

**EPA Superfund
Record of Decision:**

**GRIFFISS AIR FORCE BASE (11 AREAS)
EPA ID: NY4571924451
OU 22
ROME, NY
09/27/2001**

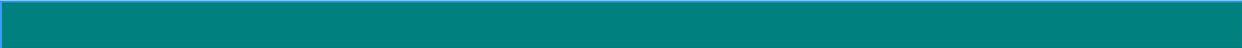
**Final Record of Decision for the
Building 255 Drywell Area of
Concern (DP-13) at the
Former Griffiss Air Force Base
Rome, New York**

June 2001

AIR FORCE BASE CONVERSION AGENCY

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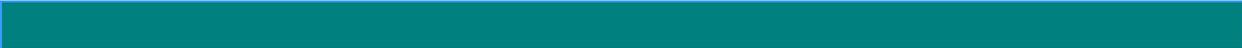
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List of Abbreviations and Acronyms

AFB	Air Force Base
AFBCA	Air Force Base Conversion Agency
AOC	Area of Concern
ARAR	Applicable or Relevant and Appropriate Requirement
ATSDR	Agency for Toxic Substances and Disease Registry
BGS	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COPC	chemicals of potential concern
DFAS	Defense Finance and Accounting Services
DoD	Department of Defense
EPA	United States Environmental Protection Agency
FFA	Federal Facility Agreement
GPR	ground-penetrating radar
HI	Hazard Index
HQ	Hazard Quotient
IRP	Installation Restoration Program
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEADS	Northeast Air Defense Sector
NPL	National Priorities List
NYANG	New York Air National Guard
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
PCB	polychlorinated biphenyl
RAB	Restoration Advisory Board
RI	Remedial Investigation
ROD	Record of Decision
SAC	Strategic Air Command
SVOC	semivolatile organic compound
TAGM	Technical and Administrative Guidance Memorandum
TBC	To-Be-Considered
VOC	volatile organic compound

1.1 Site Name and Location

The Building 255 Drywell Area of Concern (AOC) (site identification designation DP-13) is located at the former Griffiss Air Force Base (AFB) in Rome, Oneida County, New York.

1.2 Statement of Basis and Purpose

This Record of Decision (ROD) presents the no further action for soil with land use restrictions alternative for the Building 255 Drywell AOC at the former Griffiss AFB. This alternative has been chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (USEPA 1980), as amended by the Superfund Amendment and Reauthorization Act (SARA) (USEPA 1986), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (USEPA 1968). The Air Force Base Conversion Agency (AFBCA), the United States Environmental Protection Agency (EPA), and the New York State Department of Environmental Conservation (NYSDEC) have adopted this ROD through joint agreement. This decision is based on the administrative record file for this site.

1.3 Description of Selected Remedy

The selected remedy for the Building 255 Drywell AOC is no further action for soil with land use restrictions for industrial/commercial use. The agencies will perform

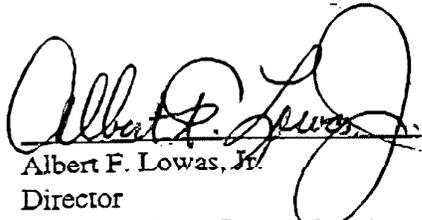
joint 5-year reviews to ensure that future land use is in compliance with the transfer documents (deed) and consistent with the risk assessment for industrial/commercial use.

1.4 Declaration Statement

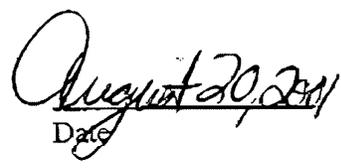
The AFBCA, EPA, and NYSDEC have determined that no further action for soil with land use restrictions are warranted for the Building 255 Drywell AOC. An interim remedial action was performed at this site in which the majority of soil contamination found during the remedial investigation was removed. The remaining chemicals detected in the soil do not exceed standards and guidance values and the known source of groundwater contamination has been removed. The concentrations of the contaminants remaining in the site soil following the remedial action do not pose a current or potential threat to public health or the environment provided the property is used for industrial/commercial use with groundwater use restrictions. Groundwater at the Building 255 AOC is being further evaluated as part of the On Base Groundwater AOC Tin City Operable Unit. Future landowners will be bound, through transfer documents (deed), to the industrial/commercial reuse of the property.

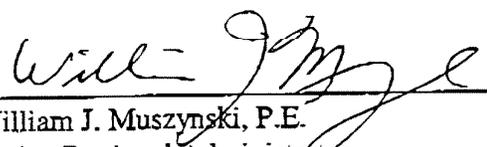
1.5 Signature of Adoption of the Remedy

On the basis of the remedial investigations performed at the Building 255 Drywell AOC there is no evidence that residual contamination at this site poses a current or future potential threat to human health or the environment when used for industrial/commercial purposes. Future landowners will be bound, through transfer documents (deed), to the industrial/commercial reuse of the property. The New York State Department of Environmental Conservation has concurred with the selected remedial action presented in this Record of Decision.

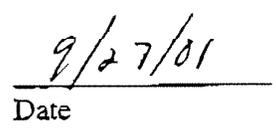

Albert F. Lowas, Jr.
Director

Air Force Base Conversion Agency


Date


William J. Muszynski, P.E.

Acting Regional Administrator
United States Environmental Protection Agency, Region 2


Date

2.1 Site Name, Location, and Brief Description

The Building 255 Drywell Area of Concern (AOC) (site identification designation DP-13) is located at the former Griffiss Air Force Base (AFB) in Rome, Oneida County, New York.

The Building 255 AOC is located in the west-central portion of the base (see Figure 1). The suspected drywells associated with this site included several near Building 255 and other nearby buildings, including Buildings 215/216, 222, 223, and the former location of Building 230 (see Figure 2).

2.2 Site History and Investigation Activities

The Former Griffiss AFB Operational History

The mission of the former Griffiss AFB varied over the years. The base was activated on February 1, 1942, as Rome Air Depot, with the mission of storage, maintenance, and shipment of material for the U.S. Army Air Corps. Upon creation of the U.S. Air Force in 1947, the depot was renamed Griffiss Air Force Base. The base became an electronics center in 1950, with the transfer of Watson Laboratory Complex (later Rome Laboratory). The 49th Fighter Interceptor Squadron was also added in that year. In June 1951, the Rome Air Development Center was established with the mission of accomplishing applied research, development, and testing of electronic air-ground systems. The Headquarters of the Ground Electronics Engineering Installations Agency was added in June 1958 to engineer and install ground communications equipment throughout the

world. On July 1, 1970, the 416th Bombardment Wing of the Strategic Air Command (SAC) was activated with the mission of maintenance and implementation of both effective air refueling operations and long-range bombardment capability. Griffiss AFB was designated for realignment under the Base Realignment and Closure Act in 1993 and 1995, resulting in deactivation of the 416th Bombardment Wing in September 1995. Rome Laboratory and the Northeast Air Defense Sector (NEADS) will continue to operate at their current locations; the New York Air National Guard (NYANG) operated the runway for the 10th Mountain Division deployments until October 1998, when they were relocated to Fort Drum; and the Defense Finance and Accounting Services (DFAS) has established an operating location at the former Griffiss AFB.

Environmental Background

As a result of the various national defense missions carried out at the former Griffiss AFB since 1942, hazardous and toxic substances were used and hazardous wastes were generated, stored, or disposed at various sites on the installation. The defense missions involved, among others, procurement, storage, maintenance, and shipping of war materiel; research and development; and aircraft operations and maintenance.

Numerous studies and investigations under the U.S. Department of Defense (DoD) Installation Restoration Program (IRP) have been carried out to locate, assess, and quantify the past toxic and hazardous waste storage, disposal, and spill sites. These investigations included a records search in 1981 (Engineering Science 1981), interviews with base personnel, a field inspection, compilation of an inventory of wastes, evaluation of disposal practices, and an assessment to determine the nature and extent of site contamination; Problem Confirmation and Quantification studies (similar to what is now designated a Site Investigation) in 1982 (Weston 1982) and 1985 (Weston 1985); soil and groundwater analyses in 1986; a base-wide health assessment in 1988 by the U.S. Public Health Service, Agency for Toxic Substances and Disease Registry (ATSDR) (ATSDR 1998); base-specific hydrology investigations in 1989 and 1990 (Geotech 1991); a groundwater investigation in 1991; and site-specific investigations between 1989 and 1993. ATSDR issued a Public Health Assessment for Griffiss AFB, dated October 23, 1995 (ATSDR 1995), and an addendum, dated September 9, 1996.

Pursuant to Section 105 of CERCLA, Griffiss AFB was included on the National Priorities List (NPL) on July 15, 1987. On August 21, 1990, the agencies entered into a Federal Facility Agreement (FFA) under Section 120 of CERCLA.

Under the terms of the agreement, the Air Force was required to prepare and submit numerous reports to NYSDEC and EPA for review and comment. These reports address remedial activities that the Air Force is required to undertake under CERCLA and include identification of Areas of Concern on base; a scope of work for a Remedial Investigation (RI); a work plan for the RI, including a sampling and analysis plan and a quality assurance project plan; a baseline risk assessment; a community relations plan; an RI report; and a work plan and the report for a supplemental investigation. The Air Force delivered the draft-final RI report covering 31 AOCs to EPA and NYSDEC on December 20, 1996 (Law 1996). The draft Closure Certification Report for Interim Remedial Action was delivered on May 24, 2000 (Ocuto 2000).

This ROD for no further action for soil with land use restrictions is based on an evaluation of potential threats to human health and the environment due to contamination in the soil and groundwater, and the performance of interim remedial actions at the Building 255 Drywell AOC. During the RI, a site-specific baseline risk assessment (using appropriate toxicological and exposure assumptions to evaluate cancer risks and non-cancer health hazards) was conducted in order to evaluate the risks posed by detected site contaminants to the reasonably maximally exposed individual under current and future land use assumptions. In the RI report, the concentrations of the contaminants were compared to available standards and guidance values using federal and state environmental and public health laws that were identified as potentially applicable or relevant and appropriate requirements at the site. Chemical-specific ARARs are usually health- or risk-based numerical values or methodologies that result in a numerical value when applied to site-specific conditions. Currently, there are no chemical-specific ARARs for soil (other than for polychlorinated biphenyls [PCBs]), therefore, other non-promulgated federal and state advisories and guidance values, referred to as To-Be-Considereds (TBCs), and background levels of the contaminants in the absence of TBCs, were considered.

Remedial Investigation

In 1994, an RI was performed (Law 1996). The main objective of the RI was to investigate the nature and extent of environmental contamination from historical releases at the AOC in order to determine whether any further remedial action was necessary to prevent potential threats to human health and the environment that might arise from exposure to site conditions. The RI included a visual survey, a ground-penetrating radar (GPR) survey, and the excavation of three test pits to try to locate the drywell; sampling and analysis of soil and grab groundwater; and installation of eight temporary monitoring wells. Observations from the visual survey included:

Building 255. Two features were noted east of Building 255 that may have been drywells associated with the storm water system. These features consisted of two corrugated metal pipes covered by steel grating and filled with gravel. No pipes were visible leading into these structures. No drywell was visibly evident in the parking lot west of Building 255. A storm drain, covered by a manhole and filled with dirt to 4 feet BGS, was assumed to be a drywell associated with Building 255.

Building 222. No drywell was evident in the vicinity of this building.

Building 223. The area at the suspected drywell location, south of Building 223, was reported by Griffiss AFB personnel to have been frequently excavated to at least 8 feet BGS for optical cable installation and repair. No drywell was reportedly encountered during this construction. The drywell at this location may have been unknowingly excavated or otherwise disturbed during construction activities.

Former Building 230. The area at the suspected drywell location east of the former location of Building 230 (now a covered pesticide storage/wash facility) was highly disturbed during construction of the new facility. No drywell was found at this location.

Building 215/216. An open surface-water drainage swale directs flow to a corrugated pipe where drainage is diverted beneath the driveway southwest of Building 216.

It was uncertain as to whether this was a drywell; however, this feature was at the location reported to be a drywell. No drywell was evident east of Building 215/216.

There were no anomalies detected during the GPR survey, which was conducted in 1993 at the suspected Building 255 drywell. In 1994, test pits were excavated at Building 222, Building 230, and Building 215/216 in an attempt to confirm the location of the reported drywells. Drywells were not located by any of the test pit activities and all test pits were backfilled.

Eight temporary monitoring wells were installed in August 1994 to collect grab groundwater samples. Six additional temporary wells were installed in April 1995 to collect additional grab groundwater samples. A total of 10 samples were collected. Analysis of the grab groundwater samples indicated the presence of 22 volatile organic compounds (VOCs), 20 semivolatile organic compounds (SVOCs), 34 pesticides, two PCBs, 26 metals, total glycols, cyanide, and petroleum hydrocarbons. The concentrations of 12 VOCs, six SVOCs, two pesticides, one PCB, 18 metals, and petroleum hydrocarbons exceeded the most stringent criteria for groundwater (see Table 1).

Eleven soil borings were drilled in the vicinity of the reported drywell locations. Six borings were associated with known drywell locations and five borings were located downgradient of presumed drywell locations. A total of 63 soil samples were collected. Analysis of the subsurface soil samples indicated the presence of 12 VOCs, 30 SVOCs, 23 pesticides, two PCBs, and 26 metals, as well as cyanide and petroleum hydrocarbons. The concentrations of six VOCs, nine SVOCs, one pesticide, one PCB, and 17 metals exceeded the most stringent criteria for subsurface soil (see Table 2). The high concentrations shown in Table 2 were all measured in one borehole (255SB-5) at a depth greater than 4 feet. This borehole is located near the drywell in the parking lot to the west of Building 255 Drywell. This soil was removed during the interim remedial action.

Supplemental Investigations

An RI supplemental investigation was performed in 1997 in the Tin City area, which includes the Building 255 Drywell AOC. This investigation included the installation and sampling of two new wells at Building 255. Low levels of chloroform and trichloroethylene were detected in one of the wells, but the concentrations did not exceed the NYSDEC groundwater guidance values.

2.3 Highlights of Community Participation

The final proposed plan, indicating no further action for soil with land use restrictions at this site, was released to the public on Friday, February 9, 2001 (AFBCA 2001). The document was made available to the public in both the administrative record file located at Building 255 in the Griffiss Business and Technology Park and in the Information Repository maintained at the Jervis Public Library. The notice announcing the availability of this document was published in the *Rome Sentinel* on Friday, February 9, 2001. A public comment period lasting from February 9, 2001, to March 11, 2001, was set up to encourage public participation in the alternative selection process. In addition, a public meeting was held on March 1, 2001. The AFBCA and the New York State Department of Health were present at the meeting and the AFBCA answered questions about issues at the AOC and the proposal under consideration. A response to the comments received during this period is included in the Responsiveness Summary, which is part of this ROD (see Section 3).

2.4 Scope and Role of Site Response Action

The scope of the plan for no further action for soil with land use restrictions for the Building 255 Drywell AOC addresses the soil at the site. The land use restrictions for industrial/commercial use are consistent with the risk assessment performed for occupational workers.

2.5 Site Characteristics

The Building 255 AOC is located in the west-central portion of the base (see Figure 1). Building 255 was the Vehicle Maintenance Building. The suspected drywells associated with this site included several near Building 255 and other nearby buildings, including Buildings 215/216, 222, 223, and the former location of Building 230.

Two drywells, which were reportedly located near Building 255 were reportedly stone- and gravel-filled pits measuring approximately 3 feet square by 10 feet deep. The exact location of these two drywells was not known; although they were suspected (but never found) in an area on the east side of the building in the grassed area across Langley Road (see Figure 2). A third drywell was located during a site reconnaissance on the

west side of Building 255 Drywell, beneath a manhole cover in the paved parking lot. The third drywell reportedly received liquid wastes from the Vehicle Maintenance Shop and possibly a small glass repair shop located within Building 255. The quantity of wastes disposed by these facilities was estimated at less than 5 gallons per day. Wastes reportedly disposed included lube oil, engine cleaning compounds, caustics, acids, and paint. Pesticide rinse water, solvents, and other waste liquids generated in small quantities by activities in Buildings 215/216, 222, 223, 230 and 255 may also have been disposed in the Building 255 drywell. Use of this drywell was discontinued in the early 1970s.

The former Griffiss AFB covered approximately 3,552 contiguous acres in the lowlands of the Mohawk River Valley in Rome, Oneida County, New York. Topography within the valley is relatively flat, with elevations on the former Griffiss AFB ranging from 435 to 595 feet above mean sea level. Three Mile Creek, Six Mile Creek (both of which drain into the New York State Barge Canal, located to the south of the base), and several state-designated wetlands are located on the former Griffiss AFB, which is bordered by the Mohawk River on the west. Due to its high average precipitation and predominantly silty sands, the former Griffiss AFB is considered a groundwater recharge zone.

The Building 255 Drywell AOC is located on relatively flat lying terrain with less than 1 foot of relief. This AOC is not located near major natural surface water drainage features. Run-off from the site is channeled into the base drain storm system, which discharges to the Mohawk River. Groundwater has been encountered at depths ranging from 13.5 feet below ground surface (BGS) to 21 feet BGS. Groundwater flows to the south-southeast across the site. Site soil consists of brown, silty fine to coarse sand and gravel to a depth of 19 feet BGS.

2.6 Current and Potential Future Site Use

The Building 255 Drywell AOC is currently designated for industrial use. Future land use at this AOC is assumed to be industrial/commercial.

2.7 Summary of Site Risks

Site risks were analyzed based on the extent of contamination at the Building 255 Drywell AOC. As part of the RI, a baseline risk assessment was conducted to evaluate current and future potential risks to human health and the environment associated with contaminants found in the soil and groundwater at the site. The results of this assessment and the interim remedial action were considered when formulating the no further action for soil with land use restrictions proposal.

Human Health Risk Assessment

A baseline human health risk assessment was conducted during the RI to determine whether chemicals detected at the Building 255 Drywell AOC could pose health risks to individuals under current and proposed future land use. As part of the baseline risk assessment, the following four-step process was used to assess site-related human health risks for a reasonable maximum exposure scenario:

- # Hazard Identification—identifies the contaminants of concern at the site based on several factors such as toxicity, frequency of occurrence, and concentration;
- # Exposure Assessment—estimates the magnitude of actual and/or potential human exposures, the frequency and duration of these exposures, and the pathway (e.g., ingestion of contaminated soil) by which humans are potentially exposed;
- # Toxicity Assessment—determines the types of adverse health effects associated with chemical exposures and the relationship between magnitude of exposure (dose) and severity of adverse effects (response); and
- # Risk Characterization—summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative (e.g., one-in-a-million excess cancer risk and non-cancer Hazard Index value) assessment of site-related risks and a discussion of uncertainties associated with the evaluation of the risks and hazards for the site.

Chemicals of potential concern (COPCs) were selected for use in the risk assessment based on the analytical results and data quality evaluation. All contaminants detected in the soil and groundwater at the site were considered chemicals of potential concern with the exception of inorganics detected at concentrations less than twice the mean

background concentrations; iron, magnesium, calcium, potassium, and sodium, which are essential human nutrients; and compounds detected in less than 5% of the total samples (unless they were known human carcinogens). As a class, petroleum hydrocarbons were not included as a chemical of concern; however, the individual toxic constituents (e.g., benzene, toluene, ethylbenzene) were evaluated.

The human health risk assessment evaluated potential exposure of occupational workers including utility, construction, and industrial workers. The various exposure scenarios for each population are described in Table 3. Intake assumptions, which are based on EPA guidance, are more fully described in the RI.

Quantitative estimates of carcinogenic and noncarcinogenic risks were calculated for the Building 255 Drywell AOC as part of a risk characterization. The risk characterization evaluates potential health risks based on estimated exposure intakes and toxicity values. For carcinogens, risks are estimated as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to the potential carcinogen. The risks of the individual chemicals are summed for each pathway to develop a total risk estimate. The range of acceptable risk is generally considered to be 1 in 10,000 (1×10^{-4}) to 1 in 1,000,000 (1×10^{-6}) of an individual developing cancer over a 70-year lifetime from exposure to the contaminant(s) under specific exposure assumptions. Therefore, sites with carcinogenic risk below the risk range for a reasonable maximum exposure do not generally require cleanup based upon carcinogenic risk under the NCP.

To assess the overall noncarcinogenic effects posed by more than one contaminant, EPA has developed the Hazard Quotient (HQ) and Hazard Index (HI). The HQ is the ratio of the chronic daily intake of a chemical to the reference dose for the chemical. The reference dose is an estimate (with uncertainty spanning perhaps an order of magnitude or greater) of a daily exposure level for the human population, including sensitive sub-populations, that is likely to be without an appreciable risk of deleterious effects during a portion of a lifetime. The HQs are summed for all contaminants within an exposure pathway (e.g., ingestion of soil) and across pathways to determine the HI. When the HI exceeds 1, there may be concern for potential noncarcinogenic health effects if the contaminants in question are believed to cause similar toxic effects.

EPA bases its decision to conduct site remediation on the risk to human health and the environment. Cleanup actions may be taken when EPA determines that the risk

at a site exceeds the cancer risk level of 1 in 10,000 (1×10^{-4}) or if the noncarcinogenic HI exceeds a level of 1. Once either of these thresholds has been exceeded, the 1 in 1,000,000 (1×10^{-6}) risk level and an HI of 1 or less may be used as the point of departure for determining remediation goals for alternatives.

Results of Site-Specific Health Risk Assessment

Potential risks from exposure to COPCs at the Building 255 Drywell AOC were evaluated for utility, construction, and industrial workers during the RI, prior to the interim remedial action. The potential carcinogenic and noncarcinogenic risks from exposure to soil and groundwater are summarized below.

Carcinogenic Risk

The total carcinogenic risk associated with exposure of utility workers to subsurface soil was 2 in 1,000,000 (2×10^{-6}), which is within EPA's target risk range. The total carcinogenic risk associated with exposure of construction workers to soil was 1 in 1,000,000 (1×10^{-6}), which is within EPA's target risk range. The total carcinogenic risk from exposure to contaminants in groundwater of industrial workers was 5 in 10,000 (5×10^{-4}), which is above EPA's target risk range. PAHs and PCBs were the major risk contributors via the inhalation and dermal pathways.

Noncarcinogenic Risk

The total HI for utility workers exposed to soil was 0.03. The total HI for construction workers exposed to subsurface soil was 0.6. The total HI for industrial workers exposed to constituents in groundwater was 0.8. All HIs for noncarcinogenic effects are below the benchmark level of 1.

Groundwater at the Building 255 Drywell AOC is being further evaluated under On Base Groundwater AOC as part of the Tin City operable unit.

Uncertainties

Uncertainties exist in many areas of the human health risk assessment process. However, use of conservative variables in intake calculations and health-protective assumptions throughout the entire risk assessment process results in an assessment that is

protective of human health and the environment. Examples of uncertainties associated with the risk assessment for this AOC include (1) Chemical samples were collected from the suspected source of contamination rather than through random sampling, which may result in a potential overestimation of risk; (2) The HIs associated with dermal contact with soil were not quantified for the majority of COPCs, which may lead to underestimation of the overall risk due to dermal contact; (3) The models used in the RI are likely to overestimate exposure point concentrations in air, which would cause an overestimation of risk for the inhalation pathway; (4) It was assumed that groundwater would be used as a potable water source under the industrial use scenario (i.e., showering, ingestion, industrial processes) in the future, which is unlikely since the site has ready access to the existing water supplies at the former base and in the City of Rome. This would result in an overestimation of risk; and (5) Toxicological criteria were not available for all chemicals found at the site, which may result in an underestimation of risk.

Ecological Risk Assessment

Building 255 Drywell is located in a highly developed portion of the base with little habitat available for ecological receptors. However, potential future exposures to ecological receptors were evaluated and a baseline risk assessment was performed. The assessment modeled risks to the raccoon and short-tailed shrew for exposures to surface soil.

The hazard quotients for both the raccoon and the shrew were less than 1; the potential for adverse impacts to these ecological receptors is considered to be insignificant. Modeling of bioaccumulation to higher order species was not performed, nor was the cumulative effect of multiple contaminants considered; this tends to underestimate the risk to ecological receptors.

Although certain state-listed endangered plants and animals have been observed on or in the vicinity of the base, no threatened and/or endangered species have been identified at this site (Corey 1994). There are no federally listed (U.S. Department of the Interior) threatened or endangered plant or animal species at the former base.

2.8 Interim Remedial Action

In 1998, based upon the results of the RI and baseline risk assessment, an interim remedial action was performed to remove contaminated subsurface soil at the drywell located west of the former site of Building 255 (see Figure 3) (Ocuto 2000). It was determined that the removal of contaminated soil from this location would mitigate the majority of contamination and resulting risk associated with this site. The work consisted primarily of asphalt demolition, removal and disposal of the drywell, soil excavation, confirmation sampling and analysis, transportation and off-site disposal of excavated materials, backfilling and site restoration. Building 255 was demolished prior to remedial actions at the site. A brief summary of this remedial action is provided below.

Remedial action work activities began on July 7, 1998. Equipment was mobilized and work zones were established. The extent of contaminated soil was estimated as an approximately 20 foot square area, centered on the drywell, from a depth of 4 to 14 feet BGS. Excavation of the drywell involved removing the first four feet of clean overburden and stockpiling. All of the remaining material removed from the excavation was assumed contaminated, segregated, and stockpiled on a bermed liner. Two underground pipes, one that came from the Building 255 floor drain to the parking lot drywell, and one of unknown origin, were cut and removed to the edge of the excavation. The remaining pipe ends were plugged and grouted closed. Excavation was completed on July 13, 1998. The estimated volume of soil excavated, stockpiled, and disposed was 192.3 cubic yards.

Confirmatory samples were taken after the removal action was completed to verify the effectiveness of this interim remedial action. The Air Force, EPA, and NYSDEC compared the results of the confirmatory soil samples to the risk-based cleanup goals and NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046: Determination of Soil Cleanup Objectives and Soil Cleanup Levels (NYSDEC 1994). After agreement was reached that the project goals were met, the excavated area was backfilled with the estimated 59.3 cubic yards of clean, stockpiled soil and additional clean material.

Material from the contaminated soil stockpile was loaded for transport to Seneca Meadows Landfill for disposal on September 14, 15, and 16, 1998.

2.9 Principal Threat Waste

There are no principal threat wastes at the Building 255 AOC.

2.10 Description of the No Further Action for Soil with Land Use Restrictions

No further action for soil with land use restrictions for industrial/commercial use is proposed for the Building 255 Drywell AOC. Five-year reviews will be performed by the Air Force, in conjunction with the EPA and NYSDEC, to ensure that future land use is in compliance with the transfer documents (deed) for industrial/commercial use. The transfer documents will contain the following restrictions to ensure that the reuse of the site is consistent with the risk assessment:

- # The property will be designated for industrial/commercial use unless permission is obtained from the EPA, NYSDEC, and the New York State Department of Health; and
- # The owner or occupant of the property shall not extract, utilize, consume, or permit to be extracted any water from the subsurface aquifer within the boundary of the property unless such owner or occupant obtains prior written approval from the New York State Department of Health.

As a result of the interim remedial action, the majority of soil contamination found during the RI investigations at this AOC were removed. The remaining chemicals detected in the soil do not exceed standards and guidance values and the known source of the groundwater contamination has been removed. In addition, the baseline risk assessment for industrial/commercial use indicated that the levels of contamination present in the soil prior to remediation fell within or below EPA's acceptable carcinogenic risk range and posed no noncarcinogenic risk to utility, construction, and industrial workers. Therefore, the concentrations of the chemicals remaining in the soil after the completion of the remedial action demonstrate that the remaining site contaminants pose no current or potential threat to public health or the environment. Groundwater at the Building 255 Drywell AOC is being further evaluated as part of the On Base Groundwater AOC Tin City operable unit.

2.11 Statutory Determinations

The selected remedy must meet the statutory requirements of CERCLA, Section 121, which are described below.

Protection of Human Health and the Environment

The plan for no further action for soil with land use restrictions for industrial/commercial use will provide adequate protection from exposure to contaminants by limiting the use of the site in accordance with the risk assessment.

Compliance with ARARs

Contaminant concentrations in the soil following the interim remedial action comply with the applicable ARARs. Furthermore, land use restrictions for industrial/commercial use will be consistent with the risk assessment, which was performed for occupational workers.

Cost-Effectiveness

No costs are associated with the selected alternative.

Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable

Treatment technologies are not included in the selected alternative.

Preference for Treatment as a Principal Element

Treatment technologies are not included in the selected alternative.

2.12 Documentation of Significant Changes

No significant changes have been made to the selected alternative from the time the proposed plan was released for public comment.

**Table 1
COMPOUNDS EXCEEDING STANDARDS AND GUIDANCE VALUES
BUILDING 255 DRYWELLS
GROUNDWATER SAMPLES**

Compound	Range of Detected Concentrations	Frequency of Detection Above Most Stringent Criterion	Most Stringent Criterion
Volatiles (µg/L)			
1,2-Dichloroethane	0.8 - 4	2/8	0.4 ^a
1,3,5-Trimethylbenzene	190 D	1/8	5
Benzene	0.2 J - 3	1/8	1 ^a
Ethylbenzene	26	1/8	5 ^a
Isopropylbenzene	15	1/8	5 ^a
m,p-Xylene	160 D	1/8	5 ^a
Naphthalene	83 D	1/8	10 ^b
o-Xylene	87 D	1/8	5 ^a
SEC-butylbenzene	13	1/8	5 ^a
Toluene	0.1 J - 780 D	1/8	5 ^a
Trichloroethylene	0.1 J - 7.7	3/8	3
cis-1,2-Dichloroethylene	96 D	1/8	5 ^a
SVOCs (µg/L)			
Benzo(a)anthracene	0.06 J - 0.9 J	4/9	0.002 ^b
Benzo(a)pyrene	0.06 J - 0.9 J	4/9	0.002 ^b
Benzo(b)fluoranthene	0.1 J - 1 J	4/9	0.002 ^b
Benzo(k)fluoranthene	0.2 J - 0.3 J	3/8	0.002 ^b
Chrysene	0.06 J - 1 J	4/9	0.002 ^b
Indeno(1,2,3-cd)pyrene	0.5 J	1/8	0.002 ^b
Pesticides/PCBs (µg/L)			
Aldrin	0.001 J - 0.004 J	1/9	0.002 ^c
Dieldrin	0.001 J - 0.013 J	1/8	0.004 ^a
PCB-1260 (Aroclor 1260)	0.6 J	1/8	0.1 ^a
Metals (mg/L)			
Aluminum	5.22 - 1,420	8/8	0.05 ^d
Antimony	0.0115	1/7	0.003 ^a
Arsenic	0.0041 J - 0.19	5/8	0.025 ^a
Barium	0.039 - 8.19	1/8	1 ^a
Beryllium	0.00173 J - 0.0592	5/8	0.003 ^b
Cadmium	0.058 J - 0.149	2/8	0.005 ^a
Chromium	0.0133 J - 4.87	5/8	0.05 ^a
Copper	0.055 - 9.43	6/8	0.2 ^a
Iron	147 - 3,940	4/8	0.3 ^a
Lead	0.0196 - 4.68	8/8	0.015 ^c
Manganese	0.693 - 293	8/8	0.05 ^d
Mercury	0.00005 J - 0.00351 J	1/8	0.0007 ^a
Nickel	0.0186 J - 2.48	4/8	0.1 ^a
Selenium	0.00083 J - 0.155	4/8	0.01 ^a
Silver	0.0062 J - 0.161 J	2/8	0.05 ^a
Thallium	0.0044 J - 0.0054	2/8	0.0005 ^b
Zinc	0.095 - 15.1	6/8	2 ^a
Wet Chemistry			
Petroleum Hydrocarbons	0.11J -28	8/8	0.1 ^a

- ^a NYSDEC Class GA groundwater standard; June 1998
- ^b NYSDEC Class GA groundwater guidances; June 1999
- ^c RCRA corrective action levels
- ^d Federal secondary maximum contaminant level
- ^e Federal primary maximum contaminant level

Key:

D = Indicates compounds identified in an analysis from a diluted sample

J = Estimated concentration*

* Estimated concentrations are typically due to measuring very low levels below the quantitation limit but above the detection limit or due to a quality control concern identified by a data reviewer.

**Table 3
BUILDING 255 DRYWELLS AOC
RISK ASSESSMENT EXPOSURE SCENARIOS** **GUIDANCE VALUES**

UTILITY AND CONSTRUCTION WORKERS Compound	INDUSTRIAL WORKERS Range of Concentrations Detected	Probability of Detection Above Most Stringent Criterion	Most Stringent Criterion
• Inhalation of airborne chemicals	• Ingestion of groundwater		
VOCs (µg/kg)			
• Inhalation of fugitive dust from soils	• Dermal contact with groundwater	2/63	200 ^a
• Ethylbenzene	• Dermal contact (during showering)	2/63	5,500 ^a
• Toluene	• Inhalation of VOCs from groundwater (during showering)	1/63	100 ^a
• Dichloroethylene (DCE)	• Dermal contact with soil	1/63	1,500 ^a
• Trichloroethylene (TCE)	• Ingestion of groundwater	5/63	700 ^a
Xylenes	1 J - 550,000	5/63	1,200 ^a
SVOCs (µg/kg)			
1,2-Dichlorobenzene	19,000 J - 29,000 J	2/63	7,900 ^a
Benzo(a)anthracene	37 J - 1,500 J	8/63	224 ^a
Benzo(a)pyrene	67 J - 1,900	21/63	61 ^a
Benzo(b)fluoranthene	130 J - 2,300 J	3/63	1,100 ^a
Bis(2-ethylhexyl)phthalate	48 J - 140,000 J	2/63	50,000 ^a
Chrysene	40 J - 6,900 J	6/63	400 ^a
Di-n-butyl phthalate	37 J - 16,000 J	2/63	8,100 ^a
Dibenzo(a,h)anthracene	430	1/63	14 ^a
Naphthalene	47 J - 520,000	2/63	13,000 ^a
Pesticides/PCBs (µg/kg)			
Endrin	0.41 J - 109	1/64	100 ^a
PCB-1260 (Aroclor 1260)	17.4 J - 2,380	4/64	90 ^b
Metals (mg/kg)			
Antimony	1.8 J - 155	3/63	3.4 ^c
Arsenic	2.1 J - 49	35/63	4.9 ^c
Barium	11.2 J - 1,420	3/63	300 ^a
Beryllium	0.076 J - 0.66	1/63	0.65 ^c
Cadmium	0.22 J - 96.7	6/63	1.1 ^c
Calcium	579 - 76,700	5/63	23,800 ^c
Total chromium	5.1 J - 1,690	9/63	22.6 ^c
Cobalt	3.5 J - 30.6	1/63	30 ^a
Copper	13 - 4,900	11/63	43 ^c
Lead	1.8 - 20,000	16/63	36.2 ^c
Magnesium	1,610 J - 8,540 J	2/63	7,180 ^c
Manganese	160 - 2,210	2/63	2,110 ^c
Mercury	0.014 J - 1.77	5/63	0.1 ^a
Nickel	5.98 J - 72.2	4/63	46.1 ^c
Silver	0.36 J - 13.6	13/63	1.1 ^c
Sodium	24 J - 443	1/63	259 ^c
Zinc	23 - 6,730	7/63	120 ^c

^a NYS-recommended soil cleanup objectives

^b Proposed RCRA corrective action levels

^c Background screening concentration

Key:

J = Estimated concentration

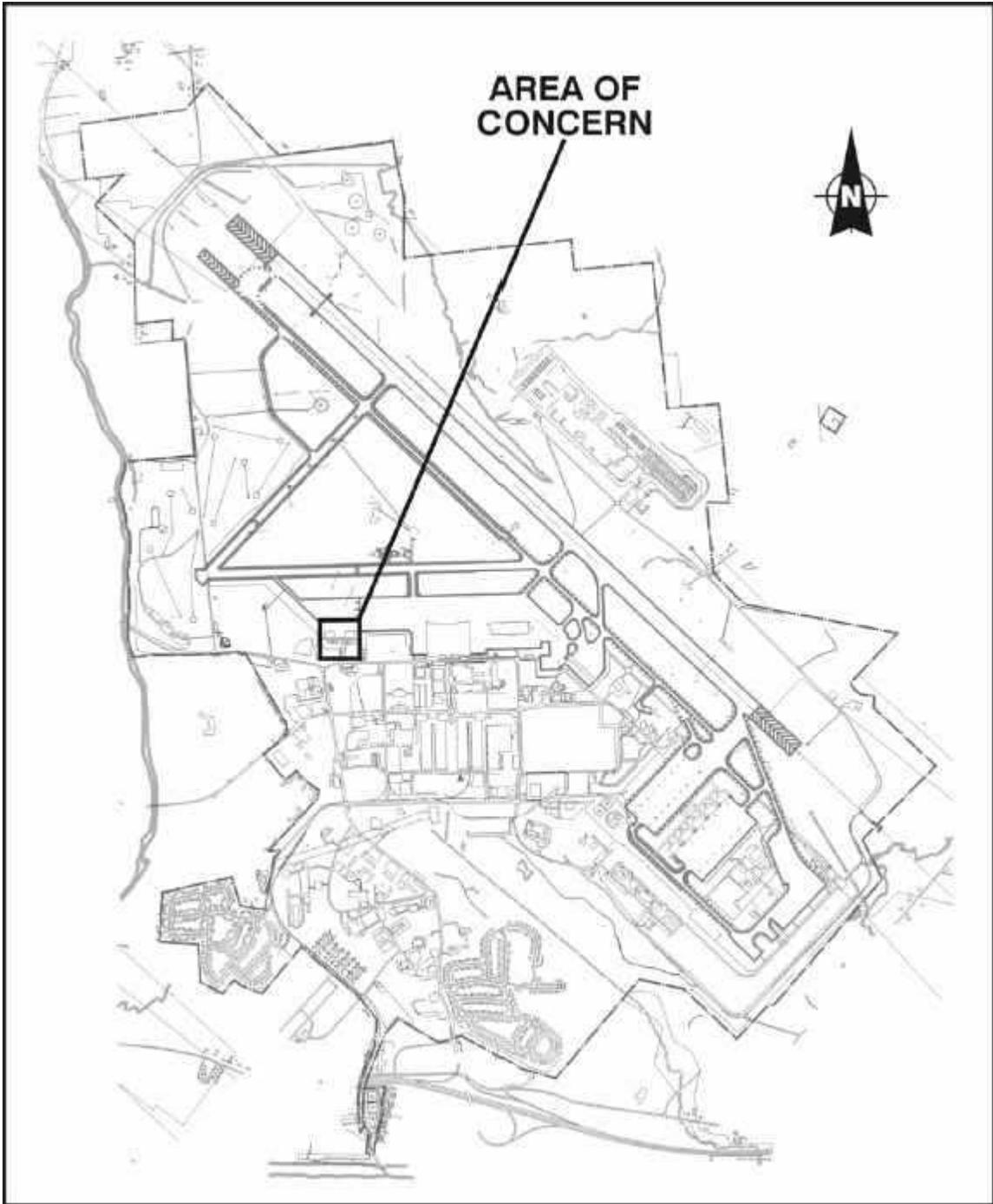
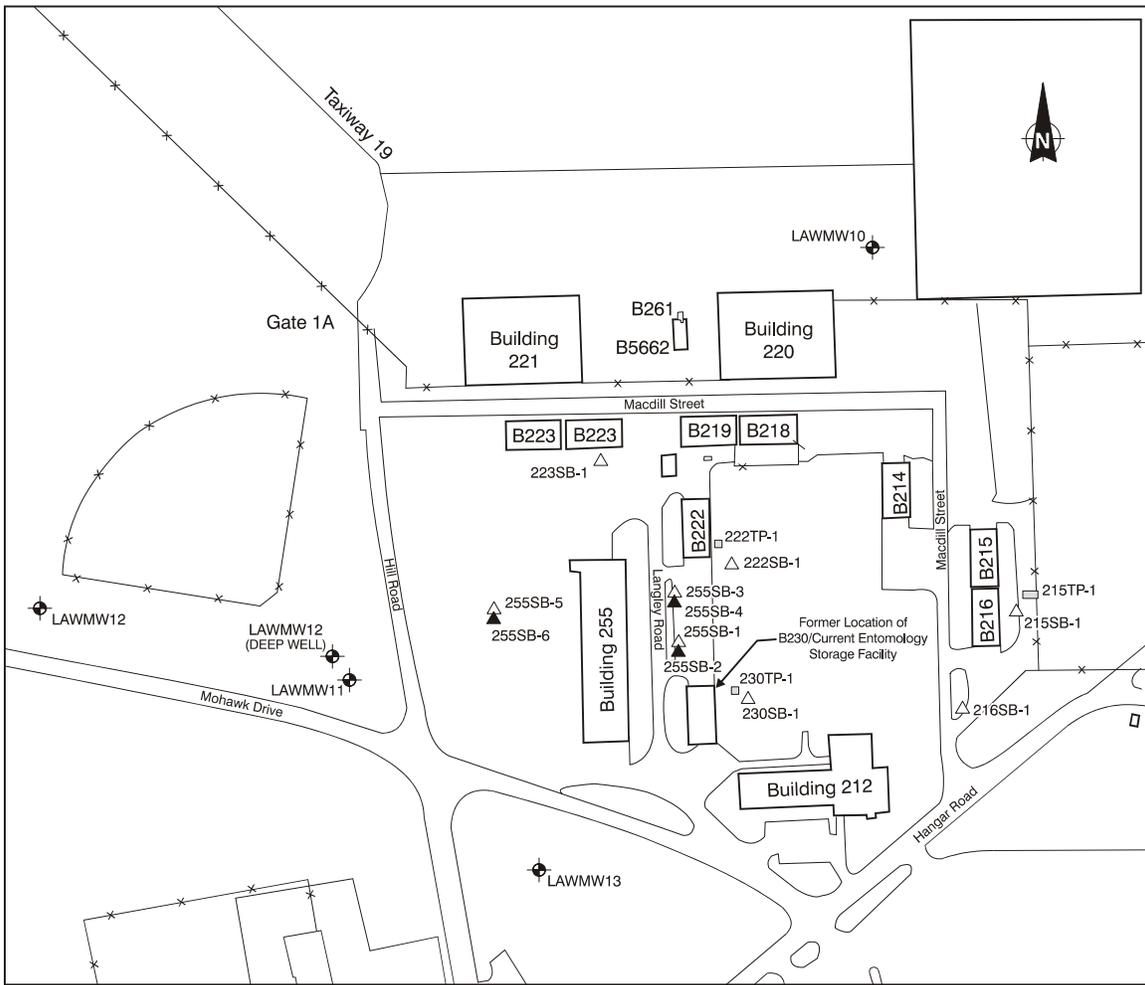


Figure 1 Building 255 Drywell AOC Location Map



LEGEND

-  Monitoring Well
-  Soil Boring/Grab Groundwater Sampling Location (In the Assumed Drywell Location)
-  Soil Boring (Adjacent to the Assumed Drywell Location)
-  Test Pit Location
-  Chain Link Fence

Figure 2 Building 255 Drywell AOC Site Map

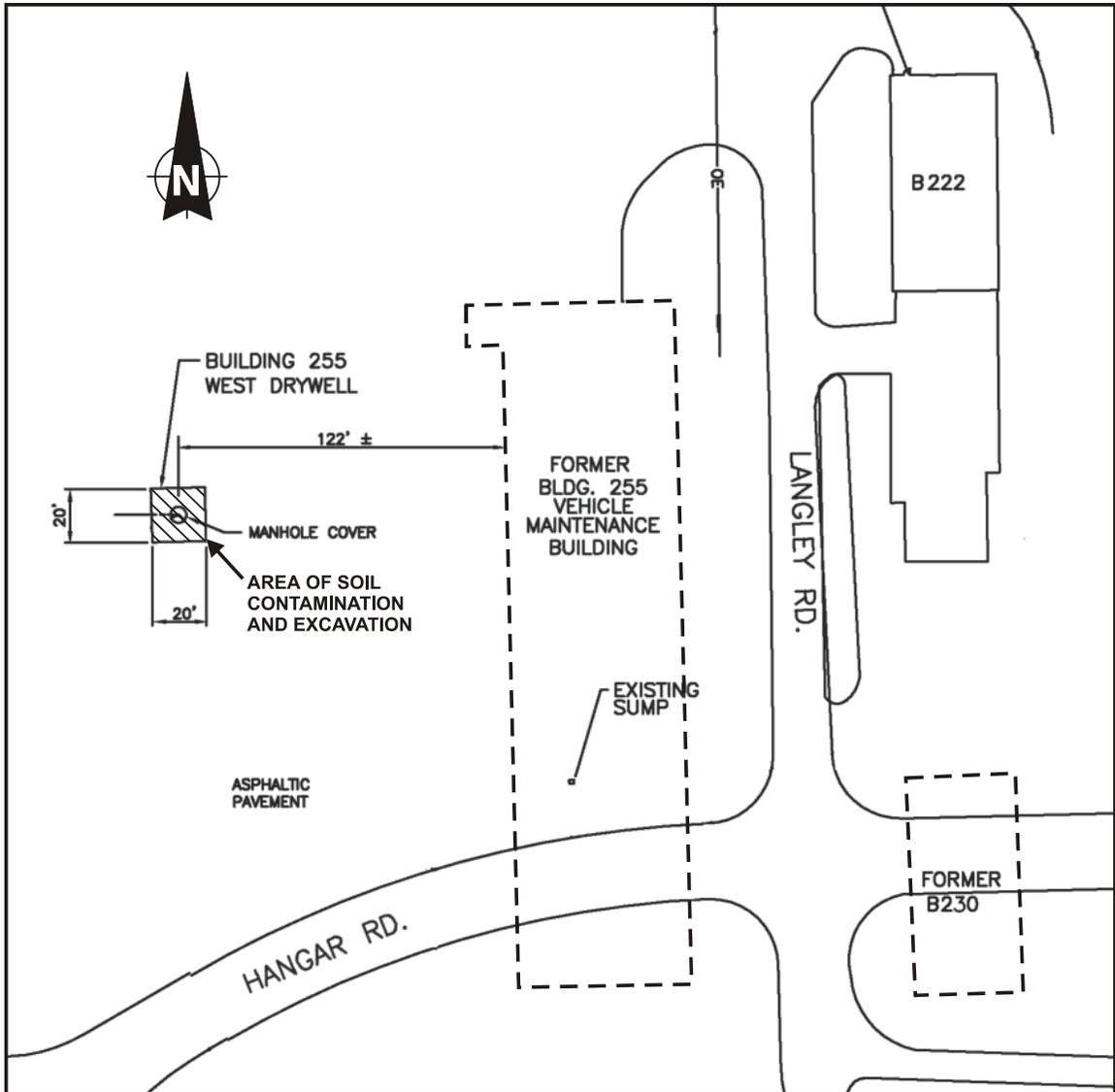


Figure 3 Building 255 Drywell AOC Interim Remedial Action

On Friday, February 9, 2001, AFBCA, following consultation with and concurrence of the EPA and NYSDEC, released for public comment the proposed plan for no further action for soil with land use restrictions at the Building 255 Drywell AOC at the former Griffiss Air Force Base. The release of the proposed plan initiated the public comment period, which concluded on March 11, 2001.

During the public comment period, a public meeting was held on Thursday, March 1, 2001, at 5:00 p.m. at the Floyd Town Hall located at 8299 Old Floyd Road, Rome, NY. A court reporter recorded the proceedings of the public meeting. A copy of the transcript and attendance list are included in the Administrative Record. The public comment period and the public meeting were intended to elicit public comment on the proposal for remedial action at the site.

This document summarizes and provides responses to the verbal comments received at the public meeting and the written comments received during the public comment period.

Comment #1 (oral - Carmen Malagisi)

Mr. Malagisi requested an explanation of the five-year review process and whether there was a termination criteria for the five-year review.

Response #1

The five-year review is conducted by the Air Force, in conjunction with the EPA and NYSDEC, to assure that human health and the environment are being protected by the

remedial actions being implemented. In this case, the review will ensure that the land use is in compliance with industrial/commercial use, deed restrictions remain in place and that the cleanup standards used in the ROD are still appropriate. During the first five-year review, and any subsequent review, if it is determined that conditions at a portion of the site have improved such that it meets unlimited and unrestricted use, then that portion of the site can be excluded from future review. However, it is the policy of the EPA that five-year reviews be conducted on a site-wide basis whenever any portion of a site requires a review.

Comment #2 (oral - John Fitzgerald)

Mr. Fitzgerald asked if it was possible to have only one five-year review.

Response #2

At a minimum, one five-year review will be conducted. During that five-year review, it could be decided that no additional reviews are necessary.

Comment #3 (oral - John Fitzgerald)

Mr. Fitzgerald asked if there would be a record of when the five-year reviews will occur.

Response #3

CERCLA regulations do not require that the public be an active participant in the five-year reviews, but they do require that the results of the five-year reviews be made available to the public in the Information Repository. EPA guidance, however, suggests that the public be consulted during the five-year review process. While the Air Force has an active presence at the former Griffiss AFB, the Restoration Advisory Board (RAB) will be informed of and invited to participate in the five-year reviews.

Comment #4 (oral - John Fitzgerald)

For the record, Mr. Fitzgerald noted that he and other residents have concerns about the groundwater, but they understand that those issues will be addressed at a later time.

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Corey, Michael, January 1994, *1993 Inventory of Rare Plant Species and Significant Natural Communities at Griffiss Air Force Base in Rome, New York*, prepared for the New York Natural Heritage Program.

Engineering Science, July 1981, *Installation Restoration Program Phase I, Records Search, Hazardous Materials Disposal Site*, prepared for United States Air Force, AFESC/DEVP, Tyndall Air Force Base, Florida.

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Law Engineering and Environmental Services, Inc., December 1996, *Draft-Final Primary Report, Volume 21, Remedial Investigation, Griffiss Air Force Base, New York*, Contract No. DACA41-92-D-8001, Kennesaw, Georgia.

New York State Department of Environmental Conservation (NYSDEC), 1994, *Technical and Administrative Guidance Memorandum (TAGM) 4046: Determination of Soil Cleanup Objectives and Soil Cleanup Levels*.

Ocuto Blacktop and Paving Environmental Services, February 2000, *Closure Certification Report for Interim Remedial Action at Buildings 20, 112, 222, and 255*, prepared for United States Army Corps of Engineers, Contract No. DACA41-97-C-8001, Rome, New York.

U.S. Environmental Protection Agency (USEPA), 1986, *Superfund Amendments and Reauthorization Act (SARA)*, 41 U.S.C. 9601 et seq., Washington D.C.

_____, 1980, *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*, 42 U.S.C. s/s 9601 et seq., Washington D.C.

_____, 1968, *National Oil and Hazardous Substances Pollution Contingency Plan (NCP)*, 40 CFR 300, Washington D.C.

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_____, December 1982, *Installation Restoration Program Phase II - Problem Confirmation and Quantification Study Stage 1, Griffiss Air Force Base, Rome, New York*, prepared for United States Air Force, Brooks AFB, Texas.