

**Air National Guard
Environmental Restoration Program**

**FINAL
COMMUNITY INVOLVEMENT PLAN**
for the
174th Fighter Wing
New York Air National Guard, Syracuse Hancock International Airport,
Syracuse, New York



February 2011

**Prepared for the Air National Guard
3500 Fetchet Ave
Andrews AFB, MD 20762-5157**

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Environmental Restoration Program**

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COMMUNITY INVOLVEMENT PLAN**

FOR THE

**174th Fighter Wing
New York Air National Guard
Syracuse Hancock International Airport
Syracuse, New York**

Submitted to:

**Air National Guard Readiness Center
Environmental Division
3500 Fetchet Avenue
Andrews Air Force Base, Maryland 20762-5157**

February 2011

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List of Acronyms

°F	degrees Fahrenheit
ANG	Air National Guard
AOC	Area of Concern
AR	Administrative Record
ARAR	Applicable or Relevant and Appropriate Requirements
AST	Aboveground Storage Tank
bgs	below ground surface
BRAC	Base Realignment and Closure
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
CAIB	Community Action Information Board
CIP	Community Involvement Plan
CRP	Community Relations Plan
CSE	Comprehensive Site Evaluation
DD	Decision Document
DDE	dichlorodiphenyltrichloroethylene
DDT	dichlorodiphenyltrichloroethane
DGI	Data Gap Investigation
DoD	U.S. Department of Defense
EE/CA	Engineering Evaluation/Cost Analysis
EPA	U.S. Environmental Protection Agency
ERP	Environmental Restoration Program
ESGR	Employer Support of the Guard and Reserve
FFS	Focused Feasibility Study
FS	Feasibility Study
FW	Fighter Wing
IR	Information Repository
IRA	Interim Remedial Action
LTM	Long Term Monitoring
MC	Munitions Constituents
MRA	Munitions Response Areas
NFRAP	No Further Response Action Planned
NFA	No Further Action
NPR	National Public Radio
NY	New York
NYSDEC	New York State Department of Environmental Conservation
OWS	Oil/Water Separator
PA	Preliminary Assessment
PCB	polychlorinated biphenyl
POL	Petroleum, Oil, and Lubricant
PP	Proposed Plan
RA	Remedial Action
RAB	Restoration Advisory Board
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study

ROD	Record of Decision
RSCO	Recommended Soil Cleanup Objective
TPH	Total Petroleum Hydrocarbon
SA	Site Assessment
SAGE	Semi-Automatic Ground Equipment
SI	Site Inspection
SUNY	State University of New York
SVOC	Semi Volatile Organic Compound
UST	Underground Storage Tank
VFW	Veterans of Foreign Wars
VOC	Volatile Organic Compound

Record of Revisions

The table below will be used to document revisions to the Community Involvement Plan.

Date Updated	Page Number	Remarks/Changes
February 2011	Entire Document	Update to the January 1991 Community Relations Plan

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EXECUTIVE SUMMARY

This Community Involvement Plan (CIP) has been prepared for the 174th Fighter Wing (FW) (hereafter referred to as the base or 174th FW) of the New York Air National Guard (ANG) located at Syracuse Hancock International Airport, Syracuse, New York (NY). This CIP is designed to facilitate two-way communication between the ANG and the communities surrounding the base regarding its environmental cleanup program. The base will utilize the community involvement activities outlined in this plan to keep residents informed of environmental conditions on site and to provide the opportunity for public involvement.

The Defense Environmental Restoration Program (DERP) is a Department of Defense (DoD) wide effort to identify possible environmental contamination that may have resulted from past practices, accidents or incidents at DoD installations nationwide and abroad. The ANG executes its Environmental Restoration Program (ERP) in support of the overall DoD effort. Overall administration of the DERP and implementation of the community outreach steps outlined in the CIP are the responsibility of the ANG. In support of its primary missions, the base has stored and used various types of hazardous materials during its history, including fuels, oils, paints and solvents. Although some of the base's historical operations have resulted in the storage and use of hazardous materials, not all of these operations relate to ERP sites.

A total of 16 ERP sites have been identified at the base since investigation activities began in March 1982. A Phase I Records Search (equivalent to a Preliminary Assessment (PA)) was completed in July 1982 that identified Sites 1 through 14. A Phase II, Stage 1, Confirmation/Quantification Report (equivalent to a Site Investigation (SI)) was completed in October 1984, and a Phase II, Stage 2 Confirmation/Quantification Report (equivalent to a Remedial Investigation (RI)) was completed in June 1989. No Further Response Action Planned (NFRAP) Decision Documents (DDs) were completed for Sites 1 through 7 in April 1990, resulting in the closure of Sites 2 and 3. A combined report, which included a Supplementary SI Report for Site 6 and a SI Report for newly identified Site 15, was completed in June 1992. In March 1997, a Closure Report was completed for Site 6. In March 2002, Sites 8, 12, 13, and 14 were approved for closure and later in October 2002, Sites 5 and 7 were approved for closure by the State. In August 2004, Sites 9, 11 and an Area of Concern (AOC), presently Site 16, were closed. Site 10 was approved for closure in May 2005. Sites 1 and 4 were approved for no further action by the NYSDEC; however, a Land Use Control Implementation Plan must be written since the sites have contaminants above unrestricted use levels. Site 15 is currently undergoing active remediation. Figure 3, located in Section 3, provides the ERP site locations.

During the update to this CIP, members of the local community that were interviewed generally expressed support and encouragement of the ANG and indicated that the base is an important community and economic partner. Many respondents indicated their appreciation for the base's efforts to inform local residents and businesses about the ongoing environmental investigation and clean up efforts, as well as providing an update related to ongoing conversion activities at the base.

Although the majority of the 38 community respondents did not express environmental, safety and/or health concerns, this may be due to the fact that respondents were generally more concerned with the conversion process ongoing under Base Realignment and Closure (BRAC)

activities. Based on their feedback, the appropriate outreach measures to take include providing a static source of basic information via a page on the ANG website and sending periodic email updates to the community. An ANG newsletter distributed to the community would also further enhance the effectiveness of community outreach efforts.

1.0 OVERVIEW OF COMMUNITY INVOLVEMENT PLAN

This Community Involvement Plan (CIP) has been prepared for the 174th Fighter Wing (FW) (hereafter referred to as the “base”) of the New York Air National Guard (ANG) located at Syracuse Hancock International Airport, Syracuse, New York (NY). This CIP serves as an update to the January 1991 Community Relations Plan (CRP) and is designed to facilitate two-way communication between the ANG and the communities surrounding the base regarding its environmental cleanup program. The base will utilize the community involvement activities outlined in this plan to keep residents informed of environmental conditions on site and to provide the opportunity for public involvement.

Appropriate and effective communication, as well as the timely exchange of information, is imperative for maintaining community understanding and support for the ANG and to ensure the success of the community outreach program. Base personnel should utilize this CIP to keep residents and the surrounding communities informed of ongoing and planned environmental cleanup activities at the base. This CIP also outlines how the base will provide the public with opportunities to express their concerns and receive feedback from the base.

Section 2 of this CIP provides a Site Description, which includes background and history of the base. Section 3 provides background on the Environmental Restoration Program (ERP) and an overview of cleanup activities that have occurred at the ERP sites. Section 4, Community Background, provides a community profile, history of community relations, community interview methodology and summary, and identifies priority issues that surfaced during the community interview process. Section 5, Community Involvement Objectives and Activities, presents the potential outreach activities intended to respond to community concerns and communication needs. Appendices A - F provide information on available resources and community interview response data. Appendix A is a detailed summary of the 38 Community Interviews and Responses. Appendix B lists Key Contacts associated with community outreach activities. Appendix C provides the current Federal, State, and Local Elected Officials for the Syracuse community. Appendix D lists Media Contacts in the area. Appendix E provides the name and address of Meeting and Repository Locations; and Appendix F includes a Glossary to aid in understanding the different elements of this plan.

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2.0 SITE DESCRIPTION

2.1 Base History

The 174th FW of the New York ANG is located at the Syracuse Hancock International Airport in Syracuse, New York, as shown in Figure 1. Other full-time tenants at the Syracuse Hancock International Airport include the 152nd Air Operations Group, 274th Air Support Operations Squadron, 222nd Command and Control Squadron, New York Central Region Counter Drug Headquarters, Civil Air Patrol, Military Entrance Processing Station, Columbia College, and the 27th Brigade Combat Team Headquarters and State Emergency Management Office.

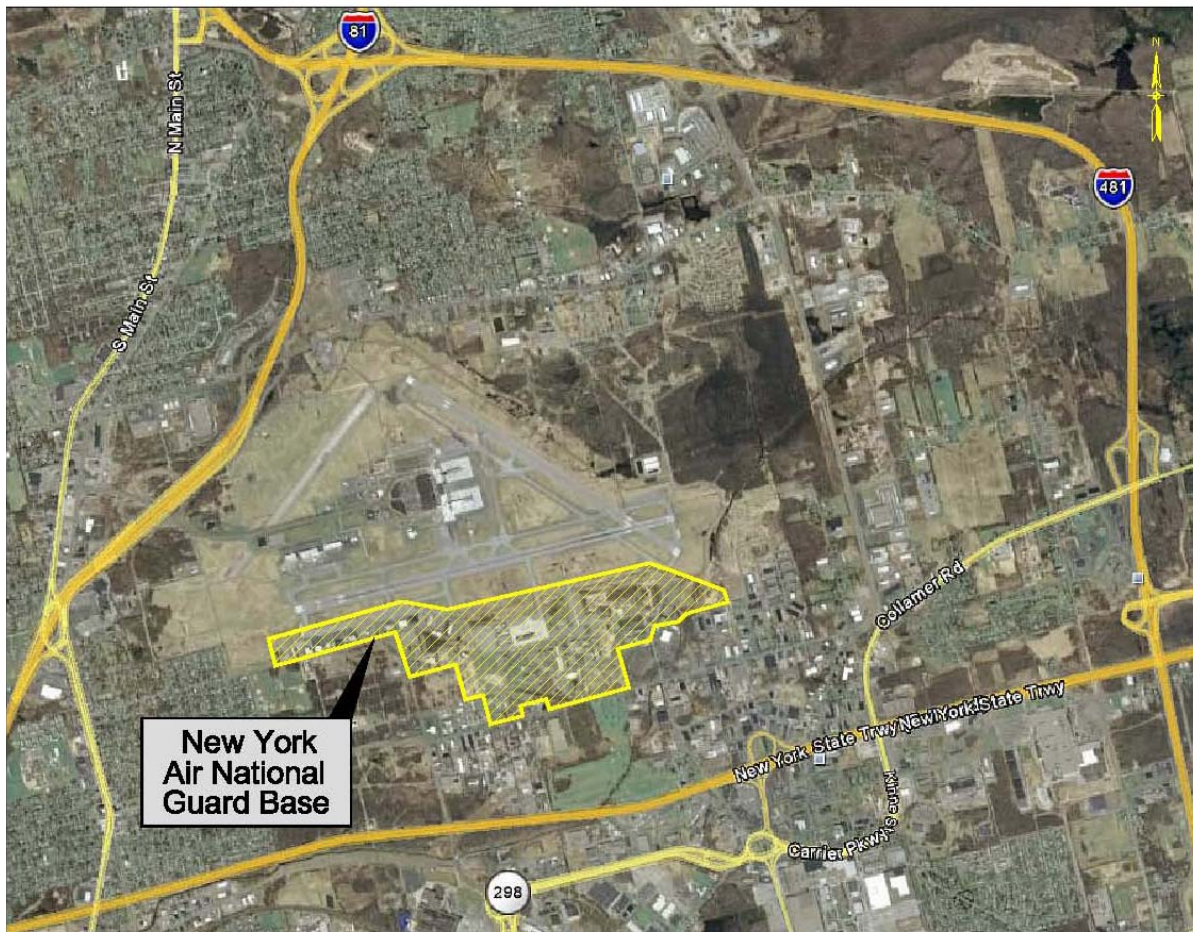


Figure 1. Location of the 174th Fighter Wing within Syracuse, New York

(Source: Image©2008 DigitalGlobe)

The Base currently occupies approximately 356 acres located immediately south of and adjacent to the Syracuse Hancock International Airport. The base was originally built and activated in 1942 as a staging area for warplanes (e.g., B17 and B24 bombers, and transports) bound for England and was known as the Syracuse Army Air Base. Army Air Forces left the base in 1946, and the 138th Fighter Squadron, New York ANG remained as the sole military occupant of the base. The 174th Fighter Wing was later established and included the 138th Fighter Squadron. The 138th Fighter Squadron received federal recognition on October 28, 1947 and became the first post-World War II National Guard flying unit in New York State. In 1947, the Squadron

began flying operations with Republic P47D “Thunderbolts.” In March 1948, the Squadron formally occupied an area of the deactivated Syracuse Army Air Base. In 1950, jet fighters (Republic F84Bs) were assigned to the 138th Fighter Squadron; these aircraft were replaced in 1952 by North American F52H “Mustangs.”

In October 1953, the Squadron's mission changed to air defense using Lockheed F94B “Starfighters,” and in 1958, the mission changed to ground attack using North American F-86H “Saberjets.”

In 1968 the unit's name was changed to the 138th Tactical Fighter Squadron. In 1970, Cessna A37Bs replaced the F86 fighters. In 1980, the 138th Tactical Fighter Squadron received the Fairchild-Republic A10A “Thunderbolt II.” In 1984, the Squadron became part of a larger unit, the 174th Tactical Fighter Wing.

Over the last few decades, both the mission and the physical size of the base have been reduced from that initially established during World War II. Large parcels of land in the northern portion of the facility have been transferred to Onondaga County to expand the Syracuse-Hancock International Airport. In 1988, the 174th FW received the F16A “Fighting Falcons.” In 1993, the unit began flying F16C/D “Fighting Falcons”.

The latest aircraft flown by the 174th FW is the MQ-9 “Reaper.” The MQ-9 is a remote piloted aircraft operated from the Ground Control Station at the base. The unit began flying Combat Air Patrols with the MQ-9 in November 2009, while continuing to fly the F-16 Fighting Falcon until March 2010. The 174th FW is currently conducting maintenance training for the MQ-9 within their Field Training Detachment.

The base supplies air reconnaissance for the eastern portion of the United States. Facilities on the base include hangers, support building offices and maintenance buildings. In support of its primary mission of providing military defense, the base has stored and used various types of hazardous materials during its history. Although some of the base's historical operations have resulted in the storage and use of hazardous materials, not all of these operations relate to ERP sites.

2.2 Site Location/Description

The 174th FW, New York ANG, is located south of the Syracuse Hancock International Airport in Onondaga County in central New York. The base is located approximately 5 miles north-northeast of Syracuse. The area surrounding the base includes portions of three townships and lies within an area bordered by three interstate highways: Route 90 to the south, Route 81 to the west, and Route 481 to the north and east. The townships in this area are Dewitt to the south, Cicero to the north, and Salina to the east. The location of the 174th FW is shown in Figure 2.



Figure 2. Location of the 174th Fighter Wing within New York

(Source: 2008 Microsoft Streets and Trips)

The downtown City of Syracuse, New York, is located southwest of the base. The surrounding land use is currently a mixture of transportation with the Syracuse Hancock International Airport, recreational (golf course), industrial, commercial, and residential. Lands to the west, north, and east of the base are used for military and transportation purposes that have operated for decades.

2.3 Base Environmental Setting

The Greater Syracuse area is a region of rolling hills, flat plains, lakes and streams. The City of Syracuse is located on a rise at the southern end of Onondaga Lake. The rolling terrain stretches north of the city for 30 miles, where it meets Lake Ontario. The Finger Lakes begin 20 miles to the southwest and Oneida Lake is eight miles northeast.

Syracuse has a four-season continental climate with marked seasonal changes. Geographical location, cyclonic systems, and cold air masses affect the Syracuse weather, making the winter cold with significant amounts of snow. During the summer and parts of spring and autumn, temperatures rise during the daytime but fall rapidly after sunset. Temperatures average 23 degrees Fahrenheit (°F) in January; 46°F in April; 70°F in July and 61°F in September.

The surface geology at the base consists of sediments deposited by glacial melt water overlying till deposited directly by glaciers. The sediments include silty clays, sands, and gravels and the underlying till consists of gravel, cobbles, and boulders. Bedrock in the area is of the Upper Silurian Vernon Formation (Lockheed Martin Corporation, 1997).

3.0 ENVIRONMENTAL RESTORATION PROGRAM

3.1 Background

The ANG's ERP is a nationwide effort to identify possible environmental contamination that may have resulted from past practices, accidents or incidents at ANG bases. This contamination would have occurred many years ago when limited knowledge existed of the potential environmental consequences associated with the routine disposal or accidental spills of waste oils, cleaning solvents, fuels, paint, paint thinners and similar potentially harmful substances. If contamination is discovered that may pose a threat to human health or the environment, steps are taken to minimize, contain, control, or when necessary, clean up that contamination.

The Defense Environmental Restoration Program (DERP), which funds the ERP, established the Military Munitions Response Program (MMRP) in 2001 to manage any environmental issues arising from unexploded ordnances and discarded munitions. Many military installations have both ERP and MMRP sites that are undergoing response actions. This CIP only addresses ERP sites, and not MMRP sites; therefore, the MMRP will not be discussed further in this document.

The ERP is divided into the following phases:

- Preliminary Assessment;
- Site Inspection;
- Engineering Evaluation/Cost Analysis;
- Remedial Investigation;
- Focused Feasibility Study/Feasibility Study;
- Proposed Plan and Decision Document or Record of Decision;
- Remedial Design/Remedial Action;
- Long Term Monitoring (if applicable);
- No Further Response Action Planned Decision Document; and
- Closure.

During a Preliminary Assessment (PA) it is determined if past operations may have contributed to some form of environmental contamination and where such contamination might exist. This determination is made primarily through interviews with past and present employees and an extensive review of historical and operational records. If the PA indicates some form of contamination may exist, a Site Inspection (SI) is conducted. This second phase involves actual on-site investigation, including analyses of soil, surface and groundwater samples. The purpose of the SI is to confirm the presence or absence of contaminants.

If at any time it is determined that contamination poses an immediate threat to human health or the environment, prompt action is taken to contain, control or minimize the contaminants. In the event that an immediate corrective action is necessary, a Focused Feasibility Study (FFS) or an

Engineering Evaluation/Cost Analysis (EE/CA) may be initiated to determine the appropriate actions to be taken.

If contamination is present and it does not pose an immediate threat, a Remedial Investigation (RI) is conducted. This phase involves far more detailed studies than those conducted in the SI. It is in the RI that an attempt is made to define the precise nature and extent of the contamination. During the RI, if groundwater is affected, extensive hydrogeological studies may be conducted to determine the direction and rate of contaminant movement. The Feasibility Study (FS) establishes cleanup criteria and develops cleanup alternatives. A number of alternatives are evaluated according to technical feasibility, cost effectiveness, regulatory requirements, environmental impact, and community desires. The ultimate purpose of the FS is to identify alternative remediation methods and recommend a preferred remedial or cleanup alternative.

In a Proposed Plan (PP) all of the remedial alternatives identified in the FS are presented and the preferred alternative is proposed. The PP is a brief document that provides the rationale for implementing the preferred remedial alternative. At this stage, public comments are formally sought. If public comments are submitted, or if oral comments are made at a public meeting, those comments and responses to them are documented in a Decision Document (DD) or Record of Decision (ROD). These documents identify the selected alternative (cleanup action) based on the technical assessment of conditions at the site and the consideration of public comments.

The Remedial Design (RD) and Remedial Action (RA) phase comes after a decision has been made, with public participation, on which cleanup alternative to pursue. This is the phase where actual on-site cleanup is conducted to eliminate or, at a minimum, reduce the contamination to a level that will protect public health and the environment. Often, to ensure success, sites are monitored for an extended period of time, under a Long Term Monitoring (LTM) program.

Once the ANG is confident that the cleanup has been successful and has the concurrence of state and/or federal regulatory officials, the site can be closed. Closing a site means that no further remedial action is required. At the conclusion of any phase within the program, with the concurrence of the appropriate state and, at times, federal regulatory agency, a DD can be issued to indicate any of the following:

- 1) That no potentially contaminated sites were identified during the PA and no further action is warranted; or
- 2) That studies of the sites confirm that no contamination is present or, if present, that no threat to human health or the environment is posed – therefore no further action is warranted; or
- 3) Following remedial action (site cleanup), the site meets or exceeds federal and state environmental standards and no further action is required.

Public participation throughout this process is actively encouraged by the ANG and the 174th FW. The concerns of local residents are an integral part of the decision-making process throughout the ERP.

3.2 Site History and Cleanup Activities

Past and present operations at the 174th FW have involved use and disposal of hazardous materials, including fuels, oils, paints and solvents. Fourteen sites (Sites 1 through 14) were identified in a July 1982 Phase I Records Search (equivalent to a PA). Seven of these sites were determined to pose little or no risk to human health; therefore, no further action was recommended for these sites.

Four sites (Sites 1 through 4) were included in a Phase II, Stage 1 Confirmation/Quantification Report (equivalent to a SI) that was completed in October 1984. Sites 1 through 4 were also included in a Phase II, Stage 2 Confirmation/Quantification Report (equivalent to a RI) completed in June 1989. Sites 5 through 7 were also included in the Phase II, Stage 2 Confirmation/Quantification Report (which was considered a SI for these sites since they were not included in the Phase II, Stage 1 Report).

NFRAP DDs were completed for Sites 1 through 7 in April 1990. The New York State Department of Environmental Conservation (NYSDEC) reviewed the NFRAP DD for Sites 2 and 3 and approved closure for these two sites in a 5 September 1995 letter.

A Supplementary SI was completed for Site 6 in June 1992 and recommended no further action. A Closure Report was completed for Site 6 in January 1997. The NYSDEC concurred with the no further action recommendation in the closure report in a 4 March 1997 letter and the New York State Department of Health documented closure approval in a 25 February 1997 letter.

A NFRAP letter for Sites 5 and 7 was prepared in 1997, and the sites were closed in 2002. A NFRAP letter for Sites 8 through 14 was submitted in May 1997; however, the NYSDEC documented that it did not concur with the NFRAP request for Sites 8 through 14 because the data was over 15 years old. NFRAP DDs were redeveloped and submitted for Sites 1 and 4 in 1998, but were not signed by the state. Sites 8, 12, 13, and 14 were considered closed in 2002.

In 2003, a Site Assessment (SA) investigation was conducted for Sites 1, 4, 9, 11, and Area of Concern (AOC)-P (currently Site 16). A SI Report followed the SA, and recommended no further action for Sites 9, 11, and AOC-P, and limited additional investigation for Sites 1 and 4. A letter prepared on 24 August 2004 by the NYSDEC provided concurrence with the SI Report recommendations, and Sites 9, 11, and AOC-P were closed. A Technical Memorandum for Sites 1 and 4 was completed in 2007 following additional investigation, and recommended no further action for Site 4 and no additional investigation at Site 1. The NYSDEC approved no further action for Sites 1 and 4; however, the state required that a Land Use Control Implementation Plan be prepared for these sites since they have contaminants above unrestricted use levels.

A Technical Memorandum was completed for Site 10 in 2005 and recommended no further action. NYSDEC agreed to the no further action recommendation in the Technical Memorandum on 16 May 2005.

One additional site (Site 15) was identified at the 174th FW in 1990. A SI was completed for Site 15 in June 1992, followed by completion of the Final RI in 1997, a FS in 2002, and a Remedial Action Plan in 2004. An Interim Remedial Action (IRA) Report for Site 15 was completed in

January 2007 documenting the further delineation of the area of contamination, which has moved off-site. The Report recommended additional investigation to determine the full extent of the down-gradient plume. A 2008 Final Action Memorandum proposed a removal action to perform source area soil removal. The 2008 Final Supplemental Remedial Investigation Technical Memorandum recommended that additional investigation be performed at Site 15 to determine the extent of the groundwater benzene, toluene, ethylbenzene, and xylene (BTEX) contamination. In July 2008, contaminated soil was excavated from Site 15 and an investigation of the groundwater contamination was begun. A Chemical Oxidation pilot study was completed at the site, and a Final Technical Memorandum and Final FFS were prepared. In 2010, Proposed Plan (PP) was completed and an additional round of groundwater sampling and vapor intrusion sampling was conducted. A full scale RA is planned for 2011 that includes direct-push injection of calcium peroxide in targeted migration pathway areas mostly located within the off-site plume, institutional controls, and monitored natural attenuation. Table 1 presents the status of each ERP site.

Table 1. Status of ERP Sites	
ERP Site	Status
1	NFRAP approved by NYSDEC but required a Land Use Control Implementation Plan.
2	Closed
3	Closed
4	NFRAP approved by NYSDEC but required a Land Use Control Implementation Plan.
5	NFRAP DD prepared in 1997. ANG considers the site to be closed.
6	Closed
7	NFRAP DD prepared in 1997. ANG considers the site to be closed.
8	The site was transferred to the City of Syracuse and is no longer the responsibility of the ANG.
9	Closed
10	Closed
11	Closed
12	The site was transferred to the City of Syracuse and then resold to a private owner for development.
13	Property was transferred to the City of Syracuse and then resold for development.
14	The SAGE Building and property was transferred to the Department of the Army in 2002 and is no longer the responsibility of the ANG. The Vehicle Maintenance Building was demolished in 2007 and the associated OWS and interior building trench drainage were removed. Tract 1 of the ANG property was transferred to the City of Syracuse; all OWSs were removed from the property prior to acquisition by the City for subsequent redevelopment.
15	Active Remediation
16	Closed

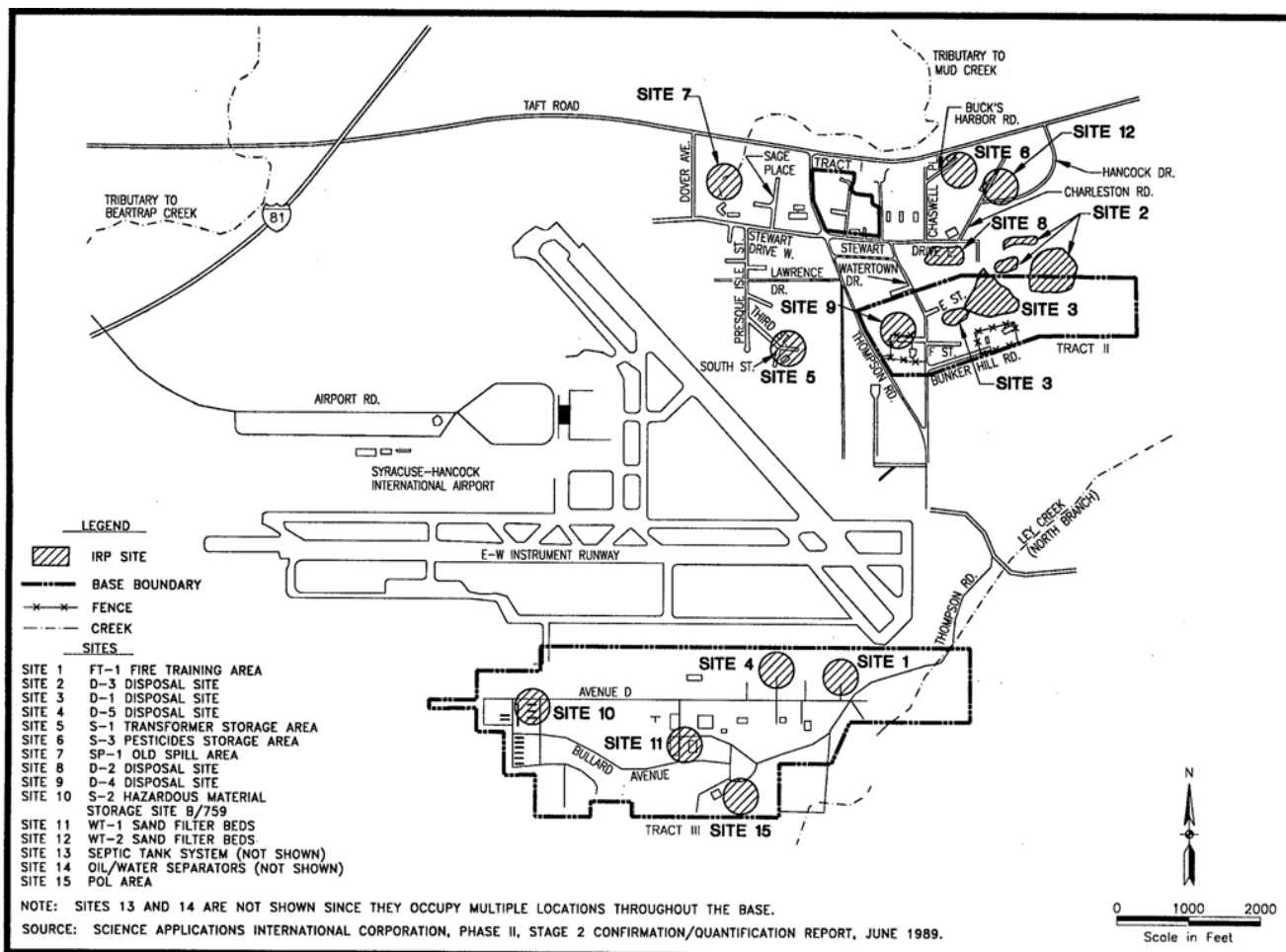


Figure 3. Location of the Identified Sites at the 174th Fighter Wing within Syracuse, New York

(Source: 1991 NY Air National Guard Community Relations Plan)

3.2.1 Site 1: Fire Training Area (FT-1)

Site 1, the Fire Training Area, is located approximately 1,500 feet south of the east-west runway and 1,250 feet west of the north branch of Ley Creek. The site occupies 0.75 acre and is bounded to the north by an earthen berm. The burn pit is an old concrete aircraft parking area with no curb or barrier to prevent fuel and water from running off into the surrounding soil. Site 1 was used for firefighting training exercises from 1948 to 1985. Approximately 100 to 150 gallons of waste fuels (including waste oils, solvents, paint thinners, and JP-4) were used during each training exercise; training was conducted at least once per month. From the late 1970s to 1985, JP-4 was the only fuel used.

Site 1 was identified in a July 1982 Phase I Records Search (equivalent to a PA). Due to the visual evidence of waste oil residue in the soil, the report recommended additional investigation for the site. A Phase II, Stage 1 Confirmation/Quantification Report (equivalent to a SI) was completed in October 1984. Results of the Phase II, Stage 1 Confirmation/Quantification Report indicated concentrations of oil in sediment, but no apparent groundwater contamination. Further investigation was recommended for Site 1.

A Phase II, Stage 2 Confirmation/Quantification Report (equivalent to a RI) was completed in June 1989 for Site 1. Lead, methylene chloride, and total petroleum hydrocarbons (TPH) were detected in groundwater, surface water, and soil samples taken at the site; however, the report concluded that the identified contaminants were at concentrations that pose no threat to human health or the environment. A NFRAP DD was completed for Site 1 in April 1990. The NYSDEC did not concur with the no further action recommendation.

In 2003, a SA was conducted for Site 1. The follow-up SI Report recommended limited additional investigation for Site 1. A Technical Memorandum was completed for Site 1 in 2007 following additional investigation, and recommended no additional investigation at Site 1. Site 1 was approved for no further action by the NYSDEC; however, the state required that a Land Use Control Implementation Plan be prepared for this site since contaminants are above unrestricted use levels.

3.2.2 Site 2: Disposal Site (D-3)

Site 2 consists of three separate areas located southwest of the housing area. The site is approximately 12 acres in size and was used from the 1950s to 1979 as a disposal area for general refuse, construction debris, minor quantities of miscellaneous hazardous waste (e.g., liquid paint residues), and sanitary waste treatment sludge. Site 2 is covered with several feet of soil and vegetation.

Site 2 was identified during a July 1982 Phase I Records Search. Due to the reported past waste disposal activities additional investigation was recommended for Site 2. Analytical results from an October 1984 Phase II, Stage 1 Confirmation/Quantification Report were considered inadequate and further investigation was recommended for the site. A June 1989 Phase II, Stage 2 Confirmation Quantification Report detected no contaminants in surface water; arsenic, chloroform, chromium, and zinc were detected in groundwater; arsenic, chromium, lead, and zinc were detected in sediment samples. The report concluded that no site-related contamination posed a threat to human health of the environment. A NFRAP DD was prepared in April 1990 for Site 2, and the NYSDEC approved closure for this site in a letter dated 5 September 1995. Site 2 is considered closed.

3.2.3 Site 3: Disposal Site (D-1)

Site 3 covers approximately 10 acres and is located east of Watertown Road and south of Stewart Drive. In the late 1950s and early 1960s, two settling ponds at the site were used to treat sanitary waste. The July 1982 Phase I Records Search indicated that minor quantities of pesticide sludge may have settled out in the ponds during the treatment of sanitary waste. Site 3 was also used from the 1960s to 1974 to dispose of general refuse, construction debris, and minor quantities of hazardous waste (e.g., paint thinner residues and partially empty drums of waste solvents and pesticides). The site is covered with several feet of soil and vegetation.

Site 3 was identified during the July 1982 Phase I Records Search. The report recommended additional investigation due to the past activities at the site. Analytical results from an October 1984 Phase II, Stage 1 Confirmation/Quantification Report were considered inadequate and further investigation was recommended for the site. A June 1989 Phase II, Stage 2 Confirmation

Quantification Report detected arsenic, chloroform, manganese, and methyl chloride in groundwater samples collected from Site 3; however, the report concluded that contaminant levels did not pose a threat to human health or the environment. A NFRAP DD was prepared in April 1990 for Site 3, and the NYSDEC approved closure for this site in a letter dated 5 September 1995. Site 3 is considered closed.

3.2.4 Site 4: Disposal Site (D-5)

Site 4 is located approximately 350 feet south of the Syracuse Hancock International Airport and 3,000 feet west of Ley Creek. The site occupies approximately 0.35 acre and surrounds an old aircraft parking area that is currently used as an engine test pad. Site 4 was used from 1950 to 1976 to dispose of construction debris, ammunition boxes, sod, empty drums, and possibly a few drums containing hazardous materials (e.g., solvents and thinners). The site is covered with approximately two feet of soil and vegetation.

Site 4 was identified in the July 1982 Phase I Records Search. The report recommended additional investigation due to the past activities at the site and potential for contaminant migration. Analytical results from an October 1984 Phase II, Stage 1 Confirmation/Quantification Report were considered inadequate and further investigation was recommended for the site. A June 1989 Phase II, Stage 2 Confirmation Quantification Report detected metals and halogenated volatile organic compounds (VOCs) in groundwater and surface water, and metals and TPH were detected in sediment samples. The report concluded that concentrations of these contaminants were not related to activities at the site. A NFRAP DD for Site 4 was prepared in April 1990. The NYSDEC did not concur with the no further action recommendation.

In 2003, a SA was conducted for Site 4. The follow-up SI Report recommended limited additional investigation for Site 4. A Technical Memorandum was completed for Site 4 in 2007 following additional investigation; Site 4 was approved for no further action by the NYSDEC; however, the state required that a Land Use Control Implementation Plan be prepared for this site since contaminants are above unrestricted use levels.

3.2.5 Site 5: Transformer Storage Area (S-1)

Site 5 is located approximately 125 feet northwest of the Syracuse Hancock International Airport at the corner of South and Third Streets. The site occupies approximately 0.1 acre of property that has been transferred to the Onondaga County for airport expansion. Site 5 was used from 1976 to 1980 to store up to nine electrical transformers at a time. Leaks from transformers stored at the site occurred during this period. Two of the transformers stored at Site 5 contained polychlorinated bi-phenyls (PCBs). In 1980, the PCB-contaminated transformers were transferred from Site 5 to Site 10.

Site 5 was identified in the July 1982 Phase I Records Search. The report recommended additional investigation due to known leaks that occurred in the past at the site. A June 1989 Phase II, Stage 2 Confirmation Quantification Report performed at Site 5 detected TPH in soil samples; however, the report concluded that the identified soil contamination did not pose a threat to human health or the environment. A NFRAP DD for Site 5 was prepared in April 1990. The NYSDEC did not concur with the no further action recommendation.

A NFRAP DD was prepared for Site 5 again in 1997. The site was considered closed in October 2002.

3.2.6 Site 6: Pesticide Storage Area (S-3)

Site 6 is located in the northwest corner of the base, immediately adjacent to the location of the former entomology shop, near Bucks Harbor Road. A military housing area is located approximately 1,000 feet to the east of the site, and another residential area is approximately 0.5 mile west of the site. The site covers approximately 0.1 acre and formerly included a 500-gallon underground storage tank (UST). Site 6 was used from 1975 to 1985 to store rinse water from pesticide containers and equipment cleaning activities as well as wash water from entomology shop operations. The UST was suspected to have leaked into the surrounding soil and groundwater. The UST was subject to infiltration in wet weather and drained during dry weather. The UST was removed in November 1989. The area surrounding the former tank is entirely fenced and not accessible to the general public.

Site 6 was identified in the July 1982 Phase I Records Search based on past activities at the site. The report recommended additional investigation for the site. Results from the June 1989 Phase II, Stage 2 Confirmation/Quantification Report indicated the presence of dichlorodiphenyltrichloroethane (DDT), dichlorodiphenyldichloroethylene (DDE), and heptachlor epoxide in trace concentrations in soil samples collected from Site 6. Additionally, Malathion was detected in UST water samples. The report concluded that the concentrations posed no threat to human health or the environment and recommended no further action for Site 6. In a letter dated 6 June 1990, the NYSDEC requested that groundwater at the site be investigated for the presence of pesticides.

A Supplementary SI was completed in June 1992 to collect additional groundwater samples as requested by NYSDEC. The Supplemental SI concluded that contaminant concentrations did not pose a threat to human health or the environment and no further action was recommended. A NFRAP DD was prepared for Site 6 in March 1992. In response to the NFRAP DD, the NYSDEC requested the installation of a background groundwater monitoring well and further soil sampling. These additional investigations were conducted during a September 1994 confirmatory study. Results of the confirmatory study suggested that, because soil contamination was found in 0-2 feet below ground surface (bgs) range, and no groundwater contamination was found, the contamination was introduced from a surface source and was not a result of leaks from the former UST. A Remedial Action Characterization Study was done in 1995. A Closure Report was completed for the site in January 1997. The NYSDEC concurred with the no further action recommendation in the closure report in a 4 March 1997 letter and the NYS Department of Health documented closure approval in a letter dated 25 February 1997. Site 6 is considered closed.

3.2.7 Site 7: Old Spill Area (SP-1)

Site 7 is located approximately 200 feet east of Dover Avenue and 250 feet north of Stewart Drive on property that was transferred to Onondaga County for airport expansion. Site 7 is a storm water outfall that drains surface water from the vicinity of the Semi-Automatic Ground Equipment (SAGE) complex and is approximately 0.1 acre in size. The storm water outfall

system is connected to a series of floor drains in Building 503, which is part of the SAGE complex. Minor discharges of fuel oil to the storm water system occurred from 1956 to 1973, when fuel oil was mistakenly pumped directly into the storm water system. In 1972, an existing 30,000-gallon tank was converted into an oil/water separator (OWS) to prevent fuel spill discharges. In 1973, fuel-contaminated soil from the storm water ditch was removed and replaced with clean fill material.

Site 7 was identified in the July 1982 Phase I Records Search. Due to past spills that occurred at this site, additional investigation was recommended for the site. A June 1989 Phase II, Stage 2 Confirmation/Quantification Report was completed. Analytical results from the report indicated trace levels of VOCs in surface water samples, and TPH and lead concentrations in sediment samples. The report concluded that these contaminant concentrations posed no risk to human health or the environment. A NFRAP DD was completed for Site 7 in April 1990. The NYSDEC did not concur with the no further action recommendation.

A NFRAP DD was prepared for Site 7 again in 1997. The site was considered closed in October 2002.

3.2.8 Site 8: Disposal Site (D-2)

Site 8 is located south of Stewart Drive near the Fire Station. The site occupies three acres, is 20 to 25 feet deep, and was originally a wetland area. Site 8 was used from 1970 to 1974 for the disposal of construction debris. In 1973, a waste slaked-lime material (with a pH of approximately 12) was disposed at this site.

Site 8 was identified in the July 1982 Phase I Records Search. The report concluded that Site 8 did not pose a potential for hazardous waste constituent migration and therefore did not pose a threat to human health or the environment. The site is covered with several feet of soil and vegetation.

A NFRAP letter for Site 8 was submitted in May 1997. In a 23 May 1997 letter, the NYSDEC documented that it did not concur with the no further action recommendation. The site was later transferred to the City of Syracuse and is no longer the responsibility of the ANG.

3.2.9 Site 9: Disposal Site (D-4)

Site 9 is located to the east of Thompson Road and south of Stewart Road. The site covers 0.06 acre and was used throughout the 1950s and 1960s for the disposal of construction debris.

Site 9 was identified in the July 1982 Phase I Records Search. The report concluded that Site 9 did not pose a potential for hazardous waste constituent migration and therefore did not pose a threat to human health or the environment. The site is covered with several feet of soil and vegetation.

A NFRAP letter for Site 9 was submitted in May 1997. In a 23 May 1997 letter, the NYSDEC documented that it did not concur with the no further action recommendation.

A 2003 SA was conducted for Site 9. A SI Report followed the SA, and recommended no further action for Site 9. A letter prepared on 24 August 2004 by the NYSDEC provided concurrence with the SI Report recommendations, and Site 9 was closed.

3.2.10 Site 10: Hazardous Materials Storage Site (S-2)

Site 10 is located at Building 759, on the corner of Avenue D and 16th Street. The site covers approximately 0.5 acre and has been used since 1980 as a storage area for transformers and empty pesticide containers. Building 759 has concrete floors and concrete secondary containment dike that surrounds the storage area. No known spills have occurred at the site.

Site 10 was identified in the July 1982 Phase I Records Search. The report concluded that Site 10 did not present a potential for hazardous waste constituent migration and therefore did not present a risk to human health or the environment.

A NFRAP letter for Site 10 was submitted in May 1997. In a 23 May 1997 letter, the NYSDEC documented that it did not concur with the no further action recommendation.

A Technical Memorandum was completed for Site 10 in 2005 and recommended no further action. The NYSDEC agreed to the no further action recommendation on 16 May 2005 and the site was considered closed.

3.2.11 Site 11: Sand Filter Beds (WT-1)

Site 11 is located south of Avenue D and covers approximately 0.5 acre. This site was used in the early 1950s to treat sanitary waste generated at Building 601.

Site 11 was identified in the June 1982 Phase I Records Search. The report concluded that Site 11 did not present a potential for hazardous waste constituent migration and therefore did not present a risk to human health or the environment.

A NFRAP letter for Site 11 was submitted in May 1997. In a 23 May 1997 letter, the NYSDEC documented that it did not concur with the no further action recommendation.

A 2003 SA was conducted for Site 11. A SI Report followed the SA, and recommended no further action for Site 11. A letter prepared on 24 August 2004 by the NYSDEC provided concurrence with the SI Report recommendations, and Site 11 was closed.

3.2.12 Site 12: Sand Filter Beds (WT-2)

Site 12 is located north of Hancock Drive and covers approximately 0.5 acre. This site was used in the late 1950s and early 1960s to treat sanitary wastes generated at the base.

Site 12 was identified in the June 1982 Phase I Records Search. The report concluded that Site 12 did not present a potential for hazardous waste constituent migration and therefore did not present a risk to human health or the environment.

A NFRAP letter for Site 12 was submitted in May 1997. In a 23 May 1997 letter, the NYSDEC documented that it did not concur with the no further action recommendation. The site was later transferred to the City of Syracuse and then resold to a private owner for development. Site 12 is no longer the responsibility of the ANG.

3.2.13 Site 13: Septic Tank System

Site 13 includes eight septic tanks located throughout the base. Each tank site covers an area of approximately 300 square feet. The septic tanks are no longer operational.

Site 13 was identified in the June 1982 Phase I records Search. The report concluded that Site 13 did not present a potential for hazardous waste constituent migration and therefore did not pose a threat to human health or the environment.

A NFRAP letter for Site 13 was submitted in May 1997. In a 23 May 1997 letter, the NYSDEC documented that it did not concur with the no further action recommendation. The site was later considered closed in March 2002 when the property was transferred to the City of Syracuse and resold for development.

3.2.14 Site 14: Oil Water Separators

Site 14 includes three OWSs located at the SAGE complex, the Vehicle Maintenance Building, and the New York ANG Complex (Tract I). Each OWS site covers approximately 300 square feet. Oil recovered from the OWSs is sold to an off-site contractor, and the wastewater is discharged to the sanitary sewer.

Site 14 was identified in the June 1982 Phase I Records Search. The report concluded that Site 14 did not present a potential for hazardous waste constituent migration and therefore did not pose a threat to human health or the environment.

A NFRAP letter for Site 14 was submitted in May 1997. In a 23 May 1997 letter, the NYSDEC documented that it did not concur with the no further action recommendation.

The SAGE Building and property was transferred to the Department of the Army in 2002 and is no longer the responsibility of the ANG. The Vehicle Maintenance Building was demolished in 2007 and the associated OWS and interior building trench drainage were removed. Tract 1 of the ANG property was transferred to the City of Syracuse; all OWSs were removed from the property prior to acquisition by the City for subsequent redevelopment.

3.2.15 Site 15: Petroleum, Oil, and Lubricants Area

Site 15 is located at the Jet Fuel Transfer Pump House, south of Kesel Road. The site is approximately 2.5 acres and consists of brush and wooded vegetation, a bermed area where a 215,000-gallon aboveground storage tank (AST) was formerly located, six 25,000-gallon USTs, and two drainage swales. One drainage swale borders the site along the north-northeast side, and a second drainage swale borders the west side of the site.

Site 15 was formerly used as the Petroleum, Oil, and Lubricants (POL) Area which was constructed in 1951 and decommissioned in 1999. Three spills have reportedly occurred at Site 15, including the release of PCBs, JP-4, and JP-8. All of these releases reportedly occurred in the area of the former pump house. The NYSDEC listed Site 15 as a Class 2 inactive hazardous waste site in 1998 due to the presence of PCB contamination in the soil. This contamination is believed to have been caused by leaky transformers related to operation of the jet fuel pump house.

Several site structures were removed in 2003 as part of a removal action for PCB-impacted soils. Structures removed include a transformer pad, the foundation of the former pump house, and associated underground structures consisting of six USTs, three drainage sumps, and an OWS. The OWS was installed in the 1950s but was never connected to a holding tank; all separated oil emptied into a dry well and eventually entered the soil.

In June 1990, a spill investigation was conducted at Site 15 that involved the installation of four groundwater monitoring wells and the collection of soil samples. PCBs were detected in soil samples and benzene was detected in groundwater samples. In a letter dated 6 June 1990, NYSDEC requested further study of Site 15 to determine the nature and extent of soil and groundwater contamination resulting from the April 1990 spill of approximately 3,850 gallons of JP-4, as well as from previous spills at this site.

A base POL Area SI Report was completed in June 1992. Analytical results indicated that soil samples contained concentrations of PCBs and groundwater samples contained benzene, ethylbenzene, xylenes, and TPH. No TPH or BTEX compounds were detected in surface water or sediment samples. The report recommended that contact with, and disturbance of, PCB-contaminated soil be restricted as much as possible until the site is remediated.

Remedial Investigation field work was conducted at Site 15 in 1995 and 1996. The purpose of the RI was to delineate the extent of affected groundwater based on concentrations of VOCs and semi volatile organic carbons (SVOCs). In May 1998, a treatability study was conducted. In September and October 1999, groundwater sampling points were installed to determine the extent of BTEX in groundwater at the site. A Data Gap Investigation (DGI) was conducted in 2000 and 2001 to provide additional data regarding the extent of BTEX-affected groundwater. Results of the DGI indicated that BTEX had migrated off-site at concentrations above applicable or relevant and appropriate requirements (ARARs).

In December 2001, a Time-critical Removal Action was initiated to remove PCB impacted soil. Approximately 2000 cubic yards of impacted soil was removed from an area of 12,000 square feet. The average excavation depth was 4 feet with a maximum excavation depth of 9 feet. Through testing, it was determined that there were no PCB impacts to groundwater in the excavation site.

The following year, in addition to removing the six 25,000-gallon USTs, the OWS, and two concrete underground sumps, approximately 5,000 cubic yards of BTEX contaminated soil was removed from an area of approximately 15,000 square feet. The average excavation depth was

9.5 feet. It should be noted that the removal area for the BTEX impacted soil largely overlapped the PCB removal area.

Results of additional remedial site investigations conducted at the site in 2005 and 2006 identified the need to remove petroleum-affected soil in the Site 15 source area to mitigate BTEX impacts to groundwater. Groundwater beneath portions of the base and the off-site neighborhood to the south and southeast contains BTEX compounds at levels exceeding NYSDEC ambient water quality standards. A 2008 Final Supplemental RI recommended an additional investigation be performed south and southeast of the Ram Tech Engineering Consultants (RamTech) property to determine if Ley Creek, located south and east of the RamTech property, has been affected by the BTEX plume. Ley Creek flows generally south-southwest and eventually flows into Onondaga Lake.

The August 2008 Final Removal Action Memorandum for Site 15 proposed a source area soil removal of approximately 2,000 cubic yards of petroleum-affected soil with off-site disposal. This alternative provided the most reliable short and long-term source control, provided the most effective protection of human health and environment, and required no long-term maintenance or monitoring.

Later in 2008, approximately 2,000 cubic yards of soil contaminated with BTEX compounds was removed from the site and transported off-site for disposal. Confirmation sampling was performed at the excavation floors and sidewalls to verify that sufficient impacted soil has been removed to meet cleanup goals. The soil was excavated to a depth of between 6 and 10 feet. Once the soil samples tested below the cleanup goals, the bottom of the excavation area was treated with Chem-Ox, a calcium peroxide agent used to stimulate the natural biological process and degrade contaminants. The excavated area was restored to its pre-existing condition. Excavated "clean" soil approved for use as backfill by NYSDEC was used to backfill the excavation and additional backfill soil was hauled to the site as necessary to refill the excavated area. At that time, an investigation was undertaken to delineate the off-site migration of contaminated groundwater.

Chem-Ox injections into the groundwater were conducted in late April 2009 to assist with natural attenuation of the BTEX in the groundwater. This injection was performed after a complete round of groundwater samples were taken from on and off-site monitoring wells as a baseline. The monitoring wells were sampled again in August 2009, approximately four months after the injections. Data from groundwater indicated that the BTEX plume had not reached Ley Creek and likely never would.

A FFS and Technical Memorandum were finalized to outline options for remediating the BTEX plume and document results of the Chem-Ox pilot study. Vapor intrusion sampling will also be conducted in the RamTech building as well as another round of groundwater sampling in 2010.

A PP was completed in 2010 and a full scale RA planned for 2011 that includes direct-push injection of calcium peroxide in targeted migration pathway areas mostly located within the off-site plume, institutional controls, and monitored natural attenuation.

3.2.16 Site 16: North of Tract II

Site 16, formerly AOC-P, is located in the northeastern portion of the base and consists of a low lying area with a short-lived stream located along the eastern side of D-3. Environmental investigations conducted during the SA for Site 16 included collecting sediment samples from along the middle portion of the channel. No surface water samples were collected. The sediment samples contained concentrations of various metals, including arsenic, which exceeded the relevant standards. The specific metals concentration were the highest in the furthest downgradient sample, suggesting that the downgradient portion of the channel may be an accumulation area.

Investigations performed as part of the SI Technical Memorandum for Sites 1, 4, 9, 11, and 16, completed in 2004, found no VOC or SVOC concentration exceeded the NYSDEC Recommended Soil Cleanup Objective (RSCO) criteria. Concentrations of arsenic and zinc in the sediment exceeded the established background standard, although these detections were not adversely affecting the surface water quality. No additional activities were recommended in for Site 16 since the soil does not appear to be adversely affecting the surface water. A letter prepared on 24 August 2004 by the NYSDEC provided concurrence with the SI Report recommendations, and Site 16 was closed.

3.2.17 MMRP Sites

3.2.17.1 Small Arms Range and Shooting-In Butt (SR001)

The Small Arms Range and Shooting-In Butt (SR001) is a 3.7 acre tract located in the south-central portion of Tract II and was identified on the 1942 Base Reservation Map and listed in a 1947 Facilities Survey. These facilities were used for training by Hancock Field personnel, the NY ANG, and local reserve units. Before use was discontinued in 2002, the small arms area was used for small caliber training by local police. The area is suspected to contain spent small arms munitions, likely in surface and subsurface soils. M-203 training rounds have been reported to have been used and are identified by zinc rings and blue ceramic casing.

Buildings 465 and 466, constructed in 1971, were also located in this area, just south of the range. Building 465 was used for gas mask training and Building 466 was used as a repair facility and for range training storage. Both buildings were demolished 15 October 2007. The site currently consists of vacant land with remnants of small arms facilities.

During a Comprehensive Site Evaluation (CSE) Phase I Site Assessment, no spent ammunition was found and no environmental sampling was conducted. Lead is the primary COC at the Small Arms Range. At the Shooting-In Butt where .50-caliber rounds were utilized, metals (lead, copper and iron) are the primary COCs.

The goals of the planned CSE Phase II will be to determine whether individual munitions response areas (MRAs) within Hancock Field ANGB warrant additional munitions response actions, and if so, provide recommendation for those actions, or to provide documentation for no further action (NFA). The 2010 CSE Phase II Final WP recommended surface and subsurface sampling to assess if munitions constituents (MCs) have been released to the environment.

3.2.17.2 Firing-In Butt (SR002)

The Firing-In Butt (SR002) is a 5.8 acre tract of land located in the eastern portion of Tract III. It was identified by Base personnel and clearly depicted in the 1956 aerial photograph of the base. It was thought to have been used rarely and has been inactive for an unknown but extended period of time. Its intended use was as a backstop for jammed rounds but was also used by F-86 aircraft for test firing and boresight alignment of up to .50-cal. ammunition. The area is suspected to contain spent small arms ammunition in surface and subsurface soils.

During a CSE Phase I Site Assessment, one spent, large-caliber round (presumably 3.5-inch rocket, HEAT, M28A2) was found in the top portion of railroad ties which form the top of the Firing-In Butt catch box and no environmental sampling was performed. At the Firing-In Butt, where .50-caliber rounds were utilized, metals (lead, copper, iron) are the primary COCs; however, explosives are a potential concern based on the discovery of the large caliber round during Phase I activities.

Due to the spent round discovered on-site, a CSE Phase II investigation was recommended. The goals of the future CSE Phase II will be to determine whether individual MRAs within Hancock Field ANGB warrant additional munitions response actions, and if so, provide recommendation for those actions, or to provide documentation for NFA. The 2010 CSE Phase II Final WP recommended including surface and subsurface sampling to assess if MCs have been released to the environment.

4.0 COMMUNITY BACKGROUND

4.1 Community Profile

The City of Syracuse is the county seat of Onondaga County. The city's population of 139,079 and the greater metropolitan area population of approximately 725,359 are based on estimates from 2009. Syracuse is the region's major metropolitan center and has been called the "Crossroads of New York State", with its central location and because the intersection of the State's two major interstate routes, the east-west New York State Thruway (Interstate 90) and north-south Interstate 81.

With Syracuse's well developed transportation network and central location, the City has become a major distribution center. Over 150 trucking and delivery companies are located in the Syracuse area, with railroad terminals located about 15 minutes from downtown Syracuse. Over two million travelers pass through Syracuse Hancock International Airport annually.

Onondaga County had an unemployment rate of 7.6% in December 2009. The median household income in Onondaga County is \$73,820 according to estimates for 2010.

4.2 History of Community Involvement

The New York ANG has established a relationship with the local community, leading to local trust of the ANG and their operations. During the community interviews, residents expressed appreciation that the base was communicating the ongoing environmental activities with the community. The base also has a history of communication and coordination with the local government. Many of those that were interviewed feel strongly about the value of having the ANG in their community.

4.3 Community Relations

Communication is essential to a community outreach program. Information in this section was obtained through in-person interviews with local residents, public officials, business and organization professionals, and others.

The results presented in this CIP reflect community views on environmental issues in general and the ERP at the base in particular. The interviews were conducted from 8-10 September 2008. A total of 38 community members were interviewed. See Appendix A for the list of interview questions and a detailed summary of the responses.

Thirty-two of the 38 respondents expressed positive feelings about having the 174th FW in their community. These respondents indicated that the base provides numerous benefits including serving as an important economic "engine" for the community, creating a strong family environment and sense of community, and providing a source of protection. One respondent mentioned that the base is always responsive to local emergencies, such as floods.

Fourteen of the interviewees indicated they were actively involved in local service organizations including the Aviation Board Education Foundation at the Airport, the State University of New York (SUNY) Center for Sustainable and Renewable Energy, the Metropolitan Development Association, Base Realignment and Closure (BRAC) meetings, the Employer Support of the

Guard and Reserve (ESGR) committee, neighborhood associations, Cub Scouts, and local church groups.

4.4 Key Community Concerns

The majority of respondents did not express environmental, safety and/or health concerns. Of the 38 respondents, 25 were aware of the environmental cleanup efforts underway at the base prior to the community interview.

Respondents with concerns expressed the following:

- Health and safety concerns related to the golf course (1).
- All risks must be mitigated appropriately (1), and all options must be explored to ensure cleanup is addressed properly (1).
- Concerns about environmental contaminants moving off-base and possibly onto residents' property (1).
- Toxins in the environment; one resident reported observing deformed animals and another resident questioned whether the apples in the trees on and near base were edible (2).
- More information for local residents is necessary (2).

Twenty-three respondents indicated they would contact the ANG directly if they had concerns. Of these 23 respondents, 14 mentioned the base Environmental Manager, three mentioned the Wing Commander, and two mentioned the base Civil Engineer. Other resources that people would turn to if they had concerns included: a community leader, the phone book, the NYSDEC, the Town of Salina, and online resources. Of the 38 interviewees, two people stated they did not know who they would contact if they had concerns.

4.5 Summary of Communication Needs

Thirty-eight members of the community in and around the base were interviewed to update the base's understanding of the community's familiarity with ERP issues. Another goal of the update is to determine what methods of communication would be most effective with the greatest variety of people. The results of the interviews are provided in a detailed summary in Appendix A.

Many respondents expressed their appreciation that the base is making an effort to inform local residents and businesses about the ongoing environmental activities, and asked for more information. One respondent specifically stated that they would like updates, whether good or bad news. Based on community feedback, the appropriate outreach measures to take include providing a static source of basic information via a page on the 174th FW website and/or sending an ANG email with a direct link to the website. A newsletter mailed to nearby residents and businesses as well as appropriate community leaders and groups would further enhance the effectiveness of community outreach efforts. One respondent suggested placing flyers at the local American Legion and Veterans of Foreign Wars (VFW) facilities prior to public meetings

and open houses. These activities would greatly improve the awareness level of the community at large.

Community members were particularly interested in the base's conversion from the F-16 to the MQ-9 aircraft. The majority of respondents were aware that the base will be undergoing conversion as part of the BRAC process and are interested in receiving updates related to the conversion. One respondent suggested adding a page to the base website that can be used to provide conversion updates as quickly as possible.

4.6 Non-ERP Issues Brought Up During the Interview Process

During the interview process, the people that are interviewed are intentionally asked open ended questions. This is done to help them to think about a variety of issues and to bring out thoughts they have with regard to the base, the environment, and their interest in getting information. Because individuals have little to no familiarity with the ERP in particular, they occasionally touch on topics outside of the program. The issues that were raised during the interviews that fall outside of the ERP are provided below.

- Concerns that there is a lot of unknown information regarding the aircraft conversion activities at the base;
- Concerns with aircraft noise levels; and
- Complaints of jet fuel and deicing fluid odors, particularly during the winter months.

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5.0 COMMUNITY INVOLVEMENT OBJECTIVES AND ACTIVITIES

The ANG and the base will coordinate as the lead agency responsible for the distribution of information regarding cleanup activities. As the lead agency, they will work together to provide the guidance and expertise for investigation and cleanup activities and will serve as the primary spokesperson after coordinating with the NYSDEC.

5.1 Objectives

The objectives of this CIP are to:

- Identify concerns that the local community may have regarding the investigation and cleanup of contamination, both on the base and beyond its boundaries;
- Establish effective and comprehensive mechanisms for informing the community and responding to community concerns; and
- Set forth a strategy for on-going, two-way communication between the base and the community.

The activities described below are recommended to implement a community involvement strategy that addresses the above objectives. This CIP is a dynamic document that will evolve as the investigation and clean projects progress.

5.2 Planned Outreach Activities

The following activities are based on the input received during the interview process or are required by ANG and U.S. Department of Defense (DoD) policy.

- Maintain an Information Repository (IR) and Administrative Record (AR) for the base. These documents should be available for the public to review and remain available until cleanup is completed.
- Consider creating a page on the base's existing website to provide updates related to the ERP and aircraft conversion activities.
- Compile an email list of interested individuals, groups, local media and federal, state and local officials, and send periodic emails as information on the website is updated.
- Prepare and distribute fact sheets, information bulletins, and news releases as needed to keep people informed about current activities at the base.
- Prepare and place display advertisements in local newspapers to announce public comment periods, public meetings, and other pertinent information.
- Create and foster a good working relationship with the surrounding community using local print and electronic media by issuing timely and informative news releases, responding promptly to inquiries, and providing access to project information and interview opportunities.
- Maintain copies of newspaper articles.

5.3 Completed Outreach Activities

A Community Relations Plan was written in January 1991. The base has organized community events, including Open Houses, Base Tours, speaking engagements, Air Shows, Aircraft Static Displays, Christmas and Easter parties, community meetings to support BRAC, and the Salvation Army Holiday Drive. Literature and current contact information is distributed to local libraries when appropriate. The base also conducts community outreach at the New York State Fair which boasts an attendance of approximately 1 million people.

A public meeting was held in September 2008 to allow the public an opportunity to comment on the EE/CA for Site 15. More recently, a public meeting was held on 9 September 2010. The PP for Site 15 was presented to the public and the public was given an opportunity to comment.

On 17 December 2009, Col. Kevin W. Bradley, 174FW Commander hosted a Media Open House to update the community on the Base's new MQ-9 Reaper Remotely Piloted Aircraft mission that started 1 December 2009. The media was brought to the MQ-9 Maintenance Field Training Detachment to conduct interviews with a pilot, sensor operator, and an intelligence officer. Reports of the new mission were seen throughout the community on local news stations and newspaper articles.

The public was invited to take part in the departure of the last F-16 aircrafts at the Base on 6 March 2010. The Base Commander gave a speech and then allowed the public to ask questions. The media was also invited to the event and reports of the F-16 aircraft send-off were seen throughout the community on local news stations and newspaper articles.

Appendix A Community Interview Questions and Responses

During the week of 8 September 2008, representatives from the New York Air National Guard (ANG) conducted 38 community interviews in Syracuse, New York. These interviews were conducted with residents in the vicinity of the base, members of the surrounding community, local businesses, and City and County officials.

1. How long have you lived (or worked) in this community?

Less Than One Year	1
1-5 Years	4
6-10 Years	4
11-15 Years	3
16-20 Years	5
21-25 Years	2
26-30 Years	5
31-35 Years	3
36-40 Years	1
41-45 Years	3
Greater Than 45 Years	7

2. How much do you know about Hancock Field Air National Guard base?

Sixteen respondents indicated they are very familiar with the base and know a lot about the activities and mission. Three respondents said that friends and neighbors work at the base, and they receive information from them. Two respondents said the base provides security, and another respondent indicated that they support the base's mission 100%. Three respondents have a basic understanding of the base, and one respondent specifically mentioned seeing television and newspaper reports on issues at the base. One respondent said that the local college provides educational benefits to the base, classes are offered at a reduced cost to ANG members. Eight respondents said they know very little to nothing about the base. Not all respondents replied to this question.

Have you or a family member ever worked at the base?

Yes – 13
No – 25

3. What are your thoughts on having the base here in the community?

Thirty-two respondents expressed positive feelings on having the base in the community. These respondents indicated that the base provides numerous benefits including providing an important economical “engine” for the community (11 respondents), creating a strong family environment and sense of community (8 respondents), and providing a source of protection

(3 respondents). Two respondents expressed that the base is essential for the mission of the country. One respondent mentioned that the base is always responsive to local emergencies, including floods. One respondent was pleased that the environmental contamination is being cleaned up.

There were three neutral responses, with interviewees indicating they had no complaints about the base.

Two respondents expressed concerns with aircraft noise levels, and one respondent complained of jet fuel and deicing fluid odors, particularly during the winter months.

4. Have you, or members of your family, participated in any activities at the Guard base?

Of the 38 interview participants, 28 have participated in base activities including base tours, Open Houses, Air Shows, Aircraft Static Displays, Christmas and Easter parties, community meetings to support Base Realignment and Closure (BRAC), the Employer Support of the Guard and Reserve (ESGR) committee, and the Salvation Army Holiday Drive.

5. Would you like updated information regarding the operations and upcoming conversion at the base?

Yes – 36

No – 2

One respondent who answered No indicated they already have close connections with the ongoing operations and receive updates directly from the base.

Would you like to be included on the mailing list if one were to be developed?

Yes – 29

No – 9

6. How do you currently get most of your information?

Radio	10
Television	27
Newspapers	21
Online	14
E-mail	5
Base Meetings	4
Word of mouth/friends	1
Environmental Protection Agency (EPA)	1

The primary source of information cited was television news with 27 respondents commenting that they receive news information from television, specifically WSTM Channel 3, WTVH Channel 5, WSYR Channel 9, and WTEN Channel 10. Twenty-one respondents

receive information from local newspapers, including the Post Standard, Herald, Penny Saver, Valley News, and Times Union. Ten respondents receive information from the radio, specifically National Public Radio (NPR), WSYR 570 AM, WNSS 1260 AM, WTKW 99.5 FM, WYYY 94.5 FM, and WBBS 104.7 FM. Of the fourteen respondents who receive news information online, several mentioned Syracuse.com, CNN.com, Google.com, Yahoo.com, NewYorkTimes.com, and BBC.com. One respondent specifically mentioned Aim Point, an online newsletter available at pentagon.mil.

Five respondents receive information via e-mails; four respondents receive information at Base meetings; one respondent gets information from friends; and one respondent receives the EPA Public Information lists.

7. How do you prefer to get information about conversion and environmental cleanup activities at the Base?

Of the respondents who would like to receive information related to conversion and cleanup activities at the Base, nineteen indicated they would like information available on a website, and fifteen preferred e-mail with a direct link to a website. The next most preferred methods included a newsletter (8), newspaper articles (5), television reports (4), public meetings (2), radio broadcasts (2), and environmental reports from the Base (1).

8. Prior to this conversation, were you aware that the base is undergoing a conversion from the F-16 to the MQ-9 or that there are ongoing environmental cleanup activities at the base?

In general, more community members were aware of the conversion activities than of the environmental cleanup activities ongoing at the base. Prior to this interview, 31 respondents were aware of the conversion activities and 25 were aware of the environmental cleanup activities.

How did you become aware of this?

Respondents became aware of the conversion activities at the base from television reports and newspaper articles, and word of mouth throughout the community.

Additional respondents became aware of the environmental cleanup activities directly from the base, specifically mentioning the Environmental Manager and the Wing Commander.

9. Do you have any concerns (environmental/safety/health/public) related to activities at the Guard base?

Yes – 7

No – 31

Respondents with concerns regarding the current environmental situation expressed the following:

- Health and safety concerns related to the golf course (1).
- All risks must be mitigated appropriately (1), and all options must be explored to ensure cleanup is addressed properly (1).
- Concerns about environmental contaminants moving off-base and possibly onto residents' property (1).
- Toxins in the environment; one resident reported observing deformed animals and another resident questioned whether the apples in the trees on and near base were edible (2).
- More information for local residents is necessary (2).

One respondent indicated that there is still a lot unknown regarding the conversion activities at the base.

Who would you turn to if you had concerns?

Twenty-three respondents indicated they would contact the ANG directly with concerns. Of these 23 respondents, 14 mentioned the base Environmental Manager, three mentioned they would contact the Wing Commander, and two mentioned the base Civil Engineer. Other resources that people would turn to included: a community leader (5 respondents); the phone book (3 respondents); the New York State Department of Environmental Conservation (NYSDEC) (2 respondents); the Town of Salina (1 respondent); and online resources (1 respondent).

Of the 38 interviewees, two people stated they did not know who they would contact with concerns.

10. Are officials at the base perceived as responsive to public concerns?

Yes – 29

No – 3

Unsure – 6

11. Have you participated in any public meetings or are you currently involved in civic affairs?

Of the 38 respondents, 14 indicated they currently participate or have participated in civic affairs. Community involvement organizations and activities engaged in by members of the interview group include:

- Aviation Board Education Foundation at the Airport
- Cub Scout Master
- SUNY Center for Sustainable and Renewable Energy
- Church groups
- Mattydale Community Blog
- Metropolitan Development Association
- ESGR Committee
- Base Community Relations luncheon

- Salvation Army Holiday Drive
- Red Cross
- 4-H
- Community Tax Council
- Heart of New York Foundation
- Economic development groups
- Syracuse Track Club
- Base BRAC meetings
- Greater Syracuse Chamber of Commerce

12. If the Guard holds a series of public meetings to provide information about the conversion and environmental cleanup activities to give people an opportunity to ask questions or communicate their concerns, would you be interested in attending this sort of meeting?

Yes – 24

No – 9

Maybe – 4

Community members provided the following suggestions for a convenient location for a public meeting:

- Base Headquarters building or other on-base location
- Local church
- Cicero-North Syracuse High School
- Jamesville Elementary School
- Salina Free Library
- Large auditorium
- North Chadaga Public Library
- Onadaga Center
- American Legion
- Fire Station
- Fairgrounds
- Salina Civic Center
- Syracuse Chamber of Commerce

13. How frequently would you like to receive information?

Of those respondents who would like to receive information relating to the base environmental activities, the majority of respondents indicated they would like to receive information on an as needed, or event driven, basis (25). The next most preferred frequency was quarterly (6), annually (2), semi-annually (2), and monthly (1).

14. Can you suggest other community members or local groups to be interviewed or included on our mailing list?

Respondents suggested that the following individuals or groups be interviewed:

- City of Syracuse Department of Aviation
- Local residents
- Salina Senior Citizens Center
- Community Action Information Board (CAIB)
- Local restaurants
- Atlantic States Legal Foundation
- Citizen's Campaign for the Environment
- O&B Consultants
- C&S Engineering
- Salina Town Supervisor
- Town of Dewitt
- Salvation Army
- Local police department
- Air and Waste Management Association
- Renaissance Hotel
- Onadaga County government
- Child Care Solutions
- Lockheed Martin
- ESGR Committee
- Elected officials
- Mattydale community leaders

15. Is there anything else you would like to add?

Respondents generally expressed support and encouragement toward the ANG and indicated that the Guard is an important community partner. Many respondents expressed their appreciation that the base is making an effort to inform local residents and businesses about the ongoing environmental activities, and asked for more information. One respondent specifically stated that they would like updates as quickly as possible, whether good or bad news. One respondent suggested placing flyers at the local American Legion and Veterans of Foreign Wars (VFW) facilities prior to public meetings and open houses.

The majority of respondents were aware that the base will be undergoing conversion as part of the BRAC process and are particularly interested in receiving updates related to the conversion. One respondent suggested a website that can be used to provide conversion updates as quickly as possible.

Appendix B Key Contacts

New York Air National Guard

Mr. Brent Lynch, Environmental Manager
174th Fighter Wing
New York Air National Guard
6001 E. Molloy Road
Syracuse, NY 13211-7099
(315) 233-2111
brent.lynch@ang.af.mil

U.S. Environmental Protection Agency, Region II

Jim Reidy
Hazardous Waste – Corrective Action
290 Broadway
New York, New York 10007-1866
(212) 637-4172

New York Department of Environmental Conservation

Robert Corcoran, P.E.
New York Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau A, Section C
625 Broadway, 11th Floor
Albany, NY 12233-7015
(518) 402-9620

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Appendix C Federal, State, and Local Elected Officials

Members of Congress and Other Elected Officials

U.S. Senator Kirsten Gillibrand

Washington DC Office
478 Russell Senate Office Building
Washington, DC 20510
Phone: (202) 224-4451
Fax: (202) 228-0282

Syracuse/Central New York Office

James M. Hanley Federal Building
100 South Clinton Street, Room 1470
P.O. Box 7378
Syracuse, NY 13261-7378
Phone: (315) 448-0470
Fax: (315) 448-0476

U.S. Representative Ann Marie Buerkle

25th District of New York
Washington DC Office
United States House of Representatives
1630 Longworth HOB
Washington, DC 20515
Phone: (202) 225-3701
Fax: (202) 225-4042

Syracuse Office

100 South Clinton Street, Rm 1340
P.O. Box 7306
Syracuse, NY 13261
Phone: (315) 423-5657
Fax: (315) 423-5669

Governor Andrew Cuomo

State Capitol
Albany, NY 12224
Phone: (518) 747-8390

U.S. Senator Charles Schumer

Washington DC Office
313 Hart Senate Building
Washington, DC 20510
Phone: (202) 224-6542
Fax: (202) 228-3027

Syracuse Office

James M. Hanley Federal Building
100 South Clinton Street, Room 841
Syracuse, NY 13261-7318
Phone: (315) 423-5471
Fax: (315) 423-5158

State Senator David J. Valesky

Office of Senator David J. Valesky
805 State Office Building
333 East Washington Street
Syracuse, New York 13202
Phone: (315) 478-8745
Fax: (315) 474-3804

Mayor Stephanie A. Miner

233 East Washington Street
203 City Hall
Syracuse, New York 13202-1473
(315) 448-8005
Fax (315) 448-8067
mayor@ci.syracuse.ny.us

City Clerk John P. Copanas

231 City Hall
Syracuse, NY 13202
Phone: (315) 448-8216
Fax: (315) 448-8489

Onondaga County Executive Joanne Mahoney

John H. Mulroy Civic Center, 14th Floor
Syracuse, NY 13202
Phone: (315) 435-3516
Fax: (315) 435-8582

Appendix D Media Contacts

Local Print and Electronic News Media

Base Website

<http://www.174fw.ang.af.mil/>

Newspapers

The Post-Standard (315) 370-0011
Clinton Square
P.O. Box 4915
Syracuse, NY 13221-4915

Scotsman Pennysaver Classifieds (315) 472-6889
750 W Genesee St
Syracuse, NY 13204

Valley News (315) 422-7874
932 Spencer St
Syracuse, NY 13204

Albany Times-Union (518) 454-5694
Box 15000
News Plaza
Albany NY 12212

The Auburn Citizen (315) 253-5311
25 Dill Street
Auburn, NY 13021

The Oneida Daily Dispatch (315) 363-5100
130 Broad Street
Oneida NY 13421

Utica Observer-Dispatch

Television Networks

WSTM Channel 3 (315) 447-9400
1030 James Street
Syracuse, NY 13203

WSYR Channel 9 (315) 446-9999
5904 Bridge Street
East Syracuse, NY 13057

News 10 Now (315) 234-1000
815 Erie Blvd. East
Syracuse, NY 13210

Radio Stations

WSYR 570 AM (315) 472-9797
Bridgewater Place
500 Plum Street, Suite 100
Syracuse, NY 13204

WNSS 1260 AM (315) 472-0200
1064 James Street
Syracuse, NY 13203

WYYY 94.5 FM (315) 472-9797
Bridgewater Place
500 Plum Street, Suite 100
Syracuse, NY 13204

WTKW 99.5 FM (315) 472-9111
235 Walton Street
Syracuse, NY 13202

WBBS 104.7 FM (315) 472-9797
Bridgewater Place
500 Plum Street, Suite 100
Syracuse, NY 13204

WAER 88.3 FM (315) 443-9237
795 Ostrom Avenue
Syracuse, NY 13244

Electronic Media

Syracuse.com (315) 251-1810
Syracuse Online, LLC.
5795 Widewaters Parkway
Syracuse, NY 13214

Appendix E Meeting and Repository Locations

Administrative Record:

174th Fighter Wing
New York Air National Guard
6001 E. Molloy Road
Syracuse, NY 13211-7099
Phone: (315) 233-2111

Information Repository:

Onondaga Public Library
447 South Salina Street
Syracuse, NY 13202
Phone: (315) 435-1900

Public Meeting Location:

Suggestions for a public meeting location include:

Base Headquarters
New York Air National Guard
6001 E. Molloy Road
Syracuse, NY 13211-7099
Phone: (315) 233-2111

Cicero-North Syracuse High School
6002 Route 31
Cicero, NY 13039
Phone: (315) 218-4100

Salina Free Library
100 Belmont St.
Mattydale, NY 13211
Phone: (315) 454.4524

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Appendix F Glossary

Glossary of Terms

Administrative Record (AR) – A file which contains all information (correspondence and documents) used by the lead agency to make its decision on the selection of a response action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or the IRP.

Alternative – A combination of technical and administrative methods developed and evaluated in a Feasibility Study, which can be used to address contamination at a site.

Cleanup – Actions taken to deal with a release or threatened release of chemicals that could affect public health or the environment. The term is often used broadly to describe various response actions or phases of removal or remedial responses.

Comment Period – A time period for the public to review and comment on various documents and proposed actions. At certain points in the cleanup process, a 30-day comment period is provided for the community so that they may review and comment on a proposed plan of action.

Community Involvement Plan (CIP) – Formal plan for community involvement activities at a site undergoing investigation and cleanup at an ERP site. The CIP is designed to ensure opportunities for public involvement at the site, determine activities that will provide for such involvement, and allow citizens the opportunity to learn about the site.

Decision Document (DD) – A formal published record of a significant decision made by the Air National Guard regarding a site being studied under the ERP. A DD, typically, is prepared when no further action is required at a specific site or when a method of remediation has been selected.

Engineering Evaluation/Cost Analysis (EE/CA) – Describes the application of engineering and economic criteria to select the technology approach that most cost-effectively meets remedial objectives.

Environmental Restoration Program (ERP) – An initiative to inspect Air National Guard installations, nationwide, to determine if, as a result of past practices, accidents or incidents; any chemicals have caused environmental contamination. The terms ERP and Installation Restoration Program (IRP) are sometimes used interchangeably. Any such contamination would have occurred many years ago when limited knowledge existed of the potential environmental consequences associated with the routine use and disposal or accidental spills of waste oils, cleaning solvents, fuels and other substances now known to be potentially harmful. If a site is discovered where contamination posing a threat to human health or the environment is present, steps are taken to contain, control or clean up that site.

Feasibility Study (FS) – An in-depth study conducted using data gathered under the RI. This study establishes cleanup objectives for a response action and from that a number of alternatives

for the response are presented. The alternatives are developed based upon factors such as public health, environmental impacts, practicality of implementation, and cost.

Focused Feasibility Study (FFS) – When an immediate corrective action is necessary at a contaminated site, to protect public health or the environment, a FFS is promptly initiated to determine the appropriate rapid response measure to be implemented.

Groundwater – Water found beneath the ground’s surface, it permeates subsurface soil, sand and other porous substances.

Hydrogeology – The science of examining and characterizing the way groundwater moves and behaves.

Information Repository (IR) – A place where current information related to the ERP is available for public review. To facilitate public access to this information, a public library located near the base usually serves as the location for an IR.

Monitoring Well – A specific type of well that is drilled on or near a suspected contaminated site. These monitoring wells allow scientists to extract groundwater, from specific depths, for analyses to determine if the water is contaminated, the type of chemical involved, if any, and the level of the contamination. These wells also assist in determining the flow direction of groundwater and the speed of the flow, thus indicating the rate any contamination in the water might be spreading or migrating to other areas. These wells also assist in determining the actual physical area of a contaminated site. During cleanup of a site, groundwater extracted from these wells is analyzed to determine the rate at which the level of contamination is diminishing – an indication of how well the selected cleanup alternative is working and how long it will take for the process to return the groundwater to an acceptable state.

Preliminary Assessment (PA) – The first phase of the ERP, primarily consisting of interviews of past and present installation employees and a review of historical and operational records in an effort to determine if there is any reason to believe environmental contamination exists on the installation. If, as a result of this assessment, it is determined that further study is needed, a SI is conducted.

Record of Decision (ROD) – A formal published record of a significant decision made by the Air National Guard regarding a site being studied under the ERP. A ROD, typically, is prepared when cleanup action is required at a specific site.

Remedial Action (RA) – The actual implementation of a chosen action in order to contain, control, minimize, reduce or clean up contamination at a given site.

Remedial Design (RD) – The technical specifications and engineering design for the RA.

Remedial Investigation/Feasibility Study (RI/FS) – An overlapping interactive investigation and analytical study conducted for a contaminated site to determine the type(s) and the extent of

the contamination present, and to establish criteria for site cleanup. It is in this phase that cleanup alternatives are identified and evaluated.

Site Inspection (SI) – The second phase of the ERP, this phase is entered if it is determined in a PA that there may be contamination at a particular site. In this phase actual on-scene inspection and analyses are used to determine if contamination does or does not exist.

Solvent – A liquid substance that is capable of dissolving or dispersing one or more other substances.

Surface Water – Water found above ground, as opposed to groundwater, which is water found below the surface of the Earth. Surface water includes rivers, lakes, creeks, streams and puddles.

U.S. Environmental Protection Agency (EPA) – Is the primary federal agency responsible for implementing federal environmental laws and regulations and monitoring compliance with those laws and regulations.

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