

Town of Islip

RECORDS SEARCH REPORT

Long Island MacArthur Airport

100 Arrival Ave, Ronkonkoma NY

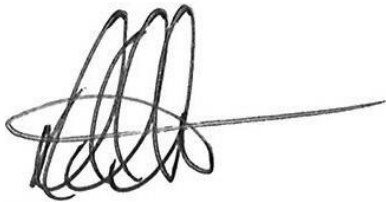
NYSDEC Site No. 152251

August 8, 2019

A large, solid orange geometric shape, resembling a stylized triangle or a section of a larger triangle, is positioned in the bottom right corner of the page. It is composed of two overlapping triangles, creating a complex, angular form. A thin white line runs diagonally through the shape, and a horizontal white line intersects it near the bottom.



Xuan Xu
Project Scientist



David E. Stern
Project Manager

RECORDS SEARCH REPORT

Long Island Macarthur Airport
100 Arrival Ave, Ronkonkoma NY
Site No. 152251

Prepared for:
Town of Islip
100 Arrival Avenue
Ronkonkoma, NY 11779

Prepared by:
Arcadis of New York, Inc.
Two Huntington Quadrangle
Suite 1S10
Melville
New York 11747
Tel 631 249 7600
Fax 631 249 7610

Our Ref.:
30017855.00002

Date:
August 8, 2019

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ACRONYMS AND ABBREVIATIONS

AFFF	aqueous film forming foam
AOPC	area of potential concern
AST	aboveground storage tank
CAMCO	Central Aviation and Marine Corporation
CORRACTS	RCRA Corrective Action Sites
DOB	Department of Buildings
EDR	Environmental Data Resources, Inc.
°F	degrees Fahrenheit
FAA	Federal Aviation Administration
FBO	fixed base operator
FEMA	Federal Emergency Management Agency
FOIL	Freedom of Information Law
GIS	geographic information system
ISP	Long Island MacArthur Airport
LIRR	Long Island Railroad
LTANKS	Leaking Storage Tanks
NTSB	National Transportation Safety Board
NWI	National Wetland Inventory
NWIS	National Weather Information System
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
PFAS	per-and polyfluoroalkyl substances
PFOA	perfluorooctanic acid
PFOS	perfluorooctanesulfonic acid
PSEG	Public Service Electric and Gas
RCRA	Resource Conservation and Recovery Act
SCWA	Suffolk County Water Authority
SPDES	State Pollutant Discharge Elimination System
STP	sewage treatment plant

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SVOC	semi-volatile organic compound
SWPPP	Stormwater Pollution Prevention Plan
TAL	target analyte list
TCA	trichloroethane
TCL	target compound list
TSP	trisodium phosphate
USGS	U.S. Geological Survey
UST	underground storage tank
VOC	volatile organic compound

1 INTRODUCTION

On behalf of the Town of Islip (Town), Arcadis of New York, Inc. (Arcadis) has prepared this Records Search Report (Report) as part of the site characterization (SC) process for the Long Island MacArthur Airport (ISP or Site). The SC is required based on the requirements of the Order on Consent (Index R1-20180228) (Order) (NYSDEC 2019), executed between the Town and the New York State Department of Environmental Conservation (NYSDEC) on May 23, 2019. Since February 2018, the Site has been classified as Class “P” (Potential) in the New York State Superfund Registry of Inactive Hazardous Waste Disposal Sites. The “P” listing was prompted based on the detection of Perfluorooctanesulfonic acid (PFOS) in water samples collected from a Suffolk County Water Authority (SCWA) public supply well in Bohemia, New York (NYSDEC 2018b).

The primary objective of this Report is to summarize the required and readily available information obtained for the Site and off-site properties and identify areas of potential concern (AOPCs). This Report is a required element of the SC process and AOPCs identified will form the basis of the Site Characterization Work Plan and satisfies the requirements of the Order as well as the provisions of NYSDECs DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC 2010).

2 SCOPE OF WORK

Following the issuance of the Order, during a meeting with the Town on June 27, 2019, the NYSDEC directed the Town to expand the SC to include per- and polyfluoroalkyl substances (PFASs), 1,4-dioxane, and selectively include Target Compound List (TCL) volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), and Target Analyte List (TAL) metals (based on the findings of records search effort) (NYSDEC et al. 2019).

Arcadis performed a records search of the Site, based on the address listed in the Order (100 Arrival Avenue, Ronkonkoma, New York) as well as adjoining and off-site properties. As required by NYSDEC DER-10, the records search effort consisted of obtaining and reviewing the following information:

- Available records on current and historical ownership and operations at the Site and adjacent properties
- Data and records pertaining to historical and current purchase, storage, use, and disposal of materials and products that may contain PFASs, 1,4-dioxane as well as other hazardous substances
- Local and regional geologic and hydrogeologic information
- Location, construction, data and use of wells at and near the Site
- Site historical and current aerial photographs and topographic maps
- Containers (e.g., tanks, drums and vessels) and storage areas that may contain PFASs, 1,4-dioxane or other hazardous substances
- Former or ongoing remedial activities, available environmental data, permits, and areas where fill materials were used

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- Information from site inspections and interviews with knowledgeable personnel

In addition to the records cited in Section 9 (References), the following specific records were obtained and reviewed:

Current/Historical Site Operations

- March 2016 Airport Layout Plan (provided by the Town of Islip)
- List of ISP tenants (provided by the Town of Islip)
- Town of Islip Department of Buildings (DOB) records, primarily including:
 - Tank inventory, tests, inspections and installations
 - Historical site usage by tenants
- Environmental Data Resources, Inc. (EDR) Package consisting of:
 - EDR Radius Map Report™ with Geocheck®, providing results of regulatory database review, well information, and soil/geological information.
 - Regional Topographic Maps (1902, 1904, 1919, 1942, 1947, 1956, 1967, and 2013)
 - Site Aerial Photographs (1938, 1947, 1954, 1957, 1962, 1970, 1980, 1985, 1994, 2006, 2009, 2013, and 2017)
 - Certified Sanborn Fire Insurance (Sanborn) Maps (no coverage available for the Site)
 - EDR's City Directory Report (1987, 1992, 1995, 2000, 2005, 2010, and 2014) providing primarily listings of business operations at and near the Site
- Stormwater Pollution Prevention Plan (SWPPP) Non-Storm Discharge Water Inspection Forms of ISP (2018)
- National Transportation Safety Board (NTSB) Aviation Accident Preliminary Reports related to ISP (1996 to Present)
- Site Management Plan for the Former CAMCO site
- Invoices of Aqueous Film Forming Foam (AFFF) purchases provided by the Town (1999 to Present)
- AFFF testing records at the Site (2000 to present)
- State Pollution Discharge Elimination System (SPDES) permits and reports
- Interviews with current and former Site Fire Chief and current Site Deputy Fire Chief
- Information provided directly by communications with other knowledgeable Site personnel
- Site Reconnaissance Activities
- Suffolk County Geographic Information Systems (GIS) Viewer showing parcel and land use/zoning information for the Site and adjacent properties

Hydrology, Hydrogeology and Well Information

- Long Island MacArthur Airport, Storm Water Run-off Map prepared by N.D. Eryou, PhD, PE (October 7, 1993)
- United States Geological Survey (USGS) National Water Information System (NWIS)
- Freedom of Information Law (FOIL) request to Suffolk County Department of Health Services (June 10, 2019) for underground storage (UST) and aboveground storage tank (AST) and Chemical Bulk Storage (CBS), Hazardous material Handling and Storage, Underground Injection Control (UIC) inspections, report, testing, and closures, on-site soil and water sampling data

- FOIL request to Suffolk County Department of Health Services (July 17, 2019) domestic well information south of the Site
- FOIL request to United States Geological Survey (USGS) (July 12, 2019) for water quality data from 2012 to present, well construction information for on-Site monitoring wells
- Federal Emergency Management Agency (FEMA) Flood Insurance Map for the Site
- National Wetlands Inventory (Fish & Wildlife Agency) for the Site
- US Geological Survey. Geological Map of the United States (1974) for information on site geology

3 PHYSICAL SETTING

3.1 Site Description

The Site is located at 100 Arrival Avenue in the hamlet of Ronkonkoma, Town of Islip, New York (**Figure 1**). According to the Order on Consent and the Suffolk County GIS Viewer, the Site is identified under parcel number 500-106-1-6.9 and is owned by the Town of Islip (NYSDEC 2019; Suffolk County GIS 2015). The Site consists of a complex of buildings and structures positioned on approximately 1,208 acres (L&B and JKL 2016). The Site is utilized as a local airport serving both commercial and general aviation flights. As shown on **Figure 2**, the airport terminal, associated buildings, and airport parking are in the southern portion of the Site. The center portion of the Site is primarily comprised of runway and taxiway infrastructure. The western portion of the Site is predominantly occupied by fixed based operator (FBO) facilities that are lessees of the Town (see Section 4.2.1).

The Site is bounded to the north by the Long Island Railroad facility and Railroad Avenue; to the west by Smithtown Avenue with mixed commercial and industrial use; to the east by Lincoln Avenue with mixed residential and commercial use; and to the south by Veterans Memorial Highway with mixed commercial and industrial use.

The Site is served by municipal potable water provided by the Suffolk County Water Authority (SCWA). There are no known potable water supply wells on the Site. Sewer service at buildings is comprised of on-Site septic leaching systems and septic tanks. Grease traps are installed at the airport terminal where food concessions are located. Public sewer or private sewage treatment plant (STP) are not present near the Site. PSEG Long Island provides electric and natural gas service to the Site main terminal. Electric service to the main terminal building, hangars, commercial buildings and ancillary structures at the Site appears to be mostly from underground services. Terminal building and auxiliary commercial buildings at the airport are heated with natural gas. Stormwater is discharged via underground conduits to two recharge basins located on the Site (**Appendix A**). Inspections of properties housekeeping and issues identified that may affect stormwater quality are presently being performed in accordance with the site Stormwater Pollution and Prevention Plan (SWPPP) (**Appendix A**).

Based on review of historical aerial photographs, prior to 1947, historic aerial photographs show the Site as undeveloped grassland. The Site was first developed with airport features in the late 1940's (**Appendix D**). Additional information on Site development is provided in Section 3.3.

3.2 Hydrologic and Hydrogeologic Information

Surface water bodies are not present on or adjacent to the Site. The most proximal water body, Lake Ronkonkoma, is located approximately 1.4 miles northwest of the Site. There are no National Wetland Inventory (NWI) or state mapped wetlands located at the Site; and the Site is not located within a 500-year or 100-year Federal Emergency Management Agency (FEMA) flood zone (**Appendix B**).

According to the Site's storm-water runoff map (**Appendix A**), historical aerial photographs, and the Site reconnaissance, there are three areas that receive the majority of on-Site runoff. Two of these areas are recharge basins referred to as Recharge Basin #1 and #2 (**Figure 2**). The third drainage area is a low-lying area to the west of the Site between taxiways Whiskey and Bravo which is referred to as Runway Runoff Area #1 (**Figure 2**) (**Appendix D**).

The unconsolidated geologic deposits underlying Suffolk County consist of clay, silt, sand, and gravel that overlie southward-dipping consolidated bedrock. The crystalline bedrock consists mainly of Precambrian age granite, gneiss, and schist. The overlying unconsolidated sediments were deposited during the Cretaceous age and form, in ascending order, the Raritan and Magothy Formations. During the Pleistocene period, glacial meltwater deposited outwash material forming what is presently known as the Upper Glacial aquifer (King and Beikman 1974).

The Raritan Formation consists of the Lloyd Sand and the Raritan Clay. The Lloyd aquifer consists of fine to coarse sand, gravel, commonly with a clayey matrix, and lenses and layers of silty and solid clay. The Raritan confining unit consists of silty and solid clay, and lenses and layers of sand. Because of its low permeability, the Raritan Clay serves as a confining unit for the underlying Lloyd Sand (McClymonds and Franke, 1972).

The Magothy Formation is a deltaic deposit consisting of fine to medium sand, clayey in part, interbedded with lenses and layers of coarse sand, silt, and sandy and solid clay. Gravel is common in the basal zone of the Magothy Formation. McClymonds and Franke (1972) estimate the average horizontal hydraulic conductivity of the Magothy aquifer in the vicinity of MacArthur Airport to be approximately 400 gallons per day per square foot (gpd/ft²).

The Upper Glacial aquifer consists primarily of till and glacial outwash deposits. The till, composed of clay, sand, gravel, and boulders, forms the Harbor Hill and Ronkonkoma terminal moraines. These terminal moraines represent the farthest advance of late-Pleistocene glaciation on Long Island. South of the morainal deposits is a glacial outwash plain, which extends from the Harbor Hill and Ronkonkoma moraines to the Great South Bay and consists of fine to very coarse sand and pebble to boulder sized gravel. Published data indicate that the horizontal hydraulic conductivity of the Upper Glacial aquifer in the MacArthur Airport area is approximately 1,500 to 2,000 gpd/ft² (McClymonds and Franke, 1972).

The direction of groundwater flow in the Upper Glacial aquifer in the area of the Site is to the south-southwest based on a regional water table map developed by the USGS (Monti et al 2013). The groundwater flow direction may vary locally around pumping supply wells.

3.2.1 Well Information

Based on information obtained from FOILs and from the USGS, a total of 17 monitoring wells were identified on the Site (**Appendix C**) (U.S. Geological Survey Undated). Two monitoring wells are located

near the Site southern boundary. Two public supply wellfields are located southeast and southwest of the Site. **Table 1** summarizes available on-Site well information and **Figures 2 and 4** shows the approximate locations of on- and off-Site wells, respectively.

3.3 Site History

The record of site development presented in this Report is based on interpretation of historical aerial photographs (summarized in **Table 2**) and historical topographic maps (summarized in **Table 3**) and information provided in the EDR City Directory Report (**Appendix D**) and is summarized as follows:

- **1938:** The Site is undeveloped and is primarily grassland;
- **1942:** The Town contracted with the federal government to build an airfield on the Site (NYSDEC 2018a)
- **1947:** The first airport related features were present;
- **1985:** The airport terminal and associated structures appear comparable to their present-day locations;
- **1987:** City Directory lists Long Island MacArthur Airport, a parking provider, an architect and World Jet Charter Corporation for the address of 100 Arrival Avenue, Ronkonkoma NY.
- **2000:** City Directory listings for 90, 100 and 150 Arrival Avenue show an expansion of tenants, including airlines, car rental facilities, travel agencies, and FBOs.

4 SUMMARY OF SITE OPERATIONS

In general, MacArthur Airport operations can be subdivided into core and non-core functions, as further described below:

1. Core Airport Operations
2. Non-Core Operations, consisting of the following:
 - a. Fixed-Based Operations (FBOs)
 - b. Concessions/Support Tenants
 - c. Satellite Areas

A description of core and non-core operations is provided below and in **Figure 3**. **Figures 2 and 3** provide the locations of on-Site AOPCs and tenant locations, respectively.

4.1 Core Operations

MacArthur Airport is classified by the Federal Aviation Administration (FAA) as a small hub, primary commercial service airport. The three airlines currently operating from the Site are American Airlines, Southwest and Frontier Airlines. The terminal serving general aviation flights is comprised of a main terminal, and east and west concourses. The main terminal includes ticketing booths, luggage check, a series of small concession stands and administrative offices. The east and west concourses have 10 passenger boarding bridges.

Site maintenance, Site hangars, aircraft control, police, firefighting and other emergency services are core operations. Firefighting staff and equipment are staged from the on-site fire house, located in the central portion of the Site.

The airport is currently planning future construction and expansion. During the site inspection a soil pile was observed on the southeastern portion of the Site (**Figure 2** and **Appendix E**). During conversations with Site representatives, it was indicated that the soil originated from an off-site source (Luft and Vogt 2019).

4.2 Non-Core Operations

In addition to the core function of the Site as an airport, there are also 34 tenants currently occupying the Site.

4.2.1 Fixed Base Operations

The airport has tenant operations onsite referred to as Fixed Base Operations (FBOs). Generally, FBOs provide aeronautical services (e.g., fueling, hangar, tie down and parking, rental, and flight instruction). FBOs occupy portions of MacArthur Airport but are standalone, independently controlled operations that function on ISP property and use some airport operations to conduct their business. FBOs active include Mid-Island, Sheltair and Excelsior/Hawthorne which operate on the western portion of the Site along Smithtown Avenue. Details on FBOs are provided on **Figure 3**.

4.2.2 Concession/Support Tenants

These areas occupy portions of MacArthur Airport property; their operations support airport core activities. Such tenants consist of: Hertz Rental Car, Avis, Avis Budget, Clarion Inn Hotel, Bank, and Swissport Fuel Facility. Additional details are provided on **Figure 3**.

4.2.3 Satellite Areas

These areas occupy portions of MacArthur Airport property, but their operations are unrelated to airport activities.

4.2.3.1 Composting Facility

A composting facility operated by the Town of Islip is located at the northern portion of the Site (**Figure 2**). Presently, the area receives mixed yard waste. The facility has one office building and one maintenance building located at the west portion. One recharge basin is located to the northeast of the composting operations and three recharge basins are located to the south of the composting facility. A historic aerial photo in 1994 shows the northeastern recharge basin and one recharge basin south of the composting facility. A 2004 aerial photo shows that the southern recharge basin was expanded to three recharge basins (**Appendix D**). The composting facility (**Figure 2**) reportedly receives composted material that are comprised of organic and inert materials.

4.2.3.2 Central Aviation and Marine Corporation

Central Aviation and Marine Corporation (CAMCO), located at 2125 Smithtown Avenue, has occupied a facility on the northwestern portion of the Site from before WWII until 1996. Former operation includes repair and overhaul of aircraft parts and accessories. Prior to 1980, industrial wastewater was discharged to a series of leaching pools and storm drains onsite (i.e., the CAMCO parcel). Samples collected from leaching pools and storm drains in 1980 revealed elevated levels of contamination (NYSDEC 2018a).

The CAMCO site is listed in the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program under Site No. 152206. The Town of Islip entered an Order of Consent on April 8, 2010 which was modified on March 1, 2012 with NYSDEC. After completion of the remedial work per the Order of Consent, some contamination was left in place at the CAMCO site and institutional controls were incorporated into the site remedy to control exposure to remaining contamination. Currently, the CAMCO site is managed and monitored under a Site Management Plan, prepared by EnviroTrac Environmental Services in December 2015.

As the CAMCO site is managed under an existing NYSDEC program (EnviroTrac 2015) and was not further evaluated in this Report.

4.2.3.3 Army National Guard

The New York Army National Guard Aviation Unit (Army National Guard) moved to the Long Island MacArthur Airport in the early 1970's, where it was designated as Army Aviation Support Facility #1. Army National Guard is still operating at the Site to date, supporting an assault helicopter battalion and an aviation support battalion. This Army National Guard facility reportedly has a history of AFFF usage (NYSDEC 2018a). In Arcadis's June 28, 2019 meeting with the NYSDEC, it was confirmed that the Army National Guard is conducting their own records search; therefore, this area was not evaluated in this report (NYSDEC et al. 2019)

5 ENVIRONMENTAL EVALUATION

The evaluation presented below and detailed in **Table 4** for on-Site operations and **Table 5** for Off-Site properties considers historical and present owners and operations conducted on various portions of the Site. The primary focus of the environmental evaluation is sources of PFASs and 1,4-dioxane, however consideration was also given to other potential releases of hazardous substances.

5.1 AFFF Purchase, Use, Storage and Disposal

The current and historical use of AFFF on Site was investigated through record review, interview of key personnel and site reconnaissance. Arcadis interviewed former airport Fire Chief Mr. Lee Gillette, current airport Fire Chief Mr. Al Cinotti and current deputy Fire Chief Mr. Ryan Tomassone. The signed memoranda of the interviews are provided in **Appendix F**.

5.1.1 Historical Activity

From the mid- 1940's until the 1980's, Ansul protein-based firefighting foam products (made from fish product) were used on Site. From 1988 onward, the Site began using Chemguard AFFF, which is a military specification firefighting foam. Starting in 1988, an annual "Hot Training" event was hosted at the airport when fire department personnel from across the country would participate in training. "Hot training" was performed near the "Burn Road" at a clearing area to the east off Echo runway, referred to in this report as "Fire Training Area #1"). The "Hot Training" involved setting fires in designated fire pits with fuel and extinguishing fire with fire foam (**Appendix F**).

Common purchase orders include C301MSP-3% AFFF military specification foam, PK- 40% dry chemical fire extinguishing powder and Dry Chemical # 13512. Between 1999 and 2018, 960 pails or 4,800 gallons of AFFF were ordered by the Town. **Table G-1** provides summary of purchased volumes and type of compound. Invoices of AFFF purchased by the Town between 1999 and 2018 are provided in **Appendix G**.

Expired AFFF was not disposed, according to Town representatives, the entire quantity purchased was used for training purposes or as part of fire response.

Based on the information on historical use of AFFF at the Site, the fire training area is considered an AOPC (**Table 4 and Figure 2**).

5.1.1.1 National Transportation Safety Board Record Incidents

National Transportation Safety Board (NTSB) Aviation Accident Preliminary Reports provided by Town representatives were reviewed. The review focused on aviation incidents involving AFFF dispersion. Hydraulic oil releases are not required to be reported. **Table 6** summarized relative information of the NTSB Records. Copies of the NTSB Records are provided in **Appendix H**. **Figures 2 and 4** provides locations of the on- and off-Site incidents, respectively, that are provided in the NTSB Records.

During the only incident (#NYC97FA030) on-Site that involved fire, AFFF was not dispersed.

Based on the absence of AFFF usage, the limited data on the nature of the incident and non-specific geographic location of the incidents, these areas are not considered to be AOPCs.

5.1.2 Current Activity

Current information regarding AFFF handling from circa 2004 to present is summarized below (**Appendix F**).

- In the old firehouse, AFFF is stored in 5-gallon pails on pallets on the floor.
- In the current firehouse, AFFF is stored in 5-gallon pails stored on shelving.
- Fire trucks (aka crash trucks) generally store 200 gallons of foam product. In addition, the FAA always requires a supplementary 200 gallons to be in store on Site.
- The FAA requires semi-annual firefighting training and annual testing and sampling of firefighting AFFF. The firefighting training occurs in the Fire Training Area #1. The AFFF testing and

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sampling is primarily performed at the north parking lot of the Old Firehouse. On windy days, AFFF testing would occur at different locations, including a clearing in the woods in the northwest area of the Site behind the Town compost facility (referred to in this report as Fire Training Area #2), and outside the SCWA building in the west area of the Site (referred to in this report as the Fire Training Area #3).

- Approximately 240 gallons of AFFF would be used in annual testing and training exercises each year.
- Purchased AFFF was expended on Site between the quarterly fire truck foam dispersal tests, the semi-annual FAA required training exercises, and annual foam testing, prior to expiration.
- Catch basins in the parking lot to the south of the Site would collect runoff from Fire Training Area #1, which would be conveyed to Recharge Basin #2.

Based on the information provided the fire training areas and Recharge Basin #2 are included as AOPCs (**Figure 2**).

5.1.3 Small Quantity Chemical Storage

Based on the site inspection, chemical storage areas were observed in the following areas:

Location	Storage Container	Container Details
Firehouse	5- gallon pails	Approximately 50 pails (200 gallons) of AFFF foam grouped on pallets and shelved. As required by the FAA.
Whitney Hangar	IBC Totes	7 totes labeled with propylene glycol material number
	55-gallon steel drums	One labeled drum of used oil and one drum of used fuel oil filters, one drum labeled as methyl ethyl ketone, an unlabeled drum and a drum labeled as used anti-freeze and multiple rusted empty drums
	Steel storage cabinets	Labeled flammable- keep away
Swissport Fuel Facility	55-gallon steel drums	two unlabeled drums in a hazard hut which is labeled waste jet fuel
Outside former jet engine testing building	55-gallon steel drums	two unlabeled drums
Hertz	55-gallon steel drums	one unlabeled drum
	55- gallon plastic drums	six unlabeled drums
	Steel storage cabinets	in mechanical area, labeled flammable- keep away
	Plastic buckets	unlabeled bucket located in mechanical area near unlabeled drum
Excelaire/Hawthorne	55-gallon steel drums	two drums of used aviation gas at fueling station
	55- gallon plastic drums	two drums labeled with a company and number in storage area
	Steel storage cabinets	Two steel storage cabinets labeled flammable and one "do not leave empty gas cans here" located in the hangar

The site inspection memorandum and photolog display chemical storage that was observed during the site inspection (**Appendix E**). AFFF storage and handling information is discussed in section 4.5.1.1 of this report.

Based on the housekeeping and/or materials observed at the Whitney Hangar building (see also Section 6.2) as well as at the Hertz rental facility, these areas are included as AOPCs (see **Table 4** and **Figure 2**).

5.2 Review of Other Regulated Activity

5.2.1 Chemical Bulk Storage

Chemical bulk storage at the Site is comprised of ASTs and USTs. **Table 7** summarizes on-Site tank information available from the Department of Buildings (DOB) (**Appendix I**), information contained in the NYSDEC's AST and UST database (obtained from EDR and FOIL) (**Appendices D and C**, respectively), and observations during the site inspection (**Appendix E**). The chemical bulk storage areas identified during the site inspection (see Section 6.2) were observed to be in good condition.

Based on the collective information included in this Report regarding bulk storage facilities, they have not been included as AOPCs.

5.2.2 Resource Conservation and Recovery Act

The RCRA and RCRA CORRACTS regulatory database was searched for hazardous and non-hazardous waste listings and corrective actions, respectively, pertaining to the Site and surrounding properties (**Appendix D**). RCRA hazardous waste summaries were searched for waste names with documented associations to PFASs, 1,4-dioxane, as well as other hazardous substances. RCRA corrective actions were not identified for the Site. RCRA listings and corrective actions on Site and offsite are in the EDR Radius Map Report (**Appendix D**).

Although RCRA corrective actions or studies were not identified at or near the Site, Sheltair and Excelaire/Hawthorne were included as AOPCs, based on historical operations and hazardous substance use (**Appendices J and D**).

5.2.3 Summary of Releases and Remedial Actions

Tables 8 and 9 summarize on-site and off-site spill information respectively. This information was obtained from NYSDEC's spill database and EDR. Details of spill records are provided in **Appendices J and D**, respectively.

NYSDEC spill number 1807038 is the only open spill record for the Site. Spill 1807038 occurred on October 2nd, 2018 where 5 gallons of hydraulic oil was spilled on an impervious surface at 100 Arrival Avenue due to equipment failure. The resource affected is listed as impervious surface. Based on the amount of the spill and nature of impervious surface, this listing is not likely to represent a concern to the Site.

In addition to spills in **Appendix J**, the New York Leaking Storage Tanks (LTANKS) Database (**Appendix D**) indicated five (5) other petroleum spills on Site. LTANKS listings are summarized below:

Location	NYSDEC Spill ID	Spill Date	Closure Date
Hudson General Aviation Terminal Ramp	8806192	11/22/1988	11/22/1988
Hudson General Aviation MacArthur Airport	8700032	04/01/1987	11/16/1987
Excelaire 2221 Smithtown Ave	9309489	11/04/1993	05/06/1998
Paramax Corp. Smithtown Avenue	9107811	10/16/1991	03/02/1992

Based on the closure statuses of the NYSDEC LTANKS listings and additional Spill listings, these incidents are not included as AOPCs at the Site.

Off-Site spills identified in the EDR and NYSDEC records have been closed and are not included as AOPCs at the Site.

Remedial activity at CAMCO and the Army National Guard Sites are described in Section 5.2.3.2 and 5.2.3.3, respectively; these areas are not included as AOPCs at the Site.

5.2.4 Adjacent Property Operations

The Site is surrounded mainly by mixed commercial and industrial properties to the north, south and west, and medium density residential properties to the east (Suffolk County GIS 2015). The use of the adjacent properties at the time of Arcadis' Investigation is summarized as follows:

Direction	Comments
North	North of the Site is a Long Island Railroad (LIRR) storage yard/wash down area (information on wash down activities provided by Town) and train station, including extensive parking and railroad tracks. North of the train tracks are one- and two-story residential homes and low-level commercial buildings. Fast Track Photo is located north of the Site (Appendix D). Based on information provided in EDR, the LIRR storage yard/wash down area and Fast Track Photo are listed as off-Site AOPCs (Table 5 and Figure 4).
South	Immediately south of the Site are approximately 25 one- and two-story commercial buildings. Further to the south, a similar mix of commercial and industrial buildings occupy the land. Abutting the property is the Islip McArthur Resource Recovery Facility which is a NYSDEC permitted waste handling facility (Permit 1-4728-00185/00012) (Appendix K). The

	Town recycling center is located to the southwest of the Site. Based on information provided in EDR, the former Banner Metalcraft Inc., American Heatset East, Inc., Islip MacArthur Resource Recovery Facility, Suffolk Metal Finishing Company Inc. and the Islip Recycle Center properties are listed as AOPCs (Table 5 and Figure 4) (Appendix D).
East	Immediately east of the Site are single-family residential homes. The residential area continues further to the east.
West	Immediately west of the Site is a strip of low-level commercial and industrial buildings. Further west, commercial buildings give way to a residential area. Based on the information provided in EDR, PCX Aerostructures LLC is listed as an AOPC (Table 5 and Figure 4) (Appendix D).

6 SITE INSPECTION AND INTERVIEW

6.1 Site Interviews

On June 25, 2019, Arcadis conducted interviews of current and former airport Fire Chiefs Albert Cinotti and Lee Gillette, respectively as well as current deputy Chief Ryan Tomassone. The interviews focused on AFFF handling and use at the Site. Information obtained from site personnel during the June 25, 2019 interviews are described elsewhere in this report and provided in detail in **Appendix F**.

6.2 Site Inspections

Concurrent with the June 25, 2019 interviews, a limited site reconnaissance specific to AFFF storage and use areas was also conducted. Tenant properties could not be accessed during the June 25, 2019 site reconnaissance.

On July 16, 2019, Arcadis conducted a reconnaissance at the Site to evaluate the possible presence of PFASs and other hazardous substances (i.e., 1,4-dioxane, VOCs, SVOCs and metals) in areas not visited on June 25, 2019. The site reconnaissance included observations made of land developed with a runway system, airport terminals, several commercial aviation buildings and ancillary airport service buildings. Arcadis was accompanied by the Site's special investigator Andrew Oliveri. Mr. Oliveri has been associated with the Site for 25 years in the security department. Details of the site inspection are summarized in the Site Inspection Memo (**Appendix E**). Additional details obtained during and following site reconnaissance are as follows:

- A treatment plant performing biotreatment of the deicing fluid runoff is located to the southeast of the Site.
- Deicing runoff from the propylene glycol ASTs and terminal area is directed to the treatment plant.
- The deicing fluid runoff consists of mainly glycol.
- The plant treats the runoff with trisodium phosphate (TSP), urea, nitrogen and biological amendments.

The function of the glycol treatment plant process was confirmed by Andrea Luft of JKL and the former airport maintenance manager, Carl Vogt, on a conference call with Arcadis on July 24, 2019 (Luft and Vogt 2019). A SPDES permit is associated with the treatment plant. Recent SPDES reports from the past twelve months were reviewed (NYSDEC 2018c).

The Whitney Hangar (**Figure 2**) was observed to be an unoccupied building on the Site during the site inspection. As described in 5.1.4, in addition to the numerous storage containers, several un-labeled and rusted, opened drums were observed. Additionally, moderate staining was observed on the floor, indicating poor housekeeping.

7 SUMMARY OF FINDINGS AND CONCLUSIONS

In accordance with the NYSDEC's DER-10 and the Order, Arcadis has completed the records search for the Long Island MacArthur Airport located at 100 Arrival Avenue, Ronkonkoma NY on behalf of the Town of Islip. Appropriate records including historical documents, aerial photographs, maps, regulatory databases, FOIL requests and relative reports were obtained and reviewed. Site inspections and interviews with knowledgeable Site representatives were also performed.

Based on the collective information obtained during the records search effort, this Report has revealed 15 on-Site AOPCs and 9 off-Site AOPCs, which are summarized in **Tables 4** and **5**, respectively. AOPCs for the Site and off-Site are shown on **Figures 2** and **4**, respectively.

8 REFERENCES

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TABLES



Table 1
Summary of Existing Monitoring Wells
Long Island MacArthur Airport
Ronkonkoma, New York

Well ID	Ownership	LS Elevation (ft msl)	MP Elevation (ft msl)	Latitude	Longitude	Total Depth (ft)	Diameter (in)	Screen Interval (ft bls)	DTW (ft bls)	Reference
On Site Wells										
S 20930.1	USGS	80	UNK	40.47°23"	73.06°08"	130	6	120-125	50	USGS NWIS ⁽¹⁾
S 66607.1	USGS	84	UNK	40.47°11"	73.06°48"	55	UNK	UNK	UNK	USGS NWIS ⁽¹⁾
S 44508.1	USGS	86	UNK	40.47°40"	73.06°05"	105	UNK	UNK	UNK	USGS NWIS ⁽¹⁾
S 44506.1	USGS	83	UNK	40.47°40"	73.06°01"	105	UNK	UNK	UNK	USGS NWIS ⁽¹⁾
S 45545.1	USGS	82	UNK	40.47°40"	73.05°58"	108	UNK	UNK	UNK	USGS NWIS ⁽¹⁾
S 45887.1	USGS	82	UNK	40.47°40"	73.05°56"	108	UNK	UNK	UNK	USGS NWIS ⁽¹⁾
S 45888.1	USGS	81	UNK	40.47°39"	73.05°55"	108	UNK	UNK	UNK	USGS NWIS ⁽¹⁾
S 5834.1	USGS	98	UNK	40.48°02"	73.06°38"	134	UNK	UNK	UNK	USGS NWIS ⁽¹⁾
MW-13-1	CAMCO	UNK	95.60	UNK	UNK	65	2	UNK	52.42	CAMCO SMP December 2015 ⁽²⁾
MW-13-2	CAMCO	UNK	96.93	UNK	UNK	65	2	UNK	54.03	CAMCO SMP December 2015 ⁽²⁾
MW-13-3	CAMCO	UNK	94.47	UNK	UNK	65	2	UNK	53.57	CAMCO SMP December 2015 ⁽²⁾
MW-13-4	CAMCO	UNK	96.13	UNK	UNK	67	2	57-67	51.47	CAMCO SMP December 2015 ⁽²⁾
MW-13-5	CAMCO	UNK	95.51	UNK	UNK	67	2	57-67	52.74	CAMCO SMP December 2015 ⁽²⁾
MW-13-6	CAMCO	UNK	95.58	UNK	UNK	65	2	55-65	55.86	CAMCO SMP December 2015 ⁽²⁾
MW-11-1	Hertz	UNK	UNK	UNK	UNK	58	4	38-58	UNK	Phase I ESA- 1989
MW-11-2	Hertz	UNK	UNK	UNK	UNK	58	4	38-58	UNK	Phase I ESA- 1989
MW-11-3	Hertz	UNK	UNK	UNK	UNK	59	4	39-59	UNK	Site Inspection
Off Site Wells										
MW-1	ISP	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	ISP SPDES Permit Number NY017370
MW-2	ISP	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	ISP SPDES Permit Number NY017370

Notes and Abbreviations:

Information collected from USGS NWIS, SMP for Former CAMCO Site (EnviroTrac 2015) and Hertz 1989 Phase I (Groundwater Technology Inc. 1989).

⁽¹⁾ Elevation referenced to NAVD88. Coordinations referenced to NAD27.

⁽²⁾ Elevation and coordination reference are unknown.

ID	Identification
LS	Land surface
MP	Measuring point
ft msl	feet above mean sea level
ft bls	feet below land surface
in	inch
UNK	Unknown
NWIS	National Water Information System
SMP	Site Management Plan
ISP	Town of Islip
SPDES	State Pollution Discharge Elimination System

Table 2
Summary of Historical Aerial Photographs
Long Island McArthur Airport
Ronkonkoma, New York.

Date	Summary of Observed Development or Activity
1938	Aerial photograph quality is moderate. The subject property is depicted as dominated by forested land. A road is depicted on the subject property extending from the northwest corner to the central portion of the southern perimeter the subject property. Three structures/areas of disturbed land, each approximately 2,000 square feet (sq. ft), are depicted in the northeast corner of the subject property. A small road/pathway is depicted on the eastern portion of the subject property extending north - south. A small road/pathway is depicted on the northern portion of the subject property extending east – west from Lincoln Avenue and terminating in the center of the subject property. The surrounding area is depicted as containing vacant forested land and areas developed with residential structures.
1947	Aerial photograph quality is moderate. The subject property is depicted as developed with multiple airport related features. An X-shaped runway bounded by asphalt roads (taxiways) on all sides, excluding to the north, is depicted on the central portion of the subject property. A cluster of nine (9) structures is depicted on the west/northwest portion of the subject property between Smithtown Avenue and Whiskey Taxiway; the foot print of the respective structures are approximately: 124,100 sq. ft, 31,023 sq. ft, 31,032 sq. ft, 15,512 sq. ft, 8,000 sq. ft, 2,500 sq. ft, 2,500 sq. ft, and three (3) structures each 1,250 sq. ft. Areas of disturbed land are depicted around the perimeter of this cluster of structures. Multiple roads are depicted on the subject property connecting the cluster of structures along the west/northwest portion of the property to Smithtown Avenue. Large areas of disturbed land are depicted adjoining the x-shaped runway to the west, north and east. A structure, with an approximate footprint of 2,100 sq. ft, is depicted to the south of the central portion of the x-shaped runway. Multiple roads are depicted extending out from the x-shaped runway area towards the northeast and southern portions of the subject property. Additional areas of disturbed land are depicted along central and eastern portions of the southern most taxiway. Various sized airplanes are depicted at several location on the subject property.
1954	Six (6) additional structures are depicted on the western portion of the subject property between Smithtown Avenue and Whisky Taxiway. The footprint of each respective structure is: 1,250 sq. ft, 1,250 sq. ft, 1,400 sq. ft, 1,250 sq. ft, 2,500 sq. ft and 3,000 sq. ft. A structure is depicted on the northwest portion of the subject property, the approximate footprint of this structure is 1,000 sq. ft. Two structures are depicted along the South Taxiway on the subject property; the footprint of each structure is approximately 31,000 sq. ft and 10,000 sq. ft respectively. Additional areas of disturbed land are depicted on: the western portion of the subject property adjoining Smithtown Avenue, the portions of land surrounding the runways and around the perimeter of structures located along South Runway. Two (2) features, believed to be two (2) mounded areas surrounded by disturbed land, are depicted on the northeastern portion of the subject property.
1957	No significant changes are evident when compared to the previous aerial photographs.

Notes and Abbreviations on Last Page

Table 2
Summary of Historical Aerial Photographs
Long Island McArthur Airport
Ronkonkoma, New York.

Date	Summary of Observed Development or Activity
1962	<p>A structure with an approximately 8,000 sq. ft footprint, is depicted to the south/southwest of South Runway on the subject property. A structure with an approximately 4,000 sq. ft footprint, is depicted to the south of South Runway. Additional roads are depicted on the southwestern portion of the subject property. Two (2) circular structures are depicted along the western portion of the subject property, between Smithtown Avenue and Whiskey Runway; the footprint of the structures are approximately 30,000 sq.ft and 15,000 sq. ft respectively. Two (2) structures are located to the northeast of the smaller circular structure; the footprints of these structures are approximately 2,000 sq. ft and 1,000 sq. ft respectively. A path/road is depicted entering the northwest portion of the subject property from Smithtown Avenue, terminating in an area of disturbed land; a feature is depicted in the center of this area of disturbed land, however image resolution is too poor to identify the feature. A road entering the subject property from Easton Street is depicted terminating at an area of disturbed land on the northern portion of the subject property. A small structure with an approximate footprint of 800 sq. ft is depicted on the southern portion of this area of disturbed land. Two (2) dirt roads/paths are depicted extending from Echo Taxiway towards the eastern perimeter of the subject property.</p>
1970	<p>Regions of disturbed land are depicted to the south, east and southwest of South Runway. Smithtown Avenue is depicted as diverted around the additional area of disturbed land on the southwest portion of the subject property. A structure with an approximately 8,000 sq. ft footprint is depicted to the south of South Runway. A semi-circular structure with an approximate footprint of 10,000 sq. ft is depicted to the south of South Runway. Areas of disturbed land are depicted to the east, north and west of the x-shaped runway on the subject property. A structure, with an approximately 13,340 sq. ft footprint, is depicted along the eastern perimeter of the subject property adjoining Lincoln Avenue.</p>
1980	<p>Schaefer Drive is depicted along the southern portion of the subject property. Areas of disturbed land and various structures are depicted to the north and southwest of Schaefer Drive. A structure with an approximately 15,000 sq. ft footprint is depicted to the north of Schaefer Drive. A structure with an approximately 10,000 sq. ft footprint is depicted to the north of Schaefer Drive. A structure with an approximately 7,500 sq. ft footprint is depicted to the north of Schaefer Drive. Two (2) structures, each with an approximately 1,000 sq. ft footprint are depicted to the north of Schaefer Drive. A structure with a footprint of approximately 40,000 sq. ft is depicted to the south of the southernmost runway. A group of four (4) structures are depicted to the north of Veterans Memorial Highway, along Schaefer Drive, on the southwest portion of the subject property; the approximate footprints of these structures are: 15,960 sq. ft, 10,260 sq. ft, 12,940 sq. ft, and 17,250 sq. ft respectively. A structure with an approximately 13,340 sq. ft footprint, is depicted on the eastern perimeter of the subject property adjoining Lincoln Avenue. A structure with an approximately 3,000 sq. ft footprint is depicted along the eastern portion of the subject property adjoining Lincoln Avenue. Areas of disturbed land are depicted extending from Delta Taxiway to the northeast perimeter of the subject property adjoining Lincoln Avenue. Three (3) structures, each with an approximately 1,500 sq. ft footprint are depicted on the northeastern portion of the subject property along Lincoln Avenue. One structure with an approximate footprint of 1,500 sq. ft and several areas of disturbed land are depicted on the northeast portion of the subject property adjoining Railroad Avenue. Two (2) structures, each with an approximately 2,000 sq. ft footprint are depicted on the northeast portion of the subject adjoining Railroad Avenue. Three (3) structures are depicted on the northeast portion of the subject property adjoining Lincoln Avenue; the approximate footprint of each building is 1,500 sq. ft.</p>

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Table 2
Summary of Historical Aerial Photographs
Long Island McArthur Airport
Ronkonkoma, New York.

Date	Summary of Observed Development or Activity
1985	The concrete pads associated with airport terminals adjoining South Taxiway to the north have been extended. A structure is depicted adjoining to the south of South Taxiway with an approximate footprint of 40,400 sq. ft. A structure with an approximately 11,560 sq. ft footprint and adjoining asphalt parking lot is depicted to the south/southeast of South Taxiway. Tenth Street (road to overflow parking lot 10 is depicted on the southeast portion of the subject property. A structure is depicted on the western portion of the subject, between Whiskey Taxiway and Smithtown Avenue, with an approximate footprint of 36,500 sq. ft. A structure with an approximate footprint of 35,000 sq. ft is depicted to the south of South Taxiway.
1994	A structure, believed to be Air Hamptons, is depicted on the western portion of the subject property, between Whiskey Taxiway and Smithtown Avenue; the approximate footprint of the structure is 47,000 sq. ft. Two (2) structures are depicted on the subject property, to the north of Veterans Memorial Highway; the footprints of each structure is approximately 8,500 and 12,000 sq. ft respectively. An area of disturbed land is depicted on the subject property, between Schaefer Drive and Veterans Memorial Highway. Nine (9) structures are depicted between Schaefer Drive and South Taxiway; the approximate footprint of each structure is: 16,000 sq. ft, 7,300 sq. ft, 11,700 sq. ft, 15,200 sq. ft, 21,000 sq. ft, 2,600 sq. ft, 3,500 sq. ft, 4,000 sq. ft, and 2,000 sq. ft. A structure with an approximately 2,800 sq. ft footprint is depicted south of Schaefer Drive on the subject property. Bravo Taxiway is depicted in its present-day configuration on the subject property. Railroad Avenue is depicted adjoining the subject property to the north. Disturbed land and one (1) structure with an approximate footprint of 3,500 sq. ft, believed to be associated with MacArthur Composting Facility are depicted to the south of Railroad Avenue on the subject property. A ponded area is depicted to the north of 10 th Street on the southeast portion of the subject property.
2006	An asphalt lot and an area of disturbed land are depicted to the east/southeast of the airport terminals on the subject property. A structure is depicted to the north of Schaefer Drive on the subject property; the approximate footprint of the structure is 15,000 sq. ft. The airport terminals to the north of Arrival Avenue are now depicted in its present-day configuration. Areas of disturbed land are depicted on the northeast corner of the subject property.
2009	Two (2) structures are depicted to the west of Lincoln Avenue along the eastern portion of the subject property; the approximate footprint of these structures are 21,000 sq. ft and 11,600 sq. ft.
2013	A structure is depicted to the east/southeast of Alpha Taxiway and south of South Taxiway; the approximate footprint of the structure is 15,800 sq. ft.
2017	A structure is depicted to the south of South Taxiway and west of the airport terminals; the footprint of the structure is approximately 21,000 sq. ft.

Notes and Abbreviations:

sq. ft Square feet

Table 3
Summary of Historical Topographic Maps
Long Island McArthur Airport
Ronkonkoma, New York.

Date	Summary of Observed Development or Activity
1902	MacArthur Airport is not depicted; the subject property is depicted as vacant land. Several roads are depicted bisecting the subject property. The surrounding area appears to be developed with residential structures.
1904	No changes are depicted; see 1902 description.
1919	No changes are depicted; see 1902 description.
1942	Map symbology updated; no changes are depicted. See 1902 description.
1947	Map symbology updated; Moscow Avenue is now depicted bisecting the subject property northwest to south/southeast.
1956	MacArthur Airport is depicted on the subject property. A cluster of twenty-two (22) structures are depicted between Whiskey Taxiway and Smithtown Avenue of the subject property; the structures are accessed by three (2) roadways entering the site from Smithtown Avenue. Three (3) structures are depicted to the south of South Taxiway on the subject property. One (1) structure is depicted to the northeast of Delta Taxiway. Veterans Memorial Highway is depicted to the south of the subject property.
1967	Runways and taxiways at the subject property are depicted in new configuration with several new taxiways added along the central and southwestern portions of the Site. One (1) structure is depicted to the north of Bravo Taxiway on the subject property. Six (6) structures are depicted to the north/northeast of Delta Taxiway on the subject property. A water tank is depicted to the west of South Taxiway on the subject property. Five (5) structures are depicted between Whiskey Taxiway and Smithtown Avenue. Five (5) structures are depicted to the south of South Taxiway. A road is depicted entering the subject property from Railroad Avenue and terminates at the northeast corner of Delta Taxiway. A road is depicted entering the northwestern portion of the subject property from Smithtown Avenue and terminates to the north the northwest portion of Bravo Taxiway.
2013	Map symbology updated; no structures are depicted on the map.

Table 4
Summary of Record Search Results for On-Site Areas of Potential Concern,
Long Island MacArthur Airport
Ronkonkoma, New York

AOPC ID	Address/ Location Description ⁽³⁾	Current Tenant	Former Tenant	Summary of Operation	Records Reviewed	Site Inspection or Interview	Ranking of Potential Concern ⁽¹⁾			Potential COC's ⁽¹⁾			
							High	Medium	Low	PFAS ⁽⁷⁾	1,4 Dioxane ⁽⁴⁾⁽⁶⁾	VOCs ⁽⁵⁾⁽⁶⁾	Others
Core Airport Operations													
1	Recharge Basin #1	NA	NA	Receives stormwater runoff and treated deicing fluids	• Town Records: Storm Water Run-off Map (Appendix A)	Yes	√			√	√	√	√
2	Recharge Basin #2	NA	NA	Receives stormwater runoff from onsite	• Town Records: Storm Water Run-off Map (Appendix A)	Yes		√		√	√	√	√
3	Fire Training Area #1: Northeast Wooded Area	NA	NA	Airport historically used area for AFFF fire training and foam testing	NA	Yes	√			√	√	√	√
4	Fire Training Area #2: Northwest, behind Compost Facility	NA	NA	Airport historically used area for AFFF fire training and foam testing	NA	Yes	√			√			
5	Equipment Cleanout Area: by Suffolk County Water Tank	NA	NA	Airport historically used area to clean AFFF out of fire fighting equipment	NA	Yes	√			√			
6	Old Fire House	NA	NA	Airport historically used area for AFFF fire training and foam testing	• Building Records: Demolition Permit and site plan (Appendix I)	Yes	√			√			
7	Runway Runoff Area #1: Low lying area between taxiways Whiskey and Bravo	NA	NA	In southeast of airport, low-lying area that receives runway and taxiway runoff as well as runoff from tenants along Smithtown Avenue	• Town Records: Storm Water Run-off Map (Appendix A)	Yes		√		√	√	√	√
8	Glycol Treatment Plant	NA	NA	Receives propylene glycol (aircraft deicing fluid) runoff from other airport areas. Treatment consists of the addition of trisodium phosphate, urea, nitrogen and biological amendments to enhance biodegradation prior to discharge to Recharge Basin #1.	• Town Records: Storm Water Run-off Map, SPDES sampling results showing no analysis performed for PFAS and 1,4-Dioxane (Appendix A; NYSDEC 2018c, respectively)	Yes		√			√		
Independent Operations													
9	2221 Smithtown Avenue, Ronkonkoma, NY	Excelaire, LLC and	Garret Aviation Services, and GE Corporate Aviation Services	The facility currently operates as a FBO providing fuel and minor maintenance to aircraft. Historically the facility has been a RCRA-LQG (1990-2006), producing waste that includes chromium, lead, TCA and wastewater treatment sludges from electroplating operations. Precise location of electroplating is not currently known.	• EDR Records: facility listed on RCRA-LQG, Manifest, AST, UST, SPDES (Appendix D); • Building Records: site plan showing former industrial wastewater ASTs (2) (Appendix I); • USGS Records: submitted FOIL request for well information, pending response (Appendix C)	Yes		√		√	√	√	√
		Hawthorne Global Aviation Services											
10	1965 Smithtown Avenue, Ronkonkoma, NY	Sheltair Islip, LLC	GTC Management Service and JLD MacArthur Corp.	The facility currently operates as an FBO providing fuel and minor maintenance to aircraft. Historically the facility has been a RCRA-SQG (1999-2004), producing waste that includes chromium, lead, TCA and wastewater treatment sludges from electroplating operations. Precise location of electroplating is not currently known.	• EDR Records: facility listed on RCRA- CESQG, historical RCRA- SQG, Manifest, FINDS (Appendix D)	Yes			√	√	√	√	√
11	4300 Johnson Avenue, Ronkonkoma, NY	Hertz/ Avis/ Avis Budget	None	These facilities currently operate as a rental car agencies for the airport. All three facilities house onsite carwashes.	• EDR Records: no database listings for facility (Appendix D) • Building Records: site plan (Appendix I)	Yes		√		√	√	√	√
12	1 Clark Drive, Ronkonkoma, NY	None	Whitney Hangar (<i>a subtenant of Excelaire</i>)	The current structure at this facility is vacant. However there are suspect hazardous materials in various containers leftover from prior use. Arcadis also observed staining on the facility floor.	• EDR Records: no database listings for facility (Appendix D)	Yes	√			√	√	√	√

Notes and Abbreviations on Last Page

Table 4
Summary of Record Search Results for On-Site Areas of Potential Concern,
Long Island MacArthur Airport
Ronkonkoma, New York

AOPC ID	Address/ Location Description ⁽³⁾	Current Tenant	Former Tenant	Summary of Operation	Records Reviewed	Site Inspection or Interview	Ranking of Potential Concern ⁽¹⁾			Potential COC's ⁽¹⁾			
							High	Medium	Low	PFAS ⁽⁷⁾	1,4 Dioxane ^{(4)/(6)}	VOCs ^{(5)/(6)}	Others
Satellite Areas ⁽²⁾													
13	2125 Smithtown Avenue, Ronkonkoma, NY	None	Central Aviation and Marine Corporation (CAMCO)	Occupied by CAMCO from before WWII to 1996- operations included the repair and overhaul of aircraft parts and accessories. Operational wastewater was discharged to leaching pools and storm drains. Samples from leaching pools and storm drains revealed elevated levels of cadmium, TCA, and methylene chloride. A subsurface investigation and interim remedial measures were conducted at this facility. Formerly classified as a potential Registry site ('P' site), the inactive facility has been reclassified to a class 'C'.	<ul style="list-style-type: none">• EDR Records: Facility listed on Manifest, LTANKS, HSWDS, FINDS, RCRA-CESQG, SHWS, INST CONTROL, ECHO, SEMS-ARCHIVE (Appendix D)• NYSDEC Records: Environmental Site Remediation Database Records (NYSDEC 2018a)• Town Records: Camco Site Management Plan (EnviroTrac 2015)	No	Not Applicable			√	√	√	
14	Composting Facility	Islip Resource Recovery Agency	None	The compost facility is about 40-acres in area and accepts yard waste, including grass, leaves, tree and brush materials brought to eh facility by the residents and landscapers. The mixed yard waste is then collected, shredded and processed into compost. Shredded tree material is processed into wood mulch	<ul style="list-style-type: none">• EDR Records: no database listings for facility (Appendix D)	No			√	√ ⁽⁸⁾			
15	201 Schaefer Drive, Ronkonkoma, NY	New York Army National Guard Aviation Unit	NA	The New York Army National Guard Aviation Unit moved to the Site in the early 1970's, where it was designated Army Aviation Support Facility #1. Facility #1 is still on MacArthur Airport to date, supporting an assault helicopter battalion and an aviation support battalion. The Army National Guard has historically used AFFF.	<ul style="list-style-type: none">• EDR Records: no database listings for facility (Appendix D)• NYSDEC Fact Sheet (NYSDEC 2018b).	Yes	Not Applicable			√			

Notes and Abbreviations on Last Page

Table 4
Summary of Record Search Results and On-Site Areas of Potential Concern,
Long Island MacArthur Airport
Ronkonkoma, New York

Notes and Abbreviation:

- (1) Ranking of potential concerns and potential COC's are based on available records. Actual COCs and potential concerns will be evaluated during Site Characterization.
- (2) CAMCO and NY Army National Guard Aviation unit Sites are presently managed separately by the NYSDEC, and are not subject to this record search report.
- (3) AOPCs were identified and ranked by the potential presence of PFOS, PFOA, 1,4-dioxane, VOCs, SVOCs and metals based on historical and current operation.
- (4) Operations utilizing car wash soaps, degreasing substances and solvents may potentially involve 1,4-Dioxane (Mohr et al. 2010);
- (5) Operations utilizing fuel oil, waste oil, degreasing substances, solvents and metal plating substances may potentially involve VOCs, SVOCs and/or metals, per industrial common practice.
- (6) Additionally, 1,4 Dioxane is also a by-product present in aircraft deicing fluids and is frequently identified at sites with 1 1 1-trichloroethane (TCA) contamination (US Environmental Protection Agency 2017).
- (7) Operations utilizing car wax products, AFFF foam, hydraulic oil and electroplating substances may potentially involve PFOS/PFOA (Kernen 2018; Guelfo et al. 2018; US Environmental Protection Agency 2009);
- (8) Compost facilities may potentially involve PFOS/PFOA, depending on the biosolid source of the organics received at the facility (Beecher and Rainey 2018).

AOPC	Area of Potential Concern
AFFF	Aqueous film forming foam
AST	Aboveground Storage Tank
CESQG	Conditionally Exempt Small Quantity Generator
COCs	Contamination of Concerns
ECHO	Enforcement & Compliance History Information
EDR	Environmental Data Resources. Inc.
FBO	Fixed Base Operation
FINDS	Facility Index System/Facility Registry System
HSWDS	Hazardous Substance Waste Disposal Site Inventory
INST CONTROL	Sites with Institutional Controls
LOQ	Large Quantity Generators
LTANKS	Leaking Storage Tank Incident Reports.
NA	Not Applicable
NYSDEC	New York State Department of Environmental Conservation
PFAS	Per- and Polyfluoroalkyl Substances
PFOS	Perfluorooctanesulfonic acid
PFOA	Perfluorooctanoic acid
RCRA	Resource Conservation and Recovery Act
SCWA	Suffolk County Water Authority
SEMS-ARCHIVE	Superfund Enterprise Management System Archive
SHWS	Inactive Hazardous Waste Disposal Sites in New York State
SOQ	Small Quantity Generators
SPDES	State Pollutant Discharge Elimination System
TCA	Trichloroethane
UST	Underground Storage Tank

Table 5
Summary of Record Search Results for Off-Site Areas of Potential Concern
Long Island MacArthur Airport
Ronkonkoma NY

AOPC ID	Address/ Location Description ⁽²⁾	Site Name	Summary of Operation	Records Reviewed	Ranking of Potential Concern ⁽¹⁾			Potential COC's ⁽¹⁾			
					High	Medium	Low	PFAS ⁽⁵⁾	1,4 Dioxane ⁽⁴⁾	VOCs ⁽³⁾	Others
OFF-1	90 Railroad Avenue, Suite 5	Fast Track Photo	Photo print facility from 1999 to 2006	• EDR Radius Map Report: RCRA- CESQG, FINDS, ECHO, Manifest (Appendix D)		√		√			
OFF-2	Hawkins Avenue	LIRR Ronkonkoma Station	Active train station; wash down area	• EDR Radius Map Report: (Appendix D) • NYSDEC Spills Database (Appendix J)	√			√	√	√	√
OFF-3	300 Trade Zone Drive	Banner Metalcraft Inc.	Manufactures sheet metal fabrication and machined parts	• EDR Radius Map Report: Manifest, FINDS, RCRA- CESQG, ECHO (Appendix D)		√		√	√	√	√
OFF-4	100 Raynor Avenue	PCX Aerostructures LLC	Aerospace manufacturing facility	• EDR Radius Map Report: Manifest, ECHO, FINDS, RCRA- CESQG (Appendix D)		√		√	√	√	√
OFF-5	Coates Avenue	Suffolk Metal Finishing Company Inc.	Advance surface finishing	• EDR Radius Map Report: RCRA-SQG, EPA Watch List (Appendix D)		√		√			√
OFF-6	89 Air Park Drive	American Heatset East, Inc.	RCRA LQG from 1994 to 1996 for American Heatset East, Inc. and Insert Color Press. Hazardous Waste Summary includes, chromium, TCA and other spent solvents	• EDR Radius Map Report: Manifest, FINDS, SPDES, RCRA NONGEN/NLR, ECHO (Appendix D)		√		√	√	√	
OFF-7	4001 Veterans Memorial Highway	Islip MacArthur Resource Recovery Facility	MacArthur Energy-from-Waste facility started March 1990 under an agreement with the Town of Islip Resource Recovery Agency. The facility processes 485 tons per day of municipal solid waste, generating up to 12 megawatts (MW) of renewable electricity. This facility also recovers and recycles 5,500 tons of ferrous (steel) metals annually.	• EDR Radius Map Report: RGA LF, CBS, AST, UST, US AIRS, RCRA-NONGEN/NLR, SWF/LF (Appendix D) • NYSDEC Database: Permit (1-4728-00185/00012) (Appendix K) • Facility website (Covanta MacArthur 2019)		√		√			
OFF-8	1155 Lincoln Ave	Islip Recycle Center	Multi-purpose recycling facility. Accepts recycables, hazardous material, electronics, appliances, furnitures, household garbage and non-recyclable material.	• Aerial photo (Figure 4) • Town of Islip website	√			√	√	√	√
OFF-9 ⁽⁷⁾	1000 Johnson Avenue	GE Aviation Systems, LLC	The facility currently operates as producer of large and small jet engines, power coversion products, cockpit control assemblies and panels for commercial and military use. Historically, the facility was a RCRA- LGQ (1984 to 1992), and RCR- SQG from 1994 to present. Hazardous waste summary includes, chromium, and TCA.	• EDR Radius Map Report: RCRA-SQG, SPDES, TRIS, AIRS, Manifest (Appendix D)	√			√	√	√	√

Notes and Abbreviations on Last Page

Table 5
Summary of Record Search Results for Off-Site Areas of Potential Concern
Long Island MacArthur Airport
Ronkonkoma, New York.

Notes and Abbreviations:

- (1) Ranking of potential concerns and potential COC's are based on available records.
- (2) AOPCs were identified and ranked by the potential presence of PFOS, PFOA, 1,4-dioxane, VOCs, SVOCs and metals based on historical and current operation.
- (3) Operations involving fuel oil, waste oil, degreasing substances, solvents and metal plating substances potentially use VOCs, SVOCs and/or metals per industrial common practice.
- (4) Additionally, 1,4 Dioxane is also a by-product present in aircraft deicing fluids and is frequently identified at sites with 1 1 1-trichloroethane (TCA) contamination (US Environmental Protection Agency 2017).
- (5) Operations utilizing car wax products, AFFF foam, hydraulic oil and electroplating substances potentially involve PFOS/PFOA (Kernen 2018; Guelfo et al. 2018; US Environmental Protection Agency 2009);
- (6) Operations involving photography, photoresistants, anti-reflective coatings, etchants, wetting agents and photo-acid generation potentially involve PFAS (Interstate Technology Regulatory Council 2017).
- (7) This facility has reported no releases. However, PFAS has not been investigated at this site and chromium plating activities can result in PFASs in the soil, groundwater and air. Given its proximity to the public water supplies, we assess that the facility constitutes a high risk for PFAS and 1,4-dioxane.

AOPC	Area of Potential Concern
AST	Aboveground Storage Tank
CBS	Chemical Bulk Storage Database
CESQG	Conditionally Exempt Small Quantity Generators
COCs	Contamination of Concerns
ECHO	Enforcement & Compliance History Information
EDR	Environmental Data Resources. Inc.
EPA	Environmental Protection Agency
FINDS	Facility Index System/Facility Registry System
LIRR	Long Island RailRoad
LOQ	Large Quantity Generators
NYSDEC	New York State Department of Environmental Conservation
PFAS	Per- and Polyfluoroalkyl Substances
RCRA	Resource Conservation and Recovery Act
RCRA NONGEN/NLR	RCRA - Non Generators / No Longer Regulated
RGA LF	Recovered Government Archive Solid Waste Facilities List
SOQ	Small Quantity Generators
SPDES	State Pollutant Discharge Elimination System
SWF/LF	Solid Waste Facilities/Landfill Sites
TCA	Trichloroethane
US AIRS	Aerometric Information Retrieval System Facility Subsystem
UST	Underground Storage Tank
LTANKS	Leaking Storage Tank Incident Reports.
SHWS	Inactive Hazardous Waste Disposal Sites in New York State
SEMS-ARCHIVE	Superfund Enterprise Management System Archive
INST CONTROL	Sites with Institutional Controls
HSWDS	Hazardous Substance Waste Disposal Site Inventory
SCWA	Suffolk County Water Arthority
AFFF	Aqueous film forming foam

Table 6
National Transportation Safety Board Record Summary
Long Island MacArthur Airport
Ronkonkoma, New York

Date	Record #	Location	Latitude	Longitude	Surface Type	Involves Fire?
Crash On-site						
3/21/2017	ERA17LA134	Runway 24	40.795278	-73.100278	Not Reported	No
8/19/2015	GAA15CA238	Not on runway	40.791667	-73.103333	grass turf	No
3/14/2011	ERA11LA191	Runway 06	40.795278	-73.100278	Asphalt	No
5/17/2005	NYC05LA123	Not on runway	40.795278	-73.100278	Not Reported	No
11/1/2003	NYC04LA046	Runway 28	40.795000	-73.100000	Asphalt	No
4/20/2002	NYC02LA086	Not on runway	40.796111	-73.096389	grass turf	No
8/5/2001	NYC01LA204	Not on runway	Not Reported	Not Reported	grass turf	No
3/10/2001 ⁽¹⁾	NYC01LA087	Not on runway	40.795000	-74.100000	grass turf	No
11/13/2000	NYC01LA035	Not on runway	Not Reported	Not Reported	Not Reported	No
8/3/1999	IAD99GA056	Not on runway	Not Reported	Not Reported	grass turf	No
8/15/1999	IAD99LA058	Not on runway	Not Reported	Not Reported	Not Reported	No
9/27/1998	NYC98LA193	Runway 24	Not Reported	Not Reported	Asphalt	No
12/22/1996	IAD97LA037	Not on runway	Not Reported	Not Reported	Asphalt	No
12/16/1996	NYC97FA030	Runway 6	Not Reported	Not Reported	Asphalt	Yes
9/21/1996	NYC96LA186	Runway 33L	Not Reported	Not Reported	Asphalt	No
Crash Off-site						
6/5/2010	ERA10LA297	Runway 24	40.785000	-73.121667	N/A	Yes
5/8/2001	NYC01FA127	1/2mil from airport	40.809444	-73.086389	Asphalt	No

Notes and Abbreviations:

⁽¹⁾ Coordinates on record appear to be not accurate. Crash location would be in New Jersey per recorded coordinations. Crash location not shown in Figure 2.

N/A: Not Applicable

Table 7
Summary of Tank Records,
Long Island MacArthur Airport,
Ronkonkoma NY

Address Listed	Site Name Listed	Record Details
90 Arrival Ave	Sheltair Islip LLC	<ul style="list-style-type: none"> • <u>EDR Records:</u> <ul style="list-style-type: none"> - One (1) active petroleum tank
90 Arrival Ave STE 18	Sheltair Islip LLC	<ul style="list-style-type: none"> • <u>EDR Records:</u> <ul style="list-style-type: none"> - One (1) inactive petroleum tank
90 Arrival Ave	Swissport Fuel Farm	<ul style="list-style-type: none"> • <u>EDR Records:</u> <ul style="list-style-type: none"> - One (1) active petroleum tank • <u>DOB Records:</u> <ul style="list-style-type: none"> - Six (6) 50,000 gallon tanks containing jet fuel - Two (2) 10,000 gallon transfer facilities
4001 Veterans Memorial HWY	Islip Town Resource Recovery	<ul style="list-style-type: none"> • <u>EDR Records:</u> <ul style="list-style-type: none"> - One (1) active 2000 gallon of steel AST containing diesel - One (1) 600 gallon tank containing diesel
4001 Veterans Memorial HWY	Islip Town Resource Recovery	<ul style="list-style-type: none"> • <u>EDR Records:</u> <ul style="list-style-type: none"> - One (1) active 20,000 gallon reinforced plastic and fiberglass UST containing #2 Fuel Oil
4001 Veterans Memorial HWY	MacArthur Waste-to-Energy Facility	<ul style="list-style-type: none"> • <u>EDR Records:</u> <ul style="list-style-type: none"> - One (1) active 4,000 gallon fiberglass tank AST of NaOH - One (1) active 4,000 gallon fiberglass AST of Sulfuric Acid - Two (2) active 200 gallon AST of hydroquinone
4200 Johnson Ave	Budget Rent A Car	<ul style="list-style-type: none"> • <u>EDR Records:</u> <ul style="list-style-type: none"> - One (1) active 500 gallon steel tank containing waste oil - One (1) 350 gallon tank closed in 2009
4200 or 4300 Johnson Ave.	Budget Rent A Car	<ul style="list-style-type: none"> • <u>EDR Records:</u> <ul style="list-style-type: none"> - One (1) active 6,000 gallon fiberglass - gasoline
2221 Smithtown Avenue	ExcelAire Service Inc.	<ul style="list-style-type: none"> • <u>EDR Records:</u> <ul style="list-style-type: none"> - One (1) active petroleum tank • <u>DOB Records:</u> <ul style="list-style-type: none"> - One (1) 1,000 gallon jet fuel tank - Two (2) 550 gallon tanks for waste oil
2221 Smithtown Avenue	ExcelAire Service Inc.	<ul style="list-style-type: none"> • <u>EDR Records:</u> <ul style="list-style-type: none"> - Two (2) inactive petroleum tanks • <u>DOB Records:</u> <ul style="list-style-type: none"> - Two (2) 20,000 gallon jet fuel ASTs - One (1) 10,000 gallon AVGAS AST

Table 7
Summary of Tank Records,
Long Island MacArthur Airport,
Ronkonkoma NY

Address Listed	Site Name Listed	Record Details
2221 Smithtown Avenue	ExcelAire Service Inc.	<ul style="list-style-type: none"> • <u>DOB Records:</u> <ul style="list-style-type: none"> - Two (2) 20,000 gallon jet fuel ASTs - One (1) 10,000 gallon AVGAS - One (1) 4,000 gallon transfer facility
2175 Smithtown Avenue	SC Police Helicopter Hangar	<ul style="list-style-type: none"> • <u>EDR Records:</u> <ul style="list-style-type: none"> - One (1) active petroleum tank • <u>DOB Records:</u> <ul style="list-style-type: none"> - No Information Available
2222 Smithtown Avenue	Truck King International	<ul style="list-style-type: none"> • <u>EDR Records:</u> <ul style="list-style-type: none"> - One (1) active petroleum UST - One (1) Inactive 15,000 gallon UST of #2 fuel oil • <u>DOB Records:</u> <ul style="list-style-type: none"> - No Information Available
Not Provided	Shell Oil Co.	<ul style="list-style-type: none"> • <u>DOB Records:</u> <ul style="list-style-type: none"> - One (1) fuel tanks present
Lakeland Ave & Vetr. Memorial Highway	Not Provided	<ul style="list-style-type: none"> • <u>DOB Records:</u> <ul style="list-style-type: none"> - Four (4) 1 gallon tanks
2190 RailRoad Avenue	Not Provided	<ul style="list-style-type: none"> • <u>DOB Records:</u> <ul style="list-style-type: none"> - One (1) 3,000 gallon jet fuel tank
Not Provided	"Southwest Airlines- MacArthur Airport"	<ul style="list-style-type: none"> • <u>DOB Records:</u> <ul style="list-style-type: none"> - One (1) 50,000 gallon Jet-A Storage Tank
100 Arrival Avenue	Not Provided	<ul style="list-style-type: none"> • <u>DOB Records:</u> <ul style="list-style-type: none"> -One (1) 2,000 gallon AST oil tank
100 Arrival Avenue	Not Provided	<ul style="list-style-type: none"> • <u>DOB Records:</u> <ul style="list-style-type: none"> - One (1) Inactive 20,000 gallon UST - One (1) active 2,000 gallon AST
4300 Johnson Ave	Hertz	<ul style="list-style-type: none"> • <u>Site Inspection:</u> <ul style="list-style-type: none"> - Two (2) ASTs of unknown size

Notes and Abbreviations:

EDR: Environmental Data Resources Inc.

DOB: Department of Building

Table 8
Summary of On-Site Spills from NYSDEC Spill Database
Long Island MacArthur Airport
Ronkonkoma, New York

Spill Number	Date Spill Reported	Date Spill Closed	Material Spilled	Amount Spilled (gal)	Resource Affected	Spill Name	County	City/Town	Address	Comments
9009506	12/1/1990	12/12/1990	Diesel	30	Soil	FAA/MACARTHUR AIRPORT	Suffolk	RONKONKOMA	150 ARRIVAL AVENUE	onsite
9011082	1/18/1991	2/13/1991	Diesel	640	Soil	LI MACARTHUR AIRPORT	Suffolk	RONKONKOMA	ARRIVAL AVENUE	onsite
9807421	9/17/1998	9/22/19998	Jet Fuel	40	Soil	LI MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
9809266	10/24/1998	12/23/1998	Jet Fuel	Unknown	Sewer	LONG ISLAND MACARTHUR AIRPOR	Suffolk	RONKONKOMA	ARRIVAL AVENUE	onsite
9811712	12/17/1998	12/23/1998	Jet Fuel	50	Soil	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
9906155	8/23/1999	8/24/1999	Jet Fuel	50	Soil	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
9910342	11/29/1999	10/1/2002	Jet Fuel	40	Soil	ARMY NATIONAL GUARD	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
9910592	12/6/1999	10/1/2002	Jet Fuel	20	Soil	LONG ISLAND JET CENTER	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
0003313	6/16/2000	6/23/2000	Jet Fuel	109	Sewer	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	1 ARRIVAL WAY	onsite
0004401	7/12/2000	6/8/2001	Jet Fuel	40	Soil	DELTA AIR	Suffolk	RONKONKOMA	100 ARRIVALS AVENUE	onsite
0303609	7/7/2003	7/7/2003	Diesel	30	Soil	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
0314084	3/25/2004	10/22/2004	Jet Fuel	100	Soil	TERMINAL 100	Suffolk	RONKONKOMA	ARRIVAL AVENUE	onsite
0404125	7/17/2004	2/16/2005	Jet Fuel	35	Soil	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
0406034	9/1/2004	7/5/2005	Jet Fuel	40	Soil	UNKNOWN	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
0604624	7/25/2006	7/25/2006	Jet Fuel	32	Soil	LONG ISLAND MCCARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVE SUITE 100	onsite
0610180	12/7/2006	4/30/2007	#2 Fuel Oil	Unknown	Soil	LONG ISLAND MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
0704981	8/1/2007	10/24/2007	Jet Fuel	50	Soil	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	90 ARRIVAL AVENUE	onsite
0806409	9/8/2008	3/12/2009	Diesel	20	Unknown	LONG ISLAND MACARTHUR AIRPORT TERMINAL RAMP	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
0909579	11/29/2009	5/24/2010	Hydrualic Oil	30	Unknown	SOUTHWEST TERMINAL	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
0911973	2/12/2010	6/23/2010	Motor Oil	3	Impervious Surface	MACARTHUR AIRPORT - LOT#5	Suffolk	RONKONKOMA	100 ARRIVAL WAY	onsite
1003789	7/6/2010	12/17/2010	Jet Fuel	10	Soil	SHELT AIR	Suffolk	RONKONKOMA	90 ARRIVAL AVENUE	onsite
1004246	7/15/2010	7/28/2010	Jet Fuel	10	Impervious Surface	LONG ISLAND MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVE	onsite
1108644	10/9/2011	6/15/2012	Transmission Fluid	5	Impervious Surface	LONG ISLAND MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVE	onsite
1202041	5/30/2012	5/31/2012	diesel	2	Impervious Surface	MACARTHUR AIRPORT PARKING LOT	Suffolk	RONKONKOMA	100 ARRIVAL AVE	onsite
1203083	6/28/2012	9/18/2012	Jet Fuel	60	Soil/Sewer	LONG ISLAND MACARTHUR AIRPORT	Suffolk	RONKONKOMA	90 ARRIVAL AVE	onsite
1207064	10/17/2012	7/16/2013	Jet Fuel	5	Impervious Surface	LONG ISLAND MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVE	onsite
1212230	11/20/2012	1/25/2013	#4 Fuel Oil	Unknown	Soil	SOUTHWEST AIRLINE	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
1214363	1/7/2013	1/8/2013	Motor Oil	2	Impervious Surface	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
1305558	8/23/2013	3/30/2015	Antifreeze	2	Sewer	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVE	onsite
1307764	10/30/2013	3/30/2015	Jet Fuel	2	Unknown	LI MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
1310780	2/13/2014	11/10/2015	Hydrualic Oil	1	Soil	LONG ISLAND MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
1312244	3/31/2014	3/31/2014	Hydrualic Oil	3	Impervious Surface	ROADWAY	Suffolk	RONKONKOMA	100 ARRIVAL AVE	onsite
1400622	4/18/2014	5/27/2016	Hydrualic Oil	5	Impervious Surface	MACARTHUR AIRPORT BEHIND EAST CONCOURSE	Suffolk	RONKONKOMA	100 ARRIVAL AVE	onsite
1407332	10/15/2014	10/15/2014	Hydrualic Oil	5	Impervious Surface	LI MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
1502994	6/17/2015	6/17/2015	Jet Fuel	20	Impervious Surface	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
1505427	8/19/2015	9/11/2017	Jet Fuel	8	Soil	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
1508241	11/9/2015	3/19/2018	Hydrualic Oil	10	Soil/Sewer	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
1800241	4/8/2018	4/9/2018	Hydrualic Oil	10	Impervious Surface	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
1803765	7/7/2018	7/9/2018	Hydrualic Oil	5	Impervious Surface	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVE	onsite
1807038	10/2/2018	OPEN	Hydrualic Oil	5	Impervious Surface	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite
1808935	11/24/2018	2/4/2019	Jet Fuel	20	Impervious Surface	MACARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVENUE	onsite

Abbreviations on Last Page

Table 8
Summary of On-Site Spills from NYSDEC Spill Database
Long Island MacArthur Airport
Ronkonkoma, New York

Spill Number	Date Spill Reported	Date Spill Closed	Material Spilled	Amount Spilled (gal)	Resource Affected	Spill Name	County	City/Town	Address	Comments
1902035	5/28/2019	5/29/2019	Jet Fuel	10	Unknown	ISLIP MCARTHUR AIRPORT	Suffolk	RONKONKOMA	100 ARRIVAL AVE	onsite
8901041	5/2/1989	5/9/1989	Material Not Identified	N/A	Not Reported	MID ISLAND AIR SERVICE	Suffolk	RONKONKOMA	SCHAEFER DRIVE	onsite
8700785	4/28/1987	5/12/1989	#2 Fuel Oil	Unknown	Groundwater	CENTRAL AVIATION	Suffolk	RONKONKOMA	2125 SMITHTOWN AVENUE	onsite
8800259	4/7/1988	2/4/1991	Jet Fuel	100	Groundwater	SCPD SPECIAL PATROL BUREAU	Suffolk	RONKONKOMA	2211 SMITHTOWN AVENUE	onsite
8803643	7/25/1988	5/12/2003	Waste Oil/Used Oil	Unknown	Groundwater	GARRETT AVIATION	Suffolk	RONKONKOMA	2221 SMITHTOWN AVENUE	onsite; excelaire
9009753	12/7/1990	9/9/2009	Jet Fuel	Unknown	Soil	ALLIED SIGNAL INC	Suffolk	RONKONKOMA	2221 SMITHTOWN AVENUE	onsite; excelaire
9010536	1/1/1991	1/2/1991	Material Not Identified	N/A	Not Reported	LONG ISLAND JET CENTER	Suffolk	RONKONKOMA	1965 SMITHTOWN AVENUE	onsite
9108230	10/31/1991	5/4/1992	#2 Fuel Oil	1	Soil	MACARTHUR AIRPORT CAMCO AVIATION	Suffolk	RONKONKOMA	2125 SMITHTOWN AVENUE	onsite
9800029	4/1/1998	6/16/1998	Jet Fuel	40	Soil	GARRETT AVIATION	Suffolk	RONKONKOMA	2221 SMITHTOWN AVENUE	onsite; excelaire
9800173	4/4/1998	6/16/1998	#4 Fuel Oil	Unknown	Soil	GARRETT AVIATION	Suffolk	RONKONKOMA	2221 SMITHTOWN AVENUE	onsite; excelaire
9801514	5/5/1998	6/17/1998	Jet Fuel	10	Soil	GARRETT AVIATION	Suffolk	RONKONKOMA	2221 SMITHTOWN AVENUE	onsite; excelaire
9806565	8/27/1998	9/11/1998	Jet Fuel	Unknown	Sewer	ISLIP MACARTHUR AIRPORT	Suffolk	RONKONKOMA	2221 SMITHTOWN AVENUE	onsite; excelaire
9913366	2/25/2000	2/14/2001	Diesel	25	Soil	AASF #1	Suffolk	LAKE RONKONKOMA	201 SCHAEFER DRIVE	onsite
0413565	3/30/2005	7/27/2005	Jet Fuel	15	Soil	AASS #1 ARMY NATIONAL GUARD	Suffolk	RONKONKOMA	201 SCHAEFER DRIVE	onsite

Notes and Abbreviations:

Information obtained from New York State Department of Environmental Conservation (NYSDEC) Spill Database.

Table 9
Summary of Off-Site Spills from NYSDEC Spill Database
Long Island MacArthur Airport
Ronkonkoma, New York

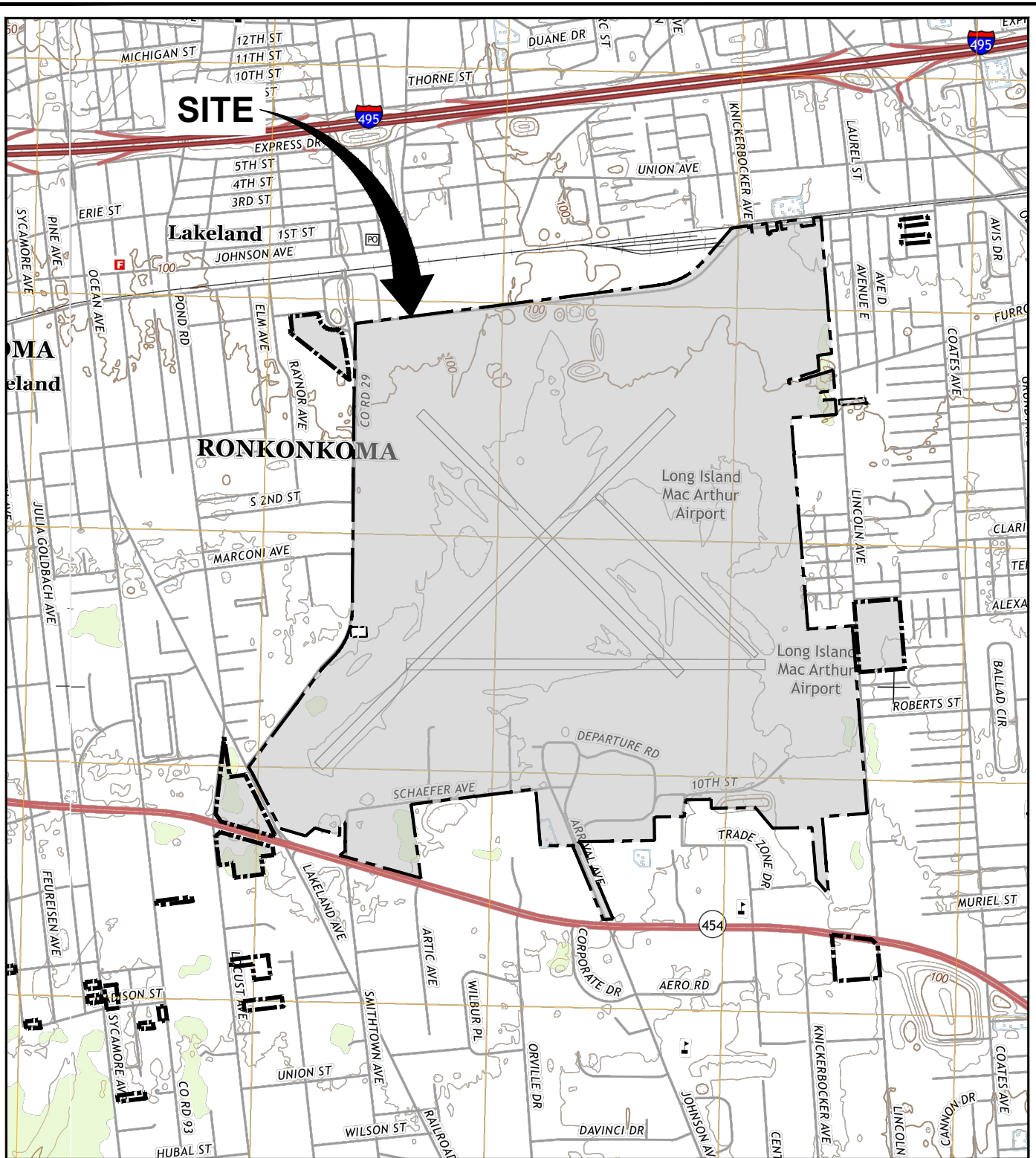
Spill Number	Date Spill Reported	Date Spill Closed	Material Spilled	Amount Spilled (gal)	Resource Affected	Spill Name	County	City/Town	Address	Comments
9709042	11/3/1997	6/1/2005	Unknown Hazardous Material	Unknown	Soil	UNKNOWN	Suffolk	RONKONKOMA	VETS HWY/LINCOLN AVENUE	Offsite
8201178	10/7/1982	3/5/2002	Diesel	Unknown	Soil	LIRR TRACKS	Suffolk	RONKONKOMA	RAILROAD AVENUE	on railroad tracks; offsite; adjoining prop.
8801181	5/6/1988	6/9/1988	Diesel	Unknown	Soil	LIRR	Suffolk	RONKONKOMA	RAILROAD AVENUE	LIRR, offsite
8802816	6/29/1988	11/15/1988	Unknown Petroleum	110	Soil	UNKNOWN	Suffolk	RONKONKOMA	RAILROAD AVENUE	offsite; abandoned drums
8806264	10/25/1988	8/15/1990	Waste Oil/Used Oil	Unknown	Soil	AIELLO CONTRACTING	Suffolk	RONKONKOMA	HAWKINS & RAILROAD AVENUE	offsite
8806447	11/1/1988	7/28/1992	Waste Oil/Used Oil	Unknown	Soil	OCEAN PETROLEUM	Suffolk	RONKONKOMA	1 RAILROAD AVENUE	offsite
8807405	12/7/1988	12/22/1988	#2 Fuel Oil	Unknown	Soil	LIRR WELFARE OFFICE BLDG	Suffolk	RONKONKOMA	HAWKINS AVENUE & RAILROAD AVENUE	offsite
8911907	3/16/1990	3/22/1990	Gasoline & Diesel	Unknown & Unknown	Groundwater & Groundwater	SUNSET TAXI	Suffolk	RONKONKOMA	1 RAILROAD AVENUE	offsite
9008781	11/9/1990	11/13/1990	Non-PCB Oil	1	Soil	LILCO	Suffolk	LAKE RONKONKOMA	RAILROAD AVENUE/KNICKERBOCKER	offsite; adjoining prop.
9100526	4/12/1991	4/16/1991	Unknown Petroleum	Unknown	Soil	RESIDENCE	Suffolk	RONKONKOMA	RAILROAD AVENUE E/O CAROL AVE	offsite
9406254	8/8/1994	8/11/1994	Waste Oil/Used Oil & Hydraulic Oil	5.00 & Unknown	Soil & Soil	LIRR	Suffolk	RONKONKOMA	RAILROAD AVENUE	offsite
9705547	8/6/1997	8/7/1997	Compost	Unknown	Air	ISLIP TOWN COMPOST FAC	Suffolk	RONKONKOMA	SOUTH RAILROAD AVENUE	offsite
9706453	8/27/1997	8/28/1997	Compost	Unknown	Air	ISLIP COMPOST	Suffolk	RONKONKOMA	RAILROAD AVENUE	offsite
112034	3/21/2002	11/6/2002	Kerosene	10	Soil	LIRR	Suffolk	RONKONKOMA	1100 RAILROAD AVENUE	offsite
411977	2/9/2005	9/12/2005	Solvents	Unknown	Groundwater	VACANT SERVICE GARAGE	Suffolk	RONKONKOMA	1 RAILROAD AVENUE	offsite
500782	4/19/2005	9/12/2005	Unknown Petroleum	Unknown	Groundwater	OLD GAS STATION	Suffolk	RONKONKOMA	1 RAILROAD AVENUE	offsite
905873	8/19/2009	8/25/2010	Lube Oil	8	Soil	LIRR RONKONKOMA YARD	Suffolk	RONKONKOMA	RAILROAD AVENUE	offsite
910647	12/30/2009	8/25/2010	Kerosene	10	Soil	RONKONKOMA YARD	Suffolk	RONKONKOMA	RAILROAD AVENUE	offsite
1609272	1/5/2017	1/23/2017	Hydraulic Oil	30	Unknown	LIRR	Suffolk	RONKONKOMA	ALICE DRIVE AND RAILROAD AVENUE	offsite
8601982	6/23/1986	10/14/1986	Non-PCB Oil	1	Soil	LILCO	Suffolk	RONKONKOMA	2100 SMITHTOWN AVENUE	offsite, west of Smithtown Ave
9302120	5/14/1993	4/27/1995	#2 Fuel Oil	Unkown	Groundwater	PARAMAX INC	Suffolk	RONKONKOMA	2230 SMITHTOWN AVENUE	offsite, west of Smithtown Ave
9303260	6/11/1993	8/2/1993	Battery Acid & Waste Oil/Used Oil	Unknown & Unknown	Sewer & Sewer	PARAMAX CORP	Suffolk	RONKONKOMA	SMITHTOWN AVENUE	offsite, west of Smithtown Ave
9507194	9/13/1995	10/2/1995	Diesel	75	Soil	CONNER TRUCKING	Suffolk	RONKONKOMA	LIE/SMITHTOWN AVENUE	offsite, not including
9604060	6/25/1996	6/30/2000	#2 Fuel Oil	3	Soil	TWIN LABS	Suffolk	RONKONKOMA	2120 SMITHTOWN AVENUE	offsite, west of Smithtown Ave
0107085	10/9/2001	12/17/2001	#2 Fuel Oil	Unknown	Soil	ARROW ELECTRONICS	Suffolk	RONKONKOMA	1860 SMITHTOWN AVENUE	offsite, west of Smithtown Ave
1810835	1/25/2019	2/8/2019	#2 Fuel Oil	Unknown	Soil	BH AIRCRAFT	Suffolk	RONKONKOMA	2230 SMITHTOWN AVENUE	offsite, west of Smithtown Ave
1811150	2/5/2019	2/8/2019	#2 Fuel Oil	Unknown	Soil	COMMERCIAL PROPERTY	Suffolk	RONKONKOMA	2230 SMITHTOWN AVENUE	offsite, west of Smithtown Ave

Notes and Abbreviations:
Information obtained from New York State Department of Environmental Conservation (NYSDEC) Spill Database.

FIGURES



CITY:SYRACUSE,NY DIV:GROUP:ENV DBA:SANCHEZ LD:ALS PIC:(opt) PM:(Regd) TM:(Opt) LVR:(Option)-OFF-REF- C:\NIMC\Drive - ARCADIS\NIM 360 Docs\ISPL\MACARTHUR AIRPORT\2019\3001785501-DWG\ISPL-FE-1-SITE LOCATION.dwg LAYOUT:1.1. SAVED: 8/8/2019 12:27 PM ACADVER: 23.08 (LWS TECH) PAGES:1.1. PLOTSETUP: --- PLOTSTYLETABLE: PLOT.LCTB PLOTTED: 8/8/2019 12:43 PM BY: SANCHEZ, ADRIAN

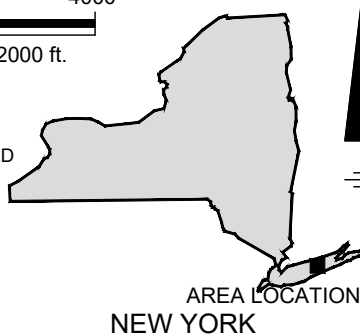


REFERENCE: BASE MAP USGS 7.5 MIN. TOPO. QUAD., PATCHOGUE & CENTRAL ISLP, NEW YORK, 2016.



NOTE:

PARCEL BOUNDARY DATA OBTAINED FROM SUFFOLK COUNTY, REAL PROPERTY TAX SERVICE AGENCY GEOGRAPHICAL INFORMATION SYSTEMS.



LONG ISLAND MACARTHUR AIRPORT
RONKONKOMA, NEW YORK

SITE LOCATION



FIGURE

1

Arcadis of New York, Inc.

Two Huntington Quadrangle

Suite 1S10

Melville, New York 11747

Tel 631 249 7600

Fax 631 249 7610

www.arcadis.com