PROPOSED REMEDIAL ACTION PLAN

Fairchild Republic Aircraft; Old Sump
State Superfund Project
East Farmingdale, Suffolk County
Site No. 152004
February 2015

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The disposal of hazardous wastes at the site has resulted in threats to public health and the environment that would be addressed by the remedy proposed by this Proposed Remedial Action Plan (PRAP). The disposal of hazardous wastes at this site, as more fully described in Section 6 of this document, has contaminated various environmental media. The proposed remedy is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This PRAP identifies the preferred remedy, summarizes the other alternatives considered, and discusses the reasons for the preferred remedy.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York; (6 NYCRR) Part 375. This document is a summary of the information that can be found in the site-related reports and documents in the document repository identified below.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all PRAPs. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repository:

Farmingdale Public Library
116 Merritts Road
Farmingdale, NY 11735
Phone: 516-249-9090

A public comment period has been set from:

2/26/2015 to 3/28/2015

A public meeting is scheduled for the following date:

3/18/2015 at 7:30 PM

Public meeting location:

Farmingdale Public Library, 116 Merritts Road, Farmingdale, NY

At the meeting, the findings of the remedial investigation (RI) and the feasibility study (FS) will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the PRAP.

Written comments may also be sent through 3/28/2015 to:

Bob Corcoran
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
bob.corcoran@dec.ny.gov

The Department may modify the proposed remedy or select another of the alternatives presented in this PRAP based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein. Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the Department's final selection of the remedy for this site.

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The Fairchild Republic Aircraft Old Sump (aka: Old Recharge Basin) Site is located near the intersection of State Route 110 (Broad Hollow Road) and Conklin Street in East Farmingdale, Suffolk County. Across Route 110 is the Airport Plaza shopping center – site of the former Fairchild Republic Main Plant Site, and Republic Airport.

Vacant property and Conklin Street lie to the north, State Route 110 to the east, East Carmens Road to the west, and industrial and commercial buildings to the south. A chain link fence completely surrounds the former Old Sump property along with a contiguous 6-acre parcel of vacant land to the north, all under the same ownership. The Brandt Airflex Superfund site (Site No. 152183) lies 500-feet north of, and hydraulically upradiant of the Old Sump site.

Site Features: The site is a 13-acre vacant sand lot. Areas of young trees and native vegetation have marginally taken hold since the basin was filled and graded in 1997-98. Approximately 25,000 cubic yards of petroleum contaminated soil, once approved for on-site use as asphalt sub-base material, are stockpiled on the site. The northern portion of the site lies in the runway protection zone of the Republic Airport and building height in the zone is restricted by local ordinance.

Current Zoning and Land Use: The site is currently inactive, comprised of five tax parcels, and is zoned G- Industry (Light). Retail development- shopping/dining is being contemplated for the property.

Historic Uses: The Old Sump is the site of a former sand mining operation that was later converted to a stormwater recharge basin and wastewater/cooling water repository. The basin was used by NYSDOT to collect storm water runoff, and by Fairchild Republic for runoff and disposal of up to 2 million gallons per day of non-contact cooling water and treated waste water from the Fairchild Main Plant Site (Site No. 152130). Fairchild stopped discharging to the basin in 1983 when it constructed a new recharge basin on the east side of Route 110. The Fairchild Main Plant Site produced sludge from metal precipitation alodining, anodizing, chemical milling and wash water paint spray booths.

The site was first listed on the Registry of Inactive Hazardous Waste Disposal Sites (Registry) as Class 2 in August 1989. A remedial Investigation (RI), completed on the site in 1995, found that basin bottom sediments contained elevated levels of total chromium, polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). In light of the fact that the site was not found to be impacting groundwater, the Record of Decision in 1996 did not require active remediation and instead selected fencing of the property and institutional controls as the remedy to prevent potential exposure to the bottom sediments. In 1997, the Department executed an Order on Consent with Fairchild, allowing Fairchild the option to fill in the recharge basin with acceptable alternative grading material and soils from demolition of their Main Plant Site. The site was delisted in 1997 with the expectation that filling the basin would result in the contamination being encapsulated approximately 30 feet below grade. The filling, completed in 1998, was problematic and created new concerns of potential exposure to contamination. Subsequent sampling by a prospective buyer indicated that the expected result from filling the

recharge basin was not achieved. A review of the process revealed that the basin was not dewatered prior to filling, and the denser fill material and concrete debris displaced the contaminated bottom sediments, resulting in an apparent upwelling of PCB and metals contamination to the surface and shallow subsurface soils. Negotiations with Fairchild (in bankruptcy) seeking mitigation of the continued threat to public health and the environment failed. The site was re-listed on the Registry in April 2010 with the filling of the recharge basin resulting in a changed condition and the need for a new characterization of the site to assure remedial goals had been achieved.

Acadia Republic Farmingdale LLC, acquired title to the site in 2013 and entered into a settlement Order on Consent with the Department in July of 2014. The Department, then re-investigated the site.

Site Geology and Hydrogeology: The site is underlain by the Upper Glacial and Magothy Aquifers which are designated by the United States Environmental Protection Agency (USEPA) as sole source aquifers. Depth to groundwater ranges from 20 to 30 feet below ground surface (bgs) and flows generally to the south. Based on borings completed at the site, the native subsurface geology is comprised of fine to coarse brown sand and rounded gravel to a depth of approximately 120 feet bgs. Below this is a layer of a mottled fine to medium sand with trace silt and mica. Mixed in with this layer are silt and clay lenses. Mixed into the upper 30 feet of subsurface is solid waste from demolition of the former Main Plant Site. The solid waste is comprised primarily of heterogeneous chunks of cement, rebar and relocated soils.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) are/is being evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is included in the Tables for the media being evaluated in Exhibit A.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include:

FAIRCHILD Corp.

Mairoll, Inc.

Avilas, Inc.

Acadia Republic Farmingdale LLC

On July 24, 2014, the Department entered into an Order on Consent with Acadia Republic Farmingdale LLC, allowing the Department to conduct a remedial investigation of the site, and committing Acadia Republic to certain obligations relative to the site's remedial program, when selected.

The Department has determined that Volatile Organic Compound (VOC) contamination found at this site is associated with an off-site source. The extent of on-site VOC contamination, as well as associated human exposure assessments and abatement actions, will be addressed separately by the Department as part of the remedial program for the Brandt Airflex Superfund site (Site No. 152183).

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

The analytical data collected on this site includes data for:

- groundwater
- soil

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCGs in the footnotes. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

POLYCHLORINATED BIPHENYLS (PCB)
LEAD
CHROMIUM
CADMIUM
MERCURY
BENZO(A)PYRENE
BENZO(A)ANTHRACENE
BENZO(B)FLUORANTHENE
BENZO(B)FLUORANTHENE
DIBENZ[A,H]ANTHRACENE

As illustrated in Exhibit A, the contaminant(s) of concern exceed the applicable SCGs for:

- soil
- groundwater

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Record of Decision.

There were no IRMs performed at this site during the RI.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for the site.

Nature and Extent of Contamination:
Soil and groundwater samples were collected during the State-funded Remedial Investigation (RI) conducted from June-August 2014. Samples were analyzed for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), metals, polychlorinated biphenyls (PCB) and pesticides.

Groundwater: Four monitoring wells were installed in 2014 and sampled along with two previously existing wells. Groundwater was not found to be impacted by site-related contamination. NYSDEC TOGS 1.1.1 groundwater standards were marginally exceeded for one VOC in one well- tetrachloroethene (PCE) detected at 6 parts per billion (ppb) while the groundwater standard is 5 ppb. Several metals including iron, manganese and sodium also exceeded groundwater standards, however, the levels were consistent with regional conditions commonly found on Long Island and are not considered to be site related contamination. Reported concentrations for SVOCs, PCBs, or pesticides did not exceed groundwater standards.

Based on off-site investigations performed hydraulically upgradient to the site, the suspected source of VOC groundwater contamination is from the Brandt Airflex Superfund site (Site No. 152183). Further actions, if necessary, regarding this contamination will be done under the Brandt Airflex Superfund site remedial program.

Soil: Unrestricted use soil cleanup objectives (UUSCOs) were exceeded at a majority of the seventy-six sample locations across the 13-acre site for one or more of the following: polychlorinated biphenyls (PCBs); metals- lead, chromium, cadmium, mercury, silver, copper and zinc; and seven SVOCs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene. One VOC, acetone marginally exceeded UUSCO in two deep subsurface samples.

Surface soils and/or shallow subsurface soils (1 foot below ground), exceed UUSCOs for SVOC, metals or PCB at 15 of 30 sample locations. SVOCs are the most widely distributed site contaminant. They were detected in all 40 surface and shallow subsurface soil samples analyzed, exceeding UUSCO at 10 of 20 locations.

Commercial use SCOs (CUSCOs) were exceeded for four SVOCs: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene. The exceedances occurred in surface, shallow subsurface and deep soils at up to 11 locations. Total PCB concentrations exceeded CUSCOs at 4 locations at depths ranging from 12-32 feet bgs. PCB concentrations are below the acceptable presumptive remedy guidelines set forth in CP-51 (Commissioner Policy 51/ Soil Cleanup Guidance), for non-residential use sites, where a soil cleanup level for PCBs of 1 ppm in surface soils and 10 ppm in subsurface soils has been established. Reported concentrations for VOCs, metals and pesticides did not exceed CUSCOs.

Soil contamination is confined to the site and was not found to be impacting groundwater.

Approximately 25,000 cubic yards of petroleum contaminated soil (PCS) has been stockpiled on the site since approximately 1999. In August 2003, the Department issued a beneficial use determination (BUD) approving the on-site use of the PCS as parking lot subgrade material for an anticipated commercial redevelopment of the site. The development never materialized and the BUD and subsequent BUD extensions have since expired. Sampling in 2014 documented that the BUD material contains the four aforementioned SVOCs at levels exceeding CUSCOs, and benzo(a)pyrene exceeding Industrial use SCOs (IUSCOs).

Solid waste, in the form of hundreds of waste automobile tires and signs of illegal dumping-construction debris, wood, insulation, numerous hot tubs, etc., was noted on-site during the investigation. Large piles of broken concrete and iron rebar were also observed on-site.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

The site is completely fenced, which restricts public access. However, people who enter the site could contact contaminants in the soil by walking on the site, digging or otherwise disturbing the soil. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in the groundwater and/or soil may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Because the site is vacant, the inhalation of site-related contaminants due to soil vapor intrusion does not represent a current concern.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

SECTION 7: SUMMARY OF THE PROPOSED REMEDY

To be selected, the remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. The remedy must also attain the remedial action objectives identified for the site, which are presented in Section 6.5. Potential remedial alternatives for the Site were identified, screened and evaluated in the FS report.

A summary of the remedial alternatives that were considered for this site is presented in Exhibit B. Cost information is presented in the form of present worth, which represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved. A summary of the Remedial Alternatives Costs is included as Exhibit C.

The basis for the Department's proposed remedy is set forth at Exhibit D.

The proposed remedy is referred to as the Cover System with Site Management remedy.

The estimated present worth cost to implement the remedy is $1,100,000. The cost to construct the remedy is estimated to be $1,000,000 and the estimated average annual cost is $7,000.

The elements of the proposed remedy, as shown in Figure 6, are as follows:

1. Remedial Design
A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

• Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;

• Reducing direct and indirect greenhouse gases and other emissions;

• Increasing energy efficiency and minimizing use of non-renewable energy;

• Conserving and efficiently managing resources and materials;

• Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;

• Maximizing habitat value and creating habitat when possible;

• Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and

• Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Cover System
A site cover will be required to allow for commercial use of the site. The cover will consist either of the structures such as buildings, pavement and sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site must meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

3. Institutional Control
Imposition of an institutional control in the form of an environmental easement for the controlled property that:

• requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);

• allows the use and development of the controlled property for commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;

• restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and

• requires compliance with the Department approved Site Management Plan.

4. Site Management Plan
A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: the environmental easement discussed in item 3 above.

Engineering Controls: the cover system discussed in item 2 above.

This plan includes, but may not be limited to:

• an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;

• descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;

• provisions for the management and inspection of the identified engineering controls;

• maintaining site access controls and Department notification;

• the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls; and

• a soil management plan identifying areas of the site where digging is restricted and establishing protocols for the safe management and disposal of contaminated soil.

Exhibit A

Nature and Extent of Contamination

This section describes the findings of the Remedial Investigation for all environmental media that were evaluated. As described in Section 6.1, samples were collected from various environmental media to characterize the nature and extent of contamination.

For each medium for which contamination was identified, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. The contaminants are arranged into four categories; volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides/polychlorinated biphenyls (PCBs), and inorganics (metals and cyanide). For comparison purposes, the SCGs are provided for each medium that allows for unrestricted use. For soil, if applicable, the Restricted Use SCGs identified in Section 4 and Section 6.1.1 are also presented.

Based on the Remedial Investigation (RI) conducted from June 2014 through August 2014, the primary environmental issues identified at the site are soil contamination from waste disposal into the former recharge basin and contaminated soil deposition from the demolition of the Fairchild Main Plant Site (MPS).

Groundwater

The groundwater sampling program consisted of the installation of four temporary monitoring wells and the utilization of two previously installed monitoring wells for a total of six sampling wells. The wells were screened at various depths between 19 feet and 50 feet below ground surface to gauge groundwater quality from the water table through the known depth of the former recharge basin. Monitoring well MW-4 was placed in the vicinity of where a 1992-93 remedial investigation reported elevated levels of total VOCs in groundwater at up to 786 ppb. Reported detections of VOC in MW-4 were all below SCGs, with total VOCs at less than 3 ppb.

Groundwater quality standards were slightly exceeded in one well for one VOC. Table 1 lists the lone VOC found to exceed SCG. Figure 2 shows the site map with monitoring well locations.

Table 1 - Groundwater

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
Tetrachloroethene (PCE)	ND - 6	5	1/6

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.
b- SCG: Standard Criteria or Guidance - Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).

No site-related groundwater contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for groundwater.

Soil

Surface and shallow subsurface soil samples were collected at 30 locations during the RI, to assess general soil contamination across the site. Surface soil samples were collected from a depth of 0-2 inches, to assess the potential for direct human exposure, while shallow subsurface soil samples were collected from a depth of 0-1 foot below ground, to evaluate the top foot of soil for eventual commercial development of the site. Deeper soil samples were collected at various depths down to 32 feet below ground to evaluate contamination impacts to groundwater. A site map with soil sample locations is shown on Figure 3.

In addition to the general sampling, focused soil sampling was conducted in three areas of concern (AOC), depicted on Figure 3. The PCB AOC is an area within the site where contaminated bottom sediments were disturbed and surfaced during the 1997-98 filling of the recharge basin ponds, resulting in an upwelling of PCB and metals contamination to the surface and shallow subsurface soils. The 2014 RI focused forty three soil borings in this area, collecting 213 samples from five depth intervals. Sample locations and results for the PCB AOC are detailed in Figure 4.

The chromium deposition AOC is an area along the western site boundary where chromium-contaminated soils from the former Fairchild Main Plant Site were deposited during the MPS demolition and remediation. Samples were collected from twelve locations.

The BUD AOC is a 25,000 cubic-yard pile of petroleum-contaminated soil that was stockpiled on-site in anticipation of its on-site use as parking lot sub-base material for a previous development project which never materialized. Samples were collected from the center and bottom of the pile at three locations.

Sample results indicate that soil contamination is widespread across the 13 acre site with the majority of the seventy six sample locations exceeding unrestricted use soil cleanup objectives (UUSCOs) for one or more of the following: PCBs ranging from non-detect (ND) to 5.4 parts per million (ND-5.4 ppm); metals- lead (ND-752 ppm), total chromium (ND-205 ppm), cadmium (ND-3.6 ppm), mercury (ND-0.48 ppm), silver (ND-15.7 ppm), copper (ND-58.7 ppm) and zinc (ND-229 ppm); and seven SVOCs- benzo(a)anthracene (ND-8.5 ppm), benzo(a)pyrene (ND-7.9 ppm), benzo(b)fluoranthene (ND-11 ppm), benzo(k)fluoranthene (ND-3.9 ppm), chrysene (ND-8.1 ppm), dibenzo(a,h)anthracene (ND-0.93 ppm) and indeno(1,2,3-cd)pyrene (ND-2.9 ppm). One VOC, acetone, marginally exceeded UUSCO in two deep subsurface samples.

Surface soils and/or shallow subsurface soils (1 foot below ground), exceed UUSCOs for SVOC, metals or PCB at 15 of 30 sample locations. SVOC are the most widely distributed site contaminant. They were detected in all 40 surface and shallow subsurface soil samples analyzed, exceeding UUSCO at 10 of 20 locations.

Commercial use SCOs (CUSCOs) were exceeded for four SVOCs: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene. The exceedances occurred in surface, shallow subsurface and deep soils at up to 11 locations. Total PCB concentrations exceeded CUSCOs at 4 locations in the PCB AOC at depths ranging from 12-32 feet BGS. PCB concentrations are below the acceptable presumptive remedy guidelines set forth in CP-51 (Commissioner Policy 51/ Soil Cleanup Guidance), for non-residential use sites, where a soil cleanup level for PCBs of 1 ppm in surface soils and 10 ppm in subsurface soils has been established. Reported concentrations for VOCs, metals and pesticides did not exceed CUSCOs.

Industrial Use SCOs (IUSCOs) were exceeded for one SVOC: benzo(a)pyrene, at ten locations. The exceedences occurred in surface, shallow subsurface and deep samples, down to 32 feet below ground. The IUSCO and CUSCO values for benzo(a)pyrene are nearly identical- 1.1 ppm vs. 1 ppm, respectively.

Soil contamination was not found to be impacting groundwater. The RI findings are consistent with previous investigations and, the areas of concern (AOC) resulting from basin filling operations and post-filling activities (1997-99) were found to have not substantially exacerbated the risk of human exposure to contamination, as previously believed.

Table 2 lists the range of concentrations for all soil contaminants exceeding SCGs. Figure 3 shows sample locations where surface and/or shallow subsurface soils exceed UUSCOs. Figure 4 shows the locations were soil contamination exceeds Commercial Use SCOs.

Table 2- Soil **152004**

Screening Criteria in use: 375 SOIL - COMMERCIAL USE, 375 SOIL - PROTECTION OF GROUNDWATER, 375 SOIL - UNRESTRICTED USE

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted Use SCG[b] (ppm)	Frequency Exceeding Unrestricted Use SCG	Restricted Use SCG[c] (ppm)	Frequency Exceeding Restricted Use SCG
Metals PART 375					
Chromium, Total	3.70-80.6	30	8/66	19	14/66
Copper	0-58.7	50	3/66	270	0/66
Lead	0.750-752	63	11/66	450	1/66
Mercury	0-0.700	0.18	5/66	0.73	0/66
Silver	0-2.00	2	1/66	8.3	0/66
Zinc	8.10-229	109	9/66	2480	0/66
Pesticides/PCBs PART 375					
PCB-1248 (Aroclor 1248)	0-5.40	0.1	26/214	1	3/214
PCB-1254 (Aroclor 1254)	0-0.790	0.1	5/214	1	0/214
PCB-1260 (Aroclor 1260)	0-1.00	0.1	21/214	1	2/214
Polychlorinated Biphenyl (PCBs)	0-5.40	0.1	50/214	1	5/214
SVOC PART 375					
Benzo(A)Anthracene	0-8.50	1	13/46	1	13/46
Benzo(A)Pyrene	0-7.90	1	14/46	1	14/46
Benzo(B)Fluoranthene	0-11.0	1	18/46	1.7	12/46
Benzo(K)Fluoranthene	0-3.90	0.8	11/46	1.7	4/46
Chrysene	0-8.10	1	14/46	1	14/46
Dibenz(A,H)Anthracene	0-0.930	0.33	9/46	0.56	5/46
Indeno(1,2,3-C,D)Pyrene	0-3.30	0.5	19/46	5.6	0/46
PCB-1262 (Aroclor 1262)	0-0.200	0.1	1/214	1	0/214
VOC PART 375					
Acetone	0-0.0590	0.05	2/46	0.05	1/46

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.
c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Commercial Use, unless otherwise noted.

The solid waste issues observed on-site will be rectified by the property owner during the course of site redevelopment and are not addressed by the remedy selection process. Dependent upon future construction plans, the elevation of final grade may require the removal of soil from the site. Being a Class 2 site, no soils, BUD material, C&D material or solid waste presently on the site may be disposed of off-site without prior characterization. No soils, BUD material, C&D material or solid waste presently on the site may be moved onto adjacent, non-site parcels to achieve desired grading elevations prior to characterization and approval of the Department.

The BUD material contains four SVOCs at levels exceeding CUSCOs, and benzo(a)pyrene exceeding IUSCOs. The material will require re-evaluation for suitability and another BUD permit before it can be used on-site, or it must be removed and disposed of off-site at a permitted landfill.

The primary soil contaminants of concern are SVOCs and metals from operations of the former Fairchild Main Plant site, and the subsequent disposal of soil and debris from the site demolition in 1997-98. Lead, chromium, mercury, copper, PCB and SVOC were detected in surface and/or shallow subsurface soils at levels above unrestricted use SCOs.

Based on the findings of the Remedial Investigation, the past disposal of hazardous waste has resulted in the contamination of soil. The site contaminants identified in soil which are considered to be the primary contaminants of concern, to be addressed by the remedy selection process are benzo(a)pyrene, dibenzo(a)pyrene, lead, chromium, mercury and copper.

Exhibit B

Description of Remedial Alternatives

The following alternatives were considered based on the remedial action objectives (see Section 6.5) to address the contaminated media identified at the site as described in Exhibit A.

Alternative 1: No Action

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. This alternative leaves the site in its present condition and does not provide any additional protection to public health and the environment.

Alternative 2: Restoration to Pre-Disposal or Unrestricted Conditions

This alternative achieves all of the SCGs discussed in Section 6.1.1 and Exhibit A and soil meets the Unrestricted Use Soil Cleanup Objectives listed in Part 375-6.8 (a). This alternative would include: excavation and off-site disposal of all waste and soil contamination above the unrestricted soil cleanup objectives. The remedy will not rely on institutional or engineering controls to prevent future exposure. There is no Site Management, no restrictions, and no periodic review. This remedy will have no annual cost, only the capital cost.

Contamination exceeding Unrestricted Use Soil Cleanup Objectives is documented in surface soils and subsurface soils down to 32 feet below ground. It is estimated that approximately 671,000 cubic yards of soil would be excavated to achieve unrestricted use of the 13 acre site. This alternative will require removal of contaminated soils from below the water table and extensive shoring of the excavation during soil removal. An equal quantity of clean soil is required to restore the site to present grade.

Capital Cost:.....$250,000,000

Alternative 3: Cover System with Site Management

This alternative would include, a cover system to allow for commercial use of the site. The cover will consist either of the structures such as buildings, pavement and sidewalks comprising future site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d). An institutional control in the form of an environmental easement (EE) is required to restrict use of the controlled property for commercial and industrial purposes. A site management plan (SMP) is required which identifies all institutional and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the institutional and/or engineering controls remain in place and effective.

Present Worth: ……..$1,100,000
Capital Cost:.....$1,000,000
Annual Costs:.....$7,000

Exhibit C

Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
No Action	0	0	0
Restoration to Pre-Disposal or Unrestricted Conditions	$250M	$0	$250M
Cover System with Site Management	$1M	$7,000	$1.1M

SUMMARY OF THE PROPOSED REMEDY

The Department is proposing Alternative 3, Cover System with Site Management as the remedy for this site. Alternative 3 would achieve the remediation goals for the site by installation of a cover system to prevent human exposure to soil contamination. The elements of this remedy are described in Section 7. The proposed remedy is depicted in Figure 6.

Basis for Selection

The proposed remedy is based on the results of the RI and the evaluation of alternatives. The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375. A detailed discussion of the evaluation criteria and comparative analysis is included in the FS report.

The first two evaluation criteria are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

The proposed remedy Alternative 3, Cover System with Site Management, would satisfy this criterion by preventing exposure to soil contamination by installation of a cover system. Contaminated soil will be covered by clean soil and/or by the buildings, parking lots and roadways of a future development project. Alternative 1 (No Action) does not provide any additional protection to public health and the environment and will not be evaluated further. Alternative 2, Restoration to Pre-Disposal or Unrestricted Conditions best protects human health and the environment by removing all contamination from the site.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

Alternative 3 complies with SCGs to the extent practicable. It meets restricted use soil cleanup objectives at the surface through construction of a cover system. Alternative 2 best complies with this criterion because it removes all soils and wastes exceeding SCGs and leaves no contamination on the site.

The next six "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

Long-term effectiveness is best accomplished through the removal of contamination. As such, Alternative 2 best fulfills this criterion with the full excavation and removal of soil contamination. Alternative 3 leaves contamination on site and instead relies on continued maintenance of the surface cover and future owner/operator compliance with use restrictions and a site management plan in order to remain effective. Alternative 3, therefore, is somewhat less effective at meeting this criterion.

4. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

Alternative 2 best reduces the toxicity, mobility and volume of contamination on the site by removing all contaminated soil. Alternative 3 leaves the soil contamination on site and therefore does nothing to reduce its volume or toxicity. The soil contaminants- metals, PCBs and SVOCs- are relatively immobile and not impacting the groundwater. Subsurface soil contamination is not likely to migrate off-site. Through a cover system, Alternative 2 will control the mobility and toxicity of surface contamination via wind-blown dust and from direct human contact.

5. Short-term Impacts and Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

Alternative 2 will have enormous short-term impacts to the local community. Removal of approximately 670,000 cubic yards of contaminated soil is expected to take two to three years and result in thousands of trips of loaded dump trucks on local roads. Construction noise, dust and traffic are all expected nuisances which can be controlled. Sourcing 670,000 cubic yards of clean fill will be difficult and costly.

Alternative 3 will have much smaller impacts to the community as the soil requirements for a full site soil cover, estimated at 21,000 cubic yards, are significantly less. Moreover, the cover system is expected to be incorporated as part of a planned commercial/retail development of the site. If the planned retail development were to occur, much of the cover system will be comprised of commercial buildings, asphalt parking lots and roadways, significantly reducing the amount of imported clean soil. The impacts of the cover system requirement will be absorbed into the overall retail construction. Alternative 3 is significantly more effective at preparing the site for commercial development.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

Alternative 2 contemplates the removal of soil from the 13 acre site down to a depth of 32 feet. This is likely not possible. Technical difficulties in implementing this alternative arise from the depth of the excavation. Extensive shoring and sheeting will need to be installed in order to get to a depth of 32 feet. Time is also a factor to consider since the removal and importation of 670,000 cubic yards of material could take over 2-3 years.

Alternative 3 is much more readily implemented. Constructing the soil cover poses no major technical difficulties other than containing potential dust emissions during construction. A cover system integrated into a planned commercial development project further enhances the implementability of Alternative 3.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision.

The full excavation of the site is the most effective way of removing site contamination, but due to the extreme costs associated with Alternative 2, it is not at all cost effective. Alternative 3 is much more cost effective while still satisfying the site specific RAOs.

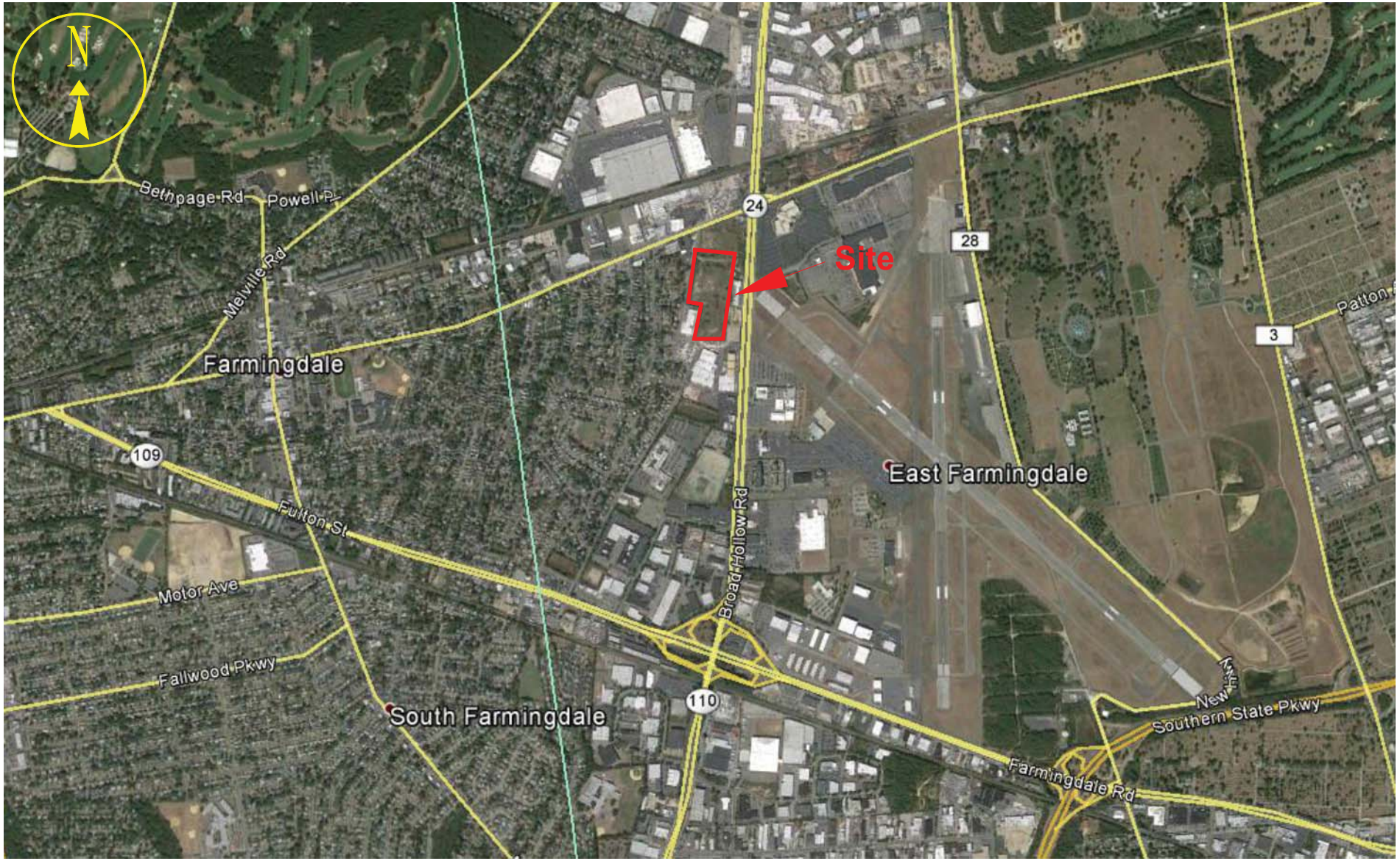
8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

Since it is anticipated that this property will be developed and used for commercial purposes, Alternative 3 best fulfills this criterion. The encapsulation of the contaminated soil is easily achievable with a soil cover system or installation of buildings, parking lots and roadways. Due to the immobility of the site contamination, there is no concern for the migration of contamination, provided the surface cover is maintained with a Site Management Plan and an Environmental Easement is put in place restricting future excavation or development.

The final criterion, Community Acceptance, is considered a "modifying criterion" and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

9. Community Acceptance. Concerns of the community regarding the investigation, the evaluation of alternatives, and the PRAP are evaluated. A responsiveness summary will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the selected remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

Alternative 3 is being proposed because, as described above, it satisfies the threshold criteria and provides the best balance of the balancing criterion.



Modified from 2014 Europa Technologies, Google

Not to Scale

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Figure 1
Site Location Map

Fairchild Republic Aircraft; Old Sump
Broad Hollow Road
East Farmingdale, NY
Site No. 152004

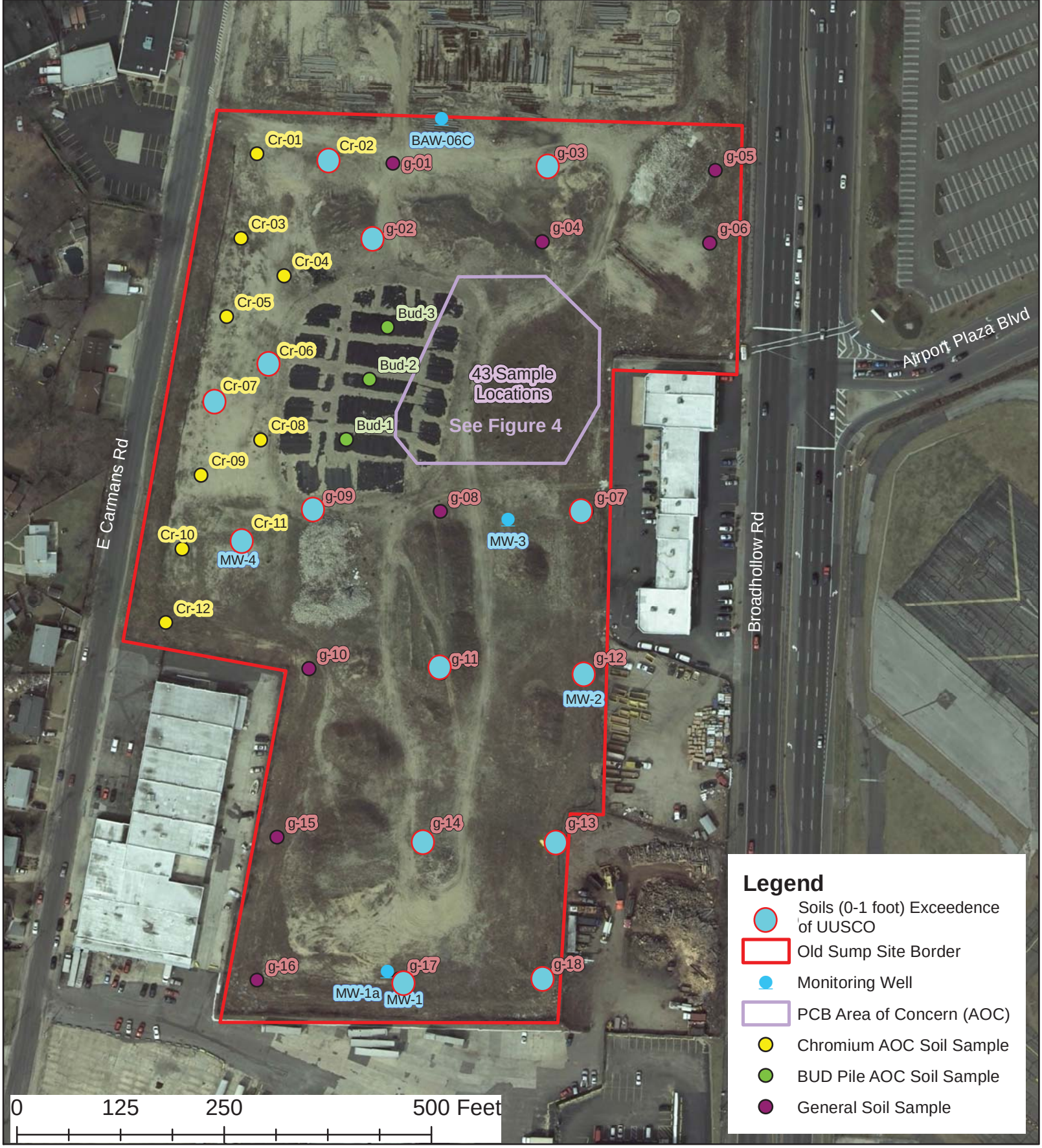
0 175
SCALE IN FEET

Legend
MW-1 - Well ID Labels
- Surveyed Well Locations

225 Atlantic Avenue
Patchogue, New York 11772
Tel (631) 447-6400
Fax (631) 447-6497
Email Info@Enviro-Asmnt.com
www.Enviro-Asmnt.com

Figure 2
Site Map

Fairchild Republic Aircraft; Old Sump
Broad Hollow Road
East Farmingdale, NY
Site No.152004



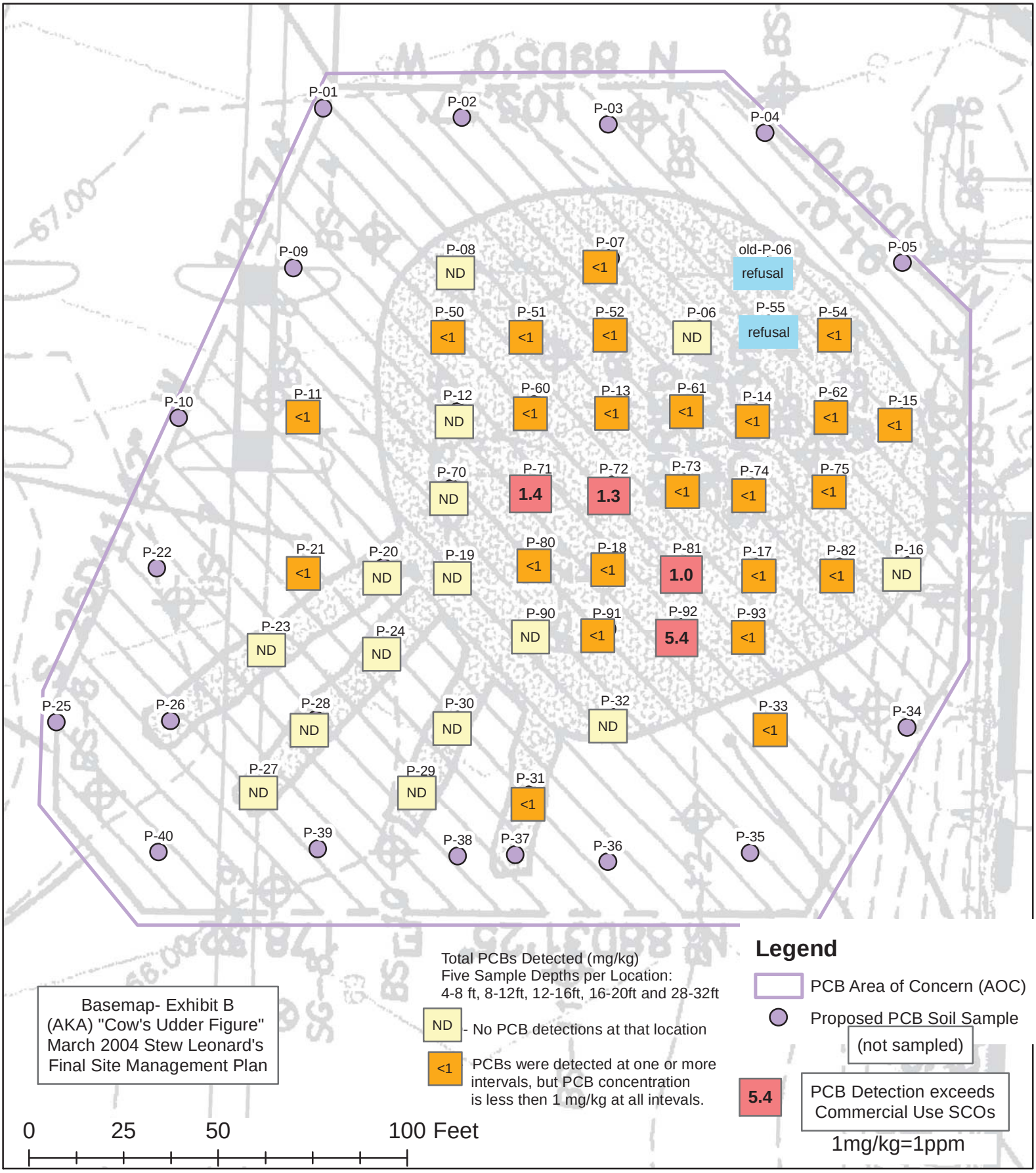
N

Fairchild Old Sump Site (class 2) Site No. 152004
Broad Hollow Rd (Rt 110) E. Farmingdale, NY 11530
Town of Babylon, Suffolk County, New York

Remedial Investigation
Surface and Shallow Subsurface Soil Exceedences of
6 NYCRR 375-6.8 Unrestricted Use Soil Cleanup Objectives (UUSCO)
June-July 2014

Figure 3

Created by: RKC
2/5/15

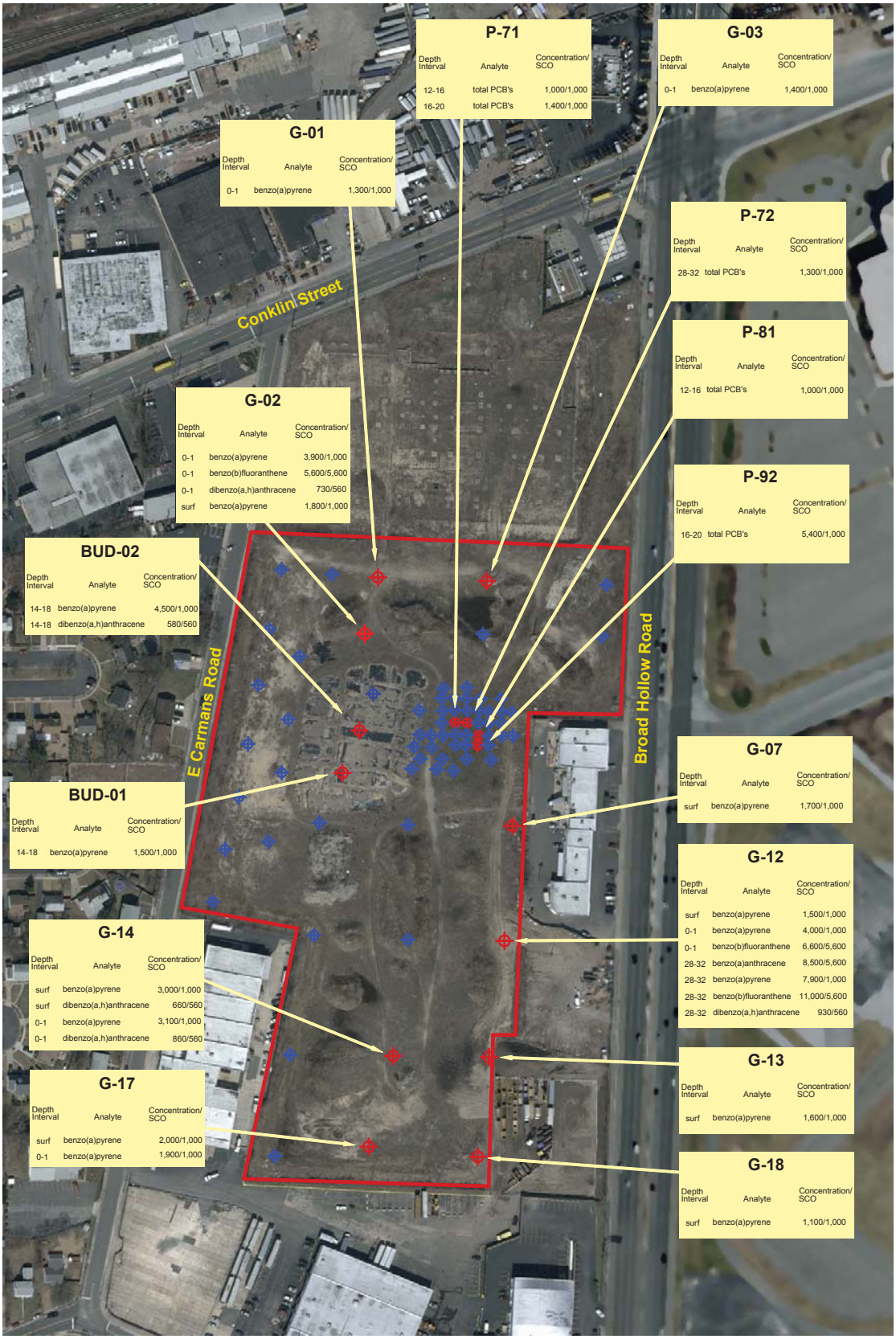


Fairchild Old Sump Site (class 2) Site No. 152004
Broad Hollow Rd (Rt 110) E. Farmingdale, NY 11530
Town of Babylon, Suffolk County, New York

Remedial Investigation
Sample Results
PCB Area of Concern
June/July 2014

Figure 4

Created by: RKC
10/2/14



- Soil Sampling Location w/ Commercial SCO Exceedance
- Soil Sampling Location

All concentrations reported in ug/Kg
Depth intervals provided in feet below grade surface
All analyses by Test America, Inc.

0 175
SCALE IN FEET

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS
225 Atlantic Avenue
Patchogue, New York 11772
Tel (631) 447-6400
Fax (631) 447-6497
Email Info@Enviro-Asmnt.com
www.Enviro-Asmnt.com

Figure 5

Commercial SCO Exceedances

June-July 2014 Remedial Investigation

6 NYCRR 375-6.8 Commercial Use Soil Cleanup Objectives

Fairchild Republic Aircraft; Old Sump
Broad Hollow Road
East Farmingdale, NY
Site No.152004

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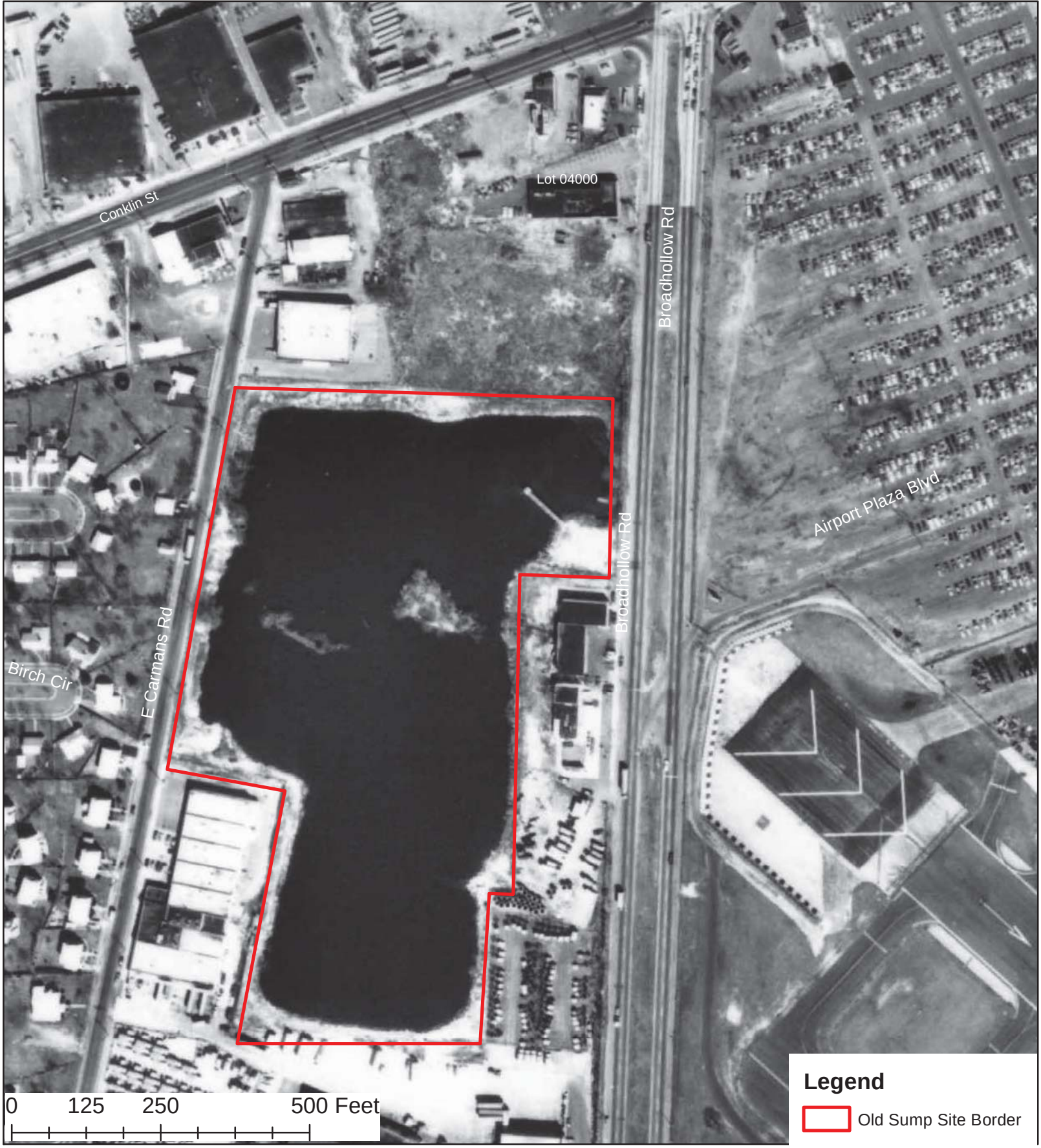
Fairchild Old Sump Site (class 2) Site No. 152004
Broad Hollow Rd (Rt 110) E. Farmingdale, NY 11530
Town of Babylon, Suffolk County, New York

Remedial Investigation
Approximate Area for Commercial Cover System
June/July 2014

Created by: RKC
2/5/15

Figure 6



N

Fairchild Old Sump Site (class 2) Site No. 152004
Broad Hollow Rd (Rt 110) E. Farmingdale, NY 11530
Town of Babylon, Suffolk County, New York

Remedial Investigation
Historical Aerial Photo
1976

Figure 7

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5/01/14