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EPA Superfund
Record of Decision:

GRIFFISS AIR FORCE BASE (11 AREAS)
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ROME, NY
09/27/2001

Final Record of Decision for the Building 112 Area of Concern (SS-08) at the Former Griffiss Air Force Base Rome, New York

June 2001

AIR FORCE BASE CONVERSION AGENCY

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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
AST	aboveground storage tank
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
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
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
SARA	Superfund Amendments and Reauthorization Act
SVOC	semivolatile organic compound
TBC	To-Be-Considered
VOC	volatile organic compound

1 Declaration

1.1 Site Name and Location

The Building 112 Area of Concern (AOC) (site identification designation SS-08) 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 with land use restrictions alternative for the Building 112 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 Amendments 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 112 AOC is no further action with land use restrictions for industrial/commercial use. The agencies will perform joint five-year re-

views 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 with land use restrictions, which include groundwater use restrictions, are warranted for the Building 112 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 a potential source of groundwater contamination has been removed. In addition, the baseline risk assessment for groundwater indicated that risks fell within EPA's acceptable risk range. 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. 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 and a successfully completed Interim Remedial Action performed at the Building 112 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

August 20, 2001
Date

William J. Muszynski, P.E.
Acting Regional Administrator
United States Environmental Protection Agency, Region 2

9/27/01
Date

2 Decision Summary

2.1 Site Name, Location, and Brief Description

The Building 112 Area of Concern (AOC) (site identification designation SS-08) is located at the former Griffiss Air Force Base (AFB) in Rome, Oneida County, New York.

Building 112 is the High Power Laboratory located in the central, industrialized area of the former Griffiss AFB (see Figure 1). The following four sites comprise the Building 112 AOC: a drywell, the rooftop transformer spill area, the loading dock area, and the polychlorinated biphenyl (PCB) dump area (see Figure 2).

The drywell, which was discovered in 1992, appeared to be comprised of gravel and have dimensions of 3 feet by 2 feet. The Building 112 rooftop transformer area was the location of a transformer rupture and leak. The loading dock was historically used for the storage of PCB containers. The PCB dump area was an area of reported discharge of PCB fluids in the past. An area on the south side of Building 112 was used to store PCB transformers. Two aboveground storage tanks (ASTs) located east of the transformer storage area were used to store the PCB insulating oils.

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 1988); 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 AOCs 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; and an RI report. 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 with land use restrictions is based on an evaluation of potential threats to human health and the environment due to contamination in the soil, sediment, and groundwater media, and the performance of interim remedial actions at the Building 112 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 (ARARs) 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 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.

In 1994, an RI was performed at the Building 112 AOC (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. RI activities at this AOC included sampling and analysis of soil, groundwater, and sediment at various locations in the four designated areas--drywell, rooftop transformer spill area, loading dock area, and PCB dump area--as described below.

Drywell

No previous investigations were performed at the drywell location. RI activities were performed to characterize the drywell and evaluate whether past use of the drywell had resulted in contamination of the environment. Analysis of the surface soil samples at the drywell indicated the presence of 21 semivolatile organic compounds (SVOCs), 11 pesticides/PCBs, and 22 metals. The concentrations of five SVOCs, one PCB, and five metals exceeded the most stringent criterion (see Table 1).

Analysis of the subsurface soil samples at the drywell indicated the presence of two volatile organic compounds (VOCs), nine SVOCs, one PCB, and 21 metals. The concentrations of two SVOCs, one PCB, and four metals exceeded the most stringent criterion (see Table 2).

Loading Dock and PCB Dump Area

Investigations performed in 1981 and 1982 indicated the presence of PCBs in soil surrounding the loading dock area at depths up to 40 inches (Weston 1982). The RI expanded upon the previous investigations to evaluate the nature and extent of PCB contamination in this area. No previous investigations had been performed at the PCB dump area prior to the RI.

Analysis of the subsurface soil samples at the loading dock and PCB dump area indicated the presence of seven pesticides/PCBs and 23 dioxins and furans. The concentrations of two PCBs exceeded the most stringent criterion (see Table 3).

Analysis of the sediment sample at the Building 112 loading dock area storm water catch basin indicated the presence of one PCB. The concentration of that PCB exceeded the most stringent criterion (see Table 4).

Bulk material samples (brick and concrete) collected at the loading dock indicated low-level PCB contamination (less than 1 mg/kg). In the PCB dump area, PCB contamination was detected in two bulk material samples at concentrations of 89 mg/kg (brick sample) and 0.37 mg/kg (concrete sample).

Rooftop Transformer Spill Area

Remedial activities performed in this area in 1984 included replacement of the transformer and the concrete pad on the roof; removal, containerization, and disposal of the concrete pad and roofing material; and excavation and disposal of contaminated soil. The RI focused on confirming whether the previous remediation of PCBs at the site was adequate because no confirmatory samples had been collected in 1984.

Bulk material samples collected from the rooftop included gravel, roofing material, brick from the walls, and concrete from the transformer pad. Wipe samples from two roof drains were also collected. PCBs were detected at low levels (less than 1 mg/kg) in 19 of 34 bulk material samples and exceeded 1 mg/kg at two locations on the transformer pad. PCBs were not detected on the wipe samples.

Groundwater

Seven grab groundwater samples were collected from the Building 112 AOC (see Figure 2). One sample was collected from the drywell location, two samples were collected from the loading dock area, and four samples were collected from the PCB dump area. Analysis of the grab groundwater samples at the above locations indicated the presence of four SVOCs, 24 pesticides/PCBs, and 21 metals. The concentrations of one pesticide, and 11 metals exceeded the most stringent criterion (see Table 5). With the exception of several metals, the chemicals detected in the surface and subsurface soil were not detected in the groundwater, indicating that the presence of these compounds is limited to the soil at the site.

2.3 Highlights of Community Participation

A proposed plan for the Building 112 AOC (AFBCA 2001), indicating no further action with land use restrictions for industrial/commercial use, was released to the public on Friday, February 9, 2001. The document was made available to the public in both the administrative record file located at Building 301 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 Thursday, 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 Record of Decision (see Section 3).

2.4 Scope and Role of Site Response Action

The scope of the plan for no further action with land use restrictions for the Building 112 AOC addresses the concerns for human health and the environment. The land use restrictions for industrial/commercial use are consistent with the risk assessment performed for occupational workers.

2.5 Site Characteristics

Building 112 is the High Power Laboratory located in the central, industrialized area of the former Griffiss AFB (see Figure 1). The following four sites comprise the Building 112 AOC: a drywell, the rooftop transformer spill area, the loading dock area, and the polychlorinated biphenyl (PCB) dump area (see Figure 2).

The drywell was discovered directly adjacent to the east side of Building 112 in 1992 during the construction of a new building entrance. The drywell appeared to be comprised of gravel and is approximately 3 feet by 2 feet in dimension. The depth and use of the drywell is unknown. The area surrounding the drywell is flat and covered by grass.

The Building 112 rooftop transformer area was the location of a transformer rupture and leak. Remedial activities were implemented at this location in 1984.

The loading dock area consists of a paved ramp and surrounding area that leads to the southwest entrance of Building 112. This area was historically used for the storage of PCB containers. The area surrounding the ramp is paved.

The PCB dump area consists of the area between the south wall of Building 112 and beyond a fenced substation south of Building 112. This was an area of reported discharge of PCB fluids in the past. An area on the south side of Building 112 was used until 1994 to store PCB transformers after their removal from service. This location was comprised of a fenced-in gravel area 16 by 44 feet in dimension. Two aboveground storage tanks (ASTs) located adjacent to and east of the transformer storage area, were used to store the PCB insulating oils and are surrounded by a concrete dike.

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 topography at the Building 112 AOC is generally flat with less than 5 feet of topographic relief across the site. Groundwater has been encountered at depths ranging from 4 feet to 15 feet below ground surface (BGS) and flows south to southwest. Site soil in the area consist of predominantly brown, silty, fine to coarse sand and gravel.

2.6 Current and Potential Future Site Use

As proposed in the Griffiss Redevelopment Planning Council redevelopment scenario, the current and future land use designations for the Building 112 AOC are industrial/commercial.

2.7 Summary of Site Risks

Site risks were analyzed based on the extent of contamination at the Building 112 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, soil gas, sediments, surface water, and groundwater at the site. The results of this assessment and the interim remedial action were considered when formulating this ROD for no further action with land use restrictions.

Human Health Risk Assessment

A baseline human health risk assessment was conducted during the RI to determine whether chemicals detected at the Building 112 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, sediments, 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 future industrial, construction, landscape, and utility workers. The various exposure scenarios for each population are described in Table 6. 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 112 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 112 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 surface soil, subsurface soil, and groundwater at the Building 112 AOC are summarized below.

Carcinogenic Risk

The total carcinogenic risk associated with exposure to contaminants in groundwater of industrial workers was $9x10^{-7}$. This value is below EPA's target risk range. The pathway-specific risks from ingestion and dermal exposure to groundwater were $8x10^{-7}$ and $1x10^{-7}$, respectively.

The total carcinogenic risk associated with exposure of construction workers to subsurface soil was $2x10^{-6}$. This value is within EPA's target risk range. The pathway-specific risks for construction workers from incidental ingestion of soil, inhalation of fugitive dust, and dermal contact were $2x10^{-6}$, $7x10^{-9}$, and $3x10^{-7}$, respectively.

The total carcinogenic risk associated with exposure of landscape workers to surface soil was $1x10^{-5}$. This value is within the EPA's target risk range. The pathway-specific risks for landscape workers from incidental ingestion of soil, inhalation of fugitive dust and dermal contact were $7x10^{-6}$, $1x10^{-7}$, and $6x10^{-6}$, respectively.

The cumulative carcinogenic risk associated with exposure of utility workers to subsurface soil was $2x10^{-6}$. This value is within EPA's target risk range. The pathway-specific risks for utility workers from incidental ingestion of soil, inhalation of fugitive dust, and dermal contact were $1x10^{-6}$, $2x10^{-8}$, and $1x10^{-6}$, respectively.

Noncarcinogenic Risk

The total HI for a landscape worker exposed to surface soil at Building 112 AOC was 0.04. This is below the benchmark value of 1. Of the three potential exposure pathways, the two greatest potential noncarcinogenic hazards were from incidental ingestion of soil and dermal contact with surface soil.

The total HI for utility workers exposed to subsurface soil at the Building 112 AOC was 0.008, which is below the benchmark value of 1. Of the three potential exposure pathways, the greatest potential noncarcinogenic hazard (0.005) was from the incidental ingestion of subsurface soil.

The total HI for construction workers exposed to subsurface soil at the Building 112 AOC was 0.2 which is below the benchmark value of 1. Of the three potential exposure pathways, the greatest potential noncarcinogenic hazard (0.2) was from the incidental ingestion of soil.

The total HI for industrial workers exposed to groundwater was 0.05. This is below the benchmark value of 1. The calculated HIs for ingestion of groundwater and dermal exposure to groundwater were 0.05 and 0.002, respectively.

Groundwater at the Building 112 AOC is being further evaluated under the 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, results in an assessment that is protective of human health and the environment. Uncertainties associated with the risk assessment for the Building 112 AOC include (1) 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; (2) Chemical samples were collected from areas of known contamination which can result in a biased data set that may overestimate risk; (3) Construction at the site was assumed to occur over a one year period. Since construction may take less time to complete, this would result in a potential overestimation of risk; (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 assumption would result in a potential overestimation of risk; and (5) Toxicological criteria were not available for all chemicals found at the site, which may result in a potential underestimation of risk.

Ecological Risk Assessment

A baseline ecological risk assessment at the Building 112 AOC was conducted during the RI. The assessment modeled risks to the short-tailed shrew and raccoon through exposure to surface soil by ingestion. Hazard quotients were calculated for each of the indicator species. For the raccoon, the hazard quotients calculated were each less than 1 with the greatest value for 2,3,7,8-TCDD (HQ = 0.0076). For the short-tailed shrew, three of the HQs were greater than 1; 2,3,7,8-TCDD (HQ = 4.3), cadmium (HQ = 1.4), and lead (HQ = 1.1). These values indicate a potential risk for adverse effects.

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 and 1999, based upon the results of the RI and baseline risk assessment, an interim remedial action was performed to remove contaminated surface and subsurface soil at the Building 112 AOC (see Figure 3) (Ocuto 2000). It was determined that the removal of contaminated soil from these locations would mitigate the majority of contamination and resulting risk associated with this site. The work consisted primarily of soil excavation, confirmation sampling, transportation and off-site disposal of excavated materials, backfilling, restoration of grass, asphalt and concrete areas, scarification, and masonry demolition and repair. Each area of the Building 112 AOC was remediated individually so that all contaminated material would be segregated into its own stockpile. A brief summary of the remedial actions is provided below.

Soil Excavation and Tank Containment Area Demolition

Remedial action work activities began on July 15, 1998. Equipment was mobilized, work zones were established, and excavation was begun in three separate locations: the loading dock grassy area, the loading dock ramp area, and the parking lot area. On the following day, contaminated soil from the PCB dump area was excavated. On July 22, 1998 the demolition of the tank containment area wall and concrete slab began and the excavation of the west side of the parking lot area was extended by an additional five feet. The excavation of soil from the tank containment area was completed on July 27, 1998. Results from confirmatory samples obtained from the loading dock grassy area, loading dock ramp area, and tank containment area were above cleanup limits and these areas were over-excavated on August 5, 1998. New confirmatory samples were obtained for the new depths and sidewalls of the over-excavations. Based on confirmatory sample results that were above cleanup limits, the loading dock grassy area was over-excavated four additional times throughout September and October, 1998. The loading dock ramp area was over-excavated twice, once in September and once in October, 1998.

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 project cleanup goals of no greater than 1 ppm PCB from 0 to 1 foot BGS and no greater than 10 ppm PCBs at a depth greater than 1 foot. After agreement was reached that the project goals were met, the excavated areas were backfilled with clean material.

On September 22 and 23, 1998, the excavated materials from the parking lot area and PCB dump area were loaded and transported to Seneca Meadows Landfill for disposal. The remaining stockpiled material from the parking lot area and PCB dump area was loaded and transported to Seneca Meadows Landfill for disposal on October 14, 1998. The total estimated volume of non-hazardous materials excavated and disposed from the PCB dump area and parking lot area were 163.8 and 39.3 cubic yards, respectively.

The non-hazardous stockpiled material initially excavated from the tank containment area was loaded and transported to Seneca Meadows Landfill for disposal on October 23 and 26, 1998. The total estimated volume of initial non-hazardous soil excavated

from the tank containment area was 14.2 cubic yards. Based on analytical results, the demolished tank containment area retaining wall was loaded and transported to Oneida-Herkimer Solid Waste Authority and disposed of as construction and demolition debris on October 29, 1998.

On July 6 and 7, 1999, the hazardous stockpiled material from the loading dock areas (grassy and ramp) and the tank containment area was loaded and transported to CWM Chemical Services for disposal. A portion of the brick wall removed from the tank containment area was also transported and disposed of at CWM Chemical Services. The total volume of hazardous materials excavated and disposed from the loading dock grassy area, loading dock ramp area, and tank containment area were 87.4, 63.5, and 21.3 cubic yards, respectively.

Concrete Scarification of Transformer Pad

The rooftop transformer pad was prepared for scarification on July 23,1998. One inch of concrete from the rooftop transformer rupture area was scarified and stockpiled. Confirmation wipe samples were collected and analyzed; all sample results were below the project cleanup goals. The stockpiled material was classified as PCB TSCA regulated waste and was disposed of at CWM Chemical Services on July 6 and 7, 1999.

Concrete Scarification of Foundation Walls

On July 12 and 13, 1999, contaminated concrete at specified areas in the loading dock grassy area, loading dock ramp area, and the tank containment area were removed. Specialized cutting equipment operating under shrouds, vacuum equipment, and filters were used to scarify one-eighth of an inch of concrete and collect the concrete chips and dust in 55-gallon drums. The filters, hoses, and shrouds used during the scarification were disposed of in the drums containing the concrete chips and dust. The drums were labeled, sealed, and classified as hazardous waste based upon the analytical results of soil excavated from areas directly adjacent to the concrete that was scarified. The drums were later disposed of at CWM Chemical Services on September 28, 1999.

2.9 Principal Threat Wastes

There are no principal threat wastes at the Building 112 AOC.

2.10 Description of the Preferred Alternative

No further action with land use restrictions for industrial/commercial use is proposed for the Building 112 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.

- The owner or occupant of the property is restricted from relocating soil in the area during any future construction activities. Soil below the clean fill must remain on site (and stay covered if stockpiled) and be covered by a minimum of 12 inches of clean fill.

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 and groundwater prior to remediation fell within or below EPA's acceptable carcinogenic risk range and posed no noncarcinogenic risk to industrial, construction, landscape, or utility workers. Therefore, the concentrations of the chemicals remaining in the soil after the completion of the remedial actions, and the results of the baseline risk assessment for the chemicals found in the groundwater, demonstrate that the remaining site contaminants pose no current or potential threat to public health or the environment.

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 112
SURFACE SOIL SAMPLES (DRYWELL)

Compound	Range of Detected Concentrations	Frequency of Detection Above Most Stringent Criterion	Most Stringent Criterion
SVOCs (µg/kg)			
Benzo(a)anthracene	300 J - 990 J	5/5	224 [a]
Benzo(a)pyrene	240 J - 770 J	5/5	61 [a]
Benzo(b)fluoranthene	290 J - 1,300 J	1/5	1,000 [a]
Chrysene	340 J - 1,100 J	3/5	400 [a]
Dibenzo(a,h)anthracene	42 J - 68 J	3/5	14 [a]
Pesticides/PCBs (µg/kg)			
PCB-1260 (Aroclor 1260)	460	1/3	90 [b]
Metals (mg/kg)			
Cadmium	1.9 -11.6	3/3	1.1 [c]
Copper	30.7 - 89.9	2/3	43 [c]
Lead	75.8 - 225	3/3	36 [c]
Mercury	0.23 J	1/3	0.1 [a]
Zinc	76.2 - 257	2/3	120 [c]

[a] NYS-recommended soil cleanup objective
[b] Proposed RCRA corrective action levels
[c] Background screening concentration

Key:
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 2
COMPOUNDS EXCEEDING GUIDANCE VALUES
BUILDING 112
SUBSURFACE SOIL SAMPLES (DRYWELL)

Compound	Range of Detected Concentrations	Frequency of Detection Above Most Stringent Criterion	Most Stringent Criterion
SVOCs (µg/kg)			
Benzo(a)anthracene	54 J - 230 J	1/7	224 [a]
Benzo(a)pyrene	170 J	1/7	61 [a]
Pesticides/PCBs (µg/kg)			
PCB-1260 (Aroclor 1260)	7.9 J - 311	1/7	90 [b]
Metals (mg/kg)			
Arsenic	3.1 - 10.2	6/7	4.9 [c]
Lead	3.7 - 139	1/7	36 [c]
Mercury	0.03 J - 0.18	1/7	0.1 [a]
Zinc	45 - 147	1/7	120 [c]

[a] NYS-recommended soil cleanup objective
[b] Proposed RCRA corrective action levels
[c] Background screening concentration

Key:
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
COMPOUNDS EXCEEDING STANDARDS AND GUIDANCE VALUES
BUILDING 112
SUBSURFACE SOIL SAMPLES (LOADING DOCK AND PCB DUMP AREA)

Compound	Range of Detected Concentrations	Frequency of Detection Above Most Stringent Criterion	Most Stringent Criterion
Pesticides/PCBs (µg/kg)			
PCB-1254 (Aroclor 1254)	5.4 J - 1,640	1/235	90 [a]
PCB-1260 (Aroclor 1260)	7.5 J - 19,400	81/234	90 [a]

[a] Proposed RCRA corrective action levels

Key:
J = Estimated concentration.

Table 4
COMPOUNDS EXCEEDING GUIDANCE VALUES
BUILDING 112
SEDIMENT SAMPLES (STORM WATER CATCH BASIN)

Compound	Range of Detected Concentrations	Frequency of Detection Above Most Stringent Criterion	Most Stringent Criterion
Pesticides/PCBs (µg/kg)			
PCB-1260 (Aroclor 1260)	42	1/1	0.0008 [a] *

[a] NYSDEC, Technical Guidance for Screening Contaminated Sediments; Human Health Bioaccumulation, Fresh water. January, 1999. Expressed as micrograms per gram of organic carbon

* Criterion expressed in terms of µg per gram organic carbon

Table 5
COMPOUNDS EXCEEDING STANDARDS AND GUIDANCE VALUES
BUILDING 112
GROUNDWATER SAMPLES

Compound	Range of Detected Concentrations	Frequency of Detection Above Most Stringent Criterion	Most Stringent Criterion
Pesticides/PCBs (µg/kg)			
Aldrin	0.002 J - 0.008 J	3/7	ND[a]
Metals (mg/L)			
Aluminum	94.7	1/1	0.05 [b]
Barium	2.27	1/1	1[a]
Beryllium	0.0098	1/1	0.003 [c]
Chromium	0.139	1/1	0.05 [a]
Copper	0.855	1/1	0.2 [a]
Iron	289	1/1	0.3 [a]
Lead	0.133	1/1	0.015 [a]
Magnesium	45.8	1/1	35 [d]
Manganese	48.7	1/1	0.05 [b]
Nickel	0.284	1/1	0.1 [a]
Zinc	1.52	1/1	2 [d]

[a] NYSDEC Class GA groundwater standard; June 1998

[b] Federal secondary maximum contaminant level

[c] Federal maximum contaminant level

[d] NYSDEC Class GA groundwater guidance values; June 1998

Key:

J = Estimated concentration

ND = Nondetect

Table 6
BUILDING 112 AOC
RISK ASSESSMENT EXPOSURE SCENARIOS

INDUSTRIAL WORKER	CONSTRUCTION WORKER	LANDSCAPE WORKER	UTILITY WORKER
• Ingestion of groundwater • Dermal contact with groundwater (during showering) • Inhalation of VOCs from groundwater (during showering)	• Inhalation of fugitive dust from subsurface soil • Incidental ingestion of subsurface soil • Dermal contact with subsurface soil	• Incidental ingestion of surface soil • Inhalation of fugitive dust from surface soil • Dermal contact with surface soil	• Incidental ingestion of subsurface soil • Inhalation of fugitive dust from subsurface soil • Dermal contact with with subsurface soil

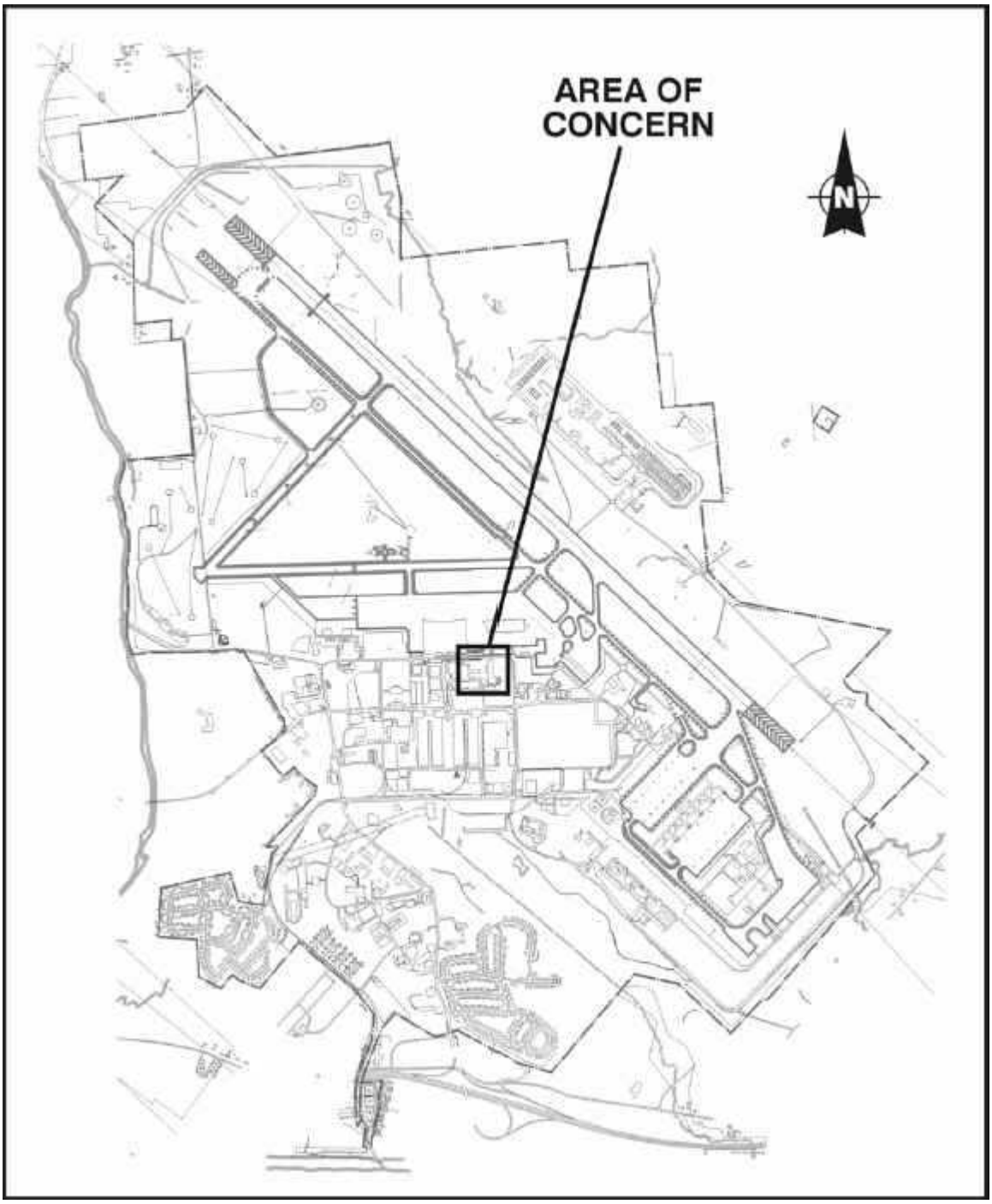

Figure 1 Building 112 AOC Location Map

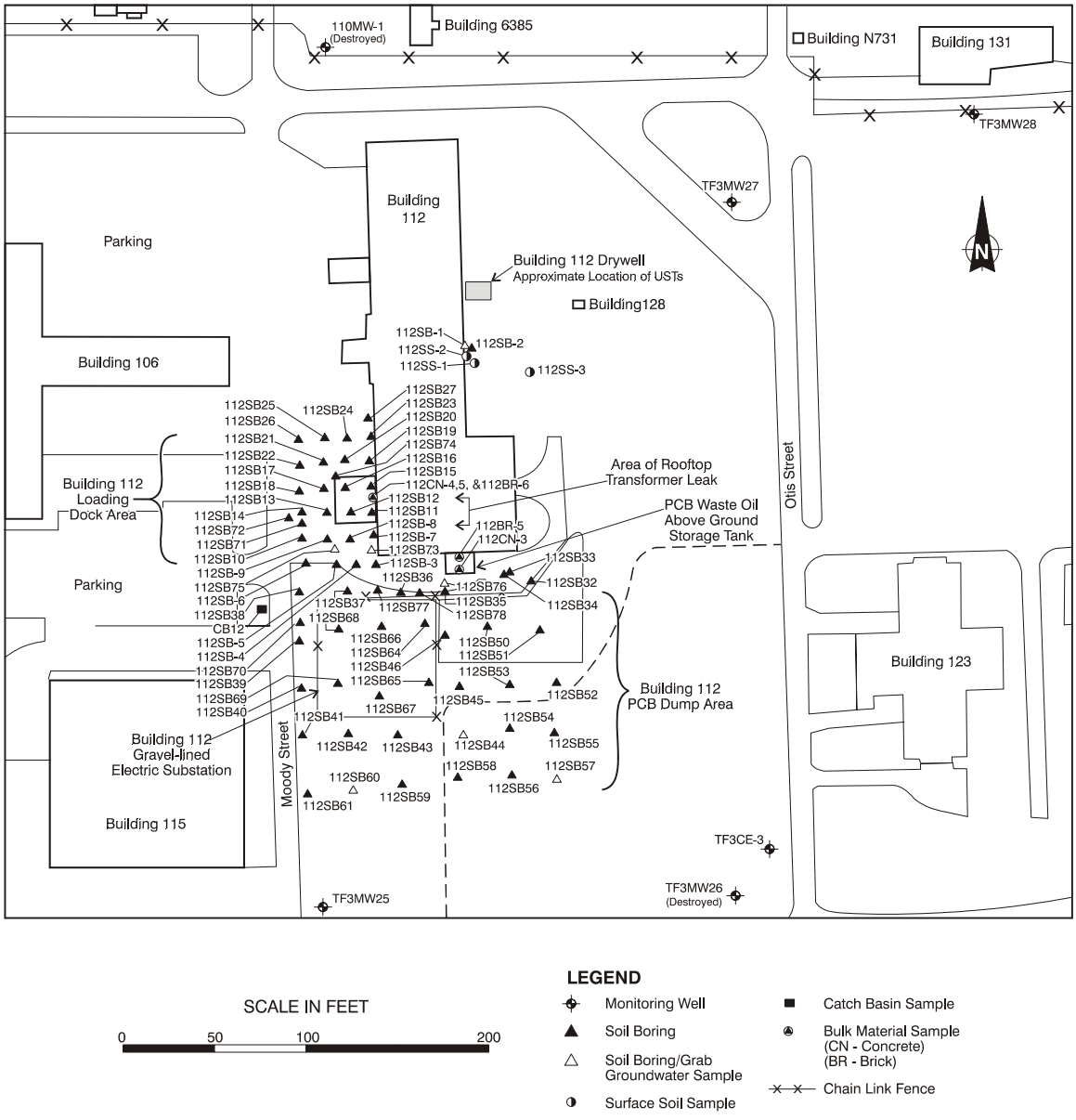

Figure 2 Building 112 AOC Site Map

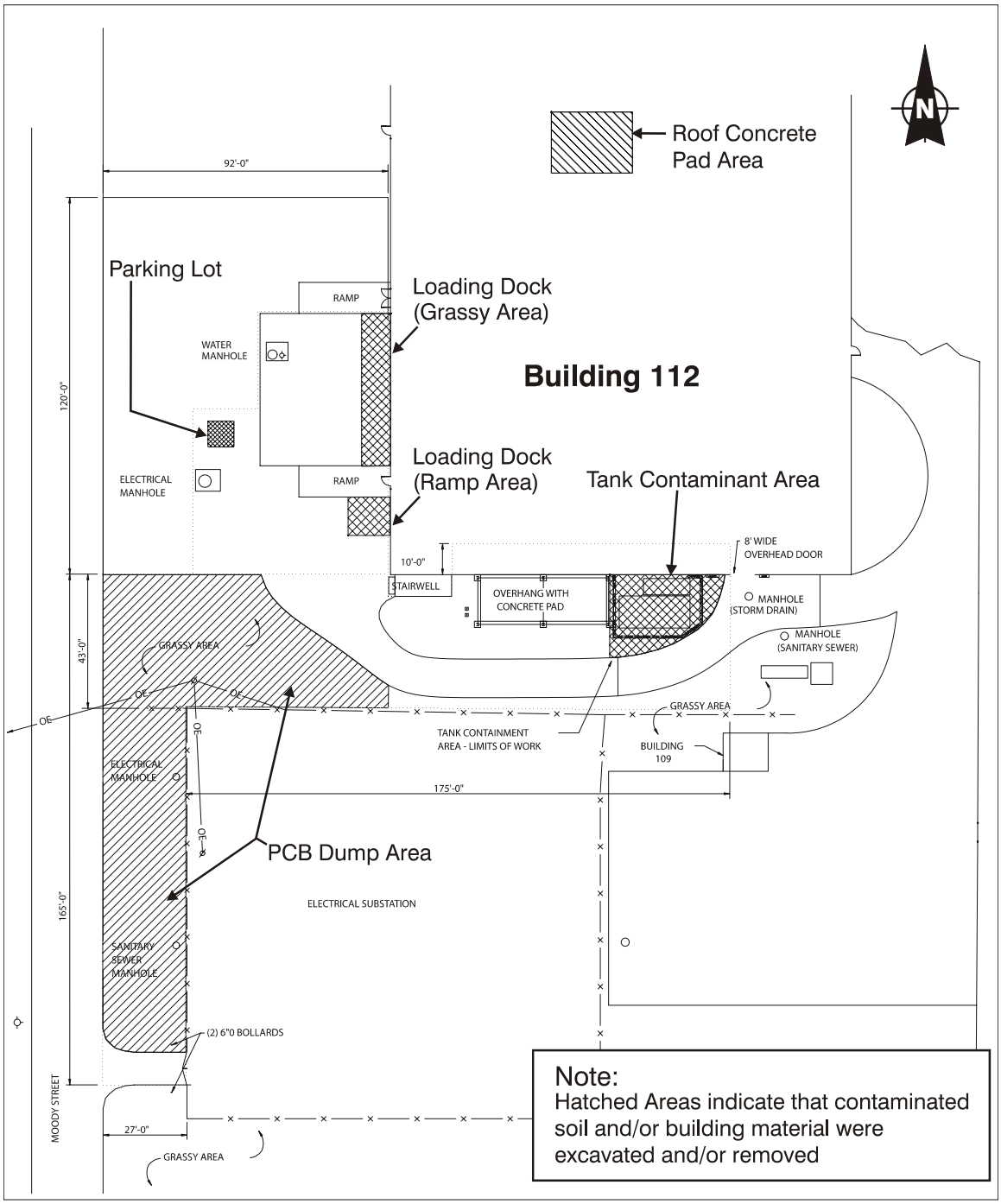

Figure 3 Building 112 AOC Interim Remedial Action

3 Responsiveness Summary

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 with land use restrictions at the Building 112 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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