Final Preliminary Assessment Report Boone National Guard Center, Kentucky

Perfluorooctane-Sulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA) Impacted Sites ARNG Installations, Nationwide

May 2020

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Centract Number: W912DR-12-D-0014 Delivery Order: W912DR17F0192

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Acronyms and Abbreviations

AASF Army Aviation Support Facility
AECOM Technical Services, Inc.

AFFF aqueous film forming foam above mean sea level

AOI area of interest

ARNG Army National Guard

ARNG-ILE Army National Guard Environmental Programs Division

bgs Below ground surface

BNGC Boone National Guard Center

CERCLA Comprehensive Environmental Response, Compensation, and Liability

Act

CSM conceptual site model

DFAC dining facility
°F Fahrenheit

FEMA Federal Emergency Management Agency

FPB Frankfort Plant Board

FTA fire training area

IED Installations and Environment Division

KDFWR Kentucky Department of Fish and Wildlife Resources

KYARNG Kentucky Army National Guard

LTC Lieutenant Colonel

NOAA National Oceanic and Atmospheric Association

NWI National Wetland Inventory

OWS Oil water separator

PA Preliminary Assessment

PFAS per- and poly-fluoroalkyl substances

PFOA perfluorooctanoic acid

PFOS perfluorooctanesulfonic acid

SI Site Inspection
US United States

USACE United States Army Corps of Engineers

USEPA United States Environmental Protection Agency

WWTP waste water treatment plant

Executive Summary

The United States (US) Army Corps of Engineers (USACE) Baltimore District on behalf of the Army National Guard (ARNG)-Installations & Environment Division (IED), Cleanup Branch contracted AECOM Technical Services, Inc. (AECOM) to perform *Preliminary Assessments (PAs)* and Site Inspections (SIs) for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) Impacted Sites at ARNG Facilities Nationwide. The ARNG is assessing potential effects on human health related to processes at facilities that used per- and poly-fluoroalkyl substances (PFAS), primarily in the form of aqueous film forming foam (AFFF) released as part of firefighting activities, although other PFAS sources are possible.

AECOM completed a PA for PFAS at Boone National Guard Center (BNGC) in Franklin County, Kentucky, to assess potential PFAS release areas and exposure pathways to receptors. The performance of this PA included the following tasks:

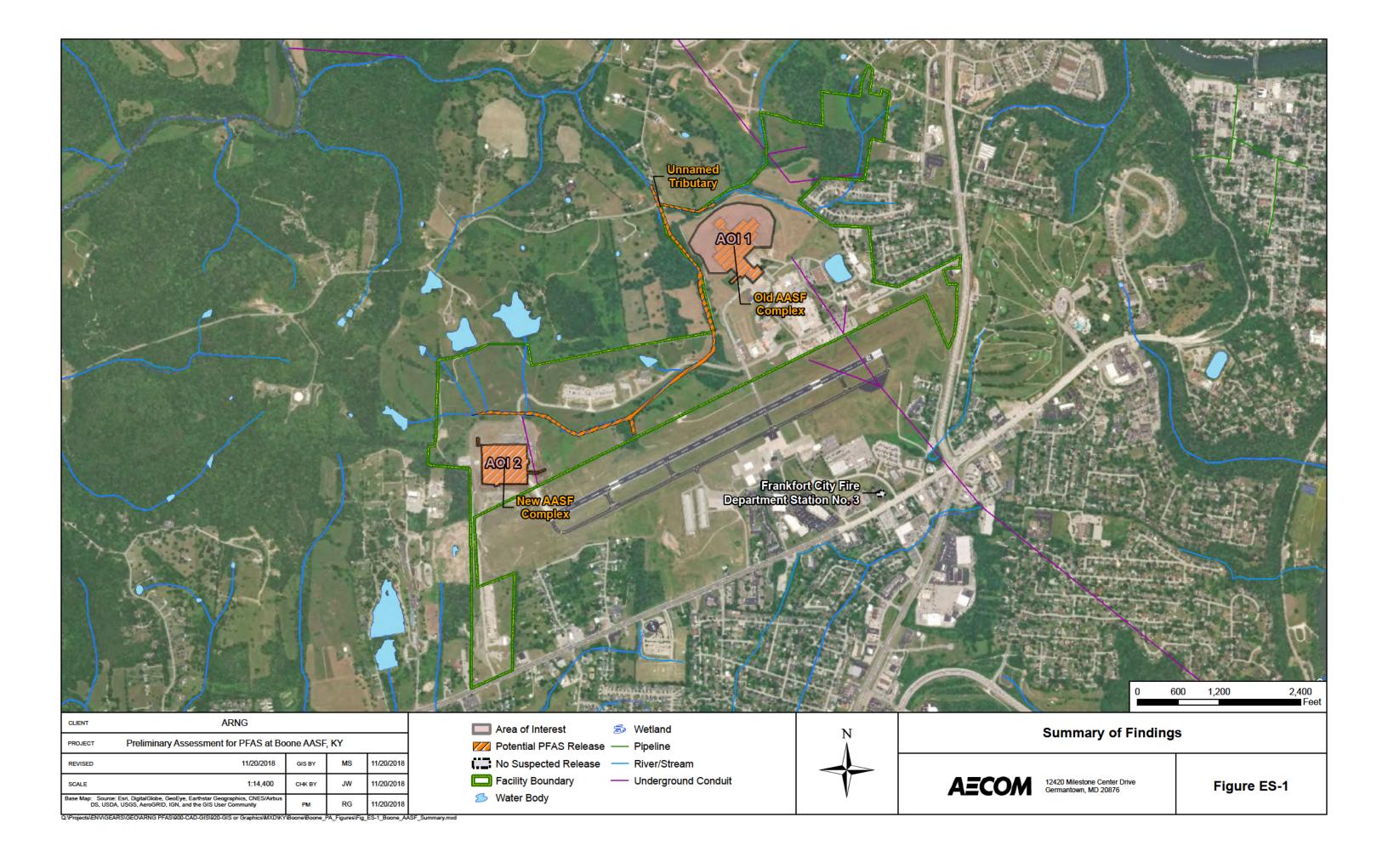
- Reviewed data resources to obtain information relevant to suspected PFAS releases
- Conducted a 1-day site visit on May 14, 2018
- Interviewed personnel associated with BNGC activities during the site visit including the Kentucky ARNG (KYARNG) State Environmental Manager at BNGC, the former KYARNG State Safety Officer and current Federal Environmental Program Manager, the BNGC Army Aviation Support Facility (AASF) maintenance supervisor, a Frankfort City Fire Department Captain, and the Frankfort City Fire Department Assistant Chief
- Completed visual survey inspections at known or suspected PFAS release locations and document with photographs

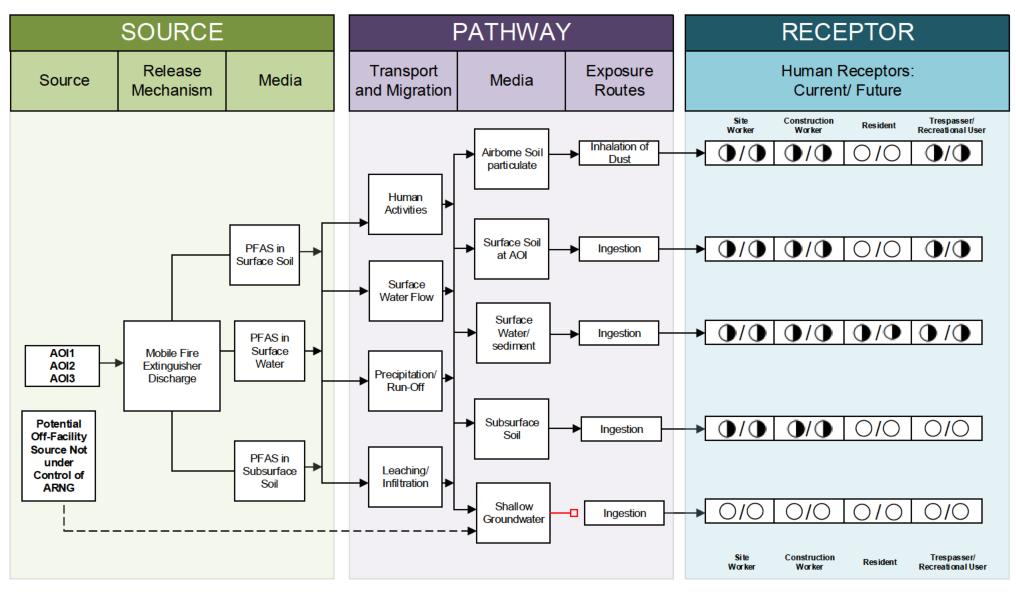
Three area of interest (AOIs) related to PFAS release was identified at BNGC based on PA data. The AOIs are shown on **Figure ES-1** and described in the table below:

Area of Interest	Name	Used by	Potential Release Dates
AOI 1	Old AASF	KYARNG	2015
AOI 2	New AASF	KYARNG	2015
AOI 3	Unnamed Tributary	NA	2015

Based on the potential for AFFF releases at these AOIs, there is potential for exposure to PFAS contamination in surface soils to site and construction workers, and recreational users/trespassers, and in subsurface soils to site and construction workers via inhalation and ingestion. There is also the potential for exposure to PFAS contamination migrating from AOIs 1 and 2 in surface water and sediment for all receptors via ingestion. No sources of PFAS release to the environment were identified in the local area surrounding BNGC through interviews or review of previous environmental investigations. The CSM for BNGC is shown on **Figure ES-2**.

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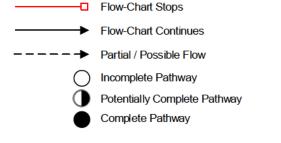


Figure ES-2 Conceptual Site Model

Boone National Guard Center

1. Introduction

1.1 Authority and Purpose

The United States (US) Army Corps of Engineers (USACE) Baltimore District on behalf of the Army National Guard (ARNG)-Installations & Environment Division (IED), Cleanup Branch contracted AECOM Technical Services, Inc. (AECOM) to perform *Preliminary Assessments (PAs) and Site Inspections (Sls) for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) Impacted Sites at ARNG Facilities Nationwide* under Contract Number W912DR-12-D-0014, Task Order W912DR17F0192, issued 11 August 2017, and Modification 01 issued 30 September 2017. The ARNG is assessing potential effects on human health related to processes at their facilities that used per- and poly-fluoroalkyl substances (PFAS), primarily releases of aqueous film forming foam (AFFF) although other sources of PFAS are possible. In addition, the ARNG is assessing businesses or operations adjacent to the ARNG facility (not under the control of ARNG) that could potentially be responsible for a PFAS release.

PFAS are classified as emerging environmental contaminants that are garnering increasing regulatory interest due to their potential risks to human health and the environment. The regulatory framework at both federal and state levels continues to evolve. The U.S. Environmental Protection Agency (USEPA) issued Drinking Water Health Advisories for PFOA and PFOS in May 2016, but there are currently no promulgated national standards regulating PFAS in drinking water. In the absence of federal maximum contaminant levels, some states have adopted their own drinking water standards for PFAS. The state of Kentucky does not currently have drinking water standards for PFAS.

This report presents findings of a PA for PFAS at Boone National Guard Center (BNGC) in Franklin County, Kentucky, in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, the National Oil and Hazardous Substances Pollution Contingency Plan (40 Code of Federal Regulations Part 300), and USACE requirements and guidance.

This PA documents the known army aviation support facilities as well as additional locations where PFAS may have been stored or released into the environment at BNGC. The term PFAS will be used throughout this report to encompass all PFAS chemicals being evaluated, including PFOS and PFOA, which are key components of AFFF.

1.2 Preliminary Assessment Methods

The performance of this PA included the following tasks:

- Reviewed data resources to obtain information relevant to suspected PFAS releases
- Conducted a 1-day site visit on May 14, 2018
- Interviewed personnel associated with BNGC activities during the site visit including the Kentucky ARNG (KYARNG) State Environmental Manager at BNGC, the former KYARNG State Safety Officer and current Federal Environmental Program Manager, the BNGC Army Aviation Support Facility (AASF) maintenance supervisor, a Frankfort City Fire Department Captain and the Frankfort City Fire Department Assistant Chief
- Completed visual survey inspections at known or suspected PFAS release locations and documented with photographs
- If areas of interest (AOIs) were identified, developed a conceptual site model (CSM) to outline the potential release and pathway of PFAS for each AOI

1.3 Report Organization

This report has been prepared in accordance with the USEPA *Guidance for Performing Preliminary Assessments under CERCLA* (USEPA, 1991). The report sections and descriptions of each are:

- **Section 1 Introduction**: identifies the project purpose and authority and describes the facility location, environmental setting, and methods used to complete the PA
- **Section 2 Fire Training Areas:** describes the potential or suspected fire training areas (FTAs) at the facility identified during the site visit
- **Section 3 Non-Fire Training Areas:** describes other locations of potential or suspected PFAS releases at the facility identified during the site visit
- Section 4 Emergency Response Areas: describes areas of suspected or potential AFFF release at the facility, specifically in response to emergency situations
- Section 5 Adjacent Sources: describes sources of PFAS release adjacent to the facility that are not under the control of ARNG
- Section 6 Conceptual Site Model: describes the pathways of PFAS transport and receptors at the facility
- Section 7 Conclusions: summarizes the data findings and presents the conclusions of the PA
- Section 8 References: provides the references used to develop this document
- Appendix A Data Resources
- **Appendix B** Preliminary Assessment Documentation
- Appendix C Photographic Log

1.4 Facility Location and Description

This section presents information obtained from the 2009 KYARNG Environmental Assessment for an AASF (KYARNG, 2009), updated as necessary with recent data. BNGC is located in a semi-urban setting approximately 1.5 miles west of the State Capital Building in Frankfort, Kentucky (**Figure 1-1**). The facility was established in the early 1950s in conjunction with the Commonwealth of Kentucky's development of the adjoining Capital City Airport. BNGC consists of 373.6 acres and approximately 71 buildings of various sizes and functions (e.g., aviation, training, logistical, administrative, and maintenance support). BNGC is the headquarters for the Kentucky Air and Army National Guard.

The BNGC property is surrounded by a mixture of developed areas and open land in a natural state. Rolling hills traverse BNGC. The majority of the facility's eastern areas are developed, while the remaining portion of the facility is open grassland with sporadic trees. Woodland areas have developed adjacent to creeks transecting the facility. The entire property is fenced with personnel and vehicular access restricted to a single, manned entrance gate.

The former AASF at BNGC is located on the northern edge of the BNGC property. It consists of a 31,184-square foot facility constructed in 1972; an additional aircraft maintenance hangar, comprising 10,560 square feet, was added in 1997. Other facilities serving the AASF include a 5,985-square foot covered storage area, fuel storage and dispensing facilities, storage, parking aprons, a landing pad, and a connecting taxiway to the Capital City Airport runway. The KYARNG aviation unit's Readiness Center is also located at BNGC.

A new AASF was completed in 2015 to increase hangar space and accommodate all aircraft types operated and maintained by the KYARNG. The New AASF is located on approximately 30 acres of land in the western area of BNGC. When the new AASF was completed, all aviation activities and assets were transferred to the new AASF. The old AASF was converted into an Armory Building.

1.5 Facility Environmental Setting

Section 1.5 presents information taken from the BNGC Environmental Assessment for an AASF (KYARNG, 2009). The BNGC is situated within an upland limestone area, fairly well-dissected by normal stream drainage. The topography is rolling to hilly. The most conspicuous topographic features within the vicinity of the BNGC are the entrenched meandering valleys of the Kentucky River and Benson and Elkhorn Creeks (Jacobs, 2005). Elevations within the New AASF area range between approximately 760 feet above mean sea level (amsl) and 825 feet amsl.

The BNGC is bounded to the north and east by residential property, to the west by the Kentucky Department of Fish and Wildlife Resources (KDFWR) Salato Wildlife Education Center and Game Farm, and to the south by the Capital City Airport. The Education Center and Game Farm provide a buffer from the encroachment of residential and commercial development along the western and southern border of the BNGC. The 132-acre KDWFR Salato Wildlife Center complex includes two fishing lakes with an accessible pier and a shaded picnic area with grills and shelters. It includes trails, a marsh, and several gardens. The 355-acre Capital City Airport is a public use airport that is owned by the Commonwealth of Kentucky and operated by the Kentucky Transportation Cabinet. The Westridge Elementary School is located on Devil Hollows Road approximately 1.3 miles north of the New AASF in the Choateville neighborhood. Westridge Elementary School opened in August 2004. Approximately 450 students attend the school. Approximately 10 churches also exist in the vicinity of the New AASF along Devil Hollows Road. In addition, numerous single family residences occur to the east of the BNGC and single family residences are continuing to develop north and southwest of the BNGC and CCA.

1.5.1 Geology

The BNGC AASF is underlain by the Clays Ferry Formation (Thrailkill, et al., 1985) and by soils. The Clays Ferry Formation ranges up to 35 feet thick and is made up of interbedded limestone and shale. The limestone and shale occur in about equal amounts (Thrailkill, et al., 1985; USGS, 2001). Lexington Limestone Formation, which is approximately 300 feet thick, underlies the Clays Ferry Formation. All of the stratigraphic units are nearly horizontal in the project area. The soils within the BNGC are a mix of topsoil and silty clay with limestone fragments. In some areas soil is thin allowing bedrock to be exposed at the surface and in other areas soils are moderately deep.

In poorly drained areas and along established drainage ways, the limestone erosion has created a karst landscape. Karst landscapes form when rain water seeps through the soil cover and dissolves the soluble limestone beneath. Karst features can include sinkholes, caves, sinking streams, or springs. Sinkholes are closed depressions at the land surface that form where soil has subsided into an enlarged opening in the limestone where water drains underground. The majority of BNGC is drained to existing sinkholes. Minor sinkholes and continually changing sinkholes also develop along the intermittent creeks and swales within the property.

Due to hazards related to karst features, the KYARNG environmental staff has restricted certain portions of the property to development. A primary sinkhole is located just east of the old AASF. This sinkhole accommodates a significant portion of the storm water runoff from the BNGC. This sinkhole, along with a low area further to the east and northeast, must be preserved and protected from grading and development. Further to the north of the sinkhole, a creek bed, which

accommodates drainage from the neighboring residential properties, has exposed the limestone and shows karst characteristics. This creek bed is also protected from development with a similar disturbance free zone. A karst feature exists in the western portion of the BNGC in the area of the New AASF. However, this feature has not shown significant changes in 20 years. Proper storm water management practices should prevent any sinkhole development in the project area (Jacobs, 2005).

1.5.2 Hydrogeology

Water yields from wells drilled within the Clays Ferry Formation range from approximately 100 to 500 gallons per day in the valley bottoms, but almost no water to wells on hillsides or ridgetops. Water is hard in valley bottoms and may contain salt or hydrogen sulfide. Shale has small, poorly connected openings, and groundwater circulation is slow; as a result, little water is available to wells and springs. On ridgetops the shale prevents downward percolation of water, and creates small, semi-perched water bodies in the lower part of the soil and the upper part of the weathered bedrock (Carey and Stickney, 2005).

At least one-half of Kentucky's aquifers occur in karst regions. Groundwater in karst areas is highly susceptible to pollution from surface activities. As discussed in **Section 1.5.1**, karst features are located within the BNGC property, including the AASF area. Groundwater features are shown on **Figure 1-2**.

The Frankfort Plant Board (FPB) provides potable water to BNGC and the City of Frankfort. The FPB Water Treatment Facility, located at 200 Coffeetree Road, Frankfort, KY, withdraws surface water from pool #4 on the Kentucky River (FPB, 2017). The Lock and Dam #4 which bounds the pool to the north is located approximately 2.25 miles northeast of BNGC. The FPB Water Quality Findings for 2017 and a map of the Kentucky River pool #4 are included in **Appendix A**.

1.5.3 Hydrology

BNGC is part of the Lower Kentucky watershed (USEPA, 2007). The New AASF is located adjacent to an unnamed tributary of South Benson Creek. There are no known surface water features within the AASF footprint and the property is not located in the 100-year or 500-year flood hazard zone (Federal Emergency Management Agency [FEMA], 2005).

Leading pollutants within the Lower Kentucky watershed include siltation, nutrients, pathogens, habitat alteration, and organic enrichment. Benson Creek is listed as impaired as a result of sedimentation, nutrient loading, and low-flow conditions as a result of habitat alteration. A total of 73 waterbodies are considered impaired within this watershed (USEPA, 2004).

According to the National Wetlands Inventory (NWI), there are no wetlands or other surface water features within the AASF footprint (USFWS, 2018); however, there are several freshwater ponds and an intermittent, seasonally flooded riverine habitat within approximately 0.3 mile of the New AASF footprint. The riverine habitat is an unnamed tributary of South Benson Creek. Additionally, there is one freshwater pond and the same intermittent, seasonally flooded riverine habitat within approximately 0.2 mile of the old AASF footprint.

The majority of the BNGC is drained to existing sinkholes. Minor sinkholes and continually changing sinkholes also develop along the intermittent creeks and swales within the property. A primary sinkhole is located just east of the Old AASF, and accommodates a significant portion of the storm water from BNGC. Surface water features are presented on **Figure 1-3**.

1.5.4 Climate

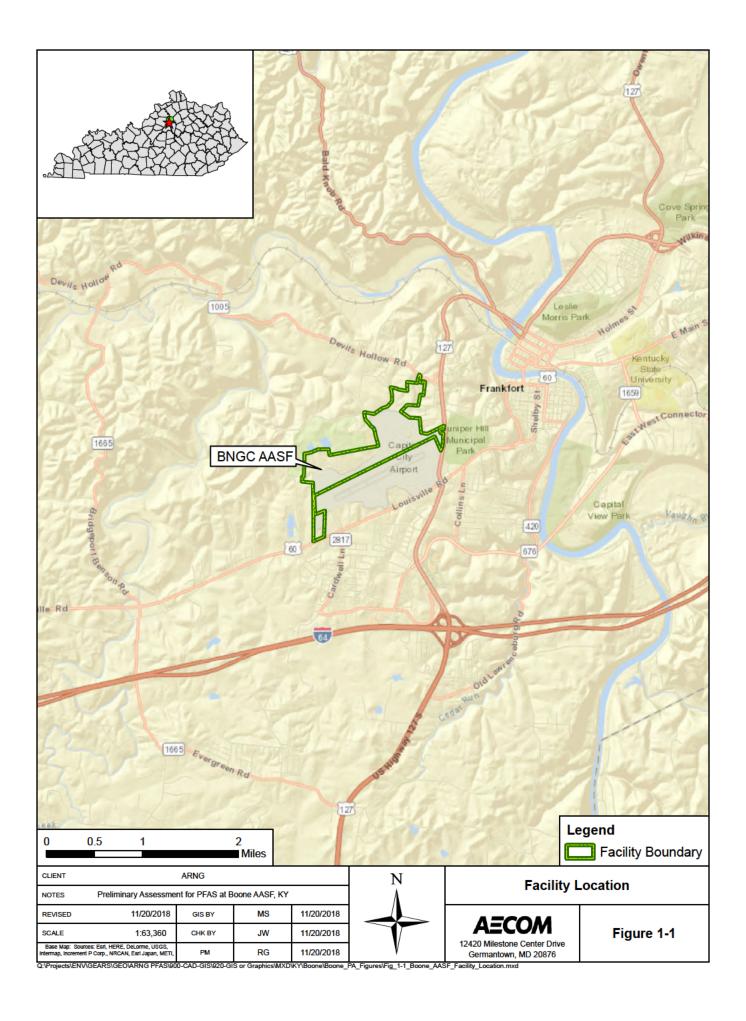
Data from the Capital City Airport immediately south of the facility indicate that the average annual temperature between 1981 and 2010 was 55.3 degrees Fahrenheit (°F) (National Oceanic and Atmospheric Administration [NOAA], 2018). The warmest months are July and August, with normal average temperatures of 76.3°F and 75.2°F, respectively. January is the coldest month, with an average monthly temperature of 32.5°F. Average annual precipitation measured from 1981 at the Capital City Airport was 45.62 inches. Rainfall is heaviest during the months of May through July, averaging over 4 inches per month; January and February are the driest months. Average monthly precipitation ranges from 3.54 inches in October to 4.85 inches in May.

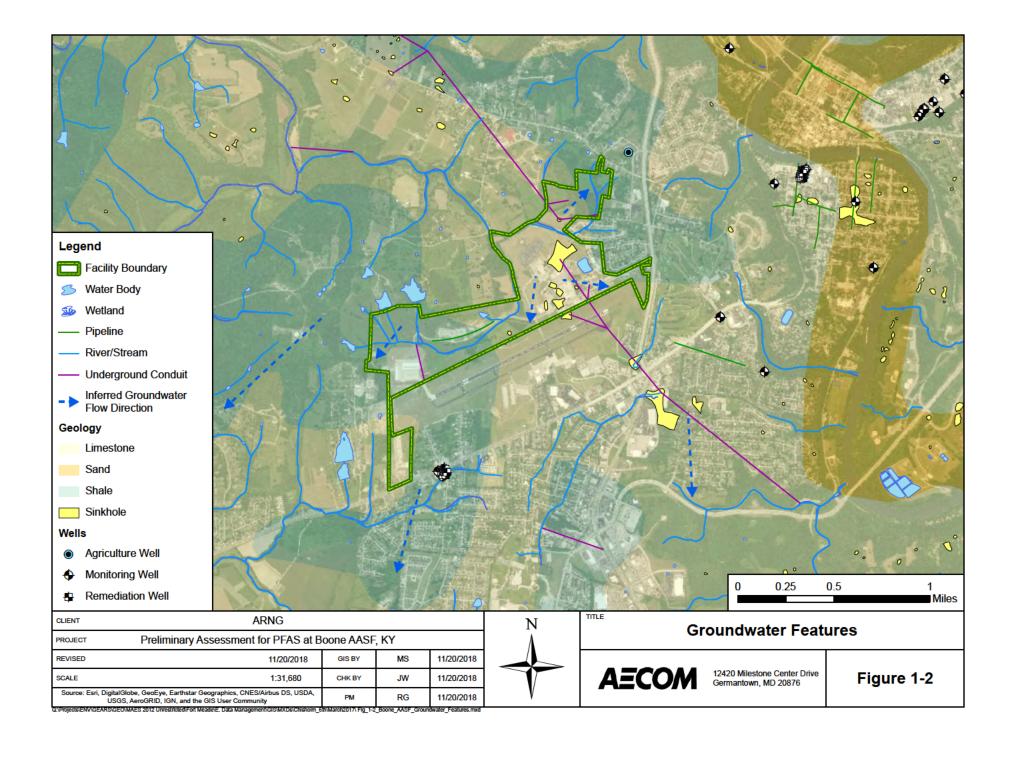
1.5.5 Current and Future Land Use

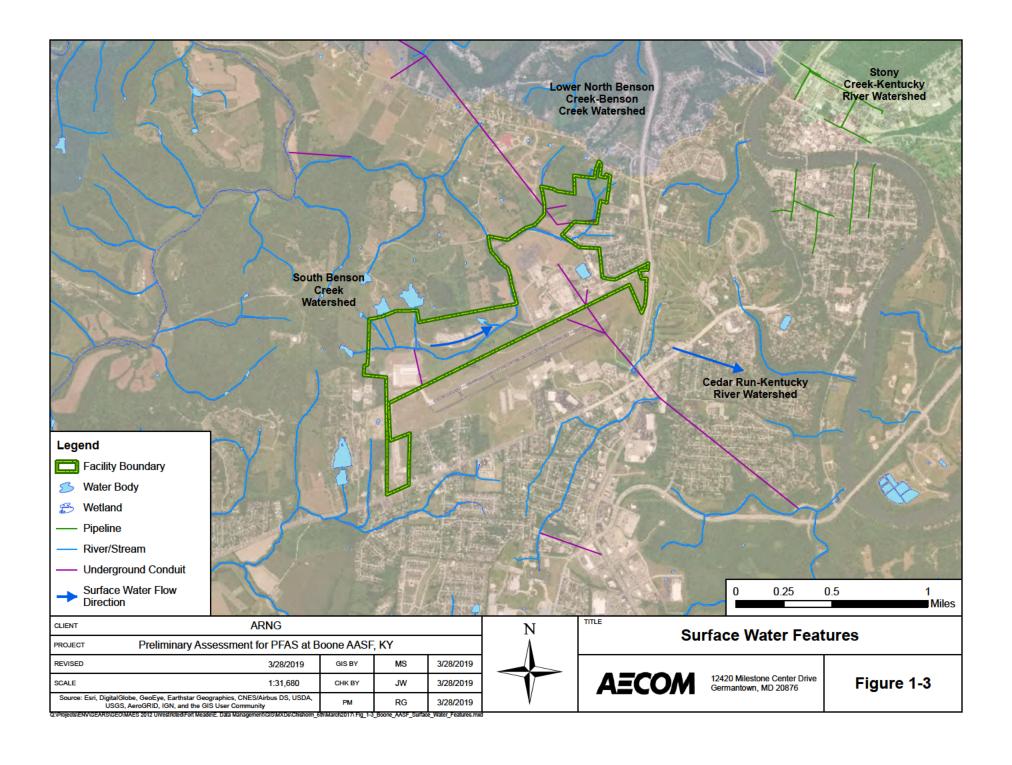
Land use at BNGC includes natural conditions and human-modified conditions, including the following land use categories: residential, commercial, industrial, transportation, communications, utilities, agricultural, institutional, recreational, and other developed use areas. Management plans and zoning regulations at BNGC are often intended to protect specially designated or environmentally sensitive areas.

BNGC was initially established in the early 1950s in conjunction with the Commonwealth of Kentucky's development of the adjoining Capitol City Airport. At the time of the Airport's initial development, a total of 33 acres were donated by the Commonwealth to the Department of Military Affairs for the construction of National Guard facilities. Since then, BNGC has steadily expanded. The Whippoorwill Golf Course (formerly the western portion of BNGC) was acquired both as a necessary part of the airport's safety zone and for its development potential.

The entire BNGC site is fenced with personnel and vehicular access restricted to a single, manned entrance gate on Minuteman Parkway off US 127. The area south of the existing AASF houses a variety of training, logistical, administrative and maintenance support activities. The Western Area, a term used to describe the parcel of land that formerly was the Whippoorwill Golf Course and currently comprises the new AAASF footprint, was once considered as a location for a new armory, billets, annex, bivouac, and vehicle testing and a future location for the growth of maintenance facilities. Other than converting the former golf course club house to house BNGC personnel functions, the construction of adjoining storage buildings, and the construction and paving of the connecting road to these facilities from the Eastern Area of BNGC, there has been little development of the Western Area.







2. Fire Training Areas

No FTAs were identified at BNGC during the PA. BNGC personnel confirmed that there are no FTAs at BNGC during interviews. Aviation activities are the focus of BNGC, including flight operations, flight planning, safety training, and equipment storage. As such, KYARNG never established FTAs at the facility. Additionally, a fire protection/rescue department was not established at the facility. Fire protection and emergency response is provided by the Frankfort City Fire Department.

According to the AASF Maintenance Supervisor at BNGC, the Frankfort City Fire Department performs training at the New AASF approximately once per year. The Assistant Fire Chief of the Frankfort City Fire Department stated during interviews that there are no FTAs at BNGC, but training events have occurred at the Old and New AASF. The Assistant Fire Chief stated that training activities only use Class A foams (which do not contain PFAS), and that no AFFF has been used for any purpose by Frankfort City Fire Department at the New AASF since its construction. Frankfort City Fire Department records corroborate the lack of AFFF use at BNGC.

3. Non-Fire Training Areas

Non-fire training areas were investigated during the PA, but no known releases of AFFF occurred at these areas. A description of each non-FTA is presented below, and they are shown on **Figure 3-1** with photographs appearing in **Appendix C**. A list of fire-fighting chemicals stored at BNGC and the locations of those stored materials provided by KYARNG is included in **Appendix A**.

3.1 Army Aviation Support Facilities

3.1.1 Old AASF (Building BC160 – Fleming Armory)

The Old AASF is located on the northern edge of BNGC in the eastern area off of National Guard Road. The site was constructed in 1972 and a hangar maintenance annex was added in 1997. It was designed for rotary-wing aircraft but was primarily used for UH-60 Blackhawk aircrafts. In approximately 2015, the construction of the New AASF was completed and the Old AASF was transitioned to an Armory. The Old AASF was considered a potential PFAS release site because AASFs can be a common location for crashes or refueling accidents. The geographic coordinates for the Old AASF are 38°11'17.9"N and 84°54'17.0"W.

The Old AASF area includes an additional maintenance hangar north of the armory, parking aprons and a helicopter landing pad. KYARNG staff confirmed that no crashes have occurred at the Old AASF; however, no KYARNG staff familiar with AFFF practices, training or other uses at the Old AASF was available to be interviewed during the site visit. There are no documented uses of AFFF at the Old AASF, but undocumented historic releases remain an uncertainty. Mobile AFFF-containing fire extinguishers were stored at the site before the completion of the New AASF. After the New AASF was completed, mobile fire extinguishers were transferred to the New AASF; however, four Amerex Model 630 mobile fire extinguishers transferred to the New AASF are currently empty. They were known to have contained Amerex AFFF, which contains PFAS. The time, nature, and location of their discharge are unknown. The Model Amerex Model 630 mobile fire extinguisher is designed for the use of Amerex model 354 AR-AFFF solution. No current maintenance, washing, or testing of AFFF containing materials occurs at the Old AASF, but historical AFFF activities are unknown.

The owner's service manual for the Amerex Model 630 mobile fire extinguisher (included in **Appendix A**) indicates that 2.31 gallons of Amerex 354 AR-AFFF solution is contained in one full extinguisher. If all four empty mobile fire extinguishers were discharged at the Old AASF, then a release of 9.24 gallons of AFFF concentrate would have occurred.

The Frankfort City Fire Department has performed training events at the Old AASF. The Fire Department Assistant Chief stated that no AFFF is used during training events, and that no AFFF has been used for any purpose by Frankfort City Fire Department at the Old AASF since.

One Amerex Model 630 mobile fire extinguisher was stored northeast of the maintenance hangar and armory in the outside heavy equipment staging area and is now co-located at the new AASF with ten additional Amerex Model 630 fire extinguishers containing a total of 140 gallons of AFFF solution, and six Amerex Model 469 (Purple K) fire extinguishers. All Model 630 and Model 469 Amerex units await future disposal by the KYARNG. No fire suppression system exists at the Old AASF. Dry chemical fire extinguishers may be present inside the armory and additional hangar area. No other fire suppression devices or systems exist at the Old AASF.

A bioremediation pond was constructed in the southwestern area of the Old AASF in approximately 2003 according to interviews with the KYARNG State Environmental Manager. Twelve catch basins in the parking area and former wash rack funnel runoff to the lined bioremediation pond. The lined pond allows surface water to evaporate, but is also capable of

controlled release via a shut off valve system to allow discharge during heavy rain events. According to the 2009 KYARNG Environmental Assessment for the New AASF proposal, subsurface movement and weather-induced expansion/contraction have created depressions and open cracks on the tarmac and ramps at the Old AASF (KYARNG, 2009). North and west of the parking aprons and helicopter landing pad, the ground slopes downward towards an unnamed tributary of South Benson Creek. Potential releases on the northern and eastern portions of the Old AASF may travel overland via runoff directly to the tributary.

3.1.2 New AASF (Building BC218 – AASF)

The New AASF was completed in 2015 to increase hangar space and to accommodate all aircraft types operated and maintained by the KYARNG. It is located off of Minuteman Parkway on approximately 30 acres of land in the western area of BNGC that was formerly the Whippoorwill Golf Course, and shares a driveway with the southwest end of the Capital City Airport airstrip. The New AASF area comprises two hangars and a chemical storage area. It was considered a potential PFAS release site because AASFs can be a common location for crashes or refueling accidents. The geographic coordinates for the New AASF are 38°10'51.8"N and 84°55'01.2"W.

The New AASF includes areas for hangar space, maintenance, controlled waste handling storage, simulation training, and other support areas. It is used to support the federal, state, and community missions of the KYARNG. The New AASF is used only by the KYARNG. BNGC staff confirmed during interviews that no crashes or incidents requiring emergency response have occurred at the New AASF. There are no documented uses of AFFF at the New AASF; however, four empty AFFF mobile fire extinguishers are stored at the New AASF. The empty units were brought from the Old AASF to the New AASF after construction was complete. The time, location, and nature of their discharge are unknown.

The fire suppression system at the new AASF uses only water. KYARNG staff recalled that the New AASF fire suppression system was tested once after installation using only water. No documentation for this test is available. Mobile AFFF containers are kept at the site along with AFFF in five-gallon buckets and 55-gallon drums. Six apparently full Amerex Model 630 mobile fire extinguishers are stored outside in the northern portion of the New AASF complex. Additionally, ten Amerex Model B674/B675 mobile fire extinguishers containing "Halotron 1" are positioned throughout the New AASF. According to the Halotron 1 clean agent owners service manual (included in **Appendix A**), the primary component of "Halotron 1" is dichlorotrifluoroethane. Six Amerex Model 469 mobile fire extinguishers containing Purple K dry chemical are also positioned throughout the New AASF.

On the western edge of the New AASF area, a storage unit contains eleven 5-gallon pails of Amerex Model 534 AFFF concentrate, two 5-gallon pails of Chemguard AFFF concentrate, and one 5-gallon pail National Foam AFFF concentrate (all of which contain PFAS). One 55-gallon drum of Chemguard AFFF solution, two 55-gallon drums of National Foam AFFF solution and one 55-gallon drum of Monsanto Fire Resistant Foam are also stored in the separate secondary containment storage area. Purple K powder, which does not contain PFAS, is also stored in five gallon buckets in the storage unit. The BNGC AASF maintenance supervisor indicated that these materials were brought from the Old AASF to the New AASF once the Old AASF was transitions to an armory. The specific chemical information for the aforementioned chemicals is provided on proprietary data sheets included in **Appendix A**.

Surface water runoff on the southern half of the New AASF area is funneled through an Oil Water Separator (OWS) in the southeastern area. The discharge from the OWS flows past an oil sorbent sock, and ultimately to the unnamed tributary of South Benson Creek that flows through BNGC. Surface water runoff on the northern half of the New AASF area is funneled through a separate OWS, past an oil sorbent sock, and ultimately to the same unnamed tributary of South Benson

Creek. Surface water runoff potentially drains to the same tributary from both the Old AASF and the New AASF.

3.2 Dining Facility (DFAC)

The Dining Facility (DFAC) at BNGC uses a dry chemical (Purple K) fire suppression system. There is no evidence suggesting that storage or use of AFFF at DFAC ever occurred.

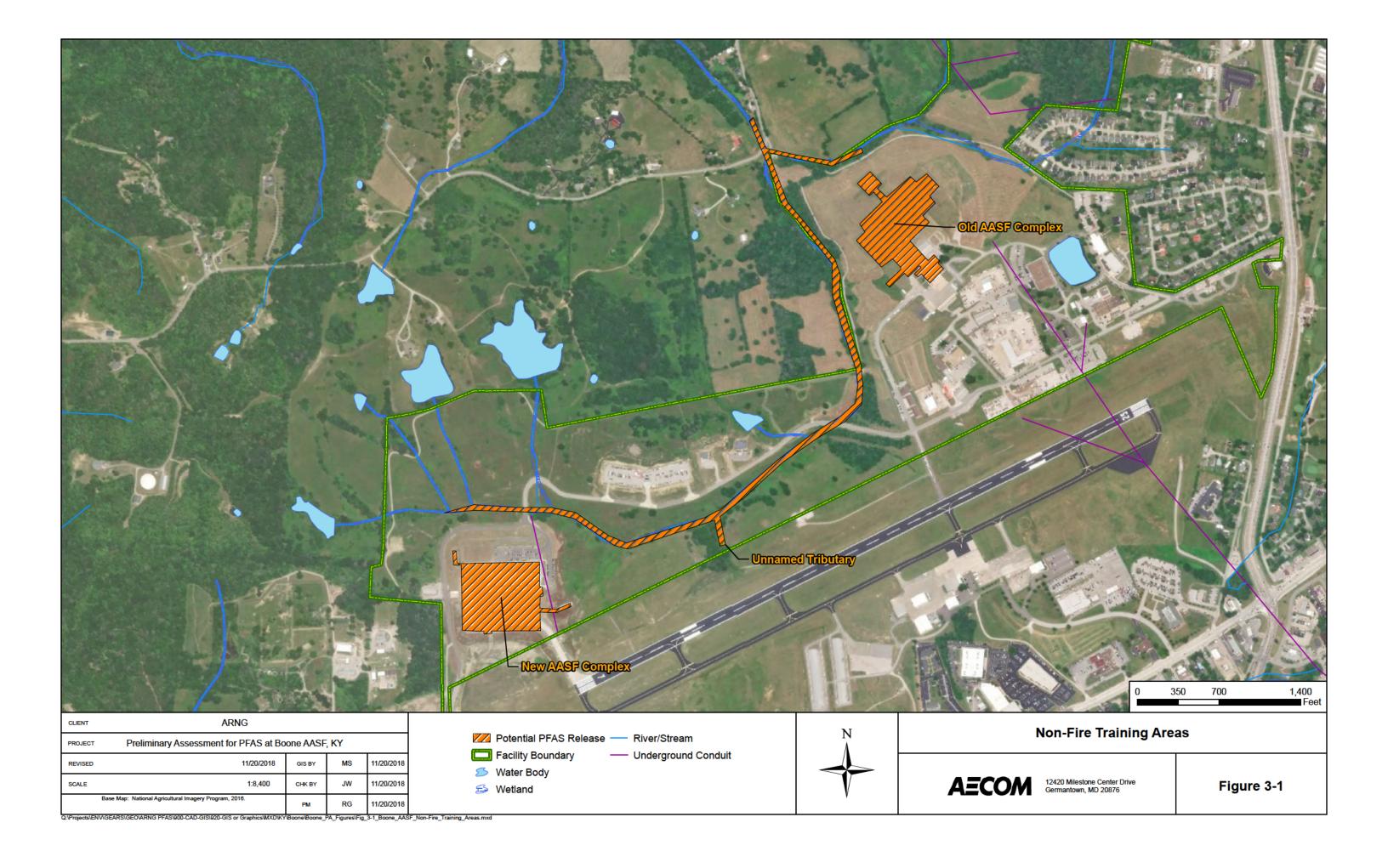
3.3 Waste Water Treatment Plant

There are no Waste Water Treatment Plants at BNGC. BNGC's sanitary sewer system feeds into the City of Frankfort Department of Public Works main line. The Frankfort Department of Public Works operates the public sanitary sewer and wastewater treatment systems as well as solid waste disposal for the City of Frankfort.

3.4 Landfills

The interviewees confirmed that there are no landfills at BNGC.

Landfills are not usually a primary potential release area of PFAS, but materials disposed of in landfills may create a secondary source of contamination. Such materials, to name a few, may include sludge from a WWTP that processes PFAS-laden water, used AFFF storage containers, or products associated with waterproofing uniforms or boots. At BNGC, no information obtained indicates PFAS-related materials were disposed of in a landfill.



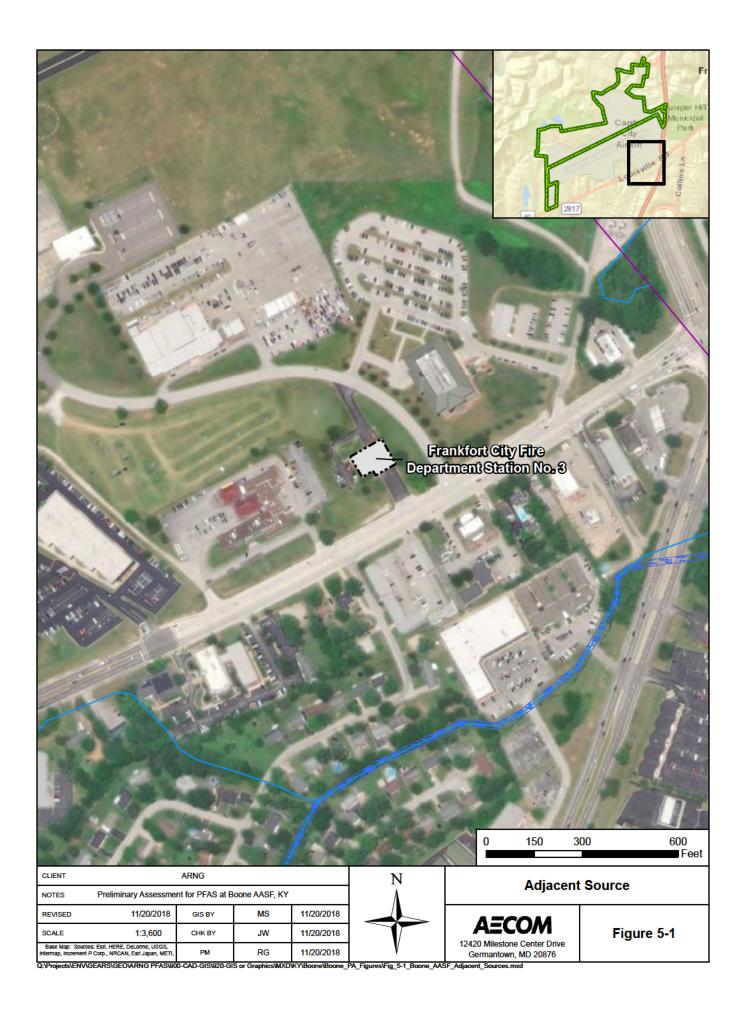
4. Emergency Response Areas

The Frankfort City Fire Department Assistant Fire Chief confirmed that the Fire Department has never responded to a crash at BNGC, and no emergency response locations were identified during BNGC personnel interviews or the PA site visit.

Emergency responses to crashes sometimes require flame suppression, which may result in the release of PFAS to the environment in the form of AFFF. No locations involving the potential release of AFFF were identified at BNGC during the site visit.

5. Adjacent Sources

One potential off-site PFAS sources adjacent to the BNGC facility was identified during the PA. The Frankfort City Fire Department Station Number 3 is located approximately 0.5 miles south of the eastern area of BNGC. Station Number 3 is approximately 0.7 mile southeast of the Old AASF and approximately 1 mile from the New AASF. National Foam brand AFFF concentrate is stored in five gallon buckets on fire rescue trucks at the station, as well as other Frankfort City Fire Department stations. Maintenance of trucks does not include washing AFFF material from equipment due to the containerizing of AFFF until necessary mixing and spraying in the event of an emergency.



6. Conceptual Site Model

Based on the PA findings, two potential release areas were identified: AOI 1 Old AASF and AOI 2 New AASF. A possible secondary area (AOI 3 Unnamed Tributary) is a possible migration route for the potential AFFF from AOIs 1 and 2. The AOI locations are shown on **Figure 6-1**. The following sections describe the CSM components and the specific CSM developed for each AOI. The CSM identifies the three components necessary for a potentially complete exposure pathway: (1) source, (2) pathway, (3) receptor. If any of these elements are missing, the pathway is considered incomplete. Receptors at BNGC include site workers, construction workers, residents, and recreational users/trespassers.

In general, the potential PFAS exposure pathways are ingestion and inhalation. Dermal contact is not considered to be a potential exposure pathway as studies have shown very limited absorption of PFAS through the skin (National Ground Water Association, 2018).

6.1 AOI 1 Old AASF

AOI 1 is the Old AASF area. This includes the armory that used to serve as the Old AASF, the parking area and parking aprons, former wash rack, bioremediation pond, and slopes on the north and west sides of the Old AASF area. No KYARNG staff familiar with AFFF practices, training, or other activities at the Old AASF were available to be interviewed during the site visit. There are no documented uses of AFFF at the Old AASF, but undocumented historic releases remain an uncertainty. Four Amerex Model 630 mobile fire extinguishers transferred from the Old AASF to the New AASF were emptied at an unknown location suspected to have been the Old AASF. The time and place where these units were emptied are unknown.

An intermittent, seasonally flooded riverine habitat that is an unnamed tributary of South Benson Creek exists within 0.1 mile of the old AASF, as well as several freshwater ponds connected via the unnamed tributary. Additionally, a sinkhole is located just east of the area, and accommodates a significant portion of the storm water runoff from BNGC. A bioremediation pond captures runoff from the parking area and wash rack at the Old AASF. Potential spills at the northern and northwestern edge of the area may flow downslope towards the unnamed tributary north of the site. PFAS are water soluble and can migrate readily from soil to groundwater or surface water via leaching and run-off. Because potential AFFF releases to surface soil or the bioremediation pond have may occurred at AOI 1, it is possible that potential PFAS contamination has migrated from the soil at AOI 1 to these surface water bodies.

The majority of the BNGC drains to sinkholes. Minor sinkholes and continually changing sinkholes also develop along the intermittent creeks and swales within the property. The primary sinkhole is located immediately east of the Old AASF, and accommodates a significant portion of the storm water from BNGC. As such, potential AFFF releases may migrate to the primary sinkhole and other nearby surface water bodies. All receptors may be exposed to PFAS contaminated surface water due to run-off and infiltration at the Old AASF.

There are no drinking water supply wells present on-facility at BNGC. Although groundwater in karst areas is highly susceptible to pollution from surface activities, BNGC and its surrounding areas are served by the Frankfort Plant Board, and the pathway for PFAS contamination in groundwater is considered incomplete to all receptors.

Ground-disturbing activities to surface soil at AOI 1 could result in site worker, construction worker, and trespasser exposure to potential PFAS contamination via inhalation of dust particles or ingestion of surface soil. Ground-disturbing activities to subsurface soil could result in site worker, construction worker, and trespasser exposure via ingestion of subsurface soil. Therefore, the

exposure pathways for these receptors are potentially complete. The CSM for AOI 1 is shown on **Figure 6-2.**

6.2 AOI 2 New AASF

AOI 2 is the New AASF. This includes building BC218 (the New AASF hangar), building BC212 (General Purple K Storage Building) to the west, and BC219 (AASF Hangar) to the southwest. Potential AFFF releases to soil by KYARNG may have occurred during the transfer of materials from the Old AASF to the New AASF. Four Amerex Model 630 mobile fire extinguishers transferred from the Old AASF to the New AASF were emptied in an unknown location suspected to have been the Old AASF.

The unnamed tributary of South Benson Creek exists within 0.1 mile of the New AASF. Catch basins at the New AASF funnel runoff from the New AASF area through OWSs and oil sorbent socks to the unnamed tributary. PFAS are water soluble and can migrate readily from soil to groundwater or surface water via leaching and run-off. Because potential AFFF releases to the channelized runoff system may have occurred at AOI 1, it is possible that potential PFAS contamination has migrated to these surface water bodies.

Drainage at the New AASF occurs similarly to the Old AASF. As such, potential AFFF releases may migrate to sinkholes and nearby surface water bodies, and all receptors may be exposed to PFAS contaminated surface water.

Similarly to the Old AASF, the pathway for PFAS contamination in groundwater is considered incomplete to all receptors at the New AASF.

Ground-disturbing activities to surface soil at AOI 2 could result in potential PFAS exposure to the same receptors via the same pathways at risk at AOI 1: site workers, construction workers, and trespassers via inhalation of dust particles or ingestion of surface soil. Ground-disturbing activities to subsurface soil could result in site worker, construction worker, and trespasser exposure via ingestion of subsurface soil. Therefore, the exposure pathways for these receptors are potentially complete. The CSM for AOI 2 is shown on **Figure 6-3.**

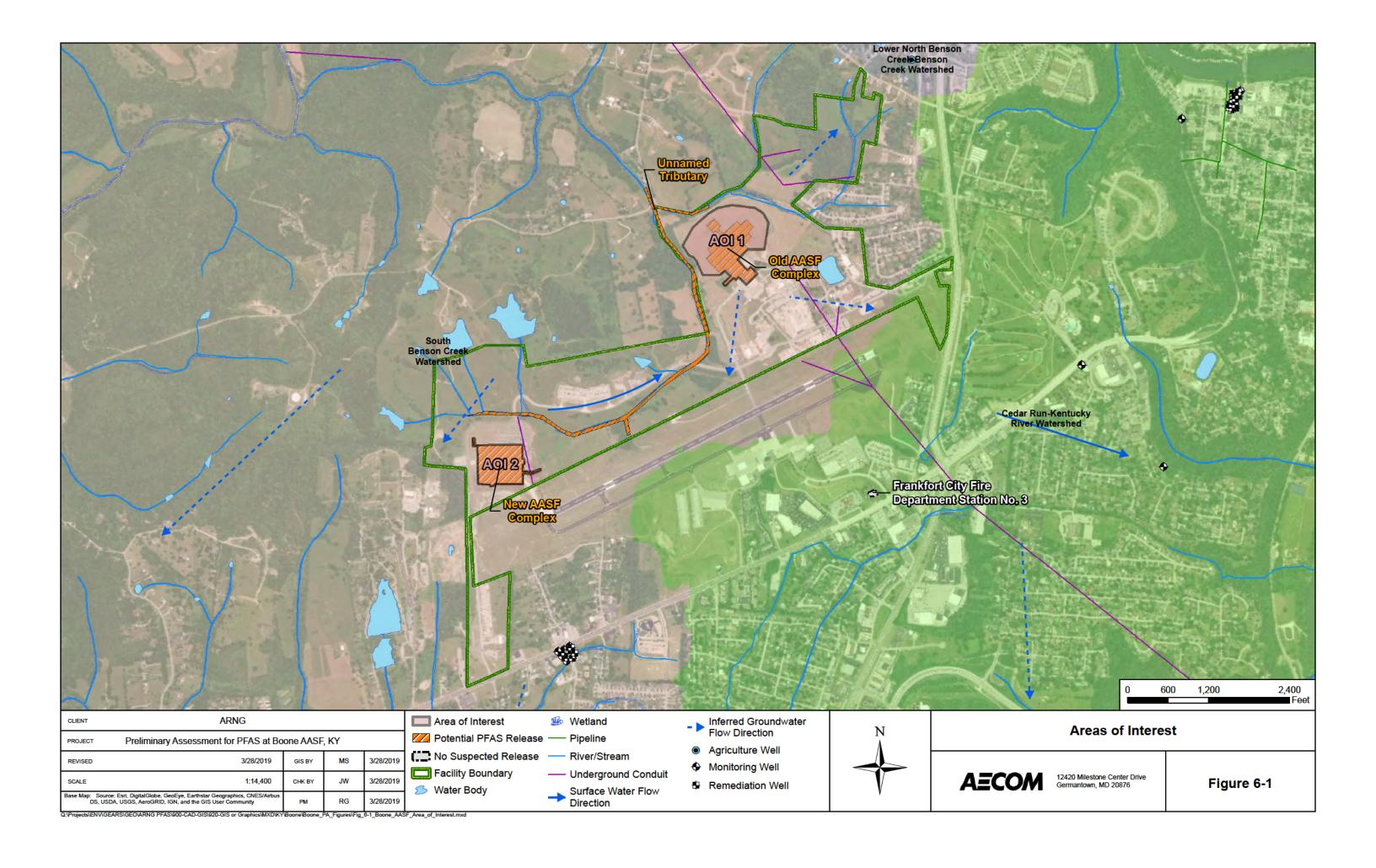
6.3 AOI 3 Unnamed Tributary

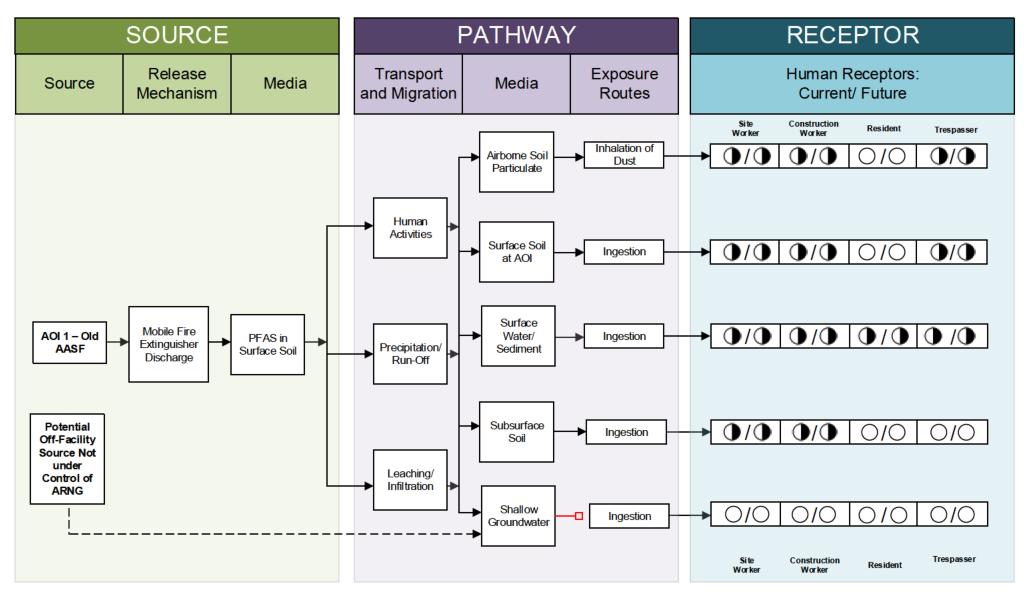
AOI 3 is the Unnamed Tributary of South Benson Creek that transects BNGC. The tributary is an intermittent, seasonally flooded wetland. The AOI traverses BNGC from the New AASF to the Old AASF and continues off the facility. The Unnamed Tributary ultimately discharges to the Kentucky River. Potential AFFF releases to the Unnamed Tributary AOI surface water by KYARNG may have occurred in 2015 during the transfer of materials from the Old AASF to the New AASF. The New AASF was completed in 2015.

AOI 3 is located within 0.1 mile of the Old AASF and New AASF at various points. Both the Old and New AASF have a complete pathway for surface water from areas where AFFF may have been released. PFAS are water soluble and can migrate readily from soil to groundwater or surface water via leaching and run-off. Because potential AFFF releases to the channelized runoff system may have occurred at AOIs 1 2, it is possible that potential PFAS contamination has migrated to these surface water bodies.

There are no drinking water supply wells present on-facility at BNGC. Although groundwater in karst areas is highly susceptible to pollution from surface activities, BNGC and its surrounding areas are served by the Frankfort Plant Board, and the pathway for PFAS contamination in groundwater is considered incomplete to all receptors.

Creek maintenance and other various activities at AOI 3 could result in site and construction worker exposure to potential PFAS contamination via ingestion of surface water or sediment. Therefore, the exposure pathways for these receptors are potentially complete. The CSM for AOI 3 is shown on **Figure 6-4.**





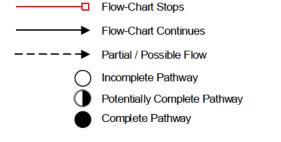
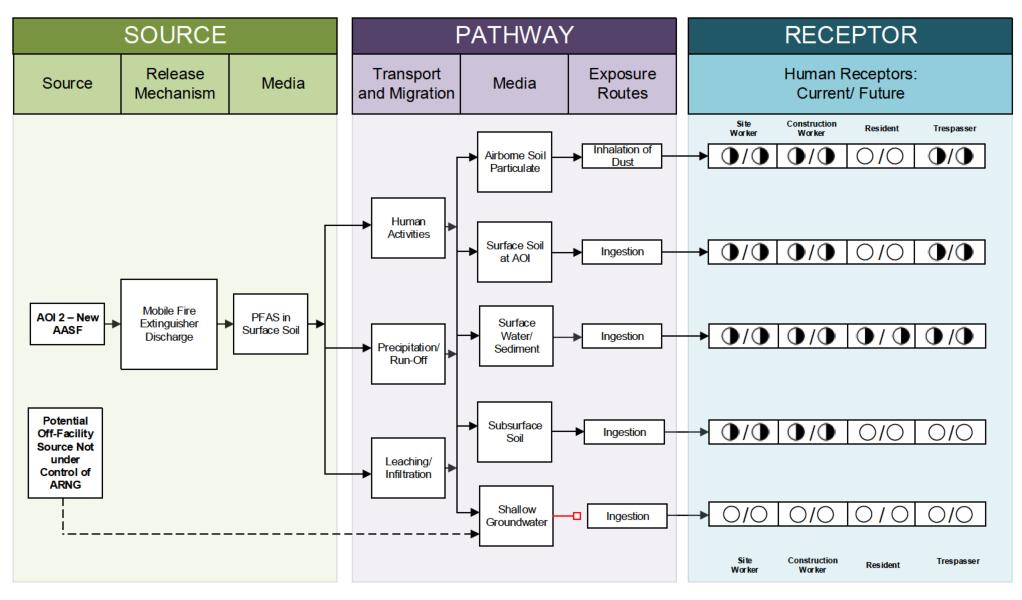


Figure 6-2 Conceptual Site Model AOI 1 Old AASF Area



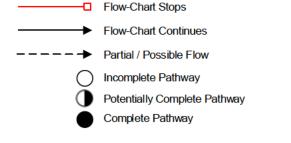
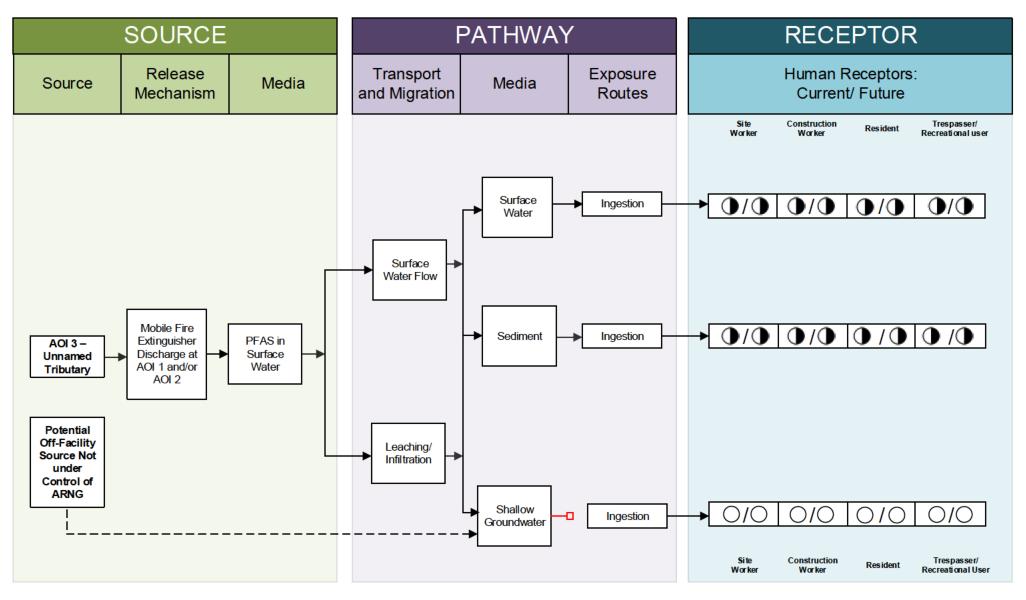


Figure 6-3
Conceptual Site Model
AOI 2 New AASF Area



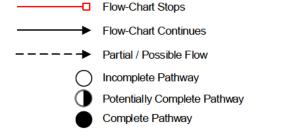


Figure 6-4 Conceptual Site Model AOI 3 Unnamed Tributary

7. Conclusions and Data Uncertainty

This report presents a summary of available information gathered during PA efforts on the use and storage of AFFF at BNGC. The PA findings are based on personnel interviews, environmental investigations and reports, historical documents, and the visual site inspection.

7.1 Conclusions

Three AOIs related to potential PFAS release were identified at BNGC based on PA data (**Figure 7-1**):

Area of Interest	Name	Used by	Potential Release Dates
AOI 1	Old AASF	KYARNG	2015
AOI 2	New AASF	KYARNG	2015
AOI 3	Unnamed Tributary	KYARNG	2015

Based on documented potential AFFF releases at these AOIs, there is potential for exposure to PFAS contamination in surface soils to site and construction workers, and recreational users/trespassers, and in subsurface soils to site and construction workers via inhalation and ingestion. There is also the potential for exposure to PFAS contamination in surface water and sediment for all receptors via ingestion. There is no potential for exposure to PFAS contamination groundwater for any receptors due to the absence of drinking water supply wells. The FPB provides potable water for BNGC and the city of Frankfort. Although documented AFFF is stored at the off-facility nearby Frankfort City Dire Department Station Number 3, no sources of PFAS release to the environment were identified in the local area surrounding BNGC.

7.2 Uncertainty

A number of information sources were investigated during this PA to determine the potential for PFAS-containing materials to have been present, used, or released at the facility. There is no historically documented use of PFAS containing materials at BNGC by KYARNG staff. Records were not kept by KYARNG staff or available during the PA to explain the discharge of four Amerex Model 630 mobile fire extinguishers. Historical use and storage of AFFF at the Old AASF is unknown.

The conclusions of this PA are predominantly based on the information provided during interviews with personnel who had direct knowledge of PFAS use at the facility. Sometimes the provided information was vague. Gathered information has a degree of uncertainty due to the absence of written documentation, the limited number of personnel with direct knowledge due to staffing changes, the time passed since PFAS was first used (1969 to present), and a reliance on personal recollection. Inaccuracies may arise in potential PFAS release locations, dates of release, volume of releases, and the concentration of AFFF used. There is also a possibility the PA has missed a source of PFAS, as the science of how PFAS may enter the environment continually evolves.

In order to minimize the level of uncertainty, readily available data regarding the use and storage of PFAS were reviewed, retired and current personnel were interviewed, multiple persons were interviewed for the same potential source area, and potential source areas were visually inspected.

The following table summarizes the uncertainties associated with the PA:

Area of Interest	Source of Uncertainty
All AOIs	No personnel available with direct knowledge of the emptying of four Amerex Model 630 mobile fire extinguishers. No records kept for the emptying of these mobile extinguishers.
AOI 1	No personnel available with direct knowledge of historical practices for AFFF use or storage, or the discharge of AFFF from the four empty Amerex Model 630 mobile fire extinguishers transferred to the New AASF. No documented storage or uses of AFFF are available. Undocumented releases from the bioremediation pond during heavy rain events represent potential unknown PFAS release at the Old AASF if PFAS-containing materials were captured in the bioremediation pond. Potential releases at the AOI are unknown.
AOI 2	No personnel available with direct knowledge of the status the four Amerex Model 630 mobile fire extinguishers at the time of their transfer to the New AASF. No documented intended purpose for the bulk AFFF stored at the New AASF.
AOI 3	No personnel available with direct knowledge of historical practices for AFFF use or storage at either the Old or New AASF that may have resulted in a release to the unnamed tributary.
Adjacent Sources – Frankfort City Fire Department Station No. 3	Undocumented releases of AFFF during truck maintenance and other activities represent a potential source of PFAS release.

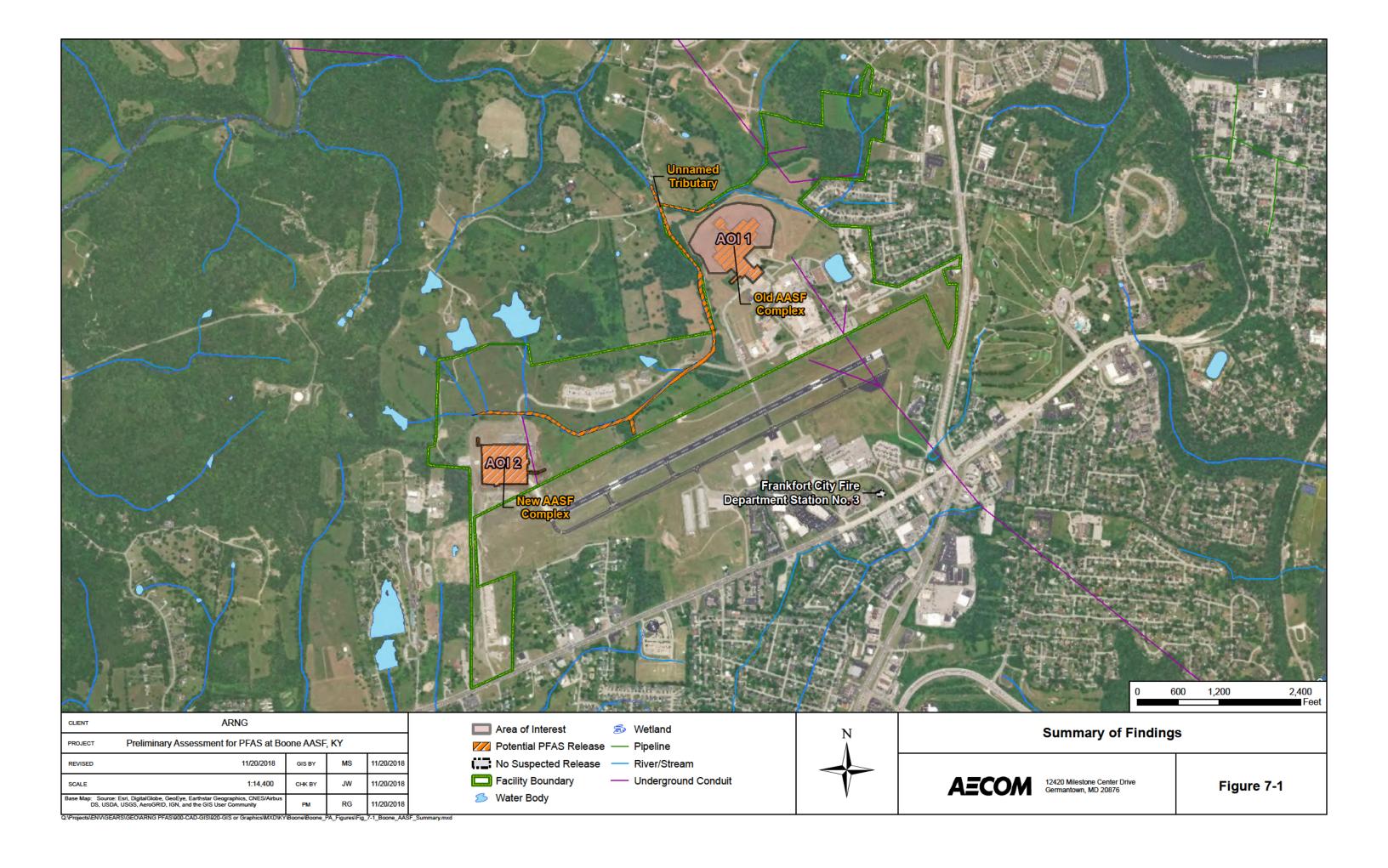
7.3 Potential Future Actions

Records and interviewees (whose first-hand facility knowledge span approximately 1998-present) could not account for four empty AFFF mobile fire extinguishers at BNGC. The empty extinguishers indicate that an unknown release may have occurred resulting in potential PFAS releases at AOI 1, AOI 2, and AOI 3. Based on the CSM developed for the AOIs, there is potential for receptors to be exposed to PFAS contamination in surface and subsurface soil, surface water, and sediment. **Table 7-1** summarizes the rationale used to determine if the AOIs should be considered for further investigation under the CERCLA process and undergo a Site Inspection (SI).

ARNG evaluates the need for an SI at BNGC based on the presence of a PFAS release, possible receptors, and the migration of potential PFAS contamination to receptors.

Table 7-1 PA Findings Summary

Area of Interest	AOI Location	Rationale	Potential Future Action
AOI 1 Old AASF	38°11'17.9"N and 84°54'17.0"W	AFFF-containing fire extinguishers previously stored at the AOI are currently inexplicably empty	Proceed to an SI, focus on soil, groundwater, surface water and sediment
AOI 2 New AASF	38°10'51.8"N and 84°55'01.2"W	AFFF-containing fire extinguishers currently stored at the AOI are inexplicably empty	Proceed to an SI, focus on soil, groundwater, surface water and sediment
AOI 3 Unnamed Tributary	Between AOI 1 and AOI 2	Potential runoff location for AOI 1 and AOI 2	Proceed to an SI, focus on surface water and sediment



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Appendix A Data Resources

Data resources will be provided separately on CD. Data resources for Boone National Guard Center include:

Previous Environmental Assessments Completed at BNGC

 2009 Environmental Assessment for an Army Aviation Support Facility, Kentucky Army National Guard

Chemical Data for Firefighting Chemicals Stored at BNGC

- 2005 Chemguard Specialty Chemicals and Equipment Blizzard Freeze Protected Foam Solution Data Sheet
- 2016 Halotron 1 Safety Data Sheet
- 2017 List of Firefighting Chemicals Stored by KYARNG
- 2018 National Foam Aer-O-Water 6EM Technical Data Sheet

BNGC Firefighting Equipment Specifications

- 2015 Amerex Corporation Halotron 1 Wheeled Fire Extinguishers Specifications
- 2015 Amerex Owners Service Manual No. 16672, Installation, Operating & Servicing Instructions for Halotron 1 Clean Agent Wheeled Stored Pressure Fire Extinguishers, 65 Pound and 150 Pound
- 2016 Amerex Owners Service Manual No. 05615, Installation, Operating & Servicing Instructions for the Model 630 Wheeled/Model 631 Stationary 33 Gallon (AR-AFFF) Alcohol Resistant Foam Fire Extinguisher, 23 Cu Ft Nitrogen Cylinder Operated

BNGC Environmental Data Resources Report

2018 Boone National Guard Center EDR Report

Frankfort Plant Board Information

- 2012 Kentucky Department of Fish and Wildlife Blue Water Trail: Kentucky River Pool 4
- 2017 Frankfort Plant Board Report to Consumers on Water Quality Findings

Environmental Assessment for an Army Aviation Support Facility (AASF)

Kentucky Army National Guard













July 2009







ENVIRONMENTAL ASSESSMENT ORGANIZATION

This Environmental Assessment (EA) evaluates the potential environmental, socioeconomic, and cultural effects of the proposed construction and operation of a new Kentucky Army National Guard (KYARNG) Army Aviation Support Facility (AASF) at the Boone National Guard Center (BNGC) in Frankfort, Franklin County, Kentucky.

As required by the National Environmental Policy Act of 1969 (NEPA; 42 USC 4321 *et seq.*), the Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations (CFR) 1500-1508), and 32 CFR Part 651 (Environmental Analysis of Army Actions, Final Rule), the potential effects of the Proposed Action and Alternatives are analyzed. This EA will facilitate the decision-making process regarding the Proposed Action and its alternatives, and is organized as follows:

EXECUTIVE SUMMARY: Describes the Proposed Action; summarizes environmental, cultural, and socioeconomic consequences; and compares potential effects associated with the two considered alternatives

SETION 1.0 PURPOSE, NEED, AND SCOPE: Summarizes the purpose of and need for the Proposed Action, provides relevant background information, and describes the scope of the EA.

SECTION 2.0 DESCRIPTION OF THE PROPOSED ACTION: Describes the Proposed Action.

SECTION 3.0 ALTERNATIVES CONSIDERED: Presents alternatives for implementing the Proposed Action.

SECTION 4.0 AFFECTED ENVIRONMENT: Describes the existing environmental, cultural, and socioeconomic setting of the proposed AASF project area and its vicinity.

SECTION 5.0 ENVIRONMENTAL CONSEQUENCES: Identifies individual and cumulative potential environmental, cultural, and socioeconomic effects of implementing the Proposed Action and alternatives, and identifies proposed mitigation measures, as appropriate.

SECTION 6.0 COMPARISON OF ALTERNATIVES AND CONCLUSIONS: Compares the environmental effects of the considered alternatives and summarizes the significance of individual and expected cumulative effects of these alternatives.

SECTION 7.0 REFERENCES: Provides bibliographical information for cited sources.

SECTION 8.0 GLOSSARY: Defines terms used in the EA.

SECTION 9.0 LIST OF PREPARERS: Identifies document preparers and their areas of expertise.

SECTION 10.0 AGENCIES AND INDIVIDUALS CONSULTED: Lists agencies and individuals consulted during EA preparation.

APPENDICES:

- **A.** AASF Concept Site Plan
- **B.** Agency Correspondence
- C. Summary of 13 August 2007 Public Meeting on AASF
- **D.** Resolutions Concerning AASF
- E. Newspaper Articles Concerning AASF
- F. Boone National Guard Center Air Quality Permit



ENVIRONMENTAL ASSESSMENT SIGNATURE PAGE

LEAD AGENCY: National Guard Bureau (NGB)

COOPERATING AGENCIES: None

TITLE OF PROPOSED ACTION: Proposed Construction and Operation of a new Army Aviation

Support Facility at the Boone National Guard Center

AFFECTED JURISDICTION: Frankfort, Franklin County, Kentucky

POINT OF CONTACT: Faith Fiene, State Environmental Program Manager

Boone National Guard Center 100 Minuteman Parkway Frankfort, KY 40601

PROPONENTS: Kentucky Army National Guard (KYARNG)

REVIEWED BY: REVIEWED BY:

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Affairs Management Office

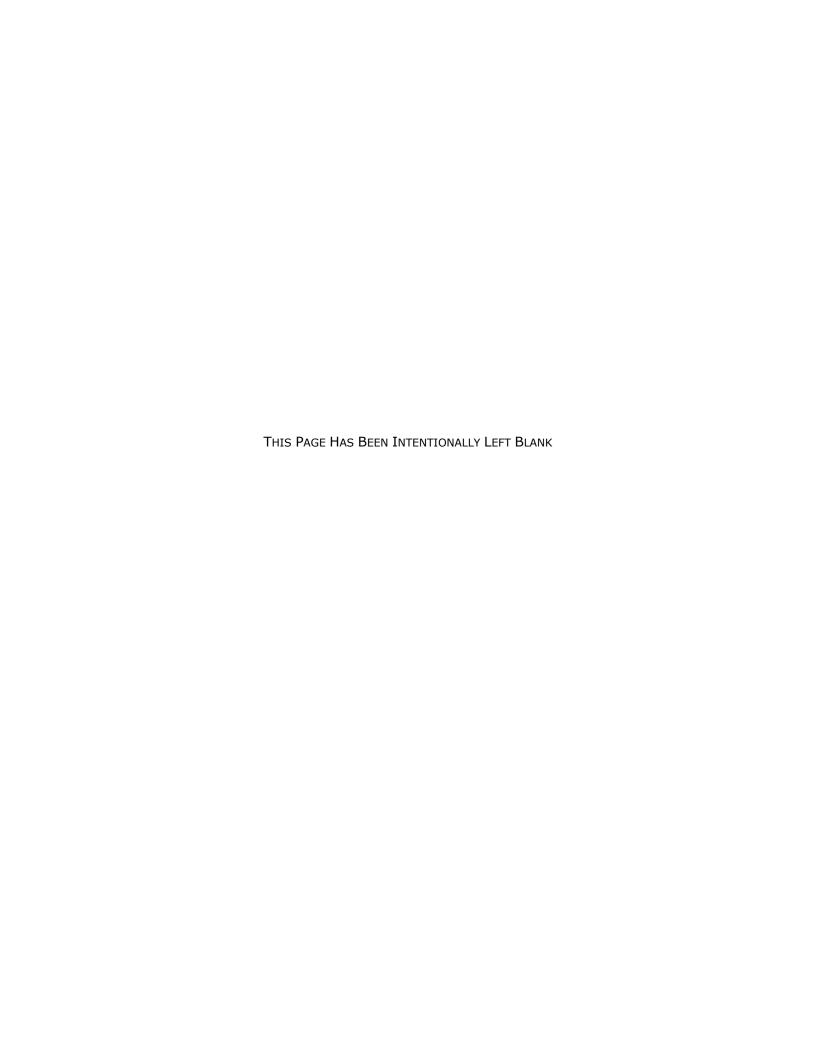
DOCUMENT DESIGNATION: Environmental Assessment (EA)

ABSTRACT: The NGB and KYARNG propose to construct and operate a new Army Aviation Support Facility (AASF) at the Boone National Guard Center (BNGC) in Frankfort, Kentucky. The new AASF would provide: hangar space for rotary-wing aircraft (thirteen UH-60 Black Hawks, six OH-58 Kiowas) and fixed-wing aircraft (two C-23 Sherpas and one C-12 Huron); shop areas; tool and parts rooms; accessory equipment, flammable/combustible and controlled waste handling storage areas; an aviation life support equipment shop/storage; locker/toilet/shower rooms; a break room; a physical fitness room; and simulation training areas. The facility would also include unheated aircraft storage hangar(s); military vehicle and privately owned vehicle parking areas; access roads; a fuel truck containment area; a fuel storage and dispensing system; ground support equipment storage areas; hangar and parking aprons; an aircraft wash facility; taxiways; and site lighting, utilities and landscaping.

The evaluation performed within this EA concludes that there would be no significant adverse impact, either individually or cumulatively, to the local environment or quality of life as a result of the implementation of the Preferred Action Alternative, provided the best management practices are followed. Positive impacts to onsite land use, the local socioeconomic environment, and onsite infrastructure would be anticipated.

The No Federal Action Alternative was not found to satisfy the purpose and need of the project. This alternative would not enable the KYARNG to conduct adequate aviation training at BNGC.

This EA recommends that the KYARNG elect to implement the Preferred Action Alternative. Implementation of the Preferred Action Alternative would serve to fulfill the purpose and need for the Proposed Action, allowing the KYARNG to accomplish its assigned military missions, while minimizing potential impacts to the local and regional natural, cultural, and socioeconomic environment.



EXECUTIVE SUMMARY

Environmental Assessment for the Proposed Army Aviation Support Facility in Frankfort, Kentucky

This Environmental Assessment (EA) has been prepared to identify, document, and discuss the possible environmental, cultural, and socioeconomic impacts associated with the proposed construction and operation of an Army Aviation Support Facility (AASF) at Boone National Guard Center (BNGC) in Frankfort, Franklin County, Kentucky.

BNGC is located 1.5 miles west of the State Capital Building in Frankfort, Kentucky. BNGC was established in the early 1950s in conjunction with the Commonwealth of Kentucky's development of the adjoining Capital City Airport (CCA). BNGC consists of 373.6 acres and approximately 70 buildings of various sizes and functions (e.g., aviation, training, logistical, administrative, and maintenance support). BNGC is the headquarters for the Kentucky Air and Army National Guard.

The current AASF is located on the northern edge of the BNGC. It consists of a 31,184 gross square foot facility constructed in 1972; an additional aircraft maintenance hangar, comprising 10,560 gross square feet, was added in 1997. Other facilities serving the AASF include a 5,985 gross square foot covered storage area, fuel storage and dispensing facilities, storage, parking aprons, a landing pad, and a connecting taxiway to the CCA runway. The KYARNG aviation unit's Readiness Center is also located at BNGC.

This EA provides the necessary information to properly and fully assess the potential effects of proposed construction and operation of a new AASF as required under the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code [USC] 4321 et seq.); the President's Council of Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] 1500-1508); 32 CFR Part 651; and fulfills the requirements as stipulated within AR 200-1, Environmental Protection and Enhancement.

OVERVIEW OF PURPOSE AND NEED

The purpose of the Proposed Action is to construct and operate a suitable, modern AASF that meets current and future KYARNG requirements. The Proposed Action is needed to overcome current AASF hanger space deficiencies to accommodate all aircraft types currently operated and maintained by the KYARNG (thirteen UH-60 Black Hawks, six OH-58 Kiowas, two C-23 Sherpas, and one C-12 Huron). All military aircraft are now authorized to be hangered to protect the equipment from the weather and wildlife damage. The current AASF can only accommodate six rotary-wing aircraft indoors with their blades unfolded during maintenance. The C-12 Huron is parked in a hanger on the adjacent Capital City Airport. All other aircraft are parked outside which has led to increased operations and maintenance costs due to lightning strikes as well as damage caused by wildlife (e.g., mice, opossums, and birds). The current AASF lacks "hot refueling" capability (i.e., refueling an aircraft while the engines and rotors are turning) that limits the KYARNG's ability to rapidly refuel helicopters to meet mission requirements. It also lacks adequate water supply, support areas, parking, and a wash rack that can service UH-60 Black Hawks. The new AASF would allow the KYARNG to maintain and improve readiness.

OVERVIEW OF CONSIDERED PROJECT ALTERNATIVES

This EA evaluates the individual and cumulative effects of the Preferred Action Alternative (construction and operation of a new AASF; the Proposed Action) and the No Action Alternative with respect to the following criteria: land use, air quality, noise, geology, soils, water resources, biological resources, cultural resources, socioeconomics, environmental justice, infrastructure, and hazardous and toxic materials/wastes.

Under the Preferred Action Alternative, KYARNG would construct and operate a new AASF at the BNGC. The new AASF would provide: hangar space for rotary-wing aircraft (thirteen UH-60 Black Hawks, six OH-58 Kiowas) and fixed-wing aircraft (two C-23 Sherpas and one C-12 shop areas; tool and parts rooms: accessory flammable/combustible and controlled waste handling storage areas; an aviation life support equipment shop/storage; locker/toilet/shower rooms; a break room; a physical fitness room; and simulation training areas. The facility would also include unheated aircraft storage hangar(s); military vehicle and privately owned vehicle parking areas; access roads; a fuel truck containment area; a fuel storage and dispensing system; ground support equipment storage areas; hangar and parking aprons; an aircraft wash facility; taxiways; and site lighting, utilities and landscaping.

The size and age of the existing AASF severely limits the future flexibility and readiness potential of the KYARNG aviation components. Modernized facilities are a critical factor in providing quality aviation support to Kentucky. The Preferred Action Alternative meets the purpose and need for the Proposed Action.

Under the No Action Alternative, the Proposed Action would not be implemented and the KYARNG's use of the existing AASF would continue. The KYARNG's mission and readiness would be negatively affected. Lack of sufficient hanger space for all its helicopters would continue to increase operation and maintenance costs. A lack of "hot-refueling" would continue to limit KYARNG's ability to quickly refuel helicopters to meet mission requirements. Runoff from aircraft parking pads would continue to enter receiving waterbodies without being managed in storm water basins. The No Action Alternative was not found to satisfy the purpose and need of the project.

CONCLUSION

The evaluation performed in this EA concludes that there would be no significant adverse impact, either individually or cumulatively, to the local environment or quality of life associated with the implementation of the Preferred Action Alternative. This EA's analysis determines, therefore, that an EIS is not necessary for implementation of the Preferred Action Alternative, and that a Finding of No Significant Impact (FNSI) is appropriate. Positive impacts to onsite land use, water resources within the eastern portion of the BNGC, noise, the local socioeconomic environment, and onsite infrastructure would be anticipated. This EA recommends implementation of the Preferred Action Alternative.

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ACRONYMS AND ABBREVIATIONS

AASF	Army Aviation Support Facility Above Ground Level	KAR	Kentucky Administrative
AGL AICUZ	Air Installation Compatibility Use	KDFWR	Regulations Kentucky Division of Fish and
ALCE.	Zone	KDOW	Wildlife Resources
ALSE	Aviation Life-Support Equipment	KDOW	Kentucky Division of Water
AR	Army Regulation	KHC	Kentucky Heritage Council
ARNG	Army National Guard	KSDC	Kentucky State Data Center
ASB	Aviation Support Battalion	KYARNG	Kentucky Army National Guard
AST	Above-Ground Storage Tank	MEDEVAC	Medical Evacuation
AVIM	Aviation Intermediate	MG	Major General
DMD	Maintenance	NAAQS	National Ambient Air Quality
BMP	Best Management Practices	NEDA	Standards
BNGC	Boone National Guard Center	NEPA	National Environmental Policy Act
BRAC	Base Realignment and Closure	NGB	National Guard Bureau
CAA	Clean Air Act	NHPA	National Historic Preservation Act
CCA	Capital City Airport	NRCS	Natural Resources Conservation
CEQ	Council on Environmental Quality		Service
CFR	Code of Federal Regulations	NVG	Night Vision Goggles
CSMS	Combined Support Maintenance	ОН	Observation Helicopter
	Shop	OIF	Operation Iraqi Freedom
CWA	Clean Water Act	OSACOM	Operation Support Airlift
DA	Department of Army		Command
DNL	Day-Night Sound Level	OSHA	Occupational Safety and Health
DoD	Department of Defense		Administration
DoDI	Department of Defense	POL	Petroleum, Oil, and Lubricant
	Instruction	POV	Privately Owned Vehicles
DET	Detachment	RPDP	Real Property Development Plan
DMA	Department of Military Affairs	SERCC	Southeast Regional Climate
EA	Environmental Assessment		Center
EIS	Environmental Impact Statement	SHPO	State Historic Preservation Office
EO	Executive Order	SONMP	Statewide Operational Noise
ESA	Endangered Species Act		Management Plan
E&S	Erosion and Sediment	SOP	Standard Operating Procedure
FAA	Federal Aviation Administration	SWPPP	Storm Water Pollution Prevention
FEMA	Federal Emergency Management		Plan
	Agency	TAG	The Adjutant General
FNSI	Finding of No Significant Impact	TA	Training Area
FPPA	Farmland Policy Protection Act	TC	Training Circular
FRMC	Frankfort Regional Medical Center	UH	Utility Helicopter
FY	Fiscal Year	USACHPPM	United States Army Center for
GOV	Government Owned Vehicles		Health Promotion and Preventive
GPP	Groundwater Protection Plan		Medicine
HAPs	Hazardous Air Pollutants	USACE	United States Army Corps of
HHC	Headquarters and Headquarters		Engineers
	Company	USC	United States Code
HSC	Health Services Command	USDA	United States Department of
HTMW	Hazardous and Toxic Materials		Agriculture .
	and Waste	USEPA	United States Environmental
ICRMP	Integrated Cultural Resource		Protection Agency
	Management Plan	USFWS	United States Fish and Wildlife
IICEP	Interagency and		Service
	Intergovernmental Coordination	USGS	United States Geological Survey
	for Environmental Planning	UST	Underground Storage Tank
	<u> </u>	WQC	Water Quality Certification
		-	- ,

1.0 PURPOSE, NEED, AND SCOPE

1.1 Introduction

This Environmental Assessment (EA) addresses the potential environmental, socioeconomic, and cultural effects associated with the construction and operation of a new Kentucky Army National Guard (KYARNG) Army Aviation Support Facility (AASF). The current AASF, located at the Boone National Guard Center (BNGC), was constructed in 1972 and a hanger maintenance annex was added in 1997. The AASF was designed for 1960s-era rotary-wing aircraft (UH-1 Hueys) but the KYARNG has primarily transitioned to more modern and bigger aircraft, the UH-60 Blackhawk.

The AASF can accommodate six rotary-wing aircraft (up to six UH-60 Black Hawks) indoors with their blades unfolded during maintenance. The current AASF does not have adequate hanger space to store or conduct maintenance simultaneously for the remaining seven UH-60 Blackhawks and six OH-58 Kiowas authorized for BNGC (see **Table 1** for a summary of aircraft authorized at BNGC). Other rotary-wing aircraft are parked/stored outdoors; 12 outdoor spaces presently are available. Sub-surface movement and weather-induced expansion/contraction create depressions and open cracks on the tarmac and ramps.

The KYARNG operates three fixed-wing aircraft (two C-23 Sherpas and one C-12 Huron) at the adjacent Capital City Airport (CCA). Only the C-12 Huron is parked in a hanger. The two C-23 Sherpas are parked outside.

The size and age of the existing AASF severely limits the future flexibility and readiness potential of the KYARNG aviation components. Modernized facilities are a critical factor in providing quality aviation support to Kentucky. The proposed AASF is deemed necessary by the KYARNG to improve the State's readiness posture.

The proposed AASF would be located on approximately 30 acres of land at the BNGC and, therefore, no new acquisition of land will be required. The AASF would include: hangar space for rotary-wing aircraft (thirteen UH-60 Black Hawks, six OH-58 Kiowas) and fixed-wing aircraft (two C-23 Sherpas and one C-12 Huron); shop areas; tool and parts rooms; accessory equipment, flammable/combustible and controlled waste handling storage areas; an aviation life support equipment shop/storage; locker/toilet/shower rooms; a break room; a physical fitness room; and simulation training areas. The facility would also include an unheated aircraft storage hangar; military vehicle and privately owned vehicle parking; access roads; fuel truck containment area; fuel storage and dispensing system; ground support equipment storage areas; hangar and parking aprons; an aircraft wash facility; taxiways; and site lighting, utilities and landscaping. The proposed AASF is included in the proposed FY 2013 ARNG Military Construction budget plan for \$32 million, and the current project cost estimate for the proposed AASF is \$47 million. Construction of the facility would occur over a two-year period.

Table 1. Rotary- and Fixed-Wing Aircraft at Boone National Guard Center

UH-60 Black Hawk

The UH-60 Black Hawk is a utility tactical transport helicopter used by the KYARNG. An 11-person, fully-equipped infantry squad can be lifted and transported in a single Black Hawk in most weather conditions. The Black Hawk can reposition a 105 mm Howitzer, its crew of six, and lift up to 30 rounds of ammunition in a single lift (DA, 2006).



OH-58 Kiowa

The OH-58 Kiowa is a single engine, single rotor observation and light attack helicopter. It is used for reconnaissance, security, command and control, and defensive air combat missions. The Kiowa is used for counter drug reconnaissance and interdiction missions.



C-23 Sherpa

The C-23 Sherpa is a small transport plane. It has two pilots and can transport passengers or equipment. The large square-section hold, with excellent access at both ends, offers ready flexibility to perform ordnance movement, troop and vehicle transport, airborne/airdrop missions, and medical evacuation



C-12 Huron

The C-12 Huron is a twin-engine turboprop that provides oncall, rapid response, air transport for high priority supply and movement of key personnel. Specifically, it is used for VIP transport, medical evacuation, courier flights or to deliver repair parts and equipment. The airplane has a crew of two and can carry passengers or equipment.



This EA is prepared in accordance with the National Environmental Policy Act (NEPA), its implementing regulations published by the Council on Environmental Quality (40 CFR 1500-1508), Department of the Army (DA) regulations (32 CFR 651), and National Guard Bureau (NGB) policy. This document has been prepared as prescribed in the June 2006 NGB NEPA Handbook (NGB 2006). Pursuant to NEPA, federal and federally-supported agencies are required to consider the environmental consequences of major proposed actions. NEPA typically applies when the federal agency is the proponent of the action or where federal funds are involved in the action.

This EA is intended to promote public participation and to support and provide valuable input into the decision-making process associated with this proposal. The EA provides information on the Proposed Action, its considered alternatives, a description of the affected environment, and an analysis of potential environmental consequences.

1.1.1 Location of the Existing AASF

BNGC is located 1.5 miles west of the State Capital Building in Frankfort, Kentucky. BNGC was established in the early 1950s in conjunction with the Commonwealth of Kentucky's development of the adjoining CCA. BNGC consists of 373.6 acres and approximately 70

buildings of various sizes and functions (e.g., aviation, training, logistical, administrative, and maintenance support). BNGC is the headquarters for the Kentucky Air and Army National Guard.

The current AASF is located on the northern edge of the BNGC (see **Figures 1 and 2**). It consists of a 31,184 gross square foot facility constructed in 1972; an additional aircraft maintenance hangar, comprising 10,560 gross square feet, was added in 1997. Other facilities serving the AASF include a 5,985 gross square foot covered storage area, fuel storage and dispensing facilities, storage, parking aprons, a landing pad, and a connecting taxiway to the CCA runway. The KYARNG aviation unit's Readiness Center is also located at BNGC.

1.1.2 The Kentucky Army National Guard and its Mission

Overall, the KYARNG has the following federal, state, and community missions:

- The Federal role is to support the United States military objectives through participation in America's Armed Forces.
- The State role is to support the Governor by providing trained units and equipment capable of protecting life and property and preserving peace, order, and public safety. The KYARNG is a resource to assist local law enforcement and emergency management agencies at the direction of the Governor. The KYARNG provides rapid response and transportation to government officials in the event of an emergency or disaster.
- The Community role is to be an active participant in domestic concerns through local, state and national programs.

1.1.3 AASF Mission

KYARNG aviation activities are centered at the BNGC. Flight operations occur at the current AASF and include flight planning, safety, training, and equipment storage. Repair and

maintenance activities for rotary-wing aircraft are undertaken on a regular basis. Areas within the AASF include the propeller/rotor shop; airframes/welding/structural shop; avionics/instruments; electrical; engine inspection/repair; armaments; non-destructive inspection; tool rooms; controlled waste area; bulk petroleum, oil, lubricant (POL) storage; and flammable/combustible storage. The AASF is also the refueling point for all rotary-wing aircraft within the KYARNG inventory. Non-KYARNG rotary-wing aircraft use the AASF for refueling and repairs.



Photograph A: Aerial View of AASF

KYARNG pilots conduct routine helicopter training operations from the BNGC to maintain proficiency in accordance with Army aviation training requirements. Night flying is done monthly and is essential training for the use of night vision goggles. Pilots must fly with night vision goggles every 60 days to remain qualified. The KYARNG makes an effort to have training end before 11:30 pm in winter time though this may extend to 1:30 am in the

summer time. During the summer, night vision training flights wait for full darkness and, therefore, the flights may start as late as 10:00 pm. In the winter, night vision training flights may be completed as early as 9:00 pm due to earlier darkness.

Emergency and disaster support aviation training missions are conducted from the BNGC. The KYARNG trains for helping with floods, winter storms, tornadoes, and forest fires. Aviation fire suppression training occurs at BNGC.

The KYARNG's fixed-wing aircraft currently are maintained at hangers leased from the CCA. The United States Aviation and Missile Command (AMCOM) in Huntsville, Alabama oversees contractors who maintain the fixed-wing aircraft.

KYARNG units that train at the AASF include the following:

- 63rd Theater Aviation Brigade
 - Headquarters and Headquarters Company (HHC)
- 1204th Aviation Support Battalion
 - Headquarters Services Company (HSC)
 - A Company
- B Company 2/147th Aviation Battalion
- B Company 351st Aviation Support Battalion (ASB)
- C Company 1/169th Medical Evacuation (MEDEVAC)
- C Company 1/134th Security and Support Battalion
- DET 3 Headquarters Company 171st Aviation
- DET 11 Operation Support Airlift Command (OSACOM)

1.2 Purpose and Need

The purpose of the Proposed Action is to construct and operate a suitable, modern AASF that meets current and future KYARNG requirements. The Proposed Action is needed to overcome current AASF deficiencies and to accommodate all aircraft types currently operated by the KYARNG (i.e., thirteen UH-60s, six OH-58s, two C-23s, and one C-12) thereby allowing the KYARNG to maintain and improve readiness.

Major General (MG) Donald C. Storm, formerly The Adjutant General (TAG) of Kentucky, had requested from the NGB that six CH-47 Chinooks be stationed at the BNGC. The CH-47 is a twin-engine, tandem rotor helicopter. It is designed for transportation of cargo, troops, and weapons under day, night, visual, and instrument conditions. To date, no Chinooks have been authorized or funded for the KYARNG. Therefore, this EA will discuss impacts of Chinooks being potentially located at the AASF in the cumulative impacts section. If Chinooks are approved, an appropriate environmental review will be completed for that action in the future.

The existing AASF does not meet the current or future requirements of the KYARNG with respect to the following components:

- Lack of sufficient hanger space for the currently assigned rotary-wing aircraft and support maintenance personnel. The existing AASF does not have sufficient hanger space to store thirteen UH-60s and six OH-58s under cover. Only six hangar spaces are presently available resulting in a deficit of thirteen hanger spaces for rotary-wing aircraft. Lack of adequate hanger space has resulted in increased operations and maintenance costs due to lightning strikes on helicopters parked outside, as well as damage caused by wildlife (e.g., mice, opossums, and birds) making homes in aircraft or chewing on wiring. For example, a single lightning strike on a KYARNG UH-60 caused approximately \$400,000 in damage and loss of use of the aircraft for over six months. All military aircraft are now authorized to be hangered to protect the equipment from the weather and wildlife damage (NG Pam 415-12, 2007).
- Lack of adequate hangar space for the KYARNG's three fixed-wing aircraft. These aircraft are currently housed within two small hangers located within the General Aviation portion of the CCA. These two hangers are too small to meet the hanger space, contract maintenance, flight planning, and storage requirements of the KYARNG (NG Pam 415, 2007).
- Lack of a "hot refueling" capability that limits the KYARNG's ability to quickly refuel helicopters to meet mission requirements. Hot refueling is a procedure that involves refueling of helicopters without engines being shut down. Fuel storage capacity currently is limited to one 20,000-gallon underground storage tank (UST) and one 10,000-gallon above-ground storage tank (AST); aircraft occasionally are fueled from trucks that draw from the AST to overcome the current deficiency. Based on current training mission requirements, the KYARNG requires 50,000 gallons of fuel storage capacity.
- <u>Lack of adequate water supply.</u> The existing water main servicing the AASF does not have the pressure, flow or volume to accommodate the demand from required new fire protection systems.
- <u>Lack of adequate support areas</u>. The current AASF does not provide adequate space for administrative offices, areas for automated data processing equipment, support activity space, a flight surgeon administrative and examination area, a break/assembly area, a physical fitness area, or a locker room.
- <u>Lack of adequate parking</u> for both military owned vehicles and privately owned vehicles using the facility.
- <u>Lack of an adequate wash rack</u>. The existing wash rack is too small to adequately service UH-60 aircraft.

The 1986 BNGC Master Plan identified the need for a new AASF to accommodate modern aircraft (Jacobs 2005). Beginning in 1992, the KYARNG State Six-Year Plan has consistently identified a new AASF as a capital construction project (Jacobs 2005).

1.3 Scope of the EA

The scope of this EA is limited to assessing the effects of construction and operation of a new AASF on the following environmental resources: land use, air quality, noise, geology and soils, water resources, biological resources, threatened and endangered species, socioeconomics, environmental justice and protection of children, infrastructure and hazardous materials and wastes. Potential cumulative and secondary impacts associated

with past, present, and reasonably foreseeable future projects are also analyzed in **Section 5.12** of this document

This EA provides a comparative analysis of the following alternatives:

<u>Alternative 1: Preferred Action Alternative</u> - Implement the Proposed Action as identified in Section 2.0 to meet the requirements of the KYARNG.

<u>Alternative 2: No Action</u> - Continue with existing AASF and operations as currently conducted and do not implement the Proposed Action.

A detailed description of the Preferred Action Alternative is provided in **Section 2.0**. A description of Alternative 2 (the No Action Alternative), as well as descriptions of alternatives eliminated from detailed study, is provided in **Section 3.0**.

This EA also considers the cumulative effects of this Proposed Action and past, present, and reasonably foreseeable actions within the region.

As specified under National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code [USC] 4321 et seq.) and Council of Environmental Quality (CEQ) regulations (40 Code of Federal Regulations (CFR) 1500-1508), a monetary cost-benefit analysis is not required as part of the EA. The Proposed Action and its alternatives have been developed based on military training needs and mission requirements. As such, no quantitative financial assessment has been performed as part of this EA. However, economic factors that result in socioeconomic impacts to involved military installations and their surrounding regions of influence are addressed in this document, as required under NEPA.

1.4 Decisions to be Made

The decision to be made by the KYARNG and the NGB is whether, having taken potential environmental effects into account, the KYARNG should construct a new AASF. The NGB, while working with the KYARNG, ultimately will decide if the action is funded.

1.5 Public Involvement

As specified under NEPA and the NEPA implementing regulations promulgated by the CEQ, 32 CFR 651, and the guidance provided in the *Army National Guard Manual for Compliance with the National Environmental Policy Act of 1969 - Guidance on Preparing Environmental Documentation for Army National Guard Actions in Compliance with NEPA* (NGB June 2006) (ARNG NEPA Manual), public participation is a significant component of the EA process (NGB 2006). A listing of key public participation events follows:

- In April 2007, the KYARNG provided a briefing on the proposed AASF project to City of Frankfort Commissioners and Fiscal Court magistrates at the BNGC. MG Donald C. Storm, TAG of Kentucky, provided a brief presentation of the proposed project including the history of the existing AASF; the need for a new AASF; facts about the proposed AASF; and noise abatement anticipated due to relocating the AASF and possible additional noise reduction measures that are being considered in association with the new AASF. MG Storm has also been interviewed by the State Journal in Frankfort (28 June 2007) (see **Appendix E**).
- On 19 July 2007, the Capital Community Economic & Industrial Development Authority of Frankfort passed a resolution in favor of the new AASF; on 27 July 2007, the Frankfort Area Chamber of Commerce unanimously voted to support the Capital Community Economic & Industrial Development Authority's resolution in favor of the new AASF at the BNGC.

- On 13 August 2007, the KYARNG participated in a City of Frankfort Special Meeting Work Session to discuss the proposed AASF project and respond to questions and comments before the City of Frankfort Mayor, Commissioners, and the general public. The public meeting was held in Frankfort and approximately 100 people attended. A summary of the meeting is included in **Appendix C**. The City of Frankfort passed a resolution supporting the proposed AASF on 27 August 2007.
- On 28 September 2007, the Franklin County Fiscal Court passed a resolution where it "fully supports" the KYARNG's new AASF at BNGC. The resolution encourages the project to occur as soon as possible (see **Appendix D**).
- The Draft EA was made available for public comment between 15 January and 15 February 2009 following publication of a notice of availability in the Frankfort State Journal (see **Appendix E**). No comments were received.

The KYARNG has considered the Annotated DOD Policy on American Indians and Alaska Natives (dated 27 October 1999), EO 13175, and per Department of Defense Instruction (DoDI) 4710.02 (DoD Interactions with Federally Recognized Tribes). The KYARNG will conduct formal consultation with federally recognized Native American tribes. These entities will be invited to participate in the Section 106 and EA process as Sovereign Nations per EO 13027. **Section 10.0** lists the federally recognized Native American tribes that were invited to consult. This list is based on recent tribal consultations on the Integrated Cultural Resources Management Plan (ICRMP). Copies of letters submitted to these federally recognized Native American tribes and their responses are included in **Appendix B**. The KYARNG prepared a memorandum for record of Native American Consultation efforts during the NEPA process and included this memorandum in **Appendix B**.

1.6 Agency Participation

In conjunction with the preparation of this EA, and to comply with NEPA, written correspondence was sent to Federal, state, and local agencies with jurisdictions that could possibly be affected by the proposal. This coordination fulfills the requirements of EO 12372 (superseded by EO 12416, and subsequently supplemented by EO 13132), that requires Federal agencies to cooperate with and consider other federal, state and local views in implementing a Federal proposal. It also constitutes the Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) process for this EA.

Section 10.0 contains a list of agencies contacted regarding the Proposed Action and any sensitive resources at or near the BNGC. These agencies include the United States Army Corps of Engineers - Louisville District (USACE); United States Fish and Wildlife Service (USFWS); Federal Aviation Administration - Southern Region Airports Division and Memphis Airports District Office (FAA); Kentucky Environmental and Public Protection Cabinet; Kentucky Department of Environmental Protection - Division of Waste Management, Division of Water, and Division of Air Quality; and the Kentucky Heritage Council (KHC), which is the Kentucky State Historic Preservation Office (SHPO). Data on local species of special concern, threatened and endangered species, soils, water resources, cultural resources, air quality, and other data pertinent to environmental resources at the proposed AASF site were requested. These data were used in developing this EA. Copies of all IICEP correspondence, including sample data request letters and all received agency responses, are included in **Appendix B**. These agencies were also provided with copies of the Draft EA when it was publicly circulated.

1.7 Regulatory Framework

This EA has been prepared under the provisions of, and in accordance with, the NEPA of 1969 (42 USC 4321 et seq.), the CEQ Regulations Implementing the Procedural Provisions of NEPA (Sec. 1502.9 Draft, final, and supplemental statements; 40 CFR Parts 1500-1508), and 32 CFR 651 (Environmental Analysis of Army Actions, Final Rule). In addition, the document has been prepared as prescribed in the ARNG NEPA Manual (NGB 2006).

2.0 DESCRIPTION OF THE PROPOSED ACTION

The KYARNG proposes to construct and operate a new AASF near the western side of the BNGC (see **Figures 1 and 2**).

2.1 Proposed Construction

As specified in the Form DD 1390/91 prepared by the KYARNG dated 23 January 2004 (revised 14 January 2005), the AASF would include: hangar space for rotary-wing aircraft (thirteen UH-60 Black Hawks, six OH-58 Kiowas) and fixed-wing aircraft (two C-23 Sherpas and one C-12 Huron); shop areas; tool and parts rooms; accessory equipment, flammable/combustible and controlled waste handling storage areas; aviation life support equipment shop/storage; locker/toilet/shower rooms; a break room; a physical fitness room; and simulation training areas. The AASF concept site plan can be found in Appendix **A.** The facility would also include an unheated aircraft storage hangar; military vehicle and privately owned vehicle parking areas; access roads; a fuel truck containment area; fuel storage and dispensing system; ground support equipment storage areas; hangar and parking aprons; an aircraft wash facility; taxiways; and site lighting, utilities and landscaping. The proposed AASF is included in the proposed FY 2013 ARNG Military Construction budget plan for \$32 million, and the current project cost estimate for the proposed AASF is \$47 million. Construction of the facility would occur over a two-year period. The proposed AASF would be located on approximately 30 acres of land at the BNGC and therefore, no new acquisition of land would be required. Early consultation letters estimated 20 acres of land would be affected but KYARNG added a 10 acre construction buffer.

The Real Property Master Plan for BNGC has proposed reusing the existing AASF for the Combined Support Maintenance Shop (CSMS) (R&K Engineering, 2006). The large paved helicopter parking ramp behind the AASF would be used for open storage and vehicle/equipment parking. The taxiway to CCA would be retained and incorporated into a revised road network for BNGC.

2.2 Projected Facility Operation

The KYARNG operates 22 military aircraft at the BNGC (thirteen UH-60s, six OH-58s, two C-23s, and one C-12). A total of 87 aircraft are currently based at the BNGC and the CCA; this total includes the 22 military aircraft noted above. Therefore, KYARNG aircraft represent approximately 30 percent of total aircraft at the BNGC/CCA. Construction and operation of the new AASF would not change the composition of rotary- and fixed-wing aircraft at the site, nor would it in any way alter training missions, airspace use, or aviation safety.

The KYARNG has 19 rotary-wing aircraft stationed at the BNGC. From March 2006 to March 2007, approximately 5,370 UH-60 Blackhawk and 740 OH-58 Kiowa operations (landings or takeoffs) occurred at the AASF (USACHPPM, 2007). Construction and operation of the new AASF would not change the amount or types of annual military aircraft operations. The adjacent CCA conducts approximately 34,200 operations annually with an average of 94.6 operations per day (**Appendix C**).

The AASF has current authorization for over 67 full-time federal jobs with an annual payroll of \$5.2 million. Another 400 KYARNG members work or train at the AASF throughout the month. Up to 20 new full-time jobs with an annual payroll increase of \$1.5 million would be generated over time by the Proposed Action. The new jobs would be for maintenance/repair

of aircraft and for operations/training of pilots to help them maintain qualifications, but not flight school training.

3.0 ALTERNATIVES CONSIDERED

NEPA, CEQ regulations, and 32 CFR 651 require a Federal agency to consider reasonable alternatives to a Proposed Action. Considering alternatives helps avoid unnecessary impacts and allows analysis of reasonable ways to achieve the stated purpose of and need for a Proposed Action while potentially limiting the impact to the human and natural environment. To warrant detailed evaluation, an alternative must be reasonable. An alternative was considered "reasonable" only if it would enable the KYARNG to sustain required aviation training, operation, and maintenance activities. "Unreasonable" alternatives would not enable the KYARNG to sustain quality aviation training, operation, and maintenance activities or emergency/disaster preparedness.

NEPA, CEQ regulations, and 32 CFR 651 require all reasonable alternatives to be rigorously explored and objectively evaluated. Alternatives that are eliminated from detailed study must be identified along with a brief discussion of the reasons for eliminating them.

This section discusses the development and screening of the following considered alternatives (see **Figure 3**):

- Construct AASF on the western side of the BNGC (Proposed Action)
- Continue operations AASF at the existing AASF (No Action Alternative)
- Expand/renovate the existing AASF at the BNGC
- Construct AASF at another location on the BNGC
- Construct AASF at Bluegrass Airport in Lexington
- Construct AASF at Bluegrass Station in Lexington
- Construct AASF at Scott County/Marshall Field in Georgetown
- Construct AASF at Godman Army Air Field in Fort Knox.

Table 2 summarizes the primary alternatives that are considered in this EA. Alternative 1, implementation of the Proposed Action identified in **Section 2.0**, has been determined by the KYARNG to be the Preferred Action Alternative.

Description

Alternative 1
Proposed Action

Construction and Operation of New AASF at BNGC as outlined in Section 2.0.

Alternative 2
No Action

Continue operations at existing AASF.

Table 2. Summary of Alternatives Considered in this EA

3.1 Screening Criteria

In determining those alternatives that could be considered as viable, the KYARNG established screening criteria to help guide decision makers and provide a reasonable list of alternatives for analysis. Screening criteria included:

- The AASF should be located at BNGC or within a 20-mile radius of BNGC to avoid the need to relocate personnel.
- Land acquisition costs should be minimized or avoided.
- Site should be suitable for construction of an AASF with limited or no constraints to development.
- The AASF should be located such that new noise impacts to surrounding communities (e.g., residences and schools) are minimized or avoided.
- The AASF should be located such that potential for future encroachment (via off-site, adjacent land use changes) is minimized or avoided.
- The AASF should be located such that air traffic and ground transportation access is readily provided and/or available.
- The AASF should be located such that impacts on existing training, operation, and maintenance activities are minimized or avoided.
- The AASF should be located such that impacts to the natural and cultural environment are minimized or avoided.
- The AASF should be located at a site with an extant, suitable airfield capable of supporting KYARNG's fixed-wing and rotary-wing aircraft.

3.2 Evaluated Alternatives

3.2.1 Alternative 1: Preferred Action Alternative

Construction and operation of the proposed AASF at the BNGC as described in **Section 2.0** has been determined by the KYARNG to be the Preferred Action Alternative. This alternative meets all of the "reasonable" screening criteria without adverse impacts to ongoing and/or anticipated actions at the BNGC or to the environment. Alternative 1 is the KYARNG's Preferred Alternative for the following reasons:

No new land acquisition is necessary as the BNGC is owned by the Kentucky Department of Military Affairs (DMA). Therefore, acquisition or lease costs are avoided. The location on the western part of the BNGC does not present significant constructability concerns as long as best management practices are implemented to manage storm water.

By relocating the AASF approximately a mile away from the existing AASF to the western part of BNGC and changing flight paths, aircraft noise would be diminished for residential neighborhoods to the north and the Westridge Elementary School. The United States Army Center for Health Promotion and Preventative Medicine (USACHPPM) identified in the Kentucky Statewide Operational Noise Management Plan (SONMP, July 2007) that due to the low average number of KYARNG daily flights at the BNGC AASF, Noise Zone II and Noise Zone III contours do not extend beyond the helipad. Even shifting to the new AASF location, this assessment would not change.

By locating the new AASF on the western part of BNGC, the KYARNG has provided a buffer between the AASF and residential development occurring to the north and east of the BNGC (see **Figure 2**). The Salato Wildlife Center provides a buffer to the west that would not be encroached by future residential or commercial development and on the south side of the AASF is the CCA.

Military air operations by the KYARNG would continue to represent approximately 30 percent of all air operations near the CCA/BNGC. BNGC is accessed by major public roads

(US 127 and US 60). These major roads provide access for employees for work and government officials in times of emergency or disaster. Within the BNGC, there is a collector road providing access to the administrative core of the facility.

With its location near the center of the state, aviation operations from the BNGC can reach the majority of the state within one hour flight time and the entire state within two hours flight time. The slight shift of the AASF within the BNGC would have no effect on current emergency or disaster response times.

With the new AASF being constructed on BNGC, impacts on existing training, operation, and maintenance activities would be minimal. No negative impacts are anticipated during construction as existing activities would continue unaffected. Equipment transfer costs would be moderate as only a short distance separates the existing AASF and the proposed AASF. Employees, who live primarily in nearby Franklin County (approximately 80 percent), would not have changes in commuting patterns or be required to relocate to continue working at the new AASF.

3.2.2 Alternative 2: No Action Alternative

As required under NEPA, CEQ regulations, and 32 CFR 651, Alternative 2 is retained in this EA for comparative analysis; Alternative 2 serves as a benchmark against which the potential impacts of the Proposed Action can be evaluated. The No Action Alternative is the only alternative to the Proposed Action considered in depth within this EA. Under Alternative 2, the KYARNG would continue operating the existing AASF, including aircraft, operations, and maintenance activities as currently conducted, and would not implement the Proposed Action. The KYARNG would continue external storage of the existing fleet of thirteen UH-60s and six OH-58s. The three fixed wing aircraft would continue to fly out of CCA and conduct planning, flight operations, and maintenance from the leased hangers in the General Aviation area. Selection of the No-Action alternative would adversely impact the overall military readiness and the Federal and State missions that the KYARNG supports due to deficiencies in the existing AASF as noted in **Section 1.2**.

3.3 Alternatives Eliminated From Further Consideration

Six alternatives were eliminated from further consideration. Each is discussed below.

3.3.1 Renovate and Expand AASF at Current Location

Renovating and expanding the existing AASF was considered but eliminated due to environmental and location concerns. A project planning design charrette rejected renovating the existing AASF and recommended the Preferred Action Alternative (Jacobs 2005).

Expanding the existing AASF would present constructability concerns due to environmental constraints. Specifically, a sinkhole just to the east of the current AASF parking lot and driveway manages the majority of storm water runoff at the BNGC. This sinkhole, along with a low area further to the east and northeast, would need to be preserved and protected from grading and development to prevent the expansion of the sinkhole or creation of new sinkholes. On the north side of the AASF is an intermittent stream, which receives drainage from the neighboring residential development. This stream has exposed limestone and Karst characteristics. Minor sinkholes continually develop in this area. These constructability concerns severely limit the current AASF's expansion possibilities.

A renovated/expanded AASF at the current location would not improve visual observation of aircraft taxiing to the CCA runway or using the runway for takeoffs and landings of KYARNG's fixed-wing aircraft. If the AASF remained at its current location and hanger

space was added for the fixed-wing aircraft, KYARNG would be required to use a long taxiway to provide fixed-wing access to the CCA runway. The existing taxiway contains an at-grade crossing of the main BNGC east-west collector. A traffic light and/or gating would be needed to improve safety for fixed-wing aircraft crossing the roadway. Alternatively, a taxiway bypass would be needed to eliminate the roadway crossing. The existing taxiway also would require modifications to the security fence to allow fixed wing access to the AASF for maintenance.

A renovation and/or expansion of the AASF would have short-term negative impacts on AASF training, operation, and maintenance activities due to construction activities interfering with operations and maintenance. For these reasons, this alternative was eliminated from further consideration.

3.3.2 Construction of New AASF at Another Location on the BNGC

The KYARNG considered other alternative sites on the BNGC for locating a new AASF. Locations northeast of the existing AASF were eliminated from further consideration as new noise impacts to surrounding residential communities and schools would be increased. Also, the potential for future encroachment (via off-site, adjacent land use changes) would not be minimized or avoided as several new housing developments are planned for near the north boundary of the BNGC. Little or no buffer for an AASF would exist. South of the existing AASF is fully developed and would not be suitable for an AASF. Southwest of the existing AASF a stream and pond would place development constraints on a new AASF.

3.3.3 Construction of New AASF at Other Locations in Kentucky

The KYARNG considered four alternative sites outside of BNGC for a new AASF.

3.3.3.1 Bluegrass Airfield in Lexington

The KYARNG examined Bluegrass Airport in southwest Fayette County as a potential alternative site. Bluegrass Airport is approximately 23 miles from BNGC. The AASF would be located adjacent to Runway 08/26, which is proposed to be lengthened from 3,500 feet to 5,000 feet by the Bluegrass Airport Authority. The KYARNG would be required to lease property from the airport authority.

The Bluegrass Airfield location was eliminated for further consideration due to uncertainties regarding approval of the expanded Bluegrass Airport Layout Plan. Local neighborhood associations are considering lawsuits concerning the Bluegrass Airport Layout Plan. The Bluegrass Airport Authority also still needs to acquire property to lengthen Runway 08/26. One property owner with approximately 115 acres of land in the airport expansion area has refused to sell his land to the Bluegrass Airport Authority. In addition, the potential exists that the AASF proposed location would need to be shifted to avoid a future planned Flight 5191 Crash Site Memorial.

Significant community concern exists to Bluegrass Airport growth. Noise impacts from existing aircraft traffic have been a source of contention to neighborhoods surrounding the airport. For these reasons, an AASF at Bluegrass Airport was eliminated from further consideration.

3.3.3.2 Bluegrass Station in Lexington

The Bluegrass Station is located in Fayette County just outside the City of Lexington. It was originally created as part of a supply network for the U.S. Army as the country prepared for World War II. A former fixed-wing grass runway exists on site. In 1995, the facility was transferred to the state as part of the Army's Base Realignment and Closure (BRAC)

Program. Bluegrass Station is approximately 39 miles from BNGC. The United States Aviation and Missile Command (AMCOM) in Huntsville, Alabama oversees contractors who repair a limited number of rotary-wing aircraft at Bluegrass Station.

The Bluegrass Station was eliminated from further consideration due to the lack of an airfield capable of supporting the KYARNG's fixed-wing aircraft. Locating an AASF at Bluegrass Station would require splitting up the KYARNG fixed-wing and rotary-wing elements. Even if an airfield was added to Bluegrass Station, constructability issues would exist for the AASF. A future taxiway would impact a Kentucky Transportation Cabinet stream restoration/stream banking project. An historic period archaeological site (15Fa235), which is eligible for listing on the National Register of Historic Places, is within the footprint of the proposed AASF location. A farmhouse foundation and a well have been identified. As part of a memorandum of agreement, a covenant exists to preserve and maintain the archaeological site (USAMC, 1995). In consultation with the Kentucky Heritage Council (KHC), which is the State Historic Preservation Office (SHPO), a Phase III archaeological mitigation would need to be undertaken for this site to be used for the AASF. Therefore, this alternative was eliminated from further consideration because of the lack of an airfield and potential impacts to a stream restoration/banking project and an archaeological site.

3.3.3.3 Scott County/Marshall Field in Georgetown

The KYARNG considered locating the new AASF at the Scott County/Marshall Field east of Georgetown. Marshall Field is approximately 31 miles east of BNGC. Marshall Field has a single 5,500-foot runway. Sixty-one aircraft are based at Marshall Field with an average of 64 flight operations daily. At this location, the KYARNG would be required to lease property from the Airport Board.

Surrounding residents experience little aircraft noise impacts due to the low number of daily flights, the airport's rural setting, and surrounding terrain that buffers/blocks some noise impacts. New residential development is proposed adjacent to the airfield. Noise encroachment issues would be anticipated if KYARNG aircraft use Marshall Field. Due to potential noise impacts, this alternative was eliminated from further consideration.

3.3.3.4 Godman Army Air Field in Fort Knox

Godman Army Air Field is located 1 mile west of Fort Knox and approximately 80 miles from BNGC. Godman Army Air Field has 3 runways and 27 aircraft based at the field including 8 Apache Helicopters. Due to the high volume of C-130 training, the air field averages 650 daily operations. KYARNG air operations would only require a minimal change to existing Air Installation Compatibility Use Zone (AICUZ). Noise impacts at this location would be minimal.

Godman Army Air Field, however, would place severe restrictions on AASF growth due to existing infrastructure and the Accident Potential Zone surrounding the existing runways. The distance from BNGC also would require the relocation of personnel. For these reasons, Godman Army Air Field was eliminated from further consideration.

4.0 AFFECTED ENVIRONMENT

This section specifically describes current baseline conditions within the proposed AASF location and vicinity (see **Figures 1 and 2**), with emphasis on those resources potentially impacted by the Preferred Action Alternative. **Section 5.0**, Environmental Consequences, identifies potential direct, indirect, and cumulative effects of the identified project alternatives on each of the issue areas presented in this section.

4.1 Project Area Description

The 373-acre BNGC is located in a semi-urban setting approximately 1.5 miles west the State Capitol Building in Frankfort, 20 miles northwest of Lexington, 33 miles east of Louisville, and 70 miles south of Cincinnati, Ohio. The primary site access is from US Highway 127 (US 127). This gate is manned full-time. The site can also be accessed from US Highway 60 (US 60), although this access point is only used for emergencies.

The BNGC property is surrounded with a mixture of developed areas and open land in a natural state. Rolling hills provide a framework for the natural features of the site similar to most of the Kentucky Bluegrass Region. While a majority of the property to the east is developed, the remaining area is open grassland with sporadic trees. Areas of woodlands have developed adjacent to existing creeks. The proposed AASF would be located on approximately 30 acres of land in the western portion of the BNGC (see **Figure 2**).

The project area is characterized by a temperate climate regime with hot and humid summers and cold winters. July tends to be the warmest month of the year with an average high and low temperatures of 87.7 degrees Fahrenheit (°F) and 63.9 °F respectively. January is the coolest month of the year with average high and low temperatures of 41.7 °F and 22.0 °F respectively. Mean annual precipitation for the area is 42.75 inches with a mean total of 8.6 inches of snowfall (Southeastern Regional Climate Center (SERCC, 2007).

4.2 Land Use

Land use includes natural conditions or human-modified conditions and activities occurring at a particular location. Human-modified land use categories include residential, commercial, industrial, transportation, communications, utilities, agricultural, institutional, recreational, and other developed use areas. Management plans and zoning regulations determine the type and extent of land use allowable in specific areas and are often intended to protect specially designated or environmentally sensitive areas.

4.2.1 Historical and Current Land Use

The initial site of the BNGC was established in the early 1950s in conjunction with the Commonwealth of Kentucky's development of the adjoining Capitol City Airport (CCA). At the time of the Airport's initial development, a total of 33 acres were donated by the Commonwealth to the DMA for the construction of National Guard facilities. Since those early days, the BNGC has steadily expanded. The Whippoorwill Golf Course was acquired both as a necessary part of the airport's safety zone and for its development potential.

The entire BNGC site is currently fenced with personnel and vehicular access restricted to a single, manned entrance gate on Minuteman Parkway off US 127 (see **Figure 2**). The area south of the existing AASF houses a variety of training, logistical, administrative and maintenance support activities. The Western Area, a term used to describe the parcel of

land that formerly was the Whippoorwill Golf Course, was touted to be a good location for a new armory, billets, annex, bivouac, and vehicle testing and a future location for the growth of maintenance facilities. Other than converting the former golf course club house to house BNGC personnel functions, the construction of adjoining storage buildings, and the construction and paving of the connecting road to these facilities from the Eastern Area of BNGC, to date there has been little development of the Western Area.

The Preferred Action Alternative would occur on the former golf course. The site is grassy with a few scattered trees (see **Figure A**).



Photograph B: Proposed AASF site facing north.

4.2.2 Surrounding Land Use

The BNGC is bounded to the north and east by residential property, to the west by the Kentucky Department of Fish and Wildlife Resources (KDFWR) Salato Wildlife Education Center and Game Farm (Salato Wildlife Center), and to the south by the CCA (see **Figure 2**). The KDFWR land and CCA provide a buffer from the encroachment of residential and commercial development along the western and southern border of the BNGC.

The 132-acre KDWFR Salato Wildlife Center complex includes two fishing lakes with an accessible pier and a shaded picnic area with grills and shelters. The Salato Wildlife Center provides both indoor and outdoor activities and workshops. It includes trails, a dragonfly marsh and several native plant gardens (KDWFR, 2007a). Approximately 97,000 people visit the Salato Wildlife Center annually.

The 355-acre CCA is a public use airport that is owned by the Commonwealth of Kentucky and operated by the Kentucky Transportation Cabinet. Along with a 5,900-foot single runway, the CCA has one full-service fixed-based operator (FBO) and an aircraft maintenance shop (Kentucky CCA, 2007).

The Westridge Elementary School is located on Devil Hollows Road approximately 1.3 miles north of the proposed AASF in the Choateville Neighborhood (see **Figure 2**). Westridge Elementary School opened in August 2004 and is built on 20 acres. Approximately 450 students attend the school.

Approximately ten churches occur along US 60, US 127 and Devil Hollows Road within the vicinity of the project area.

4.3 Air Quality

4.3.1 Ambient Air Quality

The USEPA is the overall regulatory agency for air quality throughout the United States. Federal air quality requirements are set forth in the Clean Air Act (CAA) of 1970 (42 USC §7401 et seq.), as amended, and implementing regulations. Title III of the CAA, as amended, provides for regulation of 188 specifically listed hazardous air pollutants (HAPs). Emission standards have been developed for sources that emit HAPs, but no ambient air quality standards have been developed. The primary regulatory authority for air quality in Franklin County, Kentucky is the Bluegrass Intrastate Air Quality Control Region.

The ambient air quality in an area can be characterized in terms of whether or not it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS) for six principal pollutants, called "criteria pollutants": Carbon monoxide (CO); Lead (Pb); Nitrogen oxides (NO_x); Ozone (O₃); Particulate matter (PM), divided into two size classes (Aerodynamic size less than or equal to 10 micrometers (PM-10) and less than or equal to 2.5 micrometers (PM-2.5); and Sulfur dioxide (SO₂).

The General Conformity Provision of the CAA of 1970 (42 USC 7401 et. seq.; 40 CFR Parts 50-87) Section 176(c), including the USEPA's implementation mechanism, the General Conformity Rule (40 CFR Part 51, Subpart W), prohibits the Federal Government from conducting, supporting or approving any actions that do not conform to an USEPA-approved State Implementation Plan (SIP). A SIP is a State's self-authored blueprint for achieving and maintaining compliance with the goals of the CAA. Federal agencies are required to prepare written Conformity Determinations for Federal actions in or affecting NAAQS non-attainment areas or maintenance areas when the total direct and indirect emissions of non-attainment pollutants (or their precursors) exceed specified thresholds.

Air quality within Franklin County is "in attainment" for all NAAQS criteria pollutants (USEPA, 2007a). As Franklin County is in attainment with all NAAQS, the procedural requirements of the General Conformity Provision of the CAA do not apply to the Proposed Action and no Conformity Determination is required.

4.3.2 Existing Emissions Sources and Permits

The Title V Operating Permit Program under 40 CFR 70 requires sources that meet the definition of a "major source" of criteria pollutants or HAPs to apply for and obtain a Title V operating permit. A major source of HAPs is a source that has the potential to emit more than 10 tons per year (tpy) of any individual HAP or 25 tpy of any combination of HAPs. The definition of major source for criteria pollutants is dependent on the air quality attainment status of the region where the source is located (i.e., areas that are in attainment or non-attainment with the NAAQS). Major sources are those with the potential to emit more than 100 tpy of any criteria pollutant in an attainment area or lower levels in various classifications of non-attainment (marginal, moderate, serious, severe, and extreme).

Title V Operating Permits have been issued to approximately four industrial sources in Franklin County (Kentucky Division of Air Quality [KYDOA] 2007). The Kentucky DMA does not hold a Title V permit. However, they do hold an Air Quality Permit (F-05-030) issued under 401 KAR 52:030 for the operation of the paint booth at BNGC that expires on 14 November 2010.

4.3.3 Proximate Sensitive Areas

With regard to air quality, sensitive populations include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers. These sensitive population segments and facilities correspond with those that the primary NAAQS are intended to protect.

Sensitive populations or areas within one mile of the site include the Salato Wildlife Center, a school, churches, and single family residences. The Salato Wildlife Center is located directly west of the site. Approximately 97,000 people visit the Salato Wildlife Center annually. Fixed-wing aircraft flight paths from the CCA and helicopters from the AASF travel over this area. The Westridge Elementary School is located on Devil Hollows Road approximately 1.3 miles north of the proposed AASF in the Choateville Neighborhood (see **Figure 2**). Approximately ten churches occur along US 60, US 127 and Devil Hollows Road within the vicinity of the project area.

In addition, numerous single family residences occur to the east of BNGC and single family residences are continuing to develop to the north and to the southwest of BNGC and the CCA.

4.4 Noise

Noise is generally defined as unwanted sound. It can be any sound that is undesirable because it interferes with communications or other human activities, is intense enough to damage hearing, or is otherwise annoying. Noise may be intermittent or continuous, steady or impulsive. Human response to noise varies, depending on the type of the noise; distance from the noise source; sensitivity; and time of day.

The decibel (dB) is the accepted unit of measurement for noise level, and it uses a logarithmic scale. The A-scale decibel (dBA) is an adjusted dB that corresponds to the range of normal human hearing. When sound pressure doubles, the sound level increases by three (3) dB. Psychologically, most humans perceive an increase of 10 dBA as a doubling of loudness. Sound pressure decreases with distance from the source. Typically, the amount of noise is halved as the distance from the source doubles (USEPA, 1974).

General land use compatibility noise zones are defined in AR 200-1, Section 14-4:

- **Noise Zone I** Areas around a noise source where the average day-night sound level (DNL) is less than 65 dBA, less than 62 C-scale decibel (dBC), and peak sound level is less than 87 peak decibels (dBP). Residential and other noise sensitive land uses are considered "compatible" with the noise environment in this zone.
- **Noise Zone II** Areas where the DNL is between 65 and 75 dBA and between 62 and 70 dBC, or where the Peak is between 87 and 104 dBP. New development within this noise zone should be normally limited to activities such as industrial, manufacturing, transportation, and resource production. Residential and other noise-sensitive land uses are considered "normally incompatible" with the noise environment in this zone.
- **Noise Zone III** An area around a noise source where the DNL is greater than 75 dBA or 70 dBC, or where the Peak is greater than 104 dBP. Residential and other noise-sensitive land uses are deemed "incompatible" with the noise environment in Noise Zone III. (AR 200-1, 2007)

Sensitive land uses with respect to noise are the same as those listed for air quality (e.g., schools, churches, and residences) (see **Section 4.3.3**).

4.4.1 Existing Noise Sources

The noise environment in the BNGC/CCA area is affected by aircraft operations. Aircraft flying within the airspace associated with the CCA and the existing AASF generally adhere to established flight paths and overfly the same areas on a consistent basis. Noise from flight operations at the airport typically occurs beneath the main approach and departure corridors, and in the immediate vicinity of the CCA and AASF.

<u>Fixed-wing aircraft.</u> The CCA conducts approximately 34,200 airfield operations (takeoffs and landings) annually with an average of 94.6 operations per day (see **Appendix C**). Airfield operations are conducted as a function of Kentucky State Government, KYARNG, corporate travel, flight training, and pleasure flying (Kentucky CCA, 2007). Seventy eight fixed-wing aircraft operate at CCA including 57 single- and 13 multi-engine aircraft and business jets. The KYARNG operates and maintains one C-12 Huron and two C-23 Sherpa fixed wing aircraft at the CCA. The runway at CCA is designed for Gulf Stream 3-type aircraft (Jacobs, 2005). Based on current daily operations, the airfield noise environment at CCA is dominated by private single and twin-engine, and corporate aircraft operations.

The 2001 KYARNG Statewide Operational Noise Management Plan identified that the CCA received some C-130 transport airplane flights. The 2007 KYARNG Statewide Operational Noise Management Plan clarified that the KYARNG does not and has no plans to station or operate C-130 aircraft at BNGC. As in the past, C-130s would only use CCA if they were coming in to support emergency operations or for air shows that are held periodically in Frankfort.

A detailed noise analysis was conducted for the CCA as part of its runway expansion project EA (HMB, 2005). The Noise Zone II and III contours for aircraft operations on the runway, including those of the KYARNG fixed-wing aircraft, were within airport property.

CCA noise abatement is achieved through voluntary agreements, land use measures, and FAA-approved operational procedures and programs designed to reduce the effects of aircraft noise on nearby residents. Safety and weather permitting, pilots avoid flying over nearby residential areas when arriving or departing the CCA (CCA Division, 2007).

Rotary-wing aircraft. The KYARNG has 19 rotary-wing aircraft stationed at the BNGC. From March 2006 to March 2007, approximately 5,370 UH-60 Blackhawk and 740 OH-58 Kiowa operations (landings or takeoffs) occurred at the AASF (USACHPPM, 2007). KYARNG pilots are required to maintain training currencies to do their mission day or night. At BNGC, night flying is undertaken monthly with night vision goggles (NVGs) so pilots can train as they fight. Eight civilian helicopters (e.g., Bell Jet Rangers and Bell Long Rangers) also operate out of CCA.

To assess military helicopter noise, computer models, such as NOISEMAP/BASEOPS, are employed. In 2001 and again in 2007, the United States Army Center for Health Promotion and Preventative Medicine (USACHPPM) determined that due to the low average number of daily helicopter flights at the existing BNGC AASF, noise exposure contours could not be developed (USACHPPM 2007). Noise contours are lines on a map that connect points of equal noise exposure based on average noise impacts. Therefore, AASF operational noise levels are considered compatible with nearby residential and sensitive land use.

As part of the CCA EA, AASF rotary-wing aircraft operations were modeled for potential noise impacts. Even directly on the helipad, the number of annual rotary-wing aircraft operations was determined to be too low to generate noise levels above the Zone II

threshold (65 ADNL) (HMB, 2005). According to land use guidelines, noise levels below Zone II are compatible with residential and sensitive land use.

As part of its "Fly Neighborly" program, the KYARNG has established helicopter "no fly-areas" and minimum operational flight elevations around known sensitive noise areas in the Frankfort area (USACHPPM, 2007). Helicopters are not to be flown below 500 feet above ground level (AGL) other than in those instances authorized in NGR-95-1: Aviation Flight Regulations. Normal cruising altitude is at or above 1,500 feet AGL except during take offs and landings; when weather and cloud clearance requirements must be met; and during inflight emergencies. Helicopter operations are conducted from 7:30 am to 5:00 pm year round with extended hours on Tuesday, Wednesday, Thursday, and Saturday to support night mission and training requirements (6:00 pm to 10:00 pm October – May and 6:00 pm to 12:00 pm (June –September)). Helicopter operations outside of these hours must be specifically approved by the AASF Commander.

The majority of KYARNG helicopter operations use a flight path specifically designed to avoid conflicts with CCA runway traffic and to minimize noise exposure to the community (see **Figure 7**). **Figure 7** depicts the current approach and departure routes, as well as the closed patterns that are used by rotary-wing aircraft training at the AASF. The figure also identifies a "noise buffer." The buffer shows where individual overflights may be audible to neighbors.

The KYARNG has established a noise complaint procedure to receive and record complaints about noise. Such complaints are logged, investigated, and corrective action applied where applicable. Most noise complaints appear to be from transient rotary-winged aircraft using the AASF. Rotary-winged aircraft from other state National Guards or Regular Army units are considered transients because they are only using the AASF for short periods of time (e.g., for refueling, minor maintenance, or flight crew rest) before leaving for another destination. In most instances, noise complaints are resolved to the mutual satisfaction of the civilian party and the KYARNG. The KYARNG receives very few noise complaints per year (USACHPPM, 2007).

4.5 Geology and Soils

The BNGC is situated within an upland limestone area, fairly well-dissected by normal stream drainage. The topography is rolling to hilly. The most conspicuous topographic features within the vicinity of the BNGC are the entrenched meandering valleys of the Kentucky River and Benson and Elkhorn Creeks (Jacobs, 2005). Elevations within the proposed AASF development area range between approximately 760 feet above mean sea level (amsl) and 825 feet amsl.

According to the *Drainage Determination for the Boone National Guard Center*, the proposed AASF is situated within the Clays Ferry Formations (Thrailkill, et al., 1985). The Clays Ferry Formation ranges up to 35 feet thick and is made up of interbedded limestone and shale. The limestone and shale occur in about equal amounts (Thrailkill, et al., 1985 and USGS, 2001).

Lexington Limestone Formation, which is approximately 300 feet thick, underlies the Clays Ferry Formation. All of the stratigraphic units are nearly horizontal in the project area.

The soils within the BNGC are a mix of topsoil and silty clay with limestone fragments. In some areas soil is thin allowing bedrock to be exposed at the surface and in other areas soils are moderately deep. In poorly drained areas and along established drainage ways, the limestone has eroded creating a karst landscape. Karst landscapes form when rain

water seeps through the soil cover and dissolves the soluble limestone beneath. ¹ Karst features can include sinkholes, caves, sinking streams, or springs. Sinkholes are closed depressions at the land surface that form where soil has subsided into an enlarged opening in the limestone where water drains underground.

The majority of BNGC is drained to existing sinkholes. Minor sinkholes and continually changing sinkholes also develop along the intermittent creeks and swales within the property. The karst deposits have been mapped at BNGC and are illustrated in **Figure 4** (Jacobs, 2005).

As a result of this mapping study, the KYARNG environmental staff has restricted certain portions of the property to development. A primary sinkhole is located just east of the existing AASF. This sinkhole accommodates a significant portion of the storm water runoff from BNGC and has been monitored for years. This sinkhole, along with a low area further to the east and northeast, must be preserved and protected from grading and development. Further to the north of the sinkhole, a creek bed, which accommodates drainage from the neighboring residential properties, has exposed the limestone and shows karst characteristics. This creek bed is also protected from development with a similar disturbance free zone.

A karst feature exists in the western portion of the BNGC in the area of the proposed AASF (see **Figure 4**). However, this feature has not shown significant changes in 20 years. Proper storm water management practices should prevent any sinkhole development in the project area (Jacobs, 2005).

The proposed AASF site is typified by silt loams. Soils information was obtained from the U.S. Department of Agriculture (USDA) - Natural Resources Conservation Service (NRCS). Soil map units within the project area are summarized in **Table 3**.

Table 3. Soil Map Units within Proposed AASF Project Area

Soil Type	Map Symbol	Slope (%)	Acres	Prime Farmland	Hydric	Limitations
Faywood silt loam	FdC	6 to 12	8.8	No 1	No	Highly erodible
	FdD	12 to 30	10.1	No	No	Highly erodible
Lowell silt loam	LwB	2 to 6	9.5	Yes 2	No	Highly erodible
	LwC	6 to 12	<0.1	No 1	No	Highly erodible

KEY

- * Approximate acreage includes proposed project area only
- 1 Farmland of Statewide Importance
- 2 All areas are Prime Farmland

Source: USDA-NRCS, 2006

The KYARNG is subject to the implementing procedures of the Farmland Policy Protection Act (FPPA; 7 CFR 658) unless the Proposed Action is required for National Defense (Section

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 $^{^1}$ When water falls as rain and infiltrates into the ground, it picks up small amounts of carbon dioxide (CO₂) from the atmosphere and from the air within the soil. The CO₂ reacts with the water to form a weak solution of carbonic acid (H₂CO₂). When the water comes into contact with limestone, the acid reacts chemically with the limestone and can cause it to dissolve. The speed at which the limestone is dissolved depends mainly on the amount of CO₂ in the water and the amount and flow of water in contact with the limestone.

1547(b) of the FPPA). Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land, but not urban built-up land or water). Prime farmland has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding. The NRCS determined that there is no prime and unique farmland located on the project site (see **Appendix B**).

Hydric soils are defined as soils that have formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the subsurface. In addition, hydric soils are typically associated with wetland areas. None of the soil types within the proposed project area are classified as hydric by the NRCS. However, soils listed as non-hydric may contain small areas of hydric soils that were too small to be mapped (NRCS, 2007).

4.6 Water Resources

4.6.1 Surface Waters

The proposed AASF site is part of the Lower Kentucky watershed (Hydrologic Unit Code [HUC] 05100205) (USEPA, 2007b). The proposed project site is located adjacent to an unnamed tributary of South Benson Creek. There are no known surface water features on the proposed site and the property is not located in the 100-year or 500-year flood hazard zone (Federal Emergency Management Agency [FEMA], 2005).

According to the 303d list of impaired waterbodies², leading pollutants within the Lower Kentucky watershed include siltation, nutrients, pathogens, habitat alteration, and organic enrichment. Benson Creek is listed as impaired as a result of sedimentation, nutrient loading, and low flow conditions as result of habitat alteration. A total of 73 waterbodies are considered impaired within this watershed (USEPA, 2004).

4.6.2 Wetlands

Consistent with the 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual, characteristics and indicators of wetland hydrology, hydric soils and hydrophytic vegetation must all be present for an area to be considered a jurisdictional wetland unless an area has been disturbed resulting in the obliteration of one or more wetland parameters (Environmental Laboratory, 1987).

A wetland delineation has not been conducted previously within the proposed AASF area. According to the National Wetlands Inventory (NWI), there are no wetlands or other surface water features within the proposed project site (USFWS, 2007a). However, there are

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² Section 303(d) of the Clean Water Act requires states to identify waters, through their Section 305(b) water quality assessments, that do not or are not expected to meet applicable water quality standards with federal technology based standards alone. States are also required to develop a priority ranking for these waters taking into account the severity of the pollution and the designated uses of the waters.

several surface water features mapped within the BNGC property or in its vicinity (see **Figure 5**).

4.6.3 Groundwater

Water yields from wells drilled within the Clays Ferry Formation range from approximately 100 to 500 gallons per day in the valley bottoms, but almost no water to wells on hillsides or ridgetops. Water is hard in valley bottoms and may contain salt or hydrogen sulfide. Shale has small, poorly connected openings, and groundwater circulation is slow; as a result, little water is available to wells and springs. On ridgetops the shale prevents downward percolation of water, and creates small, semiperched water bodies in the lower part of the soil and the upper part of the weathered bedrock (Carey & Stickney, 2005).

At least one-half of Kentucky's aquifers occur in karst regions. Groundwater in karst areas is highly susceptible to pollution from surface activities. As discussed in **Section 4.5**, karst features are located within the BNGC property, including the proposed project area.

The KYARNG maintains a Groundwater Protection Plan (GPP) for the BNGC as required in 401 Kentucky Administrative Regulations (KAR) 5:037.

4.7 Biological Resources

4.7.1 Flora and Fauna

The BNGC property is a mix of developed areas and open grassland with sporadic trees. Small woodland areas have developed adjacent to existing creeks (i.e., riparian woodlands). The proposed AASF project area was previously used as part of the Whippoorwill Golf Course before the DMA acquired this land. Prior to use as a golf course, the land was farmed.

Current vegetation within the project site is dominated by maintained grasslands. In 1996, the Kentucky State Nature Preserves Commission (KSNPC) conducted a biological inventory of BNGC (KSNPC, 1996). The floristic inventory identified 269 species. Twenty-six percent of the flora is made up of exotic species, an amount consistent with that of the overall state flora. The proportion of weed and exotic plant species indicate a high degree of land use disturbance.

According to the KDFWR, approximately 269 wildlife species are known to occur in Franklin County. Among these are many common game species including white tailed deer (Odocoileus virginianus), eastern gray squirrel (Sciurus carolinensis), Eastern fox squirrel (Sciurus niger), cottontail rabbit (Sylvilagus floridanus), wild turkey (Meleagaris gallopavo), and many waterfowl species. Other wildlife species commonly found in Franklin County include American beaver (Castor canadensis), coyote (Canis latrans), big brown bat (Eptesicus fuscus), great blue heron (Ardea Herodias), red-tailed hawk (Buteo jamaicencis), and numerous song-bird species (KDFWR, 2007a). Because much of the installation has been disturbed and the balance of the land area is manicured or short grass, wildlife species found on BNGC are mostly limited to those that have adapted to high levels of human activity and disturbance (KSNPC, 1996).

4.7.2 Special Status Species

The USFWS administers the Endangered Species Act of 1973 (ESA) as amended. This law provides federal protection for species designated as federally endangered or threatened. An endangered species is "in danger of extinction throughout all or a significant portion of its range," and a threatened species "is likely to become an endangered species within the

foreseeable future" (USFWS, 1988). Special status species are listed as threatened or endangered, are proposed for listing, or are candidates for listing by the state and/or federal government.

According to the USFWS (2007b), there are four federally endangered species and one candidate³ species known to occur in Franklin County, Kentucky. The Indiana bat (*Myotis sodalis*), gray bat (*Myotis grisescens*), northern riffleshell (*Epioblasma torulosa rangiana*), and small rock cress (*Arabis perstellata var. perstellata*) are listed as endangered, while the short's bladderpod (*Lesquerella globosa*) is a candidate species.

Gray bats live in caves year round except when foraging or migrating to and from their summer roosting caves and winter hibernacula. Gray bats are insect eaters and often hunt and feed over water. Summer caves are located close to rivers or lakes where the bats feed (USFWS, 1997a).

Indiana bats unlike gray bats do not spend the entire year roosting in caves, but rather roost in forested habitat along streams and rivers within the summer. Roost trees generally have loose, exfoliating bark. Cavities and crevices are also used. Both live and snags can be inhabited (USFWS, 2006).

The northern riffleshell is found in a wide variety of streams from large to small. It buries itself in bottoms of firmly packed sand or gravel with its feeding siphons exposed. Reproduction requires a stable, undisturbed habitat and a sufficient population of host fish to complete the mussel's larval development (USFWS, 1997b).

The small rock cress is typically found on wooded steep slopes with limestone outcrops. The outcrops tend to be moist but not wet; rarely, plants can be found on seepy outcrops. They also may be found in protected areas, such as around the bases of larger trees, or in areas where there is little competition, such as around areas regularly scoured by talus movement or erosion (USFWS, 1996).

Short's bladderpod grows on steep, rocky wooded slopes. It also occurs along cliff tops, bases and ledges. The species usually is found adjacent to rivers or streams and on south to west facing slopes (USFWS, 2005).

No habitat exists on site for these federally listed species and they are unlikely to occur near the proposed AASF site (USFWS 2007).

An additional 27 species listed by the Commonwealth of Kentucky as special concern, threatened, or endangered have been known to occur in Franklin County (KDFWR, 2007b; Kentucky State Nature Preserves Commission [KSNPC], 2007). Kentucky does not have protection requirements for state-listed species. The KYARNG consulted with the KDFWR but did not receive any comments on the proposed project (see Appendix B). A complete list of rare species and their status are presented in **Table 4**.

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³ Candidate species are plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened under the ESA of 1973, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. Candidate species receive no statutory protection under the ESA. The USFWS encourages cooperative conservation efforts for these species because they are, by definition, species that may warrant future protection under the ESA.

Table 4. Special Status Species Known to Occur in Franklin County, KY

Common Name	Scientific Name	Federal Status	KY Status
Amphibians			
Eastern Hellbender	Cryptobranchus alleganiensis alleganiensis		S
Northern Leopard Frog	Rana pipiens		S
Bats			
Gray Myotis	Myotis grisescens	E	Т
Indiana Bat	Myotis sodalis	E	E
Birds		•	
American Coot	Fulica americana		Е
Bewick's Wren	Thryomanes bewickii		S
Blue-winged Teal	Anas discors		Т
Common Moorhen	Gallinula chloropus		Т
Great Blue Heron	Ardea herodias		S
Northern Shoveler	Anas clypeata		Е
Sharp-shinned Hawk	Accipiter striatus		S
Spotted Sandpiper	Actitis macularius		Е
Vesper Sparrow	Pooecetes gramineus		E
Fish			
Hornyhead Chub	Nocomis biguttatus		S
Mammals		-	_
American Black Bear	Ursus americanus		S
Mussels		•	_
Elktoe	Alasmidonta marginata		Т
Northern Riffleshell	Epioblasma torulosa rangiana	Е	E
Salamander Mussel	Simpsonaias ambigua		Т
Plants			
Eastern Yampah	Perideridia americana		Т
Globe Bladderpod	Lesquerella globosa		E
Grape Honeysuckle	Lonicera prolifera		E
Hairy False Gromwell	Onosmodium hispidissimum		Е
Mock Orange	Philadelphus inodorus		Т
Red Buckeye	Aesculus pavia		Т
Short's Bladderpod	Lesquerella globosa	С	E
Small Rock Cress	Arabis perstellata var. perstellata	E	Т
Softleaf Arrowwood	Viburnum molle		Т
Stemless Evening-primrose	Oenothera triloba		Т

Table 4. Special Status Species Known to Occur in Franklin County, KY

Common Name	Scientific Name	Federal Status	KY Status		
Svenson's Wildrye	Elymus svensonii	-	S		
Water Stitchwort	Sagina fontinalis		Т		
Western False Gromwell	Onosmodium occidentale		E		
Wood's Bunchflower Veratrum woodii T					
KEY: C – Candidate, E- Endangered, T - Threatened, S - Special Concern					

Source: KDFWR, 2007b; KSNPC, 2007; USFWS, 2007b

A 1996 biological inventory did not identify any of the special status species listed above as occurring on BNGC (KSNPC, 1996).

4.8 Cultural Resources

4.8.1 Cultural Resources Overview

NEPA requires consideration of "important historic, cultural, and natural aspects of our natural heritage." Consideration of cultural resources under NEPA includes the necessity to independently comply with the applicable procedures and requirements of other federal and state laws, regulations, EOs, presidential memoranda, and ARNG guidance.

Cultural resources are historic properties as defined by the National Historic Preservation Act (NHPA), cultural items as defined by the Native American Graves Protection Act (NAGPRA) archaeological resources as defined by the Archaeological Resources Protection Act (ARPA), sacred sites as defined by EO 13007 to which access is afforded under the American Indian Religious Freedom Act (AIRFA), and collections and associated records as defined by 36 CFR 79. The principal federal law addressing cultural resources is the NHPA (16 USC Section 470), and its implementing regulations (36 CFR 800). The regulations, commonly referred to as the Section 106 process, describe the procedures for identifying and evaluating historic properties; historic properties are those properties that are both listed on or eligible for listing on the NRHP. As part of the Section 106 process, agencies are required to consult with the State Historic Preservation Officer (SHPO). The term "historic properties" are refers to cultural resources that meet specific criteria for eligibility for listing on the National Register of Historic Places (NRHP); historic properties need not be formally listed on the NRHP. Section 106 does not require the preservation of historic properties, but ensures that the decisions of federal agencies concerning the treatment of these places result from meaningful considerations of cultural and historic values and of the options available to protect the properties. Federal agencies are required under the NHPA, however, to consult with stakeholders and develop reasonable mitigation when their actions will adversely affect historic properties. The Proposed Action is an undertaking as defined by 36 CFR 800.3 and is subject to Section 106.

The DoDI 4710.02 provides guidance for interacting and working with federally recognized American Indian and Alaska Native governments or tribes. This Instruction implements DoD policy that governs DoD interactions with federally recognized tribes. The policy outlines DoD trust obligations, communication procedures with tribes on a government-to-government basis, consultation protocols, and actions to recognize and respect the significance that tribes ascribe to certain natural resources and properties of traditional

cultural or religious importance. The policy requires consultation with federally recognized tribes for proposed activities that could significantly affect tribal resources or interests.

In addition to Federal and State regulatory laws and policies, an Integrated Cultural Resources Management Plan (ICRMP) was developed by the KYARNG that included the BNGC (Louis Berger Group, 2003). An ICRMP is required by DODI 4715.3, *Environmental Conservation Program* and fulfills the requirements as stipulated within AR 200-1, *Environmental Protection and Enhancement.* The KYARNG's ICRMP establishes explicit responsibilities, standard operating procedures (SOPs), and long-range goals for managing cultural resources on KYARNG lands in compliance with all applicable laws and regulations, while ensuring the safety, efficiency, and attainment of Federal and state missions. SOP Number 4 of the ICRMP establishes procedures to be followed in case of inadvertent discovery of cultural items, and SOP Number 6 addresses new construction on DMA property or newly acquired acreage.

4.8.2 Significance Criteria

In order for a cultural resource to be considered significant, it must meet one criterion or more for inclusion on the NRHP, as described below:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association; and: a) that are associated with events that have made a significant contribution to the broad patterns of our history; or b) that are associated with the lives or persons significant in our past; or c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or d) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60:4).

Only significant cultural resources warrant consideration with regard to adverse impacts resulting from implementation of a Proposed Action. Generally, cultural resources must be more than 50 years old to receive protection under Federal laws.

4.8.3 Archaeological Resources

In 1988, the USACE surveyed approximately 650 acres at BNGC utilizing standard archaeological procedures as outlined in the Kentucky Heritage Council's *Specifications for Archeological Fieldwork and Assessment Reports*. The survey included land at the CCA but excluded areas that had been subjected to obvious extensive ground disturbance, such as primary and secondary runways, parking lots, roads and sites where buildings had been constructed. A majority of the area affected by the Proposed Action was previously ground disturbed during development of the golf course. Areas not subject to previous ground disturbance were surveyed.

The survey identified one historic cemetery (the Baxter Cemetery), three historic stone fences and two lithic scatters (Ball, 1988). The survey recommended as not eligible each of these cultural resources. The SHPO concurred with the survey recommendations that none of these archaeological resources is eligible for listing on the NRHP (Louis Berger Group, 2003). A 2006 archaeological survey conducted by the Kentucky Archaeological Survey used ground penetrating radar and monitored the removal of topsoil/plowzone during the CCA runway expansion project. This survey determined that if the Baxter Cemetery had been located near the airport, it had been destroyed by earlier construction activities. None of the identified archaeological resources are located within the proposed AASF footprint.

4.8.4 Architectural Resources

The project site is located on property that was used previously as a golf course. The former golf course club house, Building 210 built in 1964, is not considered eligible for listing on the National Register of Historic Places (NRHP). No historic structures listed or eligible for listing on the NRHP exist on or near the proposed AASF footprint (KHC, 2007).

4.8.5 Native American Consultation

In accordance with Section 106 of NHPA, NEPA, and the *Department of Defense Annotated American Indian and Alaska Native Policy*, the KYARNG has consulted on a government to government basis with eight federally recognized tribes with potential ancestral ties to the Frankfort, Kentucky area. To date, only one response has been received. The United Keetoowah Band of Cherokee Indians in Oklahoma has no objection to the proposed AASF. The tribe requested that if human remains or cultural artifacts are inadvertently discovered that construction cease immediately and they be contacted for further consultation. Copies of applicable correspondence are included in **Appendix B**.

4.9 Socioeconomics

The following subsections identify and describe the basic attributes and resources associated with the human environment surrounding the proposed AASF site. This data is presented in order to provide an understanding of the socioeconomic forces that have shaped, and continue to shape, the area. Socioeconomic areas of discussion include local demographics, local and regional economy, local housing, local schools, local medical facilities, local service facilities, local recreational facilities, and associated issues of health and safety to the surrounding communities as related to activities conducted at the proposed AASF site. Socioeconomic data shown in this section are presented at the city, county, and state levels to analyze baseline socioeconomic conditions in the context of local, regional, and state trends. Data have been collected from previously published documents issued by Federal, State, and local agencies and from state and national databases (for example, the U.S. Census Bureau).

This section provides the framework necessary to determine the significance of the estimated socioeconomic effects from any proposed activity at the proposed site.

4.9.1 Population

Franklin County grew by 8.0 percent between 1990 and 2000, ranking it 70th out of 120 Kentucky counties on that measure (Kentucky State Data Center [KSDC], 2007). The information presented in **Table 5** indicates that Franklin County will continue to grow, but slowly, in comparison to the overall state population.

Between 1990 and 2006, population growth within the City of Frankfort increased at a rate of 4.3 percent. While the population is continuing to grow within the project area, growth is significantly lower when compared to the County (10.1 percent) and State (14.1 percent) as a whole during this same time period (U.S. Census Bureau, 2006, 2000, 1990).

Table 5. Franklin County and State Population Projections

Year	Kentucky	Franklin County
2000	4,041,769	47,687
2005	4,165,814	48,153
2010	4,326,490	49,040
2015	4,502,595	50,180
2020	4,660,703	51,175
2025	4,799,443	52,011
2030	4,912,621	52,649
Projected Change, 2000-2030 (%)	21.5%	10.4%

Sources: KSDC, 2007; U.S. Census Bureau, 2000 Census,

http://factfinder.census.gov

4.9.2 Regional Economy

Major industry sectors within the City of Frankfort include public administration (26.6 percent); education, health care, social services (15.1 percent); manufacturing (13.2 percent); and retail trade (9.7 percent) (U.S. Census Bureau, 2000 Census).

Per capita income statistics from the 2000 U.S. Census indicate that Franklin County and the City of Frankfort have slightly higher per capita incomes compared with the Commonwealth of Kentucky. Median household income is higher and poverty levels are lower in comparison to the state. Franklin County had a lower unemployment rate in September 2007 in comparison to the Commonwealth of Kentucky. The nationwide average was 4.5 percent in September 2007 (Workforce Kentucky, 2007). Regional income data are summarized in **Table 6**.

Table 6. Regional Income

Area	Number of Households	Median Household Income	Per Capita Income	Percent of Population Below Poverty Level	Unemployment Rate (%) Sept 2007 *	
Kentucky	1,591,739	\$33,672	\$18,093	15.8	6.1	
Franklin County	19,890	\$40,011	\$21,229	10.7	4.9	
City of Frankfort 12,250 \$34,980 \$20,512 13.9						
* Rates are not seasonally adjusted						

Sources: 2000 U.S. Census Bureau, Profile of Selected Economic Characteristics, Workforce Kentucky, 2007

4.9.3 Housing

Median home values, mortgages and rent in the City of Frankfort are similar to county and state rates, while the owner occupancy rate is 21.2 and 29.7 percent lower than Franklin

County and the Commonwealth of Kentucky, respectively. **Table 7** presents selected housing characteristics for the areas surrounding the project site.

Table 7. Regional Housing Characteristics

Area	Housing Units Available	Occupied (%)	Owner- Occupied (%)	Median Value	Median Home Mortgage	Renter- Occupied (%)	Median Contract Rent
Kentucky	1,750,927	90.8	64.2	\$86,700	\$816	35.8	\$445
Franklin County	21,409	93.0	60.0	\$91,600	\$814	40.0	\$482
City of Frankfort	13,398	91.7	49.5	\$88,100	\$776	50.5	\$474

Source: 2000 U.S. Census Bureau, Profile General Demographic Characteristics and Selected Housing Characteristics

4.9.4 Schools

The BNGC is within the Franklin County Public School District. The district includes six elementary schools, two middle schools, two high schools, an educational development center, and a career and technical center. Private schools in Franklin County include the Capital Day School and Frankfort Christian Academy (Kentucky Department of Education [KDE], 2007).

There are no educational facilities located immediately surrounding the proposed site (within a one mile radius). The Westridge Elementary School is located on Devil Hollows Road approximately 1.3 miles north of the proposed AASF site (see **Figure 2**).

According to the 2000 U.S. Census statistics, Franklin County and the City of Frankfort have a higher percentage of individuals with a post-secondary degree and a greater percentage of individuals with a high school diploma or higher compared with the Commonwealth of Kentucky. **Table 8** provides 2000 statistics of educational attainment for persons 25 years and older for areas peripheral to the proposed project site.

Table 8. Regional Educational Attainment of Persons 25 years and Older

Area	No Diploma (%)	High School Graduates (%)	Post-Secondary Graduates (%)
Kentucky	25.9	74.1	22.1
Franklin County	21.2	78.8	28.7
City of Frankfort	20.8	79.2	29.2

Source: 2000 U.S. Census Bureau, Profile of Selected Social Characteristics

4.9.5 Recreational Facilities

The KDFWR Salato Wildlife Center is located adjacent to the BNGC to the west (see Section **4.2.2** for further details).

Juniper Hill Municipal Park is located east of the BNGC just off Louisville Road (see **Figure 2**). The park is comprised of approximately 124 acres, which includes a 94-acre golf course. The park includes an Olympic-sized pool, two sand volleyball courts, one baseball field, two shelters, a gazebo, three horseshoe pits, a playground, picnic facilities, administrative offices, a State memorial to fallen firefighters, and a Desert Storm memorial.

4.9.6 Public and Occupational Health and Safety

4.9.6.1 Police and Fire Protection

Law enforcement services are provided to the BNGC by the Frankfort Police Department. The Frankfort Police Station is located on 308 West 2nd Street, approximately 2.5 miles from the BNGC. Firefighter services are provided by the Frankfort Fire Department. The department is made up of approximately 90 full time employees, who maintain four fire stations and administrative offices. The nearest fire station is Station Number 3 on 1100 Louisville Road, approximately 0.50 mile from the BNGC.

Additionally, the KYARNG military security and emergency response personnel work closely with local public services to ensure the safety and health of both military and civilian people working within the BNGC.

4.9.6.2 Medical Facilities

The nearest hospital is the Frankfort Regional Medical Center (FRMC) located at 299 King's Daughters Drive, Frankfort, KY. The hospital is approximately 3 miles from the BNGC located off of I-64. The FRMC serves Franklin, Anderson, Owen, Woodford, and Shelby Counties as well as the surrounding counties.

FRMC was chosen as the top hospital to work for in Kentucky, and the third best company overall among large sized employers, as part of the Top 25 Best Places to Work for in Kentucky in 2007 (FRMC, 2007).

4.9.7 Protection of Children

Because children may suffer disproportionately from environmental health risks and safety risks, EO 13045 (Protection of Children from Environmental Health Risks and Safety Risks) was issued on 21 April 1997. EO 13045 was intended to prioritize the identification and assessment of environmental health risks and safety risks that may affect children and to ensure those Federal agencies' policies, programs, activities, and standards address environmental risks and safety risks to children.

No children are regularly present at the BNGC, and primary access to the BNGC is controlled through one manned security gate. A second gate near the CAA is used only for emergency vehicle access. A fence currently exists around the perimeter of the BNGC. Base-wide access is reserved for military personnel, civilian employees, and approved government contractors with escort. No child care centers, schools, parks, or other concentrations of children currently exist on the installation.

Residential neighborhoods exist to the north and east of BNGC. It is expected that children live in these neighborhoods but the exact number is not known. The Salato Wildlife Center is located to the west of the BNGC. The Salato Wildlife Center is open to the public and hosts a variety of activities and workshops that children attend. Westridge Elementary School is located 1.3 miles north of the BNGC. Children attend services at the approximately 10 churches exist US 60, US 127 and Devils Hollow Road within the vicinity of BNGC. The percentage of the population under age 18 is slightly lower within Frankfort and Franklin County than in Kentucky as a whole, but not disproportionately so (see **Table 9**).

Table 9. Total Population Versus Population Under Age 18

Area	Total Population	Population Under 18	% Population under 18	
Kentucky	4,041,769	994,818	24.6	
Franklin County	47,687	10,776	22.6	
City of Frankfort	27,741	5,994	21.6	

Source: 2000 U.S. Census Bureau www.census.gov

4.10 Environmental Justice

EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations), dated 11 February 1994, was issued to focus attention of Federal agencies on human health and environmental conditions in minority and low-income communities and to ensure that potential disproportionately high and adverse human health or environmental effects on these communities are identified and addressed.

4.10.1 Geographic Distribution of Minority Populations

Based upon the 2000 U.S. Census, populations in Franklin County and the City of Frankfort are comprised of 12.0 and 18.2 percent minorities, respectively, which is significantly higher than the overall Kentucky percentage of 9.9 percent minorities. However, the BNGC is located in the City of Frankfort, which in comparison to Franklin County as a whole, has a significantly lower minority population. **Table 10** presents regional demographics by race for the areas surrounding the BNGC. For the City of Frankfort, the major reported ancestries include: United States or American (20.2 percent), Irish (11.6 percent), English (11.3 percent), German (11.2 percent), and 'Other' ancestries (19.9 percent) (U.S. Census Bureau, 2000 Census).

Table 10. Regional Population by Race

Area	All Individuals	White (%)	African- American (%)	American Indian and Alaska Native (%)	Asian or Pacific Islander (%)	Other Race (%)	Hispanic or Latino* (%)
Kentucky	4,041,769	90.1	7.3	0.2	0.7	0.6	1.5
Franklin County	47,687	88.0	9.4	0.1	0.7	0.6	1.1
City of Frankfort	27,741	81.8	14.7	0.1	0.9	1.6	1.5

^{*}Persons of Hispanic or Latino origin may be of any race

Note: The five percentages reported by the U.S. Census Bureau for each geographic region may total more than 100% because individuals may report more than one race.

Source: U.S. Census Bureau, 2000 Census, Profile of General Demographic Characteristics

4.10.2 Geographic Distribution of Low-Income Populations

Detailed information regarding income for the City of Frankfort residents, as determined from the 2000 U.S. Census and Workforce Kentucky (2007), is provided in **Table 6**. Approximately 13.9 percent of the City of Frankfort residents were at or below the poverty level, which is greater than the 10.7 percent of Franklin County residents and less than the

15.8 percent of state residents. As shown in **Table 6**, median household income within the City of Frankfort is just slightly higher than when compared to the State median household incomes and 14.4 percent lower than the County. Unemployment rates are much lower within Franklin County in comparison to the Commonwealth of Kentucky. Overall, the region of the BNGC is similar to the rest of the state in terms of income levels.

4.11 Infrastructure

The majority of the BNGC infrastructure is located within the Eastern Area of the installation including the existing AASF (see **Figure 2**). The proposed AASF site is located in the Western Area, which was formerly a golf course. Other than converting the former golf course club house (Building 210) to house BNGC personnel functions, the construction of adjoining storage buildings, and the construction and paving of the connecting road to these facilities from the eastern site, there has been little development of the Western Area to date.

4.11.1 Energy Sources and Telecommunications

An overhead power line traverses the site connecting development south of the airfield to residential property north of the BNGC. This overhead line provides power to Building 210. A new communications duct bank has recently been installed to serve Building 210. Electricity is provided through the Frankfort Plant Board. Telecommunication services are provided through BellSouth for local telephone service and Qwest for long distance.

4.11.2 Potable Water Supply, Wastewater Treatment and Solid Waste Disposal

A 2-inch water line services the existing buildings in the Western Area. A water tower with a 20-inch water main was recently constructed approximately 4,900 feet west of the proposed AASF site. The Frankfort Plant Board provides potable water to BNGC and the City of Frankfort.

BNGC's sanitary sewer system feeds into the City of Frankfort Department of Public Works main line. The Frankfort Department of Public Works operates the public sanitary sewer and wastewater treatment systems as well as solid waste disposal for the City of Frankfort. An existing 8-inch sanitary sewer serves Building 210, which was previously used as a golf club house. A 10,000-gallon underground tank is located on site, which is thought to be a former sewage holding tank.

4.11.3 Transportation

BNGC is accessed via US 127 and US 60. The primary gate, which is manned full time, is located on US 127 along the eastern limits of the BNGC. A secondary access is available on US 60; however, it is used only for emergencies. Internal roadways within the BNGC include a collector road that runs east-west to the crossing of the taxiway. Secondary roads, which connect to the collector road, access individual buildings and facilities. West of the taxiway is a secondary road that traverses the Western Area of the BNGC. This road terminates at the emergency exit on US 60 (see **Figure 6**).

The BNGC also contains a taxiway that provides traffic circulation between the existing AASF and the CCA. The taxiway contains an at-grade crossing with the main east-west collector road. As discussed in **Section 4.2.2**, the 355-acre CCA, located adjacent to the BNGC, is a public use airport that is owned and operated by the Commonwealth of Kentucky (see **Figure 2**). Airfield operations at CAA are conducted as a function of Kentucky State

Government, KYARNG, corporate travel, flight training, and pleasure flying (Kentucky CCA, 2007). The existing AASF within the Eastern Area of the BNGC also operates a separate helipad and approach.

4.12 Hazardous and Toxic Materials/Wastes

Hazardous and toxic materials or substances are generally defined by the USEPA as materials or substances that pose a risk (through either physical or chemical reactions) to human health or the environment. Regulated hazardous substances are identified through a number of federal laws and regulations. The most comprehensive list is contained in 40 CFR 302, and identifies quantities of these substances, when released to the environment, that requires notification to a federal government agency. Hazardous wastes, defined in 40 CFR 261.3, are considered hazardous substances. Generally, hazardous wastes are discarded materials (solids or liquids) not otherwise excluded by 40 CFR 261.4 that exhibits a hazardous characteristic (i.e., ignitable, corrosive, reactive, or toxic), or are specifically identified within 40 CFR 261. Petroleum products are specifically exempted from 40 CFR 302, but some also are generally considered hazardous substances due to their physical characteristics (especially fuel products), and their ability to impair natural resources.

The KYARNG has developed a Hazardous Material and Waste Management Plan which prescribes responsibilities, policies, and procedures for storing and managing hazardous materials and wastes (KYARNG, 2008). The plan contains spill response and reporting procedures to protect human health and the environment.

The proposed AASF location was used as a golf course prior to Kentucky DMA acquiring the property. The site remains relatively undeveloped aside from a few structures and a 10,000-gallon underground tank. This tank is believed to be a sewage holding tank from the former clubhouse (Jacobs, 2005).

5.0 ENVIRONMENTAL CONSEQUENCES

This section identifies potential direct, indirect, and cumulative effects and compares and contrasts the effects of implementing the Preferred Action Alternative (also known as the Proposed Action) and the No Action Alternative. This section also identifies Best Management Practices (BMPs) that would reduce the level of identified impacts. The KYARNG considers BMPs integral to project implementation; therefore, BMPs are not considered separate from the Proposed Action or as mitigation measures. Significance criteria for NEPA subject areas applied as part of this impact analysis are included as **Appendix F**.

5.1 Land Use

5.1.1 Effects of the Preferred Action Alternative

Under the Preferred Action Alternative, the proposed AASF site would change from a relatively undeveloped open field to a developed area containing the AASF structures and maintained grounds. The proposed site is within the BNGC property and adjacent to the CAA runway. Because the site is located in an area already supporting this type of land use, it would have an overall negligible impact on local land use.

No prime farmland would be converted due to the construction of the new AASF (see 1/21/09 NRCS letter in **Appendix B**). This alternative would not foster changes in adjacent or regional land use. Effectively, this alternative would relocate an improved AASF to the west of the existing AASF within the BNGC. As no change to aviation training is proposed, no indirect off-site land use impact would occur.

The Preferred Action Alternative would result in up to 20 new full-time jobs generated over time; this would not result in a significant land use change through fostering increased development in the region. It is anticipated that these new employees would be drawn from the local population or could readily find housing within the existing market.

No visual or aesthetic impacts are anticipated. The AASF structure would be developed to emulate other architectural features within the BNGC and the general area.

5.1.2 Effects of the No Action Alternative

The No Action Alternative reflects the status quo that involves the continued use of the existing AASF in the eastern portion of BNGC. The KYARNG would continue external storage of the existing fleet of thirteen UH-60s and six OH-58s. The three fixed-wing aircraft would continue to fly out of CCA and conduct planning, flight operations, and maintenance from the leased hangers in the General Aviation area. Increased maintenance and operational costs would be incurred because of a lack of sufficient hanger space and administrative space. The No Action Alternative would not result in any land use impacts.

5.2 Air Quality

5.2.1 Effects of the Preferred Action Alternative

Air emissions generated from the Proposed Action would have *less-than-significant direct,* short-term impacts to the existing air quality environment around the proposed AASF site. Direct impacts would include short-term increased air emission levels as a result of construction activities. No long-term impacts are anticipated as no significant change in on-

site activities would occur; these activities would simply occur at a different location within the BNGC.

Construction activities would be performed in accordance with Federal, State and local air quality requirements. Construction-related emissions are generally short-term but may still have adverse impacts on air quality. NO_x and particulate matter are the pollutants of greatest concern with respect to these activities. NO_x emissions are generated by equipment engines. Particulate emissions can result from a variety of activities, including excavation, grading, vehicle travel on paved and unpaved surfaces, and vehicle and equipment exhaust. NO_x emissions contribute to regional ozone concentrations. Construction-related emissions, particularly site grading, can substantially increase localized concentrations of PM_{10} and $PM_{2.5}$. Particulate emissions from construction can lead to adverse health effects and nuisance concerns, such as reduced visibility. Implementing dust control measures can significantly reduce particulate emissions from construction. The amount of dust is dependent on the intensity of the activity, soil type and conditions, wind speed, and dust suppression activities used.

Implementing BMPs to reduce fugitive dust emissions during construction would minimize the potential impacts on air quality. Examples of BMPs include watering disturbed areas and unpaved roads, limiting vehicle speeds on unpaved areas, covering haul trucks with tarps, and stabilizing previously disturbed areas if they will be inactive for several weeks or more. BMPs that would be implemented as necessary by the KYARNG during construction to reduce or eliminate fugitive dust emissions would include the following:

- Sprinkling the ground surface with water until it is moist can be used to control dust on haul roads and other traffic routes. This practice can be applied to almost any site. When suppression methods involving water are used, care would be exercised to minimize over-watering that could cause the transport of mud onto adjoining roadways, which ultimately could increase the dust problem. Mechanical removal of mud from tires would be implemented if necessary.
- In areas not expected to handle vehicle traffic, vegetative stabilization of disturbed soil is often desirable. Vegetation provides coverage to surface soils and decreases wind velocity at the ground surface, thus reducing the potential for dust to become airborne.
- Mulching can be a quick and effective means of dust control for recently disturbed areas.

These dust-reducing measures would be briefed to the contractor at the construction kick-off meeting. The KYARNG's on-site construction manager would be responsible to bring air quality issues, if they arise, to the KYARNG for resolution. The KYARNG would communicate regularly with the surrounding residents, including sensitive populations identified in **Section 4.3.3**, regarding construction schedules.

Minor long-term adverse operational air quality impacts are expected. Long-term impacts from site activities would be associated with operation of government-owned vehicles, privately-owned vehicles, aircraft, and heating units, with additional, insignificant emissions from routine facility maintenance and operations. However, these impacts would be negligible as the Proposed Action would not change the composition of rotary- and fixed-wing aircraft, the number of employees, or the amount or types of annual military aircraft operations at BNGC. Operational impacts would simply shift from the existing AASF to the proposed new AASF within the BNGC.

New stationary sources of air emissions would be created by this alternative. Modifications to the existing Air Quality Permit (F-05-03) would be made as necessary. This permit is for the operation of the paint booth at BNGC. Under the existing Air Quality Permit, the AASF is considered an "Insignificant Activity" for air quality impacts pursuant to 401 KAR 52:030, Section 6. Emission sources would be specified to meet New Source Performance Standards as defined in 40 CFR Part 60 as required.

The Proposed Action Alternative would not cause an exceedance of the NAAQS and would occur in areas currently in full attainment with the NAAQS. A conformity analysis is not required, and no significant adverse impacts to air quality would occur as a result of implementing the Proposed Action Alternative.

5.2.2 Effects of the No Action Alternative

Under the No Action Alternative, no air quality impacts would result.

5.3 Noise

5.3.1 Effects of the Preferred Action Alternative

Noise generated from the proposed project would have *minor short-term adverse* impacts to the existing noise environment due to construction activities. No increased noise levels from flight operations and maintenance activities are anticipated as the Preferred Action Alternative is primarily a replacement facility. Operations would shift to the new AASF location approximately one mile west. As operations shift from the existing AASF to the new AASF, *minor long-term benefits* would occur due to reduced noise levels for some neighborhoods and the Westridge Elementary School because of the change in AASF location and flight paths.

5.3.1.1 Short-term Impacts

Construction noise would be associated primarily with the use of standard construction equipment. Construction noise is highly variable, depending on the type, number, and operating schedules of equipment. Construction projects are usually executed in stages, each having its own combination of equipment and noise characteristics and magnitudes. Construction activities are expected to be typical of other similar construction projects and would include mobilization, site preparation, excavation, placing foundations, utility development, heavy equipment movement, and paving roadways and parking areas. The most prevalent noise source at construction sites is the internal combustion engine. General construction equipment using engines includes, but is not limited to: heavy, medium, and light equipment such as excavators; roller compactors; front-end loaders; bulldozers; graders; backhoes; dump trucks; water trucks; concrete trucks; pump trucks; utility trucks; cranes; sheet pile drivers; man lifts; forklifts; and lube, oil, and fuel trucks.

Peak noise levels vary at a given location based on line of sight, topography, vegetation, and atmospheric conditions. Peak noise levels would be variable and intermittent because each piece of construction equipment is only operated when needed. However, peak construction noise levels would be considerably higher than existing noise levels. Relatively high peak noise levels in the range of 93-108 dBA would occur on the active construction site, decreasing with distance from the construction areas. **Table 11** presents peak noise levels that could be expected from a range of construction equipment during proposed construction activities.

Table 11. Peak Noise Levels Expected from Typical Construction Equipment

		Peak Noise Level (dBA, attenuated)							
Source		Distance from Source (feet)							
	0	50	100	200	400	1,000	1,700	2,500	
Heavy Truck	95	84-89	78-93	72-77	66-71	58-63	54-59	50-55	
Dump Truck	108	88	82	76	70	62	58	54	
Concrete Mixer	108	85	79	73	67	59	55	51	
Jack-hammer	108	88	82	76	70	62	58	54	
Scraper	93	80-89	74-82	68-77	60-71	54-63	50-59	46-55	
Bulldozer	107	87-102	81-96	75-90	69-84	61-76	57-72	53-68	
Generator	96	76	70	64	58	50	46	42	
Crane	104	75-88	69-82	63-76	55-70	49-62	45-48	41-54	
Loader	104	73-86	67-80	61-74	55-68	47-60	43-56	39-52	
Grader	108	88-91	82-85	76-79	70-73	62-65	58-61	54-57	
Pile driver	105	95	89	83	77	69	65	61	
Forklift	100	95	89	83	77	69	65	61	
Worst-	Worst-Case Combined Peak Noise Level (Bulldozer, Jackhammer, Scraper)								
Combined Pe	Distance from Source (feet)								
Noise Leve	50 100 20		200	1/4 Mile		1/2 N	1ile		
		103	97	91	74	1	6	8	

Source: Tipler 1976

Generally speaking, peak noise levels within 50 feet of active construction areas and material transportation routes would most likely be considered "striking" or "very loud", comparable to peak crowd noise at an indoor sports arena. At approximately 200 feet, peak noise levels would be loud, approximately comparable to a garbage disposal or vacuum cleaner at ten feet. At a $\frac{1}{4}$ mile, construction noise levels would generally be quiet enough so as to be considered insignificant, although transient noise levels may be noticeable at times.

Combined peak noise levels, or worst-case noise levels when several loud pieces of equipment are used in a small area at the same time as described in **Table 11**, are expected to occur rarely, if ever, during the project. However, under these circumstances, peak noise levels could exceed 70 dBA within a quarter mile of the construction area, depending on equipment being used.

Although noise levels would be quite loud in the immediate area, the intermittent nature of peak construction noise levels would not create the steady noise level conditions for an extended duration that could lead to hearing damage. Construction workers would follow standard Federal Occupational Safety and Health Administration (OSHA) requirements to prevent hearing damage.

Areas that would be most affected by noise from construction include those closest to the construction footprint, such as residences north and south of the BNGC. Indoor noise levels would be expected to be 15-25 decibels lower than outdoor levels. In addition, since the nearest residence is more than 1,000 feet from the proposed construction footprint, construction-related noise is unlikely to interfere with indoor or outdoor activities as peak noise levels are generally less than 65 dBA with some heavy equipment being higher (i.e., bulldozer (61-76 dBA); pile driver (69 dBA); and forklift (69 dBA). Peak noise levels Construction noise could interfere with outdoor activities at some nearby residences. Noise is not anticipated to affect activities at the Westridge Elementary School as it is approximately 6,860 feet (1.3 miles) north of the project footprint.

Indirect noise impacts include noise from workers commuting and construction material transport. Area traffic volumes and noise levels would increase slightly as construction employees commute to and from work, and delivery and service vehicles (including trucks of various sizes) transit to and from the site. Because trucks are present during most phases of construction and leave and enter the site via local thoroughfares, truck noises tend to impact more people over a wider area. All construction traffic would be entering BNGC off US 127. For this project, persons living in the residential areas near BNGC would experience minor increases in traffic noise during daytime hours. These noise effects are not considered significant because they are temporary.

The following BMPs would be used by the KYARNG as appropriate to limit noise impacts during construction:

- Limit, to the extent possible, construction and associated heavy truck traffic between nine p.m. to seven a.m. This measure would reduce noise impacts during sensitive night-time hours.
- Locate stationary equipment as far away from sensitive receivers as possible.
- Shut down noise-generating heavy equipment when it is not needed.
- Maintain noisy equipment per manufacturer's recommendations.
- Encourage construction personnel to operate equipment in the quietest manner practicable (for example, speed restrictions, retarder brake restrictions, engine speed restrictions, etc.).

These noise-reducing measures would be briefed to the contractor at the construction kick-off meeting. The KYARNG's on-site construction manager would be responsible to bring noise issues, if they arise, to the KYARNG for resolution.

5.3.1.2 Long-term Impacts

The Preferred Action Alternative would have *minor*, *long-term beneficial* impacts from aircraft noise. Operation of the new AASF would not change the composition of rotary- and fixed-wing aircraft or the amount or types of annual military aircraft operations at the BNGC. Operations would simply shift from the existing AASF one mile west to the proposed AASF location.

The KYARNG would change future rotary-wing aircraft flight corridors (see **Figure 8**). Departures and approach corridors would primarily be to the west. Since the greatest noise is generated during takeoffs and landings, the Preferred Action Alternative would reduce noise impacts to the Juniper Hills, River Bend, Parkview Estates, and Choatesville neighborhoods. People in these neighborhoods would have reduced exposure to the noise from aircraft overflights (see **Figure 8**). Long-term noise reduction benefits would be

anticipated at the Westridge Elementary School due to the increased distance to the new AASF, approximately 6,860 feet (1.3 miles).

The new location increases the distance between the AASF and residential development occurring to the north (e.g., near Juniper Hills) and east of BNGC. The Preferred Action Alternative would reduce noise impacts to these developments. The CCA would continue to provide a distance buffer to residential and commercial areas growing to the south of US 60. Noise impacts to the Salato Wildlife Center would remain unchanged as flight paths would continue to avoid crossing the Salato Wildlife Center. The KDFWR, which manages the Salato Wildlife Center, did not comment or raise any concerns about the Preferred Action Alternative (see **Appendix B**). The Salato Wildlife Center is a noise sensitive area to the west but it also acts as a buffer to reduce potential noise impacts from the AASF to the new residential areas being developed along US 60 to the west.

As part of the 2007 KYARNG Statewide Operational Noise Management Plan, USACHPPM analyzed potential future noise environments at BNGC. USACHPPM determined that under the Preferred Action Alternative, the number of annual helicopter operations remains too low to generate average noise level exposures or noise contours (USACHPPM, 2007). The proposed operational levels would remain well below those needed to generate noise levels incompatible with residential land use. According to Federal Land Use guidelines, noise levels generated by rotary-wing aircraft operations at the new AASF would continue to be compatible with nearby sensitive land uses (e.g., residences, churches, and schools) because the average DNL would be below 65 dBA (FICUN 1980).

The 2007 KYARNG Statewide Operational Noise Management Plan also identified that noise complaints are typically generated by individual loud events and not average noise level exposures. Thus, the tables below give the expected maximum noise levels for the most common types of military aircraft (**Table 12**), and the percentage of the population that is likely to be annoyed by particular maximum levels (**Table 13**)(USACHPPM, 2007). Using these two tables can give a rough idea of whether a complaint is likely given specific aircraft operations.

Table 12. Maximum Sound Level by Aircraft Type

Slant Dista	ance	Maximum Level, dBA						
Feet	AH-1	AH-64	CH-47D	OH-58D	UH-1	UH-60	C-17	C-130
200	93.3	91.8	97.5	89	91	91	101	100.2
500	85	83.4	89.3	80.5	82.8	82.5	91.4	100.2
1,000	78.5	76.8	83	73.8	76.4	75.9	83.3	91.5
2,000	71.6	69.8	76.5	66.7	69.8	68.7	74.4	77.2
5,000	61.2	59.1	67.1	56.1	60.2	57.8	62.1	66.3
10,000	52.1	49.6	59.1	47.1	52.1	48	51.8	56.9

Table 13. Percentage of Population Likely to be Highly Annoyed by Particular Levels of Aircraft Noise

Maximum Level, dBA	Percentage Highly Annoyed
70	5
75	13
80	20

Maximum Level, dBA	Percentage Highly Annoyed
85	28
90	35

With the AASF moving to its new location, some residents in the Hawkeegan Park neighborhood closest to the AASF may hear a slight increase in rotary-wing aircraft noise. The Preferred Action Alternative would bring the AASF closer to this neighborhood. The land between the new AASF and the Hawkeegan Park neighborhood is relatively flat and open as part of the CCA runway extends between the AASF and this neighborhood. The nearest residence, however, is more than 1,000 feet from the new AASF site.

The KYARNG realizes that the potential exists for people to hear individual rotary-wing aircraft overflights. Overflights have generated annoyance and/or noise complaints from residents in the past. To minimize overflight noise complaints, the KYARNG would continue to take all reasonable measures to reduce potential noise annoyance by adhering to flight routes that avoid noise sensitive areas under its "Fly Neighborly" program (see **Section 4.4.1**).

In addition, rotary-wing aircraft would not to be flown below 500 feet above ground level (AGL) other than in those instances authorized in NGR-95-1: Aviation Flight Regulations. Normal cruising altitude is at or above 1,500 feet AGL except during take offs and landings; when weather and cloud clearance requirements must be met; and during in-flight emergencies. Helicopter operations are conducted from 0600 to 1130 unless specifically approved by the AASF Commander. KYARNG would investigate and respond to any noise complaints. The KYARNG would strive to keep noise impacts to the minimal possible while continuing its mission of training soldiers.

5.3.2 Effects of the No Action Alternative

Under the No Action Alternative, no short-term noise impacts from AASF construction activities would occur. Similar short-term construction noise would occur if the KYARNG needed to construct facilities for the staff and maintenance operations who would have occupied the existing AASF. Noise levels generated by the AASF operations would continue to be compatible with noise-sensitive land uses (e.g., residential use). Long-term noise reduction benefits to the Juniper Hills, River Bend, Parkview Estates, and Coatesville neighborhoods from shifting the location of the AASF farther away would not occur.

5.4 Geology and Soils

5.4.1 Effects of the Preferred Action Alternative

The proposed site is located within an area containing a karst feature that has not shown significant changes in 20 years (**Figure 4**). Design and construction of new structures within the proposed AASF site would take into account karst topography in order to minimize impacts to groundwater resources and to the structure from subsidence. Potential impacts to groundwater from storm water runoff in karst terrain are discussed in **Section 5.5**.

No significant impacts to mineral resources are anticipated, as this alternative would not involve the commercial extraction of mineral resources, nor affect mineral resources considered important on a local, state, national, or global basis.

During construction, *minor direct short-term adverse soil erosion and sedimentation impacts* would be possible as the proposed building, taxiways, parking areas, entrance road, and other project components are constructed. Construction would remove vegetative cover,

disturb the soil surface, and compact the soil. The soil would then be susceptible to erosion by wind and surface runoff. Due to the topography, it is anticipated that areas of the project footprint will need to receive fill. Exposure of the soils during construction has the minor potential to result in increased sedimentation in off-site surface waters. No surface water features occur directly within the project footprint. A 75-foot buffer will be maintained during land disturbance activities to avoid impacts to the stream within the immediate vicinity of the proposed site (see **Figure 2**).

Minor direct long-term soil erosion impacts may occur as a result of increased impervious surfaces on-site (i.e., increased runoff or alteration in natural drainage patterns). Training activities associated with this alternative are not anticipated to impact soils on-site. Outdoor training would be negligible and would not include ground-disturbing activities. Vehicle traffic would remain within paved areas (e.g., roads and parking areas).

As part of the Preferred Action Alternative, the KYARNG would implement standard BMPs to minimize erosion impacts prior to initiation of, and during any onsite construction. Prior to any land disturbing activities, the architecture or engineering design consultant or the construction contractor would prepare a detailed, site-specific Erosion and Sedimentation (E&S) Control Plan to address all earth-disturbance aspects of the Proposed Action, including all project components. The E&S Control Plan would include BMPs, such as specific guidelines and engineering controls, to mitigate anticipated erosion and resultant sedimentation impacts from establishment and operation of the proposed facilities. These measures may involve using filter fences, sediment berms, interceptor ditches, and/or other sediment control structures; and seeding/revegetation of areas temporarily cleared of vegetation. Revegetation plans and requirements included in the E&S Control Plan shall, when possible, include planting during optimum seeding periods. Use of native grasses for revegetation of disturbed soils should be addressed in the E&S Control Plan and should occur where proven feasible, effective, and economical. No plant materials should be used from species considered invasive, as defined by EO 13112 (Greening the Government Through Leadership in Environmental Management); regionally native plant species should be favored, as required by EO 13148 (Invasive Species).

If BMPs would be utilized during site development and operation, soil erosion and resulting sedimentation would be minimized to *less-than-significant levels*. Successful implementation of these measures would ensure that this alternative is in compliance with state and Federal water quality standards and minimizes both the short- and long-term potential for erosion and sedimentation.

The project area contains no prime farmland. There is no current agricultural use of the land at BNGC (nor any proposal for such activity), no adverse impacts to farm operations or agricultural activities are expected from implementing the Preferred Action Alternative. The site was previously part of a golf course.

The KYARNG has consulted with the NRCS to take into account whether the Preferred Action Alternative would affect local efforts to preserve farmland (see **Appendix B**). The KYARNG and the local NRCS office (Area 2 Frankfort office) have worked together to conduct a land evaluation site assessment using the U.S. Department of Agriculture (USDA) Farmland Conservation Impact Rating Form. The form consists of two parts: the NRCS provided the score concerning the relative value for agricultural production of the farmland to be converted by the project compared to other farmland in the county; and the KYARNG developed site assessment scores based on the site, the surrounding area, and state or local programs for farmland protection (7 CFR 658) (see **Appendix B**). The site assessment scores are not high enough to require consideration of FPPA farmland protection requirements.

The KYARNG would obtain all required permits before any proposed construction activities commence and would adhere to permit conditions during all on-site construction activities.

5.4.2 Effects of the No Action Alternative

Implementation of the No Action Alternative would result in *no impacts* to topography, geology, and soils, as no construction would occur.

5.5 Water Resources

5.5.1 Effects of the Preferred Action Alternative

Implementation of this alternative would not result in significant impacts to surface or groundwater resources, provided BMPs are implemented during construction to control erosion and sedimentation as well as post-construction storm water BMPs to minimize the potential for water resources impacts.

As part of the Proposed Action, BMPs as discussed in **Section 5.4.1** would be implemented to minimize direct impacts of soil erosion and sedimentation, and to avoid impacts to water resources. The KYARNG, as part of these BMPs, also would install oil/water separators as needed to prevent release of wash chemicals and oil into the environment. This would reduce potential impacts associated with runoff of wash water to *less than significant* levels.

Because the proposed construction is underlain by karst terrain, which is inherently sensitive to potential pollution from surface activities, appropriate measures will be taken to protect groundwater resources. Karst terrain provides only limited filtering opportunities to minimize contamination entering groundwater. Sinkholes would be avoided where it is practicable to do so and stabilized or capped where necessary. KYARNG will work with the architecture and engineering design consultants to follow appropriate sinkhole capping procedures and materials.

Appropriate storm water BMPs will be implemented during construction and post-construction. According to the KDOW Groundwater Branch, if groundwater protection measures are taken, any impacts to groundwater are likely to be minimal and transient (KDOW, 2007). In addition, the KYARNG maintains a GPP for BNGC to reduce the potential for groundwater pollution as a result of on-site activities. The GPP will be modified, as necessary, to include the construction and operation of the new AASF.

Long-term beneficial impacts to water resources through improved control of storm water are anticipated as a result of this alternative. Activities currently conducted at the existing AASF would be shifted to the new AASF. Currently, runoff at the existing AASF from aircraft parking pads is not managed in storm water basins prior to entering receiving waterways. In addition, the existing AASF lacks a storm water drainage system for the current apron and aircraft parking pads, which does not allow for the containment of potential spills. A primary sinkhole at the BNGC is located just east of the existing AASF parking and driveway area. This sinkhole accommodates a large portion of the storm water runoff from BNGC and has been monitored for years. This alternative would eliminate the above mentioned inadequacies as well as move AASF activities away from the large sinkhole on the eastern portion of the BNGC.

This alternative would require a Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Storm Water Discharge Associated with Construction Activities from the KDOW. A specific Storm Water Pollution Prevention Plan (SWPPP) would be developed for the AASF construction activities. The plan would include all phases of construction and identify location and sizing of sediment and erosion controls. The plan must be maintained

on site during construction. Periodic visual inspections by the KYARNG would also be required to verify that the E&S Control Plan is being followed and is working. Successful implementation of BMPs would ensure that the Preferred Action Alternative is in compliance with State and Federal standards and limit both the short- and long-term potential for water resource impacts, including erosion and sedimentation.

No floodplain areas, streams, lakes, wetlands or other type of water bodies are located directly within the project area (**Figure 2**). A 75-foot buffer would be maintained during land disturbance activities to avoid impacts to the stream within the immediate vicinity of the Proposed Action area (see **Figure 2**). If site plans change during the engineering design phase and the project site is extended northward to include the nearby stream, potential impacts would be re-assessed by the KYARNG. If this stream could not be avoided, the KYARNG would obtain a Clean Water Act (CWA) Section 404 permit from the USACE and a CWA Section 401 Water Quality Certification (WQC) from KDOW prior to conducting activities within this stream. Compensatory mitigation would be required for all impacts greater than 0.1 acre or 300 linear feet of stream.

The KYARNG would obtain all required permits before any proposed construction activities commence and would adhere to permit conditions.

5.5.2 Effects of the No Action Alternative

The No Action Alternative reflects the status quo that involves the continued use of the existing AASF in the eastern portion of BNGC. Therefore, under the No Action Alternative, there is a potential for *adverse short-term or long-term impacts* to surface water and groundwater resources as result of the continued use of the old, inadequate storm water management system. Runoff from aircraft parking pads is not managed in storm water basins prior to entering receiving waterways. With no internal drainage of apron and aircraft parking pads, containment of potential spills would remain a potential problem. In addition, activities would continue near the main sinkhole at the BNGC. No impacts to water resources would occur as a result of the No Action Alternative within the Preferred Action Alternative area.

5.6 Biological Resources

5.6.1 Effects of the Preferred Action Alternative

The Preferred Action Alternative would have *minor*, *adverse short- and long-term* effects on biological resources as a result of the permanent loss of vegetation communities to impervious surfaces. Based on the current site layout (see **Appendix A** and **Figure 5**), it is estimated that up to 30 acres of maintained grassland would be impacted during construction and operation.

Wildlife in the project areas would sustain *minor*, adverse short-term impacts. During construction activities, wildlife would be expected to vacate the project area; less mobile species (i.e., small mammals, reptiles, amphibians) could potentially suffer loss of life during initial construction activities.

The total amount of habitat lost due to the new AASF would be up to 30 acres of maintained grasslands or eight percent of BNGC. It would be located directly north of the CAA runway. Wildlife in the project area are not anticipated to sustain *significant long-term* impacts. It is anticipated that most wildlife species would likely return as the majority of the western portion of BNGC would continue to contain undeveloped land.

No impacts are anticipated to state or federally listed threatened or endangered species as the project area is comprised of maintained grassland previously used as a golf course, and located adjacent to an active airport runway. The USFWS determined that the project area "is not likely to provide suitable habitat for threatened and/or endangered species known to occur in Franklin County, KY" (see **Appendix B**). A Kentucky State Nature Preserves Commission biological inventory did not identify any state-listed threatened or endangered species found in Franklin County as occurring on BNGC. The proposed AASF site does not provide suitable habitat for the state-listed species found in Franklin County. If any federal or state listed threatened or endangered species is identified on the proposed AASF site, consultation with the USFWS and/or KDFWR would be initiated.

5.6.2 Effects of the No Action Alternative

Under the No Action Alternative, there is a potential for *indirect, short-term* or *long-term* impacts to biological resources as a result of surface water or groundwater pollution. As discussed in **Section 5.5.2**, storm water management at the existing AASF is old and inadequate, and has the potential to impact water resources. No impacts to biological resources would occur as a result of the No Action Alternative within the Preferred Action Alternative area.

5.7 Cultural Resources

5.7.1 Effects of the Preferred Action Alternative

As confirmed by the SHPO, *no impacts* to historic structures, archaeological resources or tribal resources are anticipated as a result of the Preferred Action Alternative (see **Appendix B**). The proposed AASF site is part of a former golf course and the ground was

previously disturbed. The SHPO reviewed maps and information from the 1988 USACE archaeological reconnaissance of BNGC. The USACE identified that the area was subjected to extensive landscaping due to recontouring efforts for the construction for the construction of the clubhouse and the creation of various mounds, sand traps, and water features. The SHPO concluded that the former clubhouse, constructed in 1964, is not eligible for listing on the National Register of Historic Places (NRHP). The SHPO determined that the

Preferred Action Alternative would have no affect on any historic or archaeological resources.



Photograph C: Building 210: Former Clubhouse

During Native American consultation, only the United Keetoowah Band of Cherokee Indians of Oklahoma responded. The United Keetoowah Band had no objection to the proposed project. This Tribe requested that if human remains or artifacts are inadvertently discovered, construction cease and the United Keetoowah Band be contacted (see **Appendix B**). The KYARNG prepared a memorandum for record of Native American Consultation efforts during the NEPA process and included this memorandum in **Appendix B**.

In case of inadvertent discovery of cultural items or tribal resources, the KYARNG will follow SOP 4 and 6 of the ICRMP, which establish procedures to be followed in case of inadvertent discovery of cultural items and new construction on DMA property, respectively.

5.7.2 Effects of the No Action Alternative

Under the No Action Alternative, no *short-term or long-term impacts* to cultural resources or tribal resources would occur.

5.8 Socioeconomics

5.8.1 Effects of the Preferred Action Alternative

Minor, short-term beneficial socioeconomic impacts associated with construction activities are anticipated for local employment and personal income under the Preferred Action Alternative. Construction of the proposed AASF would potentially provide additional temporary construction jobs in the private sector, thus providing short-term socioeconomic benefit to the area. However, due to the intermittent and finite nature of these construction projects, no long-term impacts to the civilian construction labor force are anticipated. Minor, long-term beneficial impacts to the local economy are anticipated from operation of the facility because the Preferred Action Alternative would over time increase the number of full-time employees by up to 20 with an increased payroll of an estimated \$1.5 million.

No significant adverse impacts to public health and safety or children are anticipated to result from construction of the new AASF. The KYARNG has established strict procedures which limit access to potentially hazardous areas to avoid a public health or safety threat. No explosives or large quantities of hazardous materials would be kept on-site. Children are not regularly present within the BNGC property. The entire BNGC site is currently fenced with personnel and vehicular access restricted to a single, manned entrance gate on Minuteman Parkway off US 127 (see **Figure 2**). Children who live in nearby residential neighborhoods, visit the Salato Wildlife Center, attend the Westridge Elementary School or nearby churches have a risk to be exposed to helicopter air emissions and/or noise but the risks are not anticipated to be significant.

No adverse impacts to recreational use of the KDFWR Salato Wildlife Center are anticipated from the relocation of the AASF; no significant changes in current flight patterns are proposed. Current flight patterns turn northward prior to reaching eastern boundary of the Salato Wildlife Center . While there may be a slight increase in flights towards the Salato Wildlife Center, it is anticipated to not have a significant adverse impact.

With its location near the center of the state, aviation operations from BNGC can reach the majority of the state with one hour flight time and the entire state with two hours flight time. The slight relocation of the AASF would have no effect on current emergency or disaster response times.

Construction areas would be secured to prevent unauthorized access. The KYARNG would work with the contractor to limit construction dust and noise as practicable.

No significant additional load is expected to be placed on the fire or police departments or medical facilities as the result of implementing the Preferred Action Alternative. Use of other public or community services by the proposed AASF is not expected. As such, the Preferred Action Alternative is expected to have no impact on local public services.

5.8.2 Effects of the No Action Alternative

Implementation of the No Action Alternative would result in no construction and therefore no *short-term benefits* to local employment or the economy.

5.9 Environmental Justice

5.9.1 Effects of the Preferred Action Alternative

The City of Frankfort has a significantly higher percentage of minorities when compared with Franklin County and the Commonwealth of Kentucky. The percentage of residents at or below the poverty level is greater in the City of Frankfort in comparison to Franklin County, but slightly lower than the Commonwealth. Median household incomes follow the same trend. Even though minority populations and poverty rates are higher than county levels, no adverse impacts to disadvantaged segments of the population are anticipated under the Preferred Action Alternative. The project would occur completely within the confines of the BNGC property.

Implementation of the Preferred Action Alternative likely would use regional construction businesses for the construction of proposed buildings. Hiring regional business that may utilize minority and low-income employees would provide jobs for such people within the region. This would constitute a *minor*, *short-term positive impact* to minority and low-income populations. However, the extent of this benefit would be dependent upon the degree to which minority or low-income persons are employed in these activities.

5.9.2 Effects of the No Action Alternative

Implementation of the No Action Alternative would result in no construction. The *indirect, short-term beneficial* environmental justice impacts identified in **Section 5.9.1** would not be realized.

5.10 Infrastructure

5.10.1 Effects of the Preferred Action Alternative

Construction of the proposed AASF would result in an increase in the consumption of utilities, including electricity, potable water, and sanitary sewer discharges. The western portion of the BNGC is mostly undeveloped and, as such, most utilities serving the area are not presently sufficient to support the new facility; utility connections would be required. However, all major utility services are available immediately next to or in close proximity to the site. There is currently electricity, telecommunications, a sewer line, and a small water line that serve Building 210. Building 210 is being removed as part of a separate demolition project. Environmental impacts from Building 210's demolition would be assessed in a record of environmental consideration.

The proposed AASF would not be anticipated to require extraordinary utility needs beyond those of a light industrial/commercial operation at the site. The new facility would be designed to meet Leadership in Energy and Environmental Design (LEED) silver rating standards. The highest operating costs over the life of buildings and facilities results from energy demand management. Energy efficiency, water conservation, and sustainable design are therefore the basis for Executive Order 13123 – Greening the Government Through Efficient Energy Management. The U.S. Green Building Council Leadership in Energy and Environmental Design – New Construction (LEED – NC) rating tool provides a metric for measuring sustainable design. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. Criteria in each of these areas are evaluated to score a proposed project and a project would be scored and given a rating.

No significant *long-term impacts* associated with increased utility use are anticipated. The KYARNG would obtain all required permits before any proposed utility line expansion

commences and would adhere to permit conditions. The overhead line would need to be relocated to avoid negative impacts to construction activities and helicopter operations. Relocating the overhead line would be considered a *minor short-term impact*. Tying into or extending existing utility infrastructure would be considered a minor short-term impact particularly if waterbodies needed to be crossed.

Beneficial impacts would result from AASF construction because the size and age of the existing AASF severely limits the future flexibility and readiness potential of the KYARNG aviation components. Modernized facilities are a critical factor in providing quality aviation support to Kentucky. The proposed AASF is deemed necessary by the KYARNG to improve the State's readiness posture. Construction of the new AASF would eliminate the deficiencies associated with the existing AASF, which include insufficient hanger space, vehicle parking, administrative offices, "hot refueling" capabilities, wash rack size, areas for automated data processing equipment, support activity space, flight surgeon administrative and examination area, break/assembly area, physical fitness area, water supply for new fire protection services, internal drainage system for runoff and spill containment.

The Real Property Master Plan for BNGC has proposed reusing the existing AASF for the Combined Support Maintenance Shop (CSMS) (R&K Engineering, 2006). These facilities would require modification to handle the CSMS operations, but most of the AASF would be reused. The large paved helicopter parking ramp behind the AASF would be used for open storage and vehicle/equipment parking. The taxiway to CCA would be retained and incorporated into a revised road network for BNGC. It would provide easy access for associated heavy truck traffic off Minuteman Parkway.

Short-term adverse traffic impacts from the Preferred Action Alternative would be related to construction activities. Construction traffic would not be routed through residential neighborhoods. Additional traffic on US 127 and US 60 would be expected, consisting of trucks, workers' personal vehicles, and construction equipment. Debris and soil may deposit on roadways from construction vehicles, resulting in a potential safety hazard as well as annoyance to area residents. No traffic detours or road closings are planned. Access would be maintained during construction. However, construction traffic could disrupt local traffic, especially during morning and evening peak periods. This is expected to be a minor, short-term adverse impact and is not considered significant. No long-term adverse impacts are anticipated along public roadways as a result of the construction and operation of the proposed AASF because there would be a gradual increase of up to 20 new full-time employees.

Construction and operation of the new AASF would not change the composition of rotaryand fixed-wing aircraft, or the amount or type of annual military aircraft operations.

5.10.2 Effects of the No Action Alternative

Under the No Action Alternative, the KYARNG would continue to incur increased operation and maintenance costs due to lightning strikes on aircraft parked outside as well as damage caused by wildlife. The *beneficial impacts* to the KYARNG and the overall military community identified in **Section 5.10.1** would not be recognized.

5.11 Hazardous and Toxic Materials

5.11.1 Effects of the Preferred Action Alternative

The proposed AASF would have at least some potential for adverse effects due to the increased presence and use of Hazardous and Toxic Materials and Wastes (HTMW) at a different location within the BNGC. The proposed project could potentially have impacts on

the existing environment due to the increase in construction vehicle traffic, which effectively raises the likelihood for release of vehicle operating fluids (e.g., oil, diesel, gasoline, antifreeze, etc.) and maintenance materials. As such, a *minor*, *short-term adverse* impact is anticipated.

In general, the potential *short-term effects* from HTMW would be due to construction vehicle activity and general construction activities. These facilities would have potential contamination sources for such products as diesel fuel, gasoline, oil, antifreeze, lubricants, and lead, among others. Even without major release events, multiple minor releases could have potential effects to the environment at the site. Releases could potentially lead to soil, surface water, and/or ground water contamination, and thus require some form of remediation if they occur.

No long-term adverse impacts would be anticipated from the Preferred Action Alternative. The KYARNG would comply with Federal, State, and local requirements, as well as Army BMPs for handling and storing small quantities of materials such as paint, oil, antifreeze, lubricants, and detergents. An oil-water separator, properly permitted, would be used to prevent materials from entering storm drains. The existing AASF is classified as a conditionally exempt small quantity generator because it produces less than 100 kilograms of hazardous waste per month and the new AASF would have the same classification. Following Federal, State, and local HTMW requirements, as well as Army BMPs, has increased importance for activities occurring adjacent to or over karst terrain to minimize the potential for groundwater contamination. The KYARNG's Hazardous Material and Waste Management Plan prescribes responsibilities, policies, and procedures for storing and managing hazardous materials and wastes (KYARNG, 2008). The plan contains spill response and reporting procedures to protect human health and the environment.

Building 210, former golf course clubhouse, is being removed as part of a separate demolition project. Environmental impacts from Building 210's demolition would be assessed in a record of environmental consideration. No long-term adverse impacts from the removal of Building 210 are anticipated.

Beneficial impacts would result from the construction of a new AASF because the existing AASF lacks a storm water drainage system for the current apron and aircraft parking pads, which does not allow for the containment of potential spills.

5.11.2 Effects of the No Action Alternative

No impacts to HTMW would occur as a result of the No Action Alternative within the Proposed Action area.

5.12 Cumulative Effects

This section addresses the cumulative effects of the Preferred Action Alternative and other past, current, and proposed future activities within the vicinity of the BNGC. Cumulative effects are defined by the CEQ in 40 CFR Part 1508.7 as:

"Impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions."

CEQ regulations also state that the addressed cumulative impacts should not only include (or be limited to) those from actual proposals, but must also contain impacts from contemplated or reasonably foreseeable actions.

5.12.1 Preferred Action Alternative

NEPA requires the analysis of cumulative environmental effects of a Proposed Action, or set of actions, on resources that may often be manifested only at the cumulative level, such as traffic congestion, air quality, noise, biological resources, cultural resources, socioeconomic conditions, utility system capacities, and others.

In order to fully capture the cumulative effects associated with the Proposed Action, 2 the "checklist" analysis methodology set forth in *Considering Cumulative Effects under the NEPA* (CEQ 1997) was used. This qualitative cumulative impacts analysis is based on the potential effects of the Preferred Action Alternative when added to similar impacts from other projects at BNGC and in the region. The region of influence considered for the cumulative impacts analysis is Franklin County and the City of Frankfort in particular.

The City of Frankfort Planning Department and the Franklin County Department of Planning provided information on current and future residential and commercial developments in the City and County. In the City of Frankfort, commercial development is occurring on US 127 and residential development is occurring on the north and east side of BNGC. In Franklin County, a small commercial development (i.e., a bank) and several small residential developments on US 60 are in progress or anticipated within the next few years.

The KYARNG Real Property Development Plan for BNGC identified both short- and long-term projects (R&K Engineers, 2006). Within the eastern core area of BNGC, additional space is available for new buildings or expansion of existing ones. Several good large construction sites in the western portion of the installation, which is currently under developed are available. The far southwestern portion of the center also has some potential for small scale development.

<u>Potential Acquisition of CH-47 Chinook Helicopters</u> - Currently, the KYARNG is authorized to operate 13 UH-60 Blackhawks and 6 OH-58 Kiowas at BNGC. Major General (MG) Donald C. Storm, formerly The Adjutant General (TAG) of Kentucky, had requested from the NGB that six CH-47 Chinooks be stationed at the BNGC. To date, no Chinooks have been authorized or funded for the KYARNG.



Photograph D: CH-47 Chinook

The KYARNG has requested the CH-47 Chinooks to enable the KYARNG to develop and maintain proficiency in use of the same modern helicopter systems used by the Army's Active Component (see **Appendix C**). The CH-47 Chinooks would ensure the ability of the KYARNG to integrate seamlessly with the Active Component upon mobilization in the event of war or national emergency. If the KYARNG is authorized to acquire CH-47 Chinooks, a separate NEPA analysis would be undertaken to evaluate environmental impacts.

The CH-47 Chinook is a twin-engine, tandem rotor helicopter. Its primary mission is to transport cargo, troops, and weapons on the battlefield. It also performs rescue, medical evacuation (air ambulance), aircraft recovery, firefighting, and special operations missions. The CH-47 Chinook can accommodate a variety of internal and external payloads including vehicles, artillery pieces, 33 to 44 troops, or 24 litters plus two medical attendants (NGB and USACE Mobile District, 2003).

If KYARNG acquired six CH-47 Chinooks, USACHPPM estimated that under ideal training conditions, the additional CH-47 Chinooks would add 12 operations per day to the AASF (USACHPPM, 2007). It is uncommon, however, that each aircraft would fly daily.

Even if six CH-47 Chinooks are acquired, USACHPPM concluded that the number of annual helicopter operations would remain too low to generate average noise level exposures or noise contours (USACHPPM, 2007). According to Federal Land Use guidelines, noise levels generated by rotary-wing aircraft operations would continue to be compatible with nearby sensitive land uses (e.g., residences, churches, and schools).

A Chinook is approximately six decibels louder than a UH-60 Blackhawk and eight decibels louder than an OH-58 Kiowa at a distance of 500 feet. Individual CH-47 Chinook operations may be more audible to neighbors in the vicinity of the helicopter flight corridors. The Chinook would be quieter than some of the aircraft using the CCA (e.g., Lear25 and Lear35 during takeoffs at a distance of 500 feet) (USACHPPM, 2007). The addition of up to six CH-47 Chinook helicopters to the aircraft stationed at the BNGC would slightly modify the noise environment surrounding the existing AASF.



Photograph E: CH-47 Chinook Helicopters At this time, it is not clear whether the total number of helicopters at the AASF would increase, remain the same, or decrease due to replacement or retirement of UH-60 Blackhawks or OH-58 Kiowas currently stationed at BNGC and these potential changes would affect the noise environment of the AASF. Adequate space would exist in the hangars if the Chinooks are approved. It should also be noted that this space is appropriate for the proposed AASF even if the Chinooks are not approved.

<u>Land Use</u> - The Preferred Action Alternative would not contribute significantly to cumulative land use change in the Frankfort and Franklin County area. Overall, population growth is low in Franklin County and the new AASF would not have any cumulative impacts on development. The new AASF would generate up to 20 new jobs but this job growth would not substantially encourage new development by increasing demand for housing or services. Approximately 9.5 acres of prime farmland would be converted due to the construction of the new AASF and this would continue the trend in Franklin County of the conversion of prime farmland to other uses (e.g., residential or commercial development). As with the prime farmland on BNGC, much of the prime farmland being converted is not being used to grow crops or pasture livestock.

<u>Air Quality</u> – The project would not contribute to a significant cumulative decrease in regional air quality.

<u>Noise</u> – The Preferred Action Alternative would not contribute to a cumulative increase in noise levels. Eight civilian helicopters operate out of CCA and it is not anticipated that the number or use of civilian helicopters out of CCA would increase. If KYARNG is authorized to receive six CH-47 Chinook helicopters, a minor, long-term adverse impact to the noise environment could occur.

<u>Geology and Soils</u> – No cumulative impact is anticipated. Adherence to permit conditions and implementation of BMPs for soil erosion and sedimentation would protect regional soil resources.

<u>Water Resources</u> – No cumulative impact is anticipated. Adherence to permit conditions and implementation of BMPs for soil erosion and sedimentation would protect regional water resources.

<u>Biological Resources</u> – A minor, negative, cumulative impact would result from the permanent loss of vegetation communities to impervious surfaces from development throughout Franklin County. No long-term adverse, cumulative impact to wildlife is anticipated. No cumulative impacts are anticipated to state or federally listed threatened or endangered species as the project area does not provide suitable habitat for threatened and/or endangered species known to occur in Franklin County.

<u>Cultural Resources</u> – No cultural resources at BNGC would be affected by the Preferred Action Alternative. No cumulative impacts to known historic or archaeological sites or cemeteries in the area are expected to occur.

<u>Socioeconomic</u> – Cumulative net positive impacts to the local socioeconomic environment would be realized through the long-term viability of BNGC and the AASF. The new AASF alone would be unlikely to foster more than minimal additional development

<u>Environmental Justice</u> – No cumulative disproportionate or adverse impacts to minority or low-income populations are anticipated. There is a potential for minor, positive cumulative benefits to minority or disadvantaged businesses due to set asides and preferences for these types of businesses on federal and state-funded projects.

<u>Infrastructure</u> – The Preferred Action Alternative would have a minor, cumulative effect on traffic in the area due to slight increase in staff at the new AASF in combination with residential and commercial growth near BNGC and along US 127 and US 60.

<u>Hazardous and Toxic Materials and Wastes</u> – No cumulative impacts are anticipated for HTMW.

5.12.2 No-Action Alternative

Implementation of the No-Action Alternative would continue to limit the KYARNG's ability to train and ensure attainment and maintenance of a full readiness posture and to meet aviation mission training objectives. Under the No-Action Alternative, no cumulative impacts would occur, as no new actions would be undertaken at BNGC.

6.0 COMPARISON OF ALTERNATIVES AND CONCLUSIONS

This EA has evaluated the potential environmental, cultural, and socioeconomic impacts from the proposed construction and use of a new AASF as detailed in **Section 2.0** (Preferred Action Alternative), as well as of implementation of the No Action Alternative.

6.1 Comparison of the Environmental Consequences of the Alternatives

The Preferred Action Alternative would fulfill the purpose and need for the Proposed Action, allowing the KYARNG to accomplish its assigned military missions while minimizing potential impacts to the local and regional natural, cultural, and socioeconomic environment. In addition, BMPs, regulatory requirements, and effect reduction measures identified throughout **Section 5.0**, would be utilized to further reduce the potential for adverse effects to area resources.

Impacts associated with Preferred Action Alternative would include:

Short-term Beneficial Impacts

- Socioeconomic Environment
- Environmental Justice

Long-term Beneficial Impacts

- Noise
- Water Quality
- Socioeconomic Environment
- Infrastructure
- HTMW

Short-term Less than Significant Impacts to:

- Air Quality
- Noise
- Soils
- Water Quality
- Biological Resources
- Traffic and Transportation
- HTMW

Long-term Less than Significant Impacts to:

- Land Use
- Air Quality
- Soils
- Biological Resources
- Environmental Justice
- Infrastructure
- HTMW

The Preferred Action Alternative would not have any impacts on cultural resources.

The No Action Alternative was not found to satisfy the purpose and need for the project. This alternative would not enable the KYARNG to provide quality aviation support to Kentucky and meet the State's readiness posture. Use of the existing AASF severely limits the future flexibility and readiness potential of the KYARNG aviation components. The existing AASF would continue to lack sufficient hanger space for the currently assigned rotary-wing and fixed-wing aircraft and support maintenance personnel. The lack of "hot refueling capability would continue to limit the KYARNG's ability to quickly refuel helicopters to meet mission requirements. The current water supply to the existing AASF does not have the pressure, flow or volume to accommodate the demand from required new fire protection systems. The current AASF does not provide adequate space for administrative offices, areas for automated data processing equipment, flight surgeon administrative and examination area, break area, a physical fitness area, or a locker room. The facility does not have adequate parking for both military and privately owned vehicles. The existing wash rack is too small to adequately service UH-60 aircraft. Implementation of the No Action Alternative would continue existing practices and environmental impacts would not change.

6.2 Conclusions

This EA has been prepared to evaluate the potential effects on the natural and human environment from the proposal of the KYARNG to construct a new AASF on BNGC. The EA has examined the Preferred Action Alternative and a No Action Alternative. The No Action Alternative is prescribed by CEQ regulations to serve as the baseline against which the Preferred Action Alternative is analyzed. The EA has considered potential effects on a wide range of environmental resources and conditions, including land use, air quality, noise, water resources, geology and soils, biological resources, cultural resources, hazardous materials and hazardous wastes, and socioeconomics (including environmental justice and protection of children).

The evaluation performed within this EA concludes that there would be *no significant* adverse impact, either individually or cumulatively, to the local environment or quality of life as a result of the implementation of the Preferred Action Alternative. This EA's analysis determines, therefore, that an EIS is unnecessary for implementation of the Preferred Action Alternative, and that a FNSI is appropriate. Positive impacts to onsite land use, water resources within the eastern portion of the BNGC, noise, the local socioeconomic environment, and onsite infrastructure would be anticipated. This EA recommends implementation of the Preferred Action Alternative.

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32 CFR 651	Title 32National Defense, Chapter V-Department of the Army. Part 651-Environmental Analysis of Army Actions
40 CFR 1500	1500-President's Council on Environmental Quality, Regulations Implementing the 1508 Procedural Provisions of NEPA. 40 Code of Federal Regulations (CFR) Part 1500 - 1508.
42 USC 4321	National Environmental Policy Act of 1969. 42 United States Code (USC) 4321
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8.0 GLOSSARY

100-year Flood Zone/ - A flood event of such magnitude that it occurs, on average, every 100 years; this equates to a one percent chance of its occurring in a given year.

500 year Flood Zone - A flood event of such magnitude that it occurs, on average, every 500 years; this equates to a 0.2 percent chance of its occurring in a given year.

Aesthetics - Pertaining to the quality of human perception of natural beauty.

Ambient - The environment as it exists around people, plants, and structures.

Ambient Air Quality Standards - Those standards established according to the CAA to protect health and welfare (AR 200-1).

Aquifer - An underground geological formation containing usable amounts of ground water which can supply wells and springs.

Attainment Area - Region that meets the National Ambient Air Quality Standard (NAAQS) for a criteria pollutant under the CAA.

Battalion - A military unit consisting of a headquarters company and three to five functional (combat arms, combat support, or combat service support) companies consisting of approximately 250 to 1,000 persons, depending on the type of unit.

Bedrock - the solid rock that underlies all soil, sand, clay, gravel and loose material on the earth's surface.

Best Management Practices (BMPs) - Methods, measures, or practices to prevent or reduce the contributions of pollutants to U.S. waters. Best management practices may be imposed in addition to, or in the absence of, effluent limitations, standards, or prohibitions (AR 200-1).

Brigade - A military unit composed of several battalions, augmented by specialized units (up to approximately 5,000 persons, depending on the type of unit).

Commercial land use - land use that includes private and public businesses (retail, wholesale, etc.), institutions (schools, churches, etc), health services (hospitals, clinics, etc.) and military buildings and installations.

Compact - The packing of soil together into a firmer, denser mass, generally caused by the pressure of great weight.

Company - A military unit that is the next smaller unit of a battalion; the most basic administrative and tactical unit (approximately 50 to 200 persons, depending on the type of unit).

Contaminants - Any physical, chemical, biological or radiological substances that have an adverse effect on air, water or soil.

Council on Environmental Quality (CEQ) - An Executive Office of the President composed of three members appointed by the President, subject to approval by the Senate. Each member shall be exceptionally qualified to analyze and interpret environmental trends; to appraise programs and activities of the Federal Government. Members are to be conscious of and responsive to the scientific, economic, social, aesthetic, and cultural needs of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment.

Criteria Pollutants - The CAA of 1970 required the USEPA to set air quality standards for common and widespread pollutants in order to protect human health and welfare. There are six "criteria pollutants": ozone (O_3) , carbon monoxide (CO), sulfur dioxide (SO_2) , lead (Pb), nitrogen dioxide (NO_2) , and particulate matter.

Cultural Resources - The physical evidence of our Nation's heritage. Included are: archaeological sites; historic buildings, structures, and districts; and localities with social significance to the human community.

Culvert - Drainage that crosses beneath a road.

Cumulative Impact - The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

dBA - "A-weighted" non-impulse noise measurement in decibels, weighted to match human hearing frequency response.

Decibel (dB) - A unit of measurement of sound pressure level.

Direct Impact - A direct impact is caused by a Proposed Action, and occurs at the same time and place.

Elevation - Raising a building and placing it on a higher foundation so the first or lowest floor is above flood levels.

Emission - A release of a pollutant.

Enclave - A territory or entity surrounded by another territory or entity.

Endangered Species - Any species which is in danger of extinction throughout all or a significant portion of its range.

Environmental Assessment (EA) - An EA is a publication that provides sufficient evidence and analysis to show whether a proposed system will adversely affect the environment or be environmentally controversial.

Environmental Impact Statement - A document prepared in conjunction with an EA, when the EA determines that a Proposed Action will adversely affect the environment or be controversial. The EIS discloses the impacts of the action.

Erosion - The wearing away of the land surface by detachment and movement of soil and rock fragments through the action of moving water and other geological agents.

Farmland - Cropland, pastures, meadows, and planted woodland.

Fauna - Animal life, especially the animal characteristics of a region, period, or special environment.

Flora - Vegetation; plant life characteristic of a region, period, or special environment.

Floodplain - The relatively flat area or lowlands adjoining a river, stream, ocean, lake, or other body of water that is susceptible to being inundated by floodwaters.

FNSI - Finding of No Significant Impact, a NEPA document.

Fugitive Dust - Particles light enough to be suspended in air which are not caught in a capture or filtering system. For this document, this refers to particles put in the air by moving

vehicles and air movement over disturbed soils at construction sites.

Geology - Science which deals with the physical history of the earth, the rocks of which it is composed, and physical changes in the earth.

Groundwater - Water found below the ground surface. Groundwater may be geologic in origin and as pristine as it was when it was entrapped by the surrounding rock or it may be subject to daily or seasonal effects depending on the local hydrologic cycle. Groundwater may be pumped from wells and used for drinking water, irrigation and other purposes. It is recharged by precipitation or irrigation water soaking into the ground. Thus, any contaminant in precipitation or irrigation water may be carried into groundwater.

Hazardous Substance - Hazardous materials are defined within several laws and regulations to have certain meanings. For this document, a hazardous material is any one of the following:

- Any substance designated pursuant to section 311 (b)(2) (A) of the Clean Water Act.
- Any element, compound, mixture, solution or substance designated pursuant to Section 102 of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- Any hazardous as defined under the Resource Conservation and Recovery Act (RCRA)
- 4) Any toxic pollutant listed under TSCA.
- 5) Any hazardous air pollutant listed under Section 112 of CAA.
- 6) Any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to Subsection 7 of TSCA.

The term does not include: 1) Petroleum, including crude oil or any thereof, which is not otherwise specifically listed or designated as a hazardous substance in a above. 2) Natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). c. A list of hazardous substances is found in 40 CFR 302.4.

Hazardous Waste - A solid waste, which when improperly treated, stored, transported

or disposed of poses a substantial hazard to human health or the environment. Hazardous wastes are identified in 40 CFR 261.3 or applicable foreign law, rule, or regulation (see also solid waste).

Heavy Expanded Mobility Tactical Truck - An 8-wheeled, diesel powered off-road capable truck capable of heavy transport for supply and re-supply of combat vehicles and weapons systems.

Hydric Soil - a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic (oxygen-lacking) conditions that favor the growth and regeneration of hydrophytic vegetation. A wetland indicator.

Inactive Duty Training - Authorized training performed by a member of a Reserve component not on active duty or active duty for training and consisting of regularly scheduled unit training assemblies, additional training assemblies, periods of appropriate duty or equivalent training, and any special additional duties authorized for Reserve component personnel by the Secretary concerned, and performed by them in connection with the prescribed activities of the organization in which they are assigned with or without pay. Does not include work or study associated with correspondence courses.

Indirect Impact - An indirect impact is caused by a Proposed Action, but occurs later in time or farther removed in distance, but is still reasonably foreseeable. Indirect impacts may include induced changes in the pattern of land use, population density or growth rate, and related effects on air, water, and other natural and social systems. For example, referring to the possible direct impacts described above, the clearing of trees for new development may have an indirect impact on area wildlife by decreasing available habitat.

Industrial Land Use - Land uses of a relatively higher intensity that are generally not compatible with residential development. Examples include light and heavy manufacturing, mining, and chemical refining.

Installation - A grouping of facilities, located in the same general vicinity, over which the installation commander has authority (AR 200-1).

Jurisdictional wetland - Areas that meet the wetland hydrology, vegetation, and hydric soil

characteristics, and have a direct connection to the Waters of the US. These wetlands are regulated by the USACE.

Karst - A distinctive topography in which the landscape is largely shaped by the dissolving action of water on carbonate bedrock (usually limestone, dolomite, or marble). This geological process, occurring over many thousands of years, results in unusual surface and subsurface features ranging from sinkholes, vertical shafts, disappearing streams, and springs, to complex underground drainage systems and caves.

Listed Species - Any plant or animal designated as a State or Federal threatened, endangered, special concern, or candidate species.

Long Term Impacts - Direct or indirect impacts resulting from an action in an extended term. In this context, long-term does not refer to any rigid time period and is determined on a case-by-case basis in terms of the environmental consequences of the Proposed Action.

Major Impact - An impact which would be particularly large in magnitude, considering both context and intensity.

Minor Impact - An impact which would be of a smaller scale or would be more readily mitigated than impacts categorized as major.

Mitigation - Measures taken to reduce adverse impacts on the environment.

Mobile Sources - Vehicles, aircraft, watercraft, construction equipment, and other equipment that use internal combustion engines for energy sources.

Monitoring - A process of inspecting and recording the progress of mitigation measures implemented.

National Ambient Air Quality Standards (NAAQS) - Nationwide standards set up by the USEPA for widespread air pollutants, as required by Section 109 of the Clean Air Act (CAA). Currently, six pollutants are regulated by primary and secondary NAAQS: carbon monoxide (CO), lead, (Pb), nitrogen dioxide (NO₂), ozone (O₃), particulate matter, and sulfur dioxide (SO₂).

National Environmental Policy Act (NEPA)

- U.S. statute that requires all Federal agencies to consider the potential effects of Proposed Actions on the human and natural environment.

Nonattainment Area - An area that has been designated by the EPA or the appropriate State air quality agency as exceeding one or more national or State ambient air quality standards.

Particulates or Particulate Matter - Fine liquid or solid particles such as dust, smoke, mist, fumes or smog found in air.

Physiographic Province - A portion of the Earth's surface with a basically common topography and common morphology.

Pollutant - A substance introduced into the environment that adversely affects the usefulness of a resource.

Potable Water - Water which is suitable for drinking.

Prime Farmland - A special category of highly productive cropland that is recognized and described by the US Department of Agriculture's Soil Conservation Service and receives special protection under the Surface Mining Law.

Real Property - A building, the land on which it sits, and any permanent improvements or fixtures made to the property (for example, addition of built-in bookshelves).

Readiness Centers - A military structure where arms and ammunition and other military equipment are stored and military training is given. Also known as an Armory.

Regiment - A military unit usually consisting of a number of battalions or squadrons.

Remediation - A long-term action that reduces or eliminates a threat to the environment.

Sedimentation - Deposition of eroded material in an alternate location by dispersing agents such as water or wind.

Sensitive Receptors - Include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement

homes, residences, schools, playgrounds, and childcare centers.

Short Term Impacts - Direct or indirect impacts resulting from an action in the near term. In this context, short-term does not refer to any rigid time period and is determined on a case-by-case basis in terms of the environmental consequences of the Proposed Action.

Significant Impact - According to 40 CFR 1508.27, "significance" as used in NEPA requires consideration of both context and intensity.

- a. Context. The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the Proposed Action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.
- Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action.

Soil - The mixture of altered mineral and organic material at the earth's surface that supports plant life.

Solid Waste - Any discarded material that is not excluded by section 261.4(a) or that is not excluded by variance granted under sections 260.30 and 260.3 1.

Surficial aquifer - Comprises all the rocks and sediments from land surface downward to the top of the intermediate confining unit containing usable amounts of ground water which can supply wells and springs.

Threatened species - Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Topography - The relief features or surface configuration of an area.

Toxic Material/Waste - A harmful substance which includes elements, compounds, mixtures, and materials of complex composition.

Waters of the United States include the following: (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide. (2) All interstate waters including interstate wetlands. (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.

Watershed - The region draining into a particular stream, river, or entire river system.

Wetlands - Areas that are regularly saturated by surface or ground water and, thus, are characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include swamps, bogs, fens, marshes and estuaries.

Wildlife Habitat - Set of living communities in which a wildlife population lives.

9.0 LIST OF PREPARERS

KYARNG Contributors

Faith Fiene, State Environmental Manager. Ms. Fiene is the KYARNG project manager and provided technical review of the EA.

Tom Fugate, NEPA/Cultural Resources. Mr. Fugate provided cultural resource and project data and acted in the role of quality assurance/quality control.

COL Ben Adams, Commander, AASF. COL Adams provided KYARNG aviation information related to the AASF.

COL Phil Miller, Public Affairs. COL Miller provided public meeting and noise information.

LTC Steve King, FMO. LTC Steve King, project manager for the AASF project, provided information on facility construction.

MAJ Brian Demers, FMO. MAJ Demers provided facility and planning information for the EA. CW3 Larry Goode, FMO. CW3 Goode provided facility and planning information for the EA.

AMEC Earth and Environmental Inc. Contributors

Marty Marchaterre, Senior Environmental Planner. Mr. Marchaterre's responsibilities included serving as the project manager, gathering data, coordinating staff, preparing and reviewing sections of the document as well as assuring overall project performance.

Brian Boose, Quality Assurance/Quality Control. Mr. Boose provided a technical review of the EA and was responsible for quality assurance/quality control.

Jennifer Pyzoha Warf, Environmental Planner. Ms. Warf's responsibilities for this EA included gathering data, preparing and reviewing sections of the document and developing GIS mapping.

Dean Barbo, Senior GIS Analyst. Mr. Barbo's responsibility on this EA was assisting in preparing and developing GIS mapping.

Todd Johanboeke, GIS Analyst. Mr. Johanboeke conducted research and prepared GIS mapping.

Lana Cary, Graphics Specialist. Ms. Cary prepared graphics for this EA.

Jason Steckel, Environmental Planner. Mr. Steckel's responsibility included gathering data and preparing and reviewing sections of the EA.

10.0 AGENCIES AND INDIVIDUALS CONSULTED

10.1 State and Federal Agencies

State and Federal resource agency consultation was initiated by the KYARNG on 4 June 2007. Copies of correspondence are included in **Appendix B**. Agencies consulted are listed below:

Federal Aviation Administration Memphis Airports District Office 2862 Business Park Drive, Bldg. G Memphis, TN 38118-1555 POC: Mr. Philip Braden, Manager

Federal Aviation Administration Southern Region Airports Division

ATTN: ASO-600 P.O. Box 20636 Atlanta, GA30320-0631

POC: Mr. Rusty Chapman, Division Manager

Kentucky Department for Environmental Protection

14 Reilly Road Frankfort, KY 40601 POC: Mr. Boyce Wells

(Acts as Clearinghouse for State Agencies including:

Division of Water

Division of Waste Management

Division of Air Quality Department of Forestry Nature Preserves Commission Kentucky Heritage Council Division of Conservation

Department of Natural Resources

Department of Fish and Wildlife Resources)

Kentucky Heritage Council 300 Washington Street Frankfort, KY 40601

POC: Ms. Donna Neary, Executive Director

U.S. Army Corps of Engineers Operations Division OP-FS 600 Dr. Martin Luther King Place Louisville, KY 40202

U.S. Fish and Wildlife Service 3761 Georgetown Road Frankfort, KY 40601 POC: Mr. Mike Armstrong

10.2 Native American Consultation

Consultation for the EA was initiated by the KYARNG in accordance with NEPA, NHPA, NAGPRA, and DoD American Indian and Alaskan Native Policy on 7 June 2007. A list of federally recognized tribes contacted is included below. Copies of correspondence are included in **Appendix B**.

Absentee-Shawnee Tribe of Indians of Oklahoma 2025 S. Gordon Cooper Dr. Shawnee, OK 74801 POC: Mr. Larry Nuckolls, Governor

The Chickasaw Nation P.O. Box 1548 Ada, OK 74821

POC: Mr. Bill Anoatubby, Governor

Cherokee Nation P.O. Box 948 Tahlequah, OK 74465

POC: Chad Smith, Principal Chief

Eastern Band of Cherokee Indians

P.O. Box *455*

Cherokee, NC 28719

POC: Michell Hicks, Principal Chief

Eastern Shawnee Tribe of Oklahoma

P.O. Box 350 Seneca, MO 64865 POC: Robin Dushane

Quapaw Tribal Business Committee

P.O. Box 765

Quapaw, OK 74363

POC: John Berrey, Chairman

Shawnee Tribe P.O. Box 189 Miami, OK 74355

POC: Mr. Ron Sparkman, Chairman

United Keetoowah Band of Cherokee Indians of Oklahoma

PO Box 746

Tahlequah, OK 74457

POC: Mr. George Wickliffe, Chief



Blizzard Freeze Protected Foam Solution

Chemguard Blizzard is a specially formulated, aqueous film forming foam solution. A vapor suppressing aqueous film is formed by the foam solution draining from the expanded foam blanket. **Do not proportion**. It is intended for use on Class B hydrocarbon type fuels such as gasoline, kerosene, diesel, etc. Chemguard Blizzard is not intended for use on fuels, which are polar solvent/water miscible such as alcohols, ketones, esters, etc.

FEATURES

- Excellent wetting characteristics when used in combating Class "A" fuel fires
- Suitable for use with both aspirating foam and standard water fog nozzles
- If inadvertently frozen, thawing will render product completely serviceable again
- Suitable for use with carbon steel, fiberglass, polyethylene or stainless steel. Chemguard Blizzard is not compatible with galvanized pipe or fittings in an undiluted form.
- Suitable for use with siliconized dry chemical extinguishing agents
- Recommended application rate on hydrocarbon type fuels is .10/gpm ft².

DISCHARGE DEVICES

- Foam Chambers
- Standard water fog nozzles for handlines and monitors
- Air-aspirating foam nozzles
- Foam makers for use with either Floating Roof storage tanks or Dike/Bund protection systems

APPLICATIONS

- Crash Fire Rescue
- Storage Tanks(non-polar solvent fuels only)

- Truck/Rail Loading or Unloading Facilities
- Processing/Storage Facilities
- Docks/Marine Tankers
- Flammable Liquid Containment Areas
- Mobile Equipment

FOAMING PROPERTIES

Aspirating type discharge devices typically generate expansion ratios between 6-10 to 1. Non-aspirating type devices will typically generate expansion ratios of between 2-4 to 1. Expansion ratios are dictated by the type of discharge devices, flow rate and discharge pressure.

TYPICAL PROPERTIES AT 77°F (25°C)

Appearance	Clear Slightly Yellow
Specific Gravity	1.153
pH	7.7

ENVIRONMENTAL IMPACT

Chemguard AFFF is biodegradable, low in toxicity and can be treated in sewage treatment plants. Please refer to Chemguard Technical Bulletin regarding foam products and the environment.

STORAGE

If kept in the original unopened and airtight Chemguard supplied container and stored within the temperature range of -40°F-120°F, a shelf life of between 20-25 years can be expected. When stored in other than the manufacturers supplied container, please check with Chemguard for storage guidelines.

ORDERING INFORMATION & WEIGHT

Part No:	Container	Weight
CBP	5-Gallon Pail /19 Liters	51 lbs.
CBD	55-Gallon Drum / 208 Liters	529 lbs.
CBBD	330-Gallon Tote / 1249 Liters	3350 lbs.

SAFETY DATA SHEET

1. IDENTIFICATION

Product Identifier:

HALOTRON® I

Synonyms:

HCFC Blend B, Halotron® I Pre-Sat Base

Product Code:

Reach Registration - N/A

SDS compliant with regulations: (EC) No 1907/2006 (REACH), (EC) No 1272/2008 (CLP)

Manufacturer/Supplier:

American Pacific, Halotron

Address:

10622 West 6400 North, Cedar City, UT 84721

Telephone:

+1 (435) 865-5000

Fax: +1 (435) 865-5005

Emergency Contact:

CHEMTREC

Customer Number: CCN721187 US Tel: 1 (800) 424-9300 Int'l Tel: +1 (703) 741-5970

Use of substance/preparation: Halotron® I is a clean fire-extinguishing agent for streaming and local applications. NFPA 2001, "Standard on Clean Agent Fire Extinguishing Systems" defines a "Clean Agent" to be "electrically non-conducting, volatile, or gaseous fire extinguishant that does not leave a residue upon evaporation." Halotron® I is a safe, effective, environmentally acceptable clean agent. It is discharged as a liquid, which rapidly evaporates (i.e. it is volatile). It is a proprietary three component chemical blend based on HCFC-123 that has been found acceptable by the U.S. EPA under its Significant New Alternatives Policy (SNAP) program (referred to as "HCFC Blend B") for all non-residential use (including commercial/industrial, military, and maritime use) in streaming applications as a substitute for halon 1211 (bromochlorodifluoromethane or "BCF").

2. HAZARDS IDENTIFICATION

Hazard Classification:

Specific target organ toxicity, single exposure - Category 3 Gases under pressure - Dissolved gas

Pictogram





Signal word:

Warning

Preparation classification:

Physical Hazard:

H280:

Contains gas under pressure; may explode if heated

Health Hazard:

H336:

May cause drowsiness and dizziness

Precautionary Statements:

P261:

Avoid breathing vapors/spray

P271:

Use only outdoors or in a well-ventilated area

P304+P340:

IF INHALED: Remove person to fresh air and keep comfortable for breathing

P 312 P403+P233: Call a POISON CENTER or doctor/physician if you feel unwell Store in a well-ventilated place. Keep container tightly closed.

P405:

Store locked up

P501:

Dispose of contents/container to an approved waste disposal plant

Information pertaining to particular dangers for man and environment: Inhalation of high concentrations of vapour may cause central nervous system effects such as dizziness, drowsiness, anesthesia, or unconsciousness. When used on a fire, hazardous decomposition products are formed, but typically are within safe emergency exposure limits. Misuse or intentional inhalation abuse may lead to death without warning.

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3. COMPOSITION/INFORMATION OR INGREDIENTS

Ingredient Na	ame Chemical Makeup	CAS#	EC#	%
HCFC-123	2, 2-Dichloro-1, 1, 1-trifluoroethane	306-83-2	206-190-3	Greater than 93%
Gas Mixture	Proprietary			Less than 7%

4. FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a physician

Routes of exposure	Signs and symptoms of exposure:	Emergency and first aid procedures:
Skin:	Evaporative cooling can result in chilling sensations or frostbite effects. Short exposures, such as when filling equipment or in other situations, should not have a lasting effect.	Wash exposed area with water. If irritation develops and persists, call a physician.
Inhalation:	Significant exposure may cause central nervous system effects such as dizziness, drowsiness, anesthesia, or unconsciousness. High concentrations of 20,000 ppm (v/v) or higher, may cause cardiac arrhythmia.	Remove to fresh air. Oxygen or artificial respiration if necessary Call a physician if breathing difficulties occur.
Ingestion:	Not likely to occur in industrial use. Highly volatile liquid.	Clean mouth with water and drink plenty of water. Do not induce vomiting. If vomiting occurs, lean person forward to reduce risk of aspiration. Call a physician.
Eyes:	Irritation and tearing may result. Mild to moderate reversible eye effects.	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.

Description of the most important symptoms or effects:

Halotron[®] I is a colorless volatile, pressurized liquid with a slight ether-like odor. As with any chemical, dose and exposure are critically important variables to understand any potential treatment. Short-term exposure to high concentrations may result in central nervous system and cardiac effects. Long-term exposure to concentrations above those time-weighted averages recommended herein may result in liver effects.

Note to Physician:

This material may make the heart more susceptible to arrhythmias. Catecholamines such as adrenaline, and other compounds having similar effects, should be reserved for emergencies and then used only with special caution.

5. FIRE FIGHTING MEASURES

Flammable properties:

Flash Point: not flammable.

Flash point method: not applicable.

Auto-ignition temperature: not determined.

Upper flammability limit (volume % in air): not applicable.

Lower flammability limit (volume % in air): not applicable.

Extinguishing media: The properties of this chemical make it an ideal extinguishing media itself.

Special firefighting precautions/instructions: Ensure that the area where the fire occurred is well ventilated before re-entering. Wear protective clothing. Use water spray or fog to cool storage containers to help prevent an uncontrolled pressure release. Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Unsuitable extinguishing media: None.

Unusual fire and explosion hazards: The concentrated agent when applied to fire can produce toxic by-products specifically hydrogen halides, which can cause damage. Avoid inhalation of these materials by evacuating and ventilating the area.

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6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Other Release: Prevent further leakage or spillage if safe to do so. Keep away from Incompatible products. In the event of a large spill, allow for adequate ventilation, and do not re-enter an area without a self-contained breathing apparatus (SCBA) until adequate ventilation is accomplished. For spills that might result in overexposure, evacuate the area and use protective gear and SCBA's. Avoid leakage into waterways. The vapours are heavier than air; therefore use caution when large volume releases occur in low-lying areas where concentrated vapors may accumulate.

Recommended 1 Hr. Emergency Exposure Limit: 1000 ppm (v/v) on the same basis as above Recommended 1 Min. Emergency Exposure Limit: 2500 ppm (v/v) on the same basis as above

Advice for emergency responders (large spills): Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Wear SCBA and protective suit. The product evaporates readily. Ventilate the area.

Environmental precautions: Prevent material from entering into waterways, soil or drains.

Methods and materials for containment and cleaning up: Dam up. Soak up with inert absorbent material. Prevent product from entering drains. Keep in properly labelled containers. Keep in suitable, closed containers for disposal. Refer to other sections and to protective measures listed in Section 8.

Any food items that were directly sprayed by the liquid should be thrown away, and all surfaces that are used for food service should be washed (as normal) before re-use.

Waste Disposal: Observe all federal, state, and local regulations for products of this type when accomplishing disposal

Supplier Notification: (SECTION 313) This product contains more than 93% by weight 2,2-dichloro-1,1,1-trifluoroethane (CAS #306-83-2) which is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40CFR372).

7. HANDLING AND STORAGE

Normal Handling: Precautions for safe handling - transfer material in a closed system. Handle only in well-ventilated areas. Use only equipment and materials which are compatible with the product.

Conditions for storage, including incompatibilities: Keep container closed

Specific use(s): For further information, please contact: Supplier

Additional Note: Approved DOT shipping containers are a normal safe method of storage. Containers should be maintained in good condition. Do not allow material to remain in deteriorating containers. Because this product can volatilize, special care should be taken for over pressurization hazards if the containers are overheated or near a radiant heat source.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Ventilate as necessary to minimize exposure levels. Inspect and clean ventilation systems regularly. Prolonged use should occur only in areas with adequate ventilation. Keep storage containers tightly closed. Vapors are heavier than air posing a potential hazard if large volumes are trapped in enclosed or low places.

Personal Protective Equipment: Protective shoes, such as steel toed shoes, should be worn in addition to the other specified personal protective equipment (PPE) when handling bulk containers. If handling bulk material or transferring the material from fire protection equipment, wear safety glasses with side shields. This statement is not intended to apply to use of a fire extinguisher where the nozzle arrangement is intended to direct the discharge away from the user of the extinguisher. Wear protective clothing when handling a leak in a storage container (does not apply to fire protection equipment servicing, other than safety goggles and gloves if large volumes can be exposed to skin). Short exposures to skin are not likely to pose a hazard. Respiratory protection is not normally needed, however, if handled in enclosed spaces where applicable exposure limits might be exceeded, a SCBA should be used. When performing filling or servicing operations, PERFORM THESE ACTIVITIES IN A WELL-VENTILATED AREA

Time Weighted Exposure Limits: (For persons regularly exposed to material)

Workplace Environmental Exposure Level, WEEL (AIHA) (8 hrs.): 50 ppm (v/v), based on the primary component (HCFC-123)

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Pressurized, colorless,	Physical state: Liquid	Molecular weight: Approx. 150.7	Chemical formula: CF ₃ CHCl ₂ plus Proprietary Gas Mixture	Odor: Slight ether-like odor
Specific gravity (water = 1.0): 1.47 at 25° C (77° F)	Solubility in Water: 0.39% wt. @ 25° C (77° F), 1 atm	pH: Not applicable	Boiling point: 27°C (80.6°F)	Melting point: Not applicable
Relative density, Air = 1: 5.1	Partition coefficient, n-octanol/water, Log Pow: 2.0 - 2.8	Auto-ignition temperature: Not determined	Upper flammability or explosive limits: Not applicable	Lower flammability or explosive limits: Not applicable
Vapor pressure at: 655 kPa (95 psig) at 20° C (70° F)	Vapor density: approx. 6.08 kg/m ³ (0.387 lb./ft ³) at 25° C (77° F)	Evaporation rate: Faster than water, slower than ether	Flash point: None	Liquid density: 1.48 kg/l (92.3 lb./ft3) at 25° C (77° F)

10. STABILITY AND REACTIVITY

Reactivity: Decomposes on heating.

Chemical Stability: Normally stable (will decompose if exposed to a high radiant heat source, such as fire). The material is intended for use as a fire extinguishant.

Incompatibilities: Incompatible with alkali or alkaline earth metals, and powdered metals Al, Zn, Be, etc.

Hazardous Decomposition Products: Decomposition products are hazardous. This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrochloric and hydrofluoric acids, and possibly carbonyl halide.

Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

Toxicological Information: Acute toxicity is low.

For 2,2-dichloro-1,1,1-trifluoroethane (CAS # 306-83-2):

LC50 (4 hr.): 3.2% (32,000 ppm), (Inhalation)

Oral Approximate Lethal Dose (ALD): 9 g/kg (body weight)

Cardiotoxic LOAEL (Lowest Observed Adverse Effect Level): 2%vol.

Cardiotoxic NOAEL (No Observed Adverse Effect Level): 1%vol.

Toxicological testing was performed on HCFC-123 by the Program for Alternative Fluorocarbon Testing (PAFT). Data from acute toxicity studies in this program demonstrated that HCFC-123 has very low toxicity by skin application or inhalation.

For the proprietary gas mixture: The toxic effects of the proprietary gas mixture in the absence of extreme temperature are primarily its ability to function as a simple asphyxiant (i.e. displace oxygen).

Other Toxicity Information:

Animal Studies: For 2,2-dichloro-1,1,1-trifluoroethane (CAS #306-83-2): Long-term exposure in a two year study (6 hours/day, 5 days/week) at concentrations of 300, 1000 and 5000 ppm decreased body weight, serum cholesterol, triglycerides and glucose, and increased urinary fluoride concentrations in rats. However, survival was significantly improved in all exposed groups compared to control animals. Inhalation of 300, 1000 and 5000 ppm caused an increase in benign tumors of the liver, pancreas, and testis. Tumors occurred late in life and none were assessed to be life threatening. Tumor formation is thought to occur through non-genotoxic mechanisms associated with a peroxisome proliferating potential or with hormonal disturbances in older rats.

Exposure to dogs, guinea pigs or monkeys at 1000 ppm or greater for 6 hours per day,7 days per week, for a total of 3 weeks, induced slight or mild liver damage with altered enzyme levels.

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Rodent studies indicate HCFC-123 is easily absorbed via inhalation. It distributes in all organs, more so in the liver. About 90% of inhaled HCFC-123 is eliminated via the lungs unchanged. The remaining amount is metabolized to trifluoroacetic acid and excreted in the urine. Small amounts of trifluoroacetylated proteins were detected in rats in laboratory studies.

HCFC-123 did not affect reproductive performance in rats or harm the unborn animals in rats or rabbits at 5000 and 10,000 ppm.

HCFC-123 was inactive in several test-tube genetic damage studies except the human lymphocyte chromosome aberration assay. HCFC-123 is also inactive in live animal genetic damage studies. Therefore, it is not considered genotoxic.

Carcinogen:

IARC: no

NTP: no

OSHA: no

12. ECOLOGICAL INFORMATION

Aquatic toxicity:

2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123)

96 h LC50: Oncorhynchus mykiss (rainbow trout) 55.5 mg/l

96 h ErC50: Pseudokirchneriella subcapitata (green algae) 96.6 mg/l 96 h EbC50: Pseudokirchneriella subcapitata (green algae) 67.8 mg/l

48 h EC50: Daphnia magna (Water flea) 17.3 mg/l

Environmental Fate:

2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123)

Biodegradability: 24%, not readily biodegradable

Bioaccumulation: Bio-concentration factor (BCF): 33, Bioaccumulation is unlikely

The material is a mixture of volatile organic compounds (although exempted from reporting as a VOC under U.S. regulation 40 CFR Part 51.100(s)) and should not be permitted to be mixed with ground or drinking water and should be handled, used, and disposed responsibly in accordance with regulations in the Country, Province, State, County, and locality where it is used.

13. DISPOSAL CONSIDERATIONS

Observe all federal, state, and local regulations for products of this type when accomplishing disposal.

The manufacturer assumes no liability for the use of this product in a manner that causes environmental or other harm.

14. TRANSPORT INFORMATION

UN	Proper Shipping Name:	US DOT	Pack
Number:	UN1956, Compressed Gas,	Hazard Class:	Group:
UN1956	N.O.S., 2.2 (Contains Argon,	2.2,	N/A
	Tetrafluoromethane)	Nonflammable	
		Gas	

15. REGULATORY INFORMATION

Listed in the Toxic Substances Control Act (TSCA) Inventory: Yes, all components are on the TSCA inventory, listed on EPA SARA (313) Hazard Class, and is subject to reporting requirements of EPCRA Section 313

HCFC-123 is listed under EINECS EC Number 206-190-3 for Intermediate Use Only.

All components of the proprietary gas mixture are listed in EINECS based on ESIS lookup for the European Union. This chemical substance is not classified in the Annex I of Directive 67/548/EEC. It is listed as a LPV for Canada, All components listed in Canadian DSL

Information about limitation of use: This blend is intended solely for use as a fire extinguishing agent and should not be used for other purposes without contact and technical discussion with the manufacturer.

This preparation was classified in compliance with the following directives and regulations:

(EC) No 1907/2006 (REACH)

(EC) No 1272/2008 (CLP)

(EC) No 453/2010

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16. OTHER INFORMATION

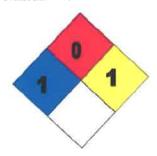
The user is responsible to evaluate the safety and environmental consequences of any intended uses. The manufacturer assumes no liability for any usages that result in adverse consequences.

Hazardous Materials Identification System (HMIS) ratings (scale 0 - 4)

Health Hazard	1
Fire Hazard	0
Reactivity	1
PPE	X

X - Consult your supervisor or S.O.P. for SPECIAL handling directions

National Fire Protection Association (NFPA) ratings (scale 0 - 4)



IMPORTANT: IMPORTANT: The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, IS MADE REGARDING PERFORMANCE, STABILITY OR OTHERWISE. This information is not intended to be all-inclusive as to the manner and conditions of use, handling and storage. Other factors may involve other or additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling and use remains the responsibility of the customer. No suggestions for use are intended as, and nothing herein shall be construed as a recommendation to infringe any existing patents or violate any Federal, Other National Governmental Entity, State, Provincial, or local laws.

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	AFFF Products			Data from June 2016	
	C6 (OK List) (6 or less carbon chains)				
Brand	Product Name	Product Number	QPD	KYARNG NOTES	KYARNG LOCATION
Ansul	ANSULITE AFC-3MS 3% AFFF		Yes	MSDS in shed, no product seen	AASF
	ARCTIC 3% MIL-SPEC AFFF	Link E	Yes	Travis Rogers at AASF reported by email that they have this. I haven't seen it yet.	
ICL	PHOS-CHEK 3% AFFF MS		Yes		
Chemguard	1% AFFF Foam Concentrate	C1B			
Chemguard	3% Military Spec AFFF	C306-MS			
Chemguard	6% Military Spec AFFF	C606-MS			
Chemguard	3% AFFF Foam Concentrate	СЗВ			
Chemguard	3% Low Temp AFFF	C3B-LT29		*	
Chemguard	6% AFFF Foam Concentrate	C6B			
Chemguard	3% x 3% AR-AFFF, Low Viscosity	C334-LV			
Chemguard	3% x 6% AR-AFFF	C364			
ICL	Phos-Chek 1% AFFF				
ICL	Phos-Chek 1% AFFF Freeze Protected				
ICL	Phos-Chek 3% AFFF				
ICL	Phos-Chek 3% AFFF M				
ICL	Phos-Chek 3% AFFF Freeze Protected				
ICL	Phos-Chek 6% AFFF				
ICL	Phos-Chek 1×1 AR-AFFF Low Viscosity				
ICL	Phos-Chek 1×3 AR-AFFF Ultra				
ICL	Phos-Chek 3×3 AR-AFFF Freeze Protect	ed			
ICL	Phos-Chek 3×3 AR-AFFF Low Viscosity				
ICL	Phos-Chek 3×6 AR-AFFF				
	ANSULITE AFC-6MS 6% AFFF Concentra	ite			
	No PFOS/PFOA	-	1		T
	NO FI OS/FI OA	Product	-	-	140
Brand	Product Name	Number	QPD		
Chemguard	ULTRAGUARD 1% x 3% AR-AFFF	C135			

	Phos-Chek 1% Fluorine Free		
	Phos-Chek 3×6 Fluorine Free		
Chemguard	Class A Plus	Saw this in AASF storage shed. Mitg email says no PFCs	AASF

References came from : Online search of QPD website; searches for AFFF products

	Unknown				
		Product			
Brand	Product Name	Number	QPL		
Chemguard	ULTRAGUARD 3% x 3% AR-AFFF	CUG			
Chemguard	3% x 3% AR-AFFF	C333			
Chemguard	3% - 3%, AR-AFFF, Low Temp	C33LT			
	Phos-Chek Multi-Expansion H930				
Solberg	Amerex 3x6% ATC Foam Conc.			In AASF shed. CH 534, Model 534; No PFCs listed on MSDS	AASF
Buckeye Fire Equip. Also Mfg by Amerex	Purple K Dry Chemical Fire Ext.			(In shed) - no PFCs listed on MSDS. (mobil system at old AASF) - Model 469. Mfg said it contains Purple K.	AASF
National Foam	Aer-O-Water 6EM 6%			4210-01-056-0883. (2) 55 gal poly drums in AASF shed. MSDS says Fluoroalkyl surfactants. 6/22/16 A tech person called back. No PFOS. Possibly trace PFOA during mfg process.	AASF
Minnesota Mining & Mfg	FC-203CF Light Water Brand Aqueous F	FF		No products seen. MSDS in shed & says amphoteric fluoroalkylamide & fluoroalkyl surfactants	AASF
National Foam	Universal Plus 3%/6% AFFF			In AASF shed. MSDS says Fluoroalkyl surfactants. 6/22/16 A tech person called back. No PFOS. Possibly trace PFOA during mfg process.	AASF
Angus Fire	Tridol S 3% AFFF			MSDS says Fluorosurfactants. Angus tech office: Ann Regina, 610-363-1400 x6422. Their process doesn't generate PFOSs. Possibly trace amounts of PFOAs, but they are conducting some tests to verify. She put me on an email list so I can be updated. Since I don't know for sure, I plan to list them as "Yes, suspect."	WHFRTC Fire House

Manufacturer	C8+ (NOT OK LIST)		Qualifi	ed Purchase D	atabase	
Brand	Product Name	Product Number	QPD	KYARNG LOCATION		
Chemguard	3% AFFF	C303	Yes	AASF	Saw this in AASF storage shed.	SDS#3
Ansul	Silv-ex Foam Concentrate			AASF	Travis Rogers at AASF reported by email that they have this. I haven't seen it yet.	
Chemguard	1% AFFF Foam Concentrate	C103]
Chemguard	3% Low Temp AFFF	C3LT				1
Chemguard	6% AFFF Foam Concentrate	C603				1
Chemguard	Blizzard Low Temp AFFF	СВ		AASF	Saw this in AASF storage shed.	SDS#1
Chemguard	6% Low Temp AFFF	C6LT		AASF	Travis Rogers at AASF reported by email that they have this. I haven't seen it yet.	
Chemguard	3%x6% AR-AFFF	C363				1
	Phos-Chek Training Foam 136		İ			1
	Phos-Chek Training Foam EE3					1
Solberg	Artic 3% AFFF Foam Concentrate	20140		AASF	I saw a rolling system with Model 630, and was told by Mfg that it contained this product. At AASF.	
3M	Light Water AFFF					1
3M	FC-206C					1
3M	FC-206CF					1

Geometried. by Linda Mitchell (former nazardous waste manager)

		AASF - Fire-fighting chemicals - 10/25/17
		In AASF Shed (Near back hanger):
		Blizzard Freeze protected CBD AFFF Solution; Chemguard,
(1) 55 gal drum	Chemguard	Mansfield TX. 817-473-9964
	1:	AFFF Liq Conc., MIL-F-24385F, Type 6 (6%). M10 Aer-o-water 6EM;
(2) 55 gal drums	National Foam	4210-01-056-0883
(1) 5 gal bucket	Chemguard	3% AFFF, Product No C-303
(1) 5 gal bucket	Chemguard	Class A Plus, Foam Liq. Conc., Product No. CA
(1) 5 gal bucket	National Foam	Universal Plus 3%/6%, AFFF
		Siliconized Potassium Bicarb base, powder. Fire Ext. recharge;
(9) 5 gal buckets	Purple K Chemical	4210-00-752-9343
		Model 534 Film Forming Fluoroprotein, alcohol resis. Foam, 205-
(11) 5 gal buckets	Amerex Corp	655-3271. 3x6% ATC Foam Concentrate
		Outside of new hangers & at old AASF
		Model 630 extinguishers: Apparently contain Model 534 Film
7 cylinders,		forming fluoroprotein (above). (6) at new AASF, (1) at old AASF -
estimate 20 gal per		rolling units likely containing Amerex 3x6% AFFF. May be mixed
cylinder = 140 gal.	Amerex Corp	with water.
4	Amerex Corp	Empty rolling units. (new AASF) Same as above

*		WHFRTC - Firehouse
520	Angus Fire	Tridol S 3% AFFF





Aqueous Film-Forming Foam NFC220



Assurance

Firefighting and environmental performance you can rely on

National Foam prides itself on the open and honest way in which we conduct our business throughout the world. Our foams are an extension of our ethical beliefs and we pride ourselves in being the responsible foam manufacturer, balancing high performance with minimal environmental impact.

C6 Technology

Aer-O-Water®6EM^{C6} is an aqueous film forming foam (AFFF) which is used at 6% concentration to extinguish fires in hydrocarbon fuels. The C6 Fluorosurfactants have been developed and refined specifically to lower the environmental impact without reducing performance. This new formulation demonstrates National Foam's commitment to superior flexibility, firefighting performance, and environmental responsibility. Aer-O-Water®6EM^{C6} is suitable for use with most types of proportioning and discharge equipment.



- Excellent Fluidity Provides Rapid "Knockdown"

- ビ Suitable For Use With Foam Compatible Dry Powder Extinguishing Agents
- ☑ Underwriters Laboratories, Inc.
- ☑ Underwriters Laboratories of Canada (ULC)
- ☑ U.S. Military Specification MIL-PRF-24385F(SH) Qualified Products List (QPL)

Aer-O-Water®6EM^{CG} is a superior quality aqueous film forming foam (AFFF) which is used at 6% concentration to extinguish fires in hydrocarbon fuels. It has been tested and qualified to meet the stringent requirements of U.S. Military Specification MIL-PRF-24385F(SH). Aer-O-Water®6EM^{CG} is suitable for use with most types of proportioning equipment and discharge devices.

AFFF foam concentrates are designed for rapid fire knockdown by producing a thin aqueous film which spreads across the surface of the fuel, separating the fuel from oxygen. This is accomplished by allowing the foam solution to quickly drain from the foam bubble which in turn, affects long term sealability and burnback resistance.

The aqueous film is produced by the fluorocarbon surfactant reducing the surface tension of the foam solution to a point where the solution can be supported by the surface tension of the fuel. The effectiveness of the aqueous film is directly influenced by the surface tension of the fuel. The film tends to be more effective on fuels with higher surface tension such as diesel and jet fuels, and less effective on fuels with lower surface tension such as hexane and gasoline.

In general, AFFF foam concentrates may be used with non-aspirating nozzles and sprinklers, however, for best foam expansion and 25% drainage time, all foam concentrates should be used with aspirating nozzles and foam making discharge devices.

Aer-O-Water®6EM^{C6} has passed stringent U.S. Military requirements for flammable liquid fire protection and is listed on the qualified products list (QPL-24385).



Aqueous Film-Forming Foam

Applications

Aer-O-Water®6EM^{C6} is used at 6% concentration in fire suppression systems and manually to fight fires involving hydrocarbon fuels such as crude oil, gasoline, and fuel oils. It is not suitable for use on polar solvents or water miscible fuels such as alcohols, ketones, esters, and ethers. Typical installations include foam-water sprinkler systems, aircraft hangars, loading racks, process areas, etc. Aer-O-Water®6EM^{C6} is also an excellent agent for use in Aircraft Rescue and Fire Fighting (ARFF) or other manual fire fighting applications where polar solvent fuels are not encountered.

Typical Physical Properties

AppearanceLigh	t Amber Color
Specific Gravity at 77°F(25°	C)1.03
pH	8.0
Viscosity at 77°F(25°C)	2 cST
Freezing Point	18°F(-8°C)
Min Usable Temperature	35°F(2°C)
Max Usable Temperature	120°F(49°C)

Storage and Handling

Aer-O-Water®6EM^{C6} is ideally stored in its original shipping container or in tanks or other containers which have been designed for such foam storage. Recommended construction materials are stainless steel (Type 304L or 316), high density cross-linked polyethylene, or reinforced fiberglass polyester (isophthalic polyester resin) with a vinyl ester resin internal layer coating (50 -100 mils). Refer to National Foam Technical Bulletin NFTB100 for further information.

Foam concentrates are subject to evaporation which accelerates when the product is exposed to air. Storage

tanks should be sealed and fitted with a pressure vacuum vent to prevent free exchange of air. The recommended storage environment is within the ULlisted temperature range of 35°F to 120°F (2°C to 49°C). When product is stored in atmospheric storage tanks, contents must be covered with 1/4-inch (6.35mm) of National Foam Seal Oil to ensure prevention of air coming into contact with the foam concentrate. Use of Seal Oil is only recommended in stationary storage tanks. Refer to National Foam Technical Bulletin NFTB100 or National Foam product data sheet NFC950 for further information

Aer-O-Water®6EM^{C6} foam concentrate is freeze/thaw stable. Should the product freeze during shipment or storage, no performance loss is expected upon thawing.

Aer-O-Water®6EM^{C6} has been tested for compatibility with all 6% AFFF foam concentrates which are qualified to MIL-F-24385F, and are suitable for mixing in long term storage. It should not be mixed with other foam concentrates which are not qualified to MIL-PRF-24385F(SH). Such mixing could lead to chemical changes in the product and a possible reduction in or loss of fire fighting capability. Most expanded foams are compatible for side-by-side application during an incident.

Aer-O-Water®6EM^{C6} is suitable for use in combination with foam compatible dry chemical extinguishing agents.

Shelf Life, Inspection, and Testing

The shelf life of any foam concentrate is maximized by proper storage conditions and maintenance. Factors affecting shelf life are wide temperature changes, extreme high or low

temperatures, evaporation, dilution, and contamination by foreign materials. Properly stored National Foam AFFF foam concentrates have been tested and shown no significant loss of firefighting performance, even after 15 years.

Annual testing of all firefighting foam is recommended by the National Fire Protection Association (NFPA). National Foam provides a Technical Service Program to conduct such tests. Refer to National Foam product data sheet NFC960 for further details on Technical Service program.

Environmental and Toxicological Information

National Foam Concentrates do not contain PFOS.

Prevent foam concentrate and foam solution from entering ground water, surface water, or storm drains. Discharge and disposal of Aer-O-Water®6EM^{C6} concentrate or foam solution should be made in accordance with federal, state, and local regulations. Refer to National Foam Technical Bulletin NFTB110 for further information.

Aer-O-Water®6EM^{C6} has not been tested for acute oral toxicity, primary skin irritation, or primary eye irritation. Repeated skin contact will remove oils from the skin and cause dryness. Aer-O-Water®6EM^{C6} is a primary eye irritant, and contact with the eyes should be avoided. Users are advised to wear protective equipment. If Aer-O-Water®6EM^{C6} enters the eyes, flush them well with water and seek immediate medical attention. For further details, see the Aer-O-Water®6EM^{C6} Safety Data Sheet NMS220.



Aqueous Film-Forming Foam

Ordering Information			
Container	Shipping Weight	Shipping Dimensions	Part Number
5-Gallon Pails (19 liters)	46.0 lb. (20.8 kg)	1.13 cu. ft. ³ (0.032 cu. m)	1136-5340-4
55-Gallon Drums (208 liters)	495 lb. (223.7 kg)	11.51 cu.ft.3 (0.326 cu.m)	1136-5481-4
275-Gallon IBC Reusable Tote Tank (1041 liters)	2497 lb. (1130 kg)	51.11 cu.ft.3 (1.1061 cu.m)	1136-5725-4
330-Gallon IBC Reusable Tote Tank (1249 liters)	2990 lb. (1352.8 kg)	55.8 cu. ft.3 (1.580 cu. m)	1136-5033-4
Bulk	8.59 lb./gal. (1.03 kg/l)		1136-5001-4



Aqueous Film-Forming Foam

24hr RED ALERT®: 610-363-1400 • Fax: 610-431-7084



Amerex Corporation

7595 Gadsden Hwy. Trussville, AL 35173 ❖ Ph: (205) 655-3271 ❖ Fax: 1-800-654-5980 ❖ e-mail: sales@amerex-fire.com

Halotron™ I Wheeled Fire Extinguishers







Model B674



Model B675

SPECIFICATIONS	HALOTRON® I		
MODEL NUMBER	B673	B674	B675
AGENT TYPE	HALOTRON I™		
UL & ULC RATING	4A:80B:C	10A:120B:C	
CAPACITY (LBS.)	65 / 29.5	150 / 68	
SHIPPING WT. (LBS.)	286 / 129.7	512 / 232.2	610 / 276.7
HEIGHT (IN./CM)	58 / 147.3	64	/ 162.6
WIDTH (IN./CM)	28 / 71.1	30 / 76.2	37 / 94
DEPTH (IN./CM)	39 / 99.1	42 / 106.7	43 / 109.2
DISCHARGE TIME (SEC.)	22	38	
DISCHARGE RANGE (FT./M)	30 - 45 / 9.1 - 13.7		
OPERATING TEMP. (F/C)	-40° to 120° / -40° to +49°		
HOSE LENGTH (FT./M)	50 / 15.2		
HOSE DIAMETER (IN./CM)	.75 / 1.9		
WHEELS [SEMI-PNEUMATIC / STEEL]	16 X 4 / 40.64 X 10.2 36 X 2.5/ 91.44 X 6		36 X 2.5/ 91.44 X 6.35
(IN./CM)			
USCG APPROVED		TYPE B:C SIZE III	

FEATURES:

- Brass Hose Fittings
- · Live Swivels on Discharge Valve
- Reflective stripes
- Tow loops
- · Stainless Steel Fasteners
- Heavy Duty Steel Cylinder, Carriage, and Hose Rack
- DOT/TC Cylinders
- · Stainless Steel Gauge Guard
- · Quick Opening Valves
- Chrome Plated Brass Valve
- Quick Release Discharge Hose
- Aluminum UL/ULC Bilingual (English/Spanish) Nameplates with Bar Code
- · Pictogram Instructional Label
- 6 Year Warranty

The Amerex Halotron I[™] extinguishers feature the same qualities found in all Amerex products and adds the convenience of a "clean" extinguishing agent. Halotron I[™] extinguishing agent has proven itself as the leader in the hunt for an alternative "clean" agent by being the only alternative "clean" agent to obtain FAA approvals for both ramp use (ARFF Vehicle) and onboard an aircraft. Combining the quality of Amerex products with a proven alternative "clean" agent, the Amerex Halotron I[™] wheeled extinguishers offer you the best value in the industry.

Amerex Corporation 2015 © Part No.: SL-113 8/2015



OWNERS SERVICE MANUAL NO. 16672 INSTALLATION, OPERATING & SERVICING INSTRUCTIONS

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 or The National Fire Code of Canada and the requirements of local authorities having jurisdiction.

When maintenance is indicated, it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances. O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them voids the Amerex extinguisher warranty and UL listing. **DO NOT SUBSTITUTE**.

REFERENCES IN THIS MANUAL:

NFPA-10 Portable Fire Extinguishers

CGA C-1 Methods for Pressure Testing of Compressed Gas Cylinders CGA C-6 Standard for Visual Inspection of Compressed Gas Cylinders

National Fire Code of Canada

AVAILABLE FROM:

National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101

Compressed Gas Association, Inc. 14501 George Carter Way, Suite 103 Chantilly, VA 20151-2923

National Research Council Canada 1200 Montreal Road Ottawa, ON K1A9Z9

AMEREX CORPORATION - P.O. BOX 81 - TRUSSVILLE, ALABAMA 35173-0081

Phone: 205/655-3271 Fax: 800/654-5980

e-mail: sales@amerex-fire.com Web Page: http://www.amerex-fire.com

SSURE FIRE EXTING 1 "CLEAN AGENT" STORED PRI

INTRODUCTION

This manual covers specific instructions for the Amerex wheeled stored pressure Halotron1 fire extinguishers. Special maintenance and recharge instructions contained in this manual apply to these extinguishers only. Halotron I "Clean Agent" extinguishers are designed for Class A, B, and C hazards formerly protected with Halon 1211 extinguishers. They contain dichlorotrifluoroethane (R-123), which is designated for streaming fire extinguisher applications. Halotron I is listed in the U.S. Environmental Protection Agency (EPA) "Significant New Alternative Policy" (SNAP) as acceptable for nonresidential applications. Halotron I has acceptable toxicity and cardiac sensitization levels for use in occupied spaces when used according to the instructions on the nameplate and rules of the EPA SNAP Program.

PHYSICAL PROPERTIES OF HALOTRON I

Primary Component Dichlorotrifluoroethane (R-123) or (HCFC-123)

Boiling Point 80.6°F [27°C]

Liquid Density 92.3 lb./ft³ (1.48 kg / liter) **Gas Density** 0.385 lb./ft3 (6.17 kg / m3)

Molecular Weight 150.7

Physical State Pressurized Liquid Vapor Pressure @ 68°F [20°C] (liquid alone) 11.2 psi [77 kPa]

Pressure of mixture in Container @ 68°F [20°] 95 psig in bulk container

HALOTRON I LIMITED WARRANTY

Amerex warrants its Halotron I fire extinguishers to be free from defects in material and work manship for a period on SIX (6) YEAR from the date of purchase or first recharge, whichever comes first. During the warranty period, any such defects will be repaired or the defective extinguisher replaced at Amerex discretion. This warranty does not cover defects resulting from modification, alteration, misuse, exposure to corrosive conditions or improper installation. ALL IM-PLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF FITNESS FOR PUR-POSE AND MERCHANTABILITY, ARE LIMITED TO THE TIME PERIODS AS STATED ABOVE. IN NO EVENT SHALL AMEREX CORPORATION BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. Amerex Corporation neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than as expressly set forth herein. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. To obtain performance of the obligation of this warranty, write to Amerex Corporation, P.O. Box 81, Trussville, AL 35173-0081 for instructions.

Amerex Corporation does not service, maintain or recharge fire extinguishers. The maintenance and recharge portion of this manual is published as a guide to assist service personnel in the inspection, maintenance and recharge of Amerex Halotron I wheeled fire extinguishers only. No instruction manual can anticipate all possible malfunctions that may be encountered in the service of fire extinguishers. Amerex assumes no liability for service, maintenance or recharge of fire extinguishers by publishing this manual. To provide optimum extinguisher reliability, recharging should be performed by persons trained in fire extinguisher maintenance and servicing. This manual should be used as a guide for installing and servicing these Amerex extinquishers. The best place to have your extinguishers serviced and recharged is your "Authorized" Amerex Distributor" who has the professional experience and equipment to do it properly.

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THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CON-TAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR **EASY REFERENCE.**

PREPARING YOUR NEW EXTINGUISHER FOR USE

- 1. Remove all wrappings, straps and pallet retaining bolts.
- 2. Examine the extinguisher for shipping damage.
- 3. Check to insure that the hose connection at the discharge valve and the nozzle connection to the hose are tight.
- 4. Check to insure that the nozzle shut-off lever is in the CLOSED position. The pull pin should be installed and the tamper seal intact.
- 5. Visually inspect the pressure gauge. The pressure gauge should be in the green zone. Slight pressure variances in the gauge reading may be found if the extinguisher has been subjected to extremes of heat or cold. High temperatures can cause high gauge readings and low temperatures, low readings. When in doubt, condition the extinguisher to 70°F (21°C) for several hours to obtain more accurate pressure gauge readings.
- 6. The method used to determine proper agent fill is by weighing the extinguisher. The gross weight is marked on each extinguisher nameplate.
- 7. Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.

INSTALLATION

Do not place this extinguisher close to a potential fire hazard. Amerex recommends a location no less than a 50-foot distance from the hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold area. The operational temperature range for this extinguisher is -40°F to 120°F (-40°C to 49°C). The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants that may interfere with its proper operation. DO NOT FUNCTIONALLY TEST THIS FIRE EXTINGUISHER. (Testing or any use may cause the extinguisher to gradually lose extinguishing agent over a period of time and make the extinguisher ineffective.)

OPERATION

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WARNING:

PERSONS EXPECTED TO USE THIS EXTINGUISHER SHOULD BE MADE AWARE OF THE CONFINED SPACE LIMITATIONS AND TRAINED IN INITIAT-ING ITS OPERATION AND PROPER FIRE FIGHTING TECHNIQUE. THE CON-CENTRATED AGENT CAN PRODUCE TOXIC BY-PRODUCTS. AVOID INHALA-TION OF THESE MATERIALS BY EVACUATING THE CONFINED SPACE. DO NOT USE IN CONFINED SPACES SMALLER THAN THE MINIMUM STATED ON THE EXTINGUISHER LABEL.

CAUTION:

Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. "Dry Run" and visual aid training will prepare personnel with the feel for this extinguisher so that the most effective application can be utilized in an emergency situation. The basic operating instructions are contained on the pictogram of every extinguisher. The following elaborates on these instructions:

- 1. Move the extinguisher to within approximately 50 feet of the fire site. KEEP UPRIGHT.
- 2.Twist and pull ring pin and open cylinder valve by rotating (pulling) the valve lever toward the hose 90°. The hose is now pressurized.
- 3. Pull nozzle with nozzle lever in the closed position from the nozzle mount and extend hose from the storage rack.
- 4. Stand back 30 feet from the fire and aim just in front of the base of the flames nearest you.
- 5.Hold hose and nozzle firmly and be prepared for a discharge recoil. Open nozzle by pulling lever toward you. Slowly sweep side to side extending the discharge beyond the edges of the fire. Progressively follow up until the fire is extinguished. Work the fire away from you while being alert for flashbacks. Move closer as the fire is extinguished but not so close as to scatter or splash the burning material. Shut off nozzle lever to stop discharge. Stand and watch for possible re-ignition.
- 6. Evacuate and ventilate the area immediately after extinguishing the fire. The fumes and smoke from any fire may be hazardous and can be deadly.

WARNING: SYMPTOMS OF OVER-EXPOSURE TO PURE HALOTRON I MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS DIZZINESS, DROWSINESS, ANESTHESIA, OR UNCONSCIOUSNESS. PERSONS SUFFERING FROM OVER-EXPOSURE SHOULD BE IMMEDIATELY REMOVED TO AREA WITH FRESH AIR. APPLY ARTIFICAL RESPIRATION IF NECESSARY. CONTACT A PHYSICIAN.

65 LB. MODELS 150 LB. MODELS

Discharge Time (approx.)

22 seconds

31 seconds

Range (Agent Thow)

30 to 45 feet

30 to 45 feet

Hose Length

50 feet

50 feet

BEFORE PREPARING TO MOVE THE EXTINGUISHER TO THE RECHARGE LOCATION, DETERMINATION MUST BE MADE THAT THE FIRE IS COMPLETELY EXTINGUISHED AND THERE IS NO DANGER OF A FLASHBACK.

SHUTDOWN

- 1. Close the discharge hose valve. Rotate cylinder discharge valve lever 90° to the CLOSED position.
- 2. Locate the extinguisher in an open area where blow down can be accomplished safely.
- 3. Tip the extinguisher to rest the carriage handle/tow loop on the ground. Slowly open the discharge hose valve and cylinder valve. Be prepared for some chemical discharge. Relieve all pressure in the cylinder and clear the discharge hose of all Halotron I. To prevent any loss of remaining agent, the carriage handle/tow loop should be positioned as low as possible in a plane below the bottom on the cylinder.

CAUTION: DO NOT LEAVE HALOTRON I IN THE HOSE AS OVER-PRESSURIZATION AND DETERIORATION OF THE HOSE MAY OCCUR.

- 4. When the hose is empty, push the discharge hose valve nozzle lever and cylinder valve lever to the CLOSED positions.
- 5. Return the extinguisher to an upright position. Coil the extinguisher hose onto the storage rack and position the nozzle onto the mount in preparation for transport to the recharge location.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

INSPECTING THE EXTINGUISHER

INSPECTION (NFPA 10) is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

PERIODIC INSPECTION PROCEDURES (monthly or more often if circumstances dictate)

NFPA 10 - Periodic inspection of fire extinguishers shall include a check of at least the following items:

- 1. Location in designated place
- 2. No obstruction to access or visibility
- 3. Operating instructions on nameplate legible and facing outward
- 4. Seals and tamper indicators not broken or missing
- 5. Determine fullness by weighing
- 6. Examination for obvious physical damage, corrosion, leakage, or clogged nozzle
- 7. Pressure gauge reading in the operable range
- 8. Hose properly coiled and shut-off nozzle in its mount in closed position
- 9. Condition of tires/wheels and that they rotate freely
- 10. HMIS label in place

MAINTENANCE

(At least once a year or when specifically indicated by an inspection)

INSPECTION (NFPA 10) is a thorough examination of the fire extinguisher. It is intended to give maximum assurance that the fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

MAINTENANCE PROCEDURE

- Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate and UL manifest are securely fastened and legible. Inspect the cylinder for corrosion, abrasion, and dents or weld damage. If any of these conditions are found and you doubt the integrity of the cylinder, hydrostatically test to factory test pressure, using the proof pressure method in accordance with CGA C-1 and NFPA 10.
 - **NOTE**: When cleaning avoid use of solvents around the pressure gauge. They could seriously damage the plastic gauge face.
- 2. Inspect the extinguisher for damaged, missing or substitute parts. Only factory replacement parts are approved for use on Amerex fire extinguishers.
- 3. Weigh extinguisher and compare with weight printed in the Maintenance section on the nameplate. Recharge extinguisher if weight is not within indicated allowable tolerances.
- 4. Check the date of manufacture stamped into the cylinder. Cylinder must be hydrostatically (proof pressure) tested every 12 years to the test pressure indicated on the nameplate. 65 lb. models 673, B673 = 480 psi (3309 kPa); 150 lb. models 674. B674, 675, B675 1000 psi (6895 kPa).

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- 5. Visually inspect the pressure gauge:
 - a. if bent, damaged or improper gauge, depressurize and replace
 - b. if pressure is low or high and temperature/pressure relationship has been ruled out:
 - 1. low pressure check for leaks
 - 2. high pressure (over pressurized or over charged) depressurize and recharge extinguisher following instructions listed below
- 6. Remove and check ring pin for freedom of movement. Replace if bent or if removal appears difficult.
- 7. Check the nozzle shutoff lever for freedom of movement (open and close several times). If the operation is impeded, replace ball valve assembly. Make sure that the nozzle tip is clear and unobstructed. WARNING: ALWAYS OPEN THE SHUTOFF NOZZLE HANDLE SLOWLY. BE PREPARED FOR A POSSIBLE DISCHARGE AND NOZZLE RECOIL.
- 8. After making sure that there is no residual pressure in the discharge hose, disconnect it from the cylinder operating valve. Blow air through the hose and nozzle assembly to insure that the passage is clear of foreign material. Check the couplings, hose and hose gasket for damage or deterioration replace as necessary.
- Inspect valve assembly for corrosion or damage to hose thread connection. Valve removal and/or valve
 part replacement should be made only after following the depressurizing and recovery procedures listed
 in the Complete Maintenance procedures.
- 10. Inspect the wheels to insure they rotate freely. Lubricate as required
- 11. Check carriage assembly for loose nuts, bolts, frame distortion or damage. Check welds for damage or corrosion. Replace damaged parts or make repairs as necessary.
- 12. Reconnect the hose to the agent cylinder. Properly coil the hose on the rack and install the nozzle (with the lever in a closed position) on the mount.

NOTE: When assembling the hose to the agent cylinder or nozzle to the hose, tighten the coupling ½ turn after contacting the hose gasket.

- 13. Install new tamper seal and record service data on the extinguisher inspection tag.
- 14. If the extinguisher has been moved to perform service, make sure that it is returned to its proper location.

Six Year Maintenance (NFPA 10). Every 6 years, stored pressure fire extinguishers that require a 12 year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures. When the applicable maintenance procedures are performed during the periodic recharging or hydrotesting, the 6– year requirement shall begin from that date.

COMPLETE MAINTENANCE (SIX YEAR MAINTENANCE) WARNING

- Before attempting to devalve the extinguisher for maintenance, hydrotest or recharging be sure that it is completely depressurized. Recover agent and vapor according to the instructions below.
- b. Never have any part of your body over the extinguisher while removing the valve assembly.
- Prolonged exposure of a devalved cylinder to ambient air should be avoided to prevent moisture
 contamination and cylinder rusting.

COMPLETE MAINTENANCE (SIX YEAR MAINTENANCE) PROCEDURES

- 1. Complete items 1 through 11 in Maintenance Procedure above.
- Attach the appropriate recharge adapter (P/N 09857) to the extinguisher operating valve on the extinguisher cylinder. Empty the extinguisher of all pressure and Halotron I using an Amerex P/N 14538 Halotron I Recharge Kit and a bulk Halotron I supply cylinder with sufficient empty capacity to accept the contents of the extinguisher.
- 3. When extinguisher is empty of all agent and pressure, remove valve assembly and disassemble by removing downtube, spring and valve stem assembly. Discard valve stem assembly and collar oring.

NOTE: Keep cylinder opening covered while devalved to minimize interior corrosion.

- 4. Thoroughly clean all parts of the disassembled valve with a soft bristle brush or soft cloth. Blow the valve out with dry nitrogen.
- 5. Install a NEW valve stem assembly (GREEN SEAL) after lightly lubricating the valve stem o-ring and valve stem seal with Bluestar V-711. Reassemble the spring and downtube. Carefully install a NEW collar o-ring (GREEN) which has been lightly lubricated with Bluestar V-711. Set the valve assembly aside.
- 6. Inspect the cylinder interior following CGA Visual Inspection Standard C-6. If a hydrotest has been performed or any moisture is evident, the cylinder should be immediately warm air dried.
- 7. Clean the o-ring seating groove in the cylinder neck. If any rust is evident, remove by using a fine emery cloth (200 grit). Clean the surface and lubricate the entire sealing area with a thin film of Bluestar V-711. Install the valve assembly in extinguisher cylinder. Hand tighten firmly.
- 8. Complete the Recharge steps, items 2 through 11.

RECHARGE

RECHARGING (NFPA 10) is the replacement of the extinguishing agent (also includes the expellant for this type of extinguisher).

WARNING:

- a. Halotron I service should be performed only in a well ventilated room by a properly trained service technician wearing proper eye protection and rubber gloves.
- b. Before attempting to recharge be sure this extinguisher is completely depressurized by slowly and carefully depressing the operating lever and discharging the extinguisher into a proper collection area.
- c. Use a REGULATED pressurizing source of ultra high purity ARGON ONLY. Set the regulator to no more than 25 PSI higher than the extinguisher gauge operating pressure.
- d. Check and calibrate regulator gauge at frequent intervals. The regulator gauge should be used to determine when the intended charging pressure has been reached. Do not use the extinguisher gauge for this purpose.
- e. Never leave an extinguisher connected to a regulator of a high pressure source for an extended period of time. A defective regulator could cause the cylinder to rupture due to excessive pressure.

RECHARGING PROCEDURE

Note: The following procedure is for an EMPTY Halotron I extinguisher. If you are recharging an extinguisher, which has been partially discharged (with agent remaining in the cylinder) or has been recharged and the pressure leaked, follow the instructions contained in the Recharging Instructions, which is packaged with the Amerex Recharge Kit (P/N 14538).

- 1. Perform the Complete Maintenance steps 1 through 7.
- 2. Install the proper Amerex Recharge Adapter and draw a vacuum of 27" of mercury (adjusted for altitude variations) [see your vacuum pump manual for detailed instructions].
- Stand the extinguisher upright on a scale of sufficient size and capacity (200 lbs. minimum).
 Tare weight extinguisher or record empty weight. The extinguisher should be fully discharged and empty.
- Connect the extinguisher to a Halotron I supply cylinder using the Amerex P/N 14538 Halotron I Recharge Kit.

Note: The Halotron I supply cylinder must be pressurized to approximately 100 psi with ARGON to properly charge the extinguisher.

 Open the agent cylinder discharge valve by pulling 90° toward the hose rack and fill extinguisher to the agent fill weight noted on the nameplate USING ONLY CLEAN UNCON-TAMINATED HALOTRON I AGENT. [see detailed instructions on your recharging system]

CAUTION: Avoid liquid Halotron I contact with the external extinguisher cylinder.

- Pressurize to the extinguisher operating pressure with ARGON only. Repeatedly rock the extinguisher to thoroughly mix the ARGON pressurizing gas until proper pressure is reached. Add additional Argon as necessary until the pressure stabilizes.
- 7. Check extinguisher for leaks at the valve orifice, around the collar seal, and gauge using a Halogen Leak Detector. The alternate method is to apply leak detecting fluid or a solution of soapy water to these areas. Thoroughly remove all leak detection fluid residue using dry nitrogen to blow all liquid residue out of the valve and wipe the extinguisher to dry the exterior. DO NOT LEAVE ANY LIQUID INSIDE THE VALVE BODY. Remove the recharge adapter.

CAUTION: If you use a Halogen type leak detector: A residual amount of Halotron I will remain in the valve body until the liquid evaporates. To properly leak test using the Halogen leak detector it is recommended that the extinguisher be set aside a minimum of 24 hours after recharging, then leak tested.

- 8. Install ring pin and new tamper seal.
- 9. Install hose assembly, with shut-off nozzle attached, to the extinguisher cylinder discharge valve. Tighten hose coupling ¼ turn after contact with hose gasket. Coil hose onto the hose rack and install nozzle into mount.
- 10. Weigh extinguisher to confirm that the total weight is within the tolerances indicated in the maintenance section on the extinguisher nameplate.
- 11. Record recharge date and attach new recharge tag in accordance with the requirements of the "Authority Having Jurisdiction".

TROUBLE SHOOTING GUIDE

WARNING: DETERMINE THE SOURCE OF A LEAK BEFORE THE EXTINGUISHER IS DEPRESSURIZED. THE EXTINGUISHER MUST BE COMPLETELY DEPRESSURIZED BEFORE ANY ATTEMPT IS MADE TO REMOVE THE VALVE ASSEMBLY AND CORRECT THE LEAKAGE PROBLEM. SEE INSTRUCTIONS PACKAGE WITH THE AMEREX HALOTRON I RECHARGE KIT P/N 14538 FOR THE PROPER METHOD OF DEPRESSURIZING THE EXTINGUISHER TO AVOID UNNECESSARY DISCHARGE AND MINIMUM AGENT LOSS.

	PROBLEM	CORRECTIVE ACTION
1.	Pressure gauge reads high or low	Pressure variances in the gauge reading may be found if the extinguisher has been subjected to extremes of heat or cold. High temperatures can cause high gauge readings and low temperatures, low readings. When in doubt, condition the extinguisher to 70°F (21°C) for several hours to obtain more accurate pressure gauge readings.
2.	Leak through valve	Remove valve assembly, downtube, spring and valve stem assembly. Install new valve stem (GREEN SEAL) assembly. Check valve seat for scratches or foreign matter.
3.	Leak at collar o-ring	Remove valve assembly, clean collar o-ring seating surface thoroughly and lubricate lightly with Bluestar-V-711. Install new collar o-ring (GREEN) after lubricating with Bluestar V-711.
4.	Leak around gauge threads	Remove gauge* and reinstall using Teflon tape on the gauge threads.
5.	Defective gauge	Remove defective gauge* and install a new gauge using Teflon tape on the gauge threads.
6.	Leak in cylinder	Contact Amerex if under warranty, otherwise mark "REJECTED" and return to owner.
7.	Visible deterioration of dis- charge hose	Replace hose assembly. Extinguishing agent has been stored in hose for a prolonged time. See Caution in Shut-Down procedures.
*	Pressure gauge threads are coated with a special epoxy at the factory. For easy removal soak the valve assembly in hot water (180° F/82°C) for two to four minutes. Remove gauge with a 7/16" open end wrench.	



PARTS LIST for 65 lb. Stored Pressure Wheeled Halotron I **Extinguisher Models**

673 - 16" Semi-Pneumatic Galvanized Wheels B673 - 16" Semi-Pneumatic Non-Galvanized Wheels





PARTS LIST for 150 lb. Stored Pressure Wheeled Halotron I **Extinguisher Models**

674 - 16" Semi-Pneumatic Galvanized Wheels

675 - 36" x 6" Steel Wheels

B675 - 36" x 2 1/2" Steel W Rubber Tread Wheels	3	B674 - 16" Semi-Pneumatic Non-Galvanized Whee
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OWNERS SERVICE MANUAL NO. 05615 INSTALLATION, OPERATING & SERVICING INSTRUCTIONS

All fire extinguishers should be installed, inspected and maintained in accordance with the National Fire Protection Association standard titled "Portable Fire Extinguishers", NFPA-10 and the requirements of local authorities having jurisdiction.

When maintenance is indicated it should be performed by trained persons having proper equipment. Fire extinguishers are pressure vessels and must be treated with respect and handled with care. They are mechanical devices and require periodic maintenance to be sure that they are ready to operate properly and safely. Amerex strongly recommends that the maintenance of portable fire extinguishers be done by a trained professional – your local authorized Amerex Distributor.

Amerex Corporation makes original factory parts available to insure proper maintenance – USE OF SUBSTITUTE PARTS RELEASES AMEREX OF ITS WARRANTY OBLIGATIONS. Amerex parts have machined surfaces and threads that are manufactured to exacting tolerances.

O-rings, hoses, nozzles, and all metal parts meet precise specifications and are subjected to multiple in-house inspections and tests for acceptability. There are substitute parts available that may be incorrectly labeled as UL component parts, some are advertised as Amerex type. None of these meet UL requirements and all of them void the Amerex extinguisher warranty and UL listing. DO NOT SUBSTITUTE.

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

REFERENCES IN THIS MANUAL:

AVAILABLE FROM:

NFPA-10 Portable Fire Extinguishers

Compressed Gas Cylinders

National Fire Protection Association 1 Batterymarch Park, P.O, Box 9101 Quincy, MA 02269-9101

CGA C-1 Methods for Hydrostatic Testing of Compressed Gas Cylinders CGA C-6 Standard for Visual Inspection of Compressed Gas Association, Inc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923

AMEREX CORPORATION - P.O. BOX 81 - TRUSSVILLE, ALABAMA 35173-0081

Phone: 205/655-3271 Fax: 800/654-5980

e-mail: sales@amerex-fire.com Web Page: http://www.amerex-fire.com

<u>33 GALLON (AR-AFFF) ALCOHOL RESISTANT FOAM FIRE EXTINGUISHER</u> MODEL 630 WHEELED / MODEL 631 STATIONARY 23 CU FT NITROGEN CYLINDER OPERATED

INTRODUCTION

Amerex Model 630 33 gal. Wheeled and Model 631 Stationary AR-AFFF foam fire extinguisher provides large volume Class A and Class B firefighting capability. The Model 630 can be transported and operated by one person and the Model 631 fits easily into a pick-up truck. The alcohol resistant AR-AFFF foam charge makes it particularly effective on fires and spills involving hydrocarbons, alcohols, esters, ketones and gasohols. The nitrogen cylinder operated design features a unique stainless steel agent storage cylinder which requires no interior coating to prevent corrosion. The agent cylinder is connected to a high pressure nitrogen cylinder through quick opening "T" handle type valve. Field recharging is possible but to provide optimum extinguisher reliability, recharging should be performed by persons trained in fire extinguisher maintenance and servicing. This manual should be used as a guide for installing, operating and servicing this extinguisher. The best place to have your extinguisher serviced and recharged is your "Authorized Amerex Distributor" who has the professional experience and equipment to do it properly.

THIS MANUAL IS ATTACHED TO EVERY NEW EXTINGUISHER SHIPPED FROM THE FACTORY. IT CONTAINS VALUABLE INFORMATION WHICH SHOULD BE STUDIED BY EVERYONE WHO WILL USE OR SERVICE THE EXTINGUISHER. THE MANUAL SHOULD BE STORED IN A CONVENIENT LOCATION FOR EASY REFERENCE.

PREPARING YOUR NEW EXTINGUISHER

WARNING: THIS FIRE EXTINGUISHER IS SHIPPED FROM THE FACTORY EMPTY. AFTER INITIAL PREPARATIONS, CAREFULLY FOLLOW THE RECHARGING INSTRUCTIONS BEFORE PLACING IT INTO SERVICE.

- 1. Remove all wrappings, straps and pallet retaining bolts.
- 2. Examine the extinguisher for shipping damage. Check to make sure that you have received the Model 534 gal. AR-AFFF foam concentrate charge which is packaged with the extinguisher.
- 3. Fill the extinguisher by carefully following the Recharge instructions (Page 8).
- 4. Remove the nitrogen cylinder protective shipping cap. Save the cap as it must be installed whenever a charged nitrogen cylinder is transported. Remove temporary (shipping) ring pin and install large ring pin.
- 5. Install new lockwire seal. Check the nitrogen cylinder pressure. The gauge should read approximately 2015 psig (13.9 mPa) at 70°F (21°C) ambient temperature. See the "Troubleshooting Guide" for pressure-temperature allowances. The lockwire seal should be intact.
- 6. Remove (and save) the Safety Vent Plug installed on all "T" handle nitrogen valves. Connect the nitrogen supply hose firmly to the nitrogen cylinder valve. Make sure that there are no kinks in this hose.
- 7. Disconnect the discharge hose assembly from the agent cylinder. Make sure that the hose and nozzle are unobstructed and that the P/N 07411 Moisture Seal is undamaged and properly seated on the agent cylinder discharge fitting. Reconnect the discharge hose to the agent cylinder and with the nozzle in the closed (forward) position, place it on the storage rack. (See Page 8)
- 8. Record the date the unit is being placed into service on the inspection tag and attach it to the extinguisher.
- 9. Remove the caution (not charged) tag.

INSTALLATION

Do not place this extinguisher close to a potential fire hazard. Amerex recommends location no less than a 50 foot distance from the hazard while leaving an unobstructed access. Avoid placing it in an extremely hot or cold place. The operational temperature range for this extinguisher is +35°F to +120°F (+2°C to +49°C). The extinguisher should be adequately protected if temperatures outside of this range are anticipated. Keep the extinguisher clean and free from dirt, ice, chemicals and any contaminants that may interfere with its proper operation. DO NOT FUNCTIONALLY TEST THIS FIRE EXTINGUISHER. (Testing or any use may cause the extinguisher to gradually lose extinguishing agent over a period of time and make the extinguisher ineffective.)

WARNING: The models 630 and 631 AR-AFFF foam fire extinguishers have been tested and listed

for Class A & B fires only. DO NOT USE ON CLASS C FIRES INVOLVING ENERGIZED ELECTRICAL EQUIPMENT, CLASS D FIRES OR ANY FLAMMABLES THAT WILL

REACT WITH WATER.

WARNING: These extinguishers must be located in an area in which they will be protected from

freezing. THERE ARE NO KNOWN ANTI-FREEZE ADDITIVES WHICH WILL PROTECT THESE UNITS FROM FREEZING without adversely affecting the foam fire fighting effectiveness. In some cases, a properly sized barrel heater may afford adequate

protection.

OPERATION

NOTE: Persons expected to use this extinguisher should be trained in initiating its operation and in the proper fire fighting technique. Familiarize all personnel with this information before an emergency occurs.

- 1. Move the extinguisher to within approximately 50 feet of the fire site and remove ring (safety) pin. Pull "T" handle to open nitrogen valve. This will pressurize the extinguisher.
- 2. Remove nozzle from the mount, and with the nozzle lever in the closed position, pull hose from rack.
- 3. Start back 30 feet from the fire and aim at base of fire nearest you.
- 4. Hold hose and nozzle firmly and be prepared for discharge recoil. Open nozzle by pulling the handle toward you. Slowly sweep side to side across the base of the fire and past both edges. Progressively follow up until the fire is extinguished. **Note:** Do not cover the nozzle aspirating holes when discharging this extinguisher.

Discharge Time (approx.): 60 seconds Effective Range of the 35 – 40 feet

agent throw is:

Hose Length: 50 feet

RECHARGE FIRE EXTINGUISHERS IMMEDIATELY AFTER ANY USE

SHUTDOWN

- 1. After making sure that the fire has been completely extinguished, expel all remaining extinguishing agent and pressure, then push the nozzle lever forward to the closed position. Close the nitrogen valve (PUSH "T" HANDLE TO CLOSED POSITION).
- 2. When the hose is empty, push the nozzle lever to the CLOSED position.
- 3. Slowly open the nozzle lever again to insure that the extinguisher and hose have been completely cleared of agent and pressure.
- 4. Coil the extinguisher hose onto the storage rack and position the nozzle onto the mount in preparation for transport to the recharge location.

CAUTION: DO NOT TRANSPORT A NITROGEN CYLINDER WITH ANY REMAINING PRESSURE WITHOUT INSTALLING THE PROTECTIVE SHIPPING CAP.

VENTING DEVICE

(Standard on all Stationary Extinguishes, Optional on Wheeled Extinguishers)

A venting device has been installed on all stationary extinguishers to provide a means of safely and easily relieving residual nitrogen pressure from the agent cylinder while utilizing the same pressure to evacuate or "blow down" the hose.

CAUTION: VALVE SHUT-OFF HANDLES MUST BE IN THE POSITIONS SHOWN WHEN EXTINGUISHER IS ON STANDBY OR IN ACTUAL OPERATION.

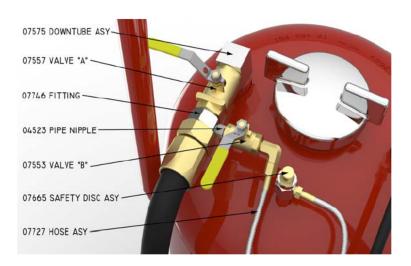


Figure 1

OPERATION – After the fire has been successfully extinguished and it has been determined that it is completely out:

- Confirm that the discharge nozzle lever is in the CLOSED position.
- Close the nitrogen valve (move "T" handle to CLOSED position)
- Remove ring pin and CLOSE agent cylinder valve (Valve A in Fig. 1) to prevent further chemical from entering the hose.
- Remove ring pin and OPEN pressure vent valve (Valve B in Fig. 1) to allow nitrogen gas to by-pass the chemical and pressurize the hose.
- Open discharge nozzle to vent all residual chemical and nitrogen gas pressure.
- Re-open nitrogen valve if additional pressure is required.
- When recharging this unit, reset agent cylinder and vent valves, install ring pins and lockwire seals.

AMEREX CORPORATION DOES NOT SERVICE, MAINTAIN OR RECHARGE FIRE EXTINGUISHERS. THIS MANUAL IS PUBLISHED AS A GUIDE TO ASSIST QUALIFIED SERVICE PERSONNEL IN THE INSPECTION, MAINTENANCE AND RECHARGE OF AMEREX FIRE EXTINGUISHERS ONLY. NO INSTRUCTION MANUAL CAN ANTICIPATE ALL POSSIBLE MALFUNCTIONS THAT MAY BE ENCOUNTERED IN THE SERVICE OF FIRE EXTINGUISHERS. DUE TO THE POSSIBILITY THAT PRIOR SERVICE PERFORMED ON THIS EQUIPMENT MAY HAVE BEEN IMPROPERLY DONE, IT IS EXTREMELY IMPORTANT THAT ALL WARNINGS, CAUTIONS AND NOTES IN THIS MANUAL BE CAREFULLY OBSERVED. FAILURE TO HEED THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

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INSPECTING THE EXTINGUISHER

This extinguisher should be inspected at regular intervals (monthly or more often if circumstances dictate) to insure that it is ready for use. Inspection is a "quick check" that a fire extinguisher is available and is in operating condition. It is intended to give reasonable assurance that the fire extinguisher is fully charged. This is done by verifying that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious physical damage or condition to prevent its operation.

THE AR-AFFF FOAM CHARGE IN THIS EXTINGUISHER MUST BE REPLACED EVERY THREE YEARS PER NFPA 10. USE ONLY THE AMEREX MODEL 534 CHARGE. USE OF ANY OTHER AGENTS OR SUBSTITUTES WILL VOID THE UL LISTING AND AMEREX WARRANTY. SEE THE RECHARGE SECTION OF THIS MANUAL FOR THE APPROPRIATE EMPTYING AND RECHARGING INSTRUCTIONS.

MAINTENANCE

At least once a year or more frequently if circumstances require, maintenance should be performed. Maintenance is a "thorough check" of the extinguisher. It is intended to give maximum assurance that a fire extinguisher will operate effectively and safely. It includes a thorough examination for physical damage or condition to prevent its operation and any necessary repair or replacement. It will normally reveal if hydrostatic testing or internal maintenance is required.

NOTE: The Getz Manufacturing Universal Wheeled Extinguisher Service Kit is available so that NFPA-10 required maintenance functions can be performed.

MAINTENANCE – SERVICE PROCEDURE

WARNING: BEFORE SERVICING BE SURE THE EXTINGUISHER AGENT CYLINDER IS NOT PRESSURIZED. THIS PROCEDURE IS BEST ACCOMPLISHED WITH THE EXTINGUISHER IN AN UPRIGHT POSITION AND ON A LEVEL SURFACE.

- Clean extinguisher to remove dirt, grease or foreign material. Check to make sure that the instruction nameplate is securely fastened and legible. Inspect the cylinders for corrosion, abrasion, dents or weld damage. If any damage is found, hydrostatically test in accordance with instructions in CGA C-1 and C-6 and NFPA 10.
- 2. Inspect the extinguisher for damaged, missing or substitute parts. A careful inspection should be made of the safety relief to make sure that it has not ruptured, corroded or been tampered with. Only factory replacement parts are approved for use on Amerex fire extinguishers.
- 3. Check the date of manufacture printed on the extinguisher label (nameplate) or on the agent cylinder dome. The agent cylinder, the discharge hose assembly and nitrogen supply hose must be hydrostatically tested every 5 years. Test pressure:
 - a. Agent Cylinder 450 psi (3103 kPa)
 - b. Hose Assembly 300 psi (2068 kPa)
 - c. Nitrogen Supply Hose 3000 psi (20,628 kPa)
- 4. Check the hydrostatic test date on the crown of the nitrogen cylinder. The nitrogen cylinder must be retested in accordance with DOT regulations.
- 5. Check the gauge on the nitrogen cylinder. If the pressure is below 1700 psig (11.7 mPa) repressurize the cylinder to 2015 psig (13.9 mPa) or replace it. A low gauge pressure may indicate leakage. Check for leaks. A low gauge reading may also result from low temperature. See the temperature/pressure relationship chart in the Troubleshooting Guide. Check the tamper indicator (lockwire seal) on the nitrogen valve and replace if necessary.
- 6. Wheeled extinguishers (Model 630) Inspect the wheels to insure they rotate freely. Lubricate as required. Stationary extinguishers (Model 631) Check to insure that any mounting fixtures are secure.
- 7. WARNING: ALWAYS OPEN THE SHUTOFF NOZZLE HANDLE SLOWLY. ANY PRESSURE IN THE AGENT CYLINDER WILL CAUSE THE EXTINGUISHER TO DISCHARGE. BE PREPARED FOR A POSSIBLE DISCHARGE AND NOZZLE RECOIL. ANY EVIDENCE OF AGENT IN THE NOZZLE INDICATES THAT THE UNIT MAY HAVE BEEN USED AND THE USE NOT REPORTED.

Disconnect the discharge hose from the agent cylinder. Check the couplings, hose and hose gaskets for damage or deterioration – replace as necessary.

- 8. To perform an operational integrity check on the discharge hose and nozzle combination:
 - a. Connect the test kit hose adapter to the female end of the discharge hose.
 - b. Close the discharge nozzle shut-off lever and properly secure it.
 - c. Connect a properly regulated and verified nitrogen pressure source, set to the extinguisher operating pressure (235-245 psi) to the test kit hose adapter.

- d. Slowly pressurize the discharge hose/nozzle assembly to the extinguisher operating pressure and check for leaks or distortion.
- e. Operate the nozzle lever to ensure proper operation and to clear the hose of any obstructions. If hose is obstructed refer to Troubleshooting Guide. Make sure that the nozzle aspirating holes and screen are clear and unobstructed clean if necessary.
- f. Close the nitrogen pressure source and slowly relieve remaining pressure by fully operating the nozzle lever.
- 9. Remove the agent cylinder cap and examine it closely for any signs of damage, cracks or thread wear. Clean the agent cylinder fill cap threads and thread vent port on the cap with a stiff bristle nylon brush. Remove the fill cap gasket and check for wear, cracks or tears replace if necessary. Lightly lubricate the gasket with Visilox and reinstall.
- 10. Check the condition of the chemical solution. The level of the solution should be 9 inches (23 cm) below the top of the fill opening. Recharge if contaminated, if the solution level is down or if the charge is over three years old. See Recharge instructions and procedures.
- 11. Place the service kit Vent Spacer on top of the agent cylinder fill opening collar. Check again to see that the fill cap thread vent is clean and that the agent fill cap gasket is in place. Install the agent fill cap securely over the vent spacer.
- 12. CAUTION: The agent cylinder cap threads must be clear and the cap securely installed onto the vent spacer and agent cylinder to allow pressure to slowly vent after performing the siphon tube clearing and gas tube integrity checks.

To perform a siphon tube clearing and gas tube integrity check:

- a. Remove the service kit Agent Hose Adapter from the discharge hose assembly and install it securely onto the agent cylinder siphon tube outlet.
- b. Using a regulated nitrogen pressure source set to the extinguisher operating pressure, slowly and briefly pressurize the agent cylinder (the siphon tube should be clear within a couple of seconds and the agent cylinder pressure slowly vent from the fill cap thread vent). Pressure and/or foam agent leaks from the gas tube inlet port (where the hose connects) will indicate a defective gas tube and will require that the agent cylinder be emptied and the gas tube replaced.
- c. Close the nitrogen pressure source and allow all pressure to slowly vent from the thread vent port on the fill cap.
- d. AFTER ALL PRESSURE HAS BEEN RELIEVED, <u>SLOWLY</u> OPEN THE FILL CAP AND <u>REMOVE</u> THE TEST KIT VENT SPACER.
- e. Re-examine the foam agent to determine if any obstructions were cleared from the siphon tube and have risen to the liquid surface.
- f. Clean the fill cap and agent cylinder thread surfaces. Install the fill cap gasket and securely install fill cap.
- 13. Disconnect the high pressure hose from the nitrogen cylinder valve. Securely install the service kit Nitrogen Cylinder Pressure Check Gauge Assembly to the nitrogen cylinder valve outlet and verify the indicated cylinder gauge pressure. Nitrogen pressure should conform to the temperature correction chart provided in the Troubleshooting section of this manual. Close the nitrogen cylinder valve and disconnect the Pressure Check Gauge Assembly.

WARNING: IF THE NITROGEN CYLINDER VALVE HAS A "T" HANDLE QUICK OPENING OR A HANDWHEEL QUICK OPENING TRIP RELEASE, THE SAFETY VENT PLUG SHIPPED WITH THE EXTINGUISHER, OR THE TEST KIT SAFETY VENT PLUG, MUST BE INSTALLED TO PROTECT SERVICE PERSONNEL FROM A HIGH VELOCITY DISCHARGE IN CASE THE LEVER IS ACCIDENTALLY OPENED.

- 14. Install a new Amerex P/N 07411 Moisture Seal per instructions in the package. Securely connect the discharge hose to the extinguisher. When assembling the hose to the agent cylinder or nozzle to the hose, tighten the coupling ¼ turn after contacting the hose gasket.
- 15. Coil the hose on to the extinguisher hose rack using the Reverse Loop Procedure (see Page 10). Install nozzle with the lever in the Closed (forward) position into the nozzle mount.
- 16. Remove the safety vent plug from the nitrogen cylinder. Reconnect the high pressure hose securely to the nitrogen cylinder valve. Wipe the extinguisher clean. Record service data on the inspection tag according to NFPA-10 requirements and attach to extinguisher. Return extinguisher to its proper location.

RECHARGE

CAUTION: THE FIRE EXTINGUISHING AGENT IN THIS EXTINGUISHER MUST BE COMPLETELY REPLACED EVERY THREE YEARS.

WARNING: BEFORE ATTEMPTING TO RECHARGE BE SURE THIS EXTINGUISHER IS COMPLETELY DEPRESSURIZED. THERE IS A CHECK VALVE IN THE SYSTEM WHICH PREVENTS NITROGEN PRESSURE FROM ESCAPING FROM THE AGENT CYLINDER WHEN THE NITROGEN HOSE IS DISCONNECTED. THE AGENT CYLINDER MAY BE PRESSURIZED EVEN THOUGH NO PRESSURE ESCAPES FROM THE CYLINDER NITROGEN CONNECTION.

RECHARGING PROCEDURE

- To depressurize:
 - a. Close the nitrogen valve.
 - b. Open the nozzle lever slowly to discharge all remaining agent and pressure (be prepared for nozzle recoil).
 - c. Insure that all pressure has escaped before further disassembly.
- Carefully remove the fill cap. Thoroughly rinse the complete interior of the agent cylinder with clean water. Dump or siphon all liquid from the cylinder. Detach discharge hose from the agent cylinder and the nozzle assembly from the hose. Remove the ruptured moisture seal from the female hose coupling and flush the hose and nozzle assemblies with clean water.
- 3. Perform Maintenance-Service Procedures 1 through 6.
- 4. Detach the hose from the nitrogen cylinder, install the shipping cap, unscrew the wing nuts and remove the nitrogen cylinder from the extinguisher.
- 5. Fill the agent cylinder with 28 gallons of clean, fresh water (to a level just touching the bottom of the internal nitrogen tube). Pour 2.69 gallons (10.18L) 22.45 lbs. (10.18 kg) of clean, fresh water into an Amerex
 - 2.31 gallon (8.74L) Model 534 AR-AFFF charge. (NOTE: Charge contains 2.31 gallons (8.74L) of concentrate in a 5 gallon pail.) Carefully stir until you have a complete and homogeneous mixture. Slowly pour the solution into the agent cylinder. The liquid level in the extinguisher cylinder should now be 9 inches (23 cm) from the top of the fill opening. Clean, lubricate and install (or replace if necessary) the fill cap gasket. Install the fill cap and tighten securely. Rock the extinguisher back and forth for two minutes to accomplish a more thorough agent mix.

WARNING: DO NOT OVERFILL THE EXTINGUISHER. THIS COULD CAUSE A MALFUNCTION OR PREMATURE RUPTURE OF THE SAFETY DISC.

6. Install an Amerex P/N 03817 23 cu. Ft. nitrogen cylinder (pressurized to 2015 psi). Remove the shipping cap, tighten the wing nuts securely and attach the nitrogen hose.

NOTE: NITROGEN CYLINDERS WITH A "T" HANDLE "QUICK OPENING" VALVE. REMOVE SMALL TEMPORARY RING (SAFETY) PIN AND INSTALL A LARGE RING PIN. INSTALL A LOCKWIRE SEAL (TAMPER INDICATOR.) NITROGEN CYLINDERS WITH A HANDWHEEL OR LEVER ACTUATED "QUICK OPENING" VALVE. A LEADWIRE SEAL MUST BE INSTALLED.

- 7. Remove the remainder of the ruptured moisture seal from the agent cylinder fitting. Replace with a new
 - P/N 07411 Moisture Seal Assembly. Carefully follow the installation instructions contained in the P/N 07411 package including the installation of a new hose gasket in the female house coupling.
- 8. Reattach the hose to the extinguisher (tighten hand tight plus a ¼ turn). Properly coil the hose onto the storage rack ring leverage loop. Reattach the shutoff nozzle firmly to the hose and store it in the mount with the shutoff lever in the **closed** (forward) position.
- 9. Record the service date on the inspection tag and place the extinguisher in its proper location

TROUBLESHOOTING GUIDE

WARNING: BEFORE ATTEMPTING TO CORRECT ANY LEAKAGE PROBLEM, BE SURE THAT THE CYLINDER AND HOSE ARE COMPLETELY EMPTY AND DEPRESSURIZED. Check to determine the source of a leak before the extinguisher is emptied. Leakage repairs will require depressurization and removal of the valve assembly. Use Getz HR-1 or other "APPROVED" recharge/recovery system to depressurize extinguisher.

	PROBLEM	CORRECTIVE ACTION					
1.	Nitrogen cylinder gauge reads low or high						
2.	Nitrogen pressure is too low. Valve is closed. Tamper seal is intact. There is pressure in the agent and nitrogen cylinders.	Follow Recharge Procedure for restoring the extinguisher to					
3.	Nitrogen pressure is too low. Valve is closed. Tamper seal is intact. No pressure observed in the agent cylinder.	with a properly charged nitrogen cylinder.					
4.	Shutoff nozzle does not move freely.	Disassemble, clean and lubricate.					
5.	Unable to remove the agent cylinder cap.	Agent cylinder may be pressurized. Make no further attempt to remove the cap until this is checked. See the Recharge Procedure for proper depressurization method.					
6.	Nitrogen hose cut, cracked or abraded.	Replace hose assembly with P/N 02234.					
7.	Chemical agent and pressure leaking from the safety disc assembly.	Inspect safety outlet for tightness or damage. Tighten if necessary. NOTE: Only tighten the large hex nut of the assembly. The small round nut containing the holes is factory set to a specific torque value. Do not attempt to adjust. If damaged or ruptured, replace complete Amerex P/N 03787/07665 safety disc assembly.					



1

Connect hose coupling to outlet on the extinguisher. Lay hose straight on ground to its full 50 ft. length. Start first regular loop counter-clockwise by placing between side brackets and over the top bracket.



2

The second loop is a REVERSE loop. Notice that the hose passes behind the loop on this reverse loop. If instructions are followed, the hose will uncoil without kinks.



3

The next loop is a regular "hose in front" loop. Succeeding loops are alternated: reverse, front, reverse, etc. for six full loops.



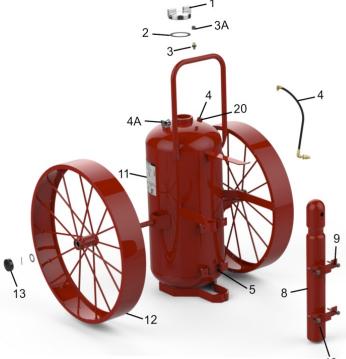
4

Adjust the loops so that the nozzle fits into the nozzle mount. Loops should be approximately the same size.



PARTS LIST for 33 Gal. AR-AFFF Foam 23 CU. FT. Nitrogen Cylinder Wheeled/Stationary Extinguisher Models

630 - 33 gal. AR-AFFF 631 - 33 gal. AR-AFFF STA.





ITEM NO.	PART NO.	DESCRIPTION
1	06993	Cap, Agent Cylinder
	12576	Cap, Agent Cylinder with Pressure Indicator
2	02272	Gasket, Cap
3	03787	Safety Disc Assembly - 630
	07665	Safety Disc Assembly - 631
ЗА	13956	Protective Vinyl Cap
4	02234	Nitrogen Hose Assembly
	06883	Nitrogen Tube Assembly
4A	06784	Downtube Assembly
5	13958	Bumper, Rubber
6	01387	Lock Wire Seal (Yellow)
7	12467	Nitrogen Valve with Gauge ("T" Handle Quick Release)
7A	16516	Safety Disc, Gasket and Nut Assembly
7B	06373	Valve Lever ("T" Handle - Complete)
7C	10213	Gauge - 3000 PSI
7D	09897	Valve Stem Assembly
7E	12466	Spring
7F	09627	Retainer
8	03817	Nitrogen Cylinder (23 cu. ft.) - Charged with Cap
9	04072	Retaining Strap - Nitrogen Cylinder
10	11970	Bolt, Washer and Wing Nut
11	07479	Pictogram - 630, 631
12	07026	Wheel Assembly 36" x 6"
	07607	Wheel Assembly 36" x 6" with Rubber Tread
13	07389	Hub Cap with Washer and Cotter Pin
14	06814	Hose Assembly - 50 ft.
15	07411	Moisture Seal
16	03877	Gasket, Hose and Nozzle
17	06279	Ball Valve Assembly
18	06749	Nozzle Tip (Aerated)
19	07560	Nozzle Assembly (Ball Valve & Tip)
20	04444	Nitrogen Elbow
21	00532	Chain (Nylon) for Ring Pin
22	00160	Ring Pin Stainless Steel

Boone National Guard Center Boone National Guard Frankfort Frankfort, KY 40601

Inquiry Number: 5319646.3

June 01, 2018

Certified Sanborn® Map Report



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

Certified Sanborn® Map Report

06/01/18

Site Name: Client Name:

Boone National Guard Center AECOM

Boone National Guard Frankfor 12120 Shamrock Plaza Frankfort, KY 40601 Omaha, NE 68154

EDR Inquiry # 5319646.3 Contact: Jacquelyn Harrington



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Certified Sanborn Results:

Certification # DA27-40BE-9739

PO# NA

Project 60552172.0005

UNMAPPED PROPERTY

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Sanbom® Library search results
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Boone National Guard Center

Boone National Guard Frankfort Frankfort, KY 40601

Inquiry Number: 5319646.5

June 04, 2018

The EDR Aerial Photo Decade Package



EDR Aerial Photo Decade Package

06/04/18

Site Name: Client Name:

Boone National Guard Center

Boone National Guard Frankfol 12120 Shamrock Plaza Frankfort, KY 40601 Omaha, NE 68154

EDR Inquiry # 5319646.5 Contact: Jacquelyn Harrington



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Search Results:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2008	1"=500'	Flight Year: 2008	USDA/NAIP
1997	1"=500'	Acquisition Date: March 11, 1997	USGS/DOQQ
1993	1"=750'	Flight Date: April 10, 1993	USGS
1985	1"=500'	Flight Date: April 18, 1985	USGS
1969	1"=500'	Flight Date: May 15, 1969	USGS
1958	1"=500'	Flight Date: April 18, 1958	USGS
1952	1"=500'	Flight Date: March 12, 1952	USGS

AECOM

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Boone National Guard Center

Boone National Guard Frankfort Frankfort, KY 40601

Inquiry Number: 5319646.2s

June 01, 2018

The EDR Radius Map™ Report with GeoCheck®



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A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

BOONE NATIONAL GUARD FRANKFORT FRANKFORT, KY 40601

COORDINATES

Latitude (North): 38.1892380 - 38° 11' 21.25" Longitude (West): 84.9052120 - 84° 54' 18.76"

Universal Tranverse Mercator: Zone 16 UTM X (Meters): 683457.5 UTM Y (Meters): 4228679.5

Elevation: 776 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 5939421 FRANKFORT WEST, KY

Version Date: 2013

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20140705 Source: USDA

MAPPED SITES SUMMARY

Target Property Address: BOONE NATIONAL GUARD FRANKFORT FRANKFORT, KY 40601

Click on Map ID to see full detail.

MAP				RELATIVE	DIST (ft. & mi.)
ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	ELEVATION	DIRECTION
1	KYARNG BOONE NATIONA	120 MINUTEMAN PKWY (SEMS, RCRA-SQG, NY MANIFEST	Higher	1619, 0.307, ESE
A2	KY DEPT OF MILITARY	100 MINUTEMAN PKWY	KY SHWS, KY PSTEAF, KY UST, KY AIRS, KY NPDES	Higher	2863, 0.542, East
A3	NDNODS RAMEY RANGE	100 MINUTEMAN PARKWA	UXO	Higher	2863, 0.542, East
4	HOPE LUTHERAN CHURCH	1251 LOUISVILLE ROAD	KY SHWS	Lower	3956, 0.749, South

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list NPL Proposed NPL NPL LIENS	Proposed National Priority List Sites
Federal Delisted NPL site lis	st
Delisted NPL	National Priority List Deletions
Federal CERCLIS list	
FEDERAL FACILITY	Federal Facility Site Information listing
Federal CERCLIS NFRAP si	ite list
SEMS-ARCHIVE	Superfund Enterprise Management System Archive
Federal RCRA CORRACTS	facilities list
CORRACTS	. Corrective Action Report
Federal RCRA non-CORRA	CTS TSD facilities list
RCRA-TSDF	RCRA - Treatment, Storage and Disposal
Federal RCRA generators li	ist
	RCRA - Large Quantity Generators RCRA - Conditionally Exempt Small Quantity Generator
	ls / engineering controls registries
US ENG CONTROLS	Land Use Control Information System Engineering Controls Sites List Sites with Institutional Controls
Federal ERNS list	
ERNS	Emergency Response Notification System

State and tribal landfill and/or s	solid waste disposal site lists
------------------------------------	---------------------------------

KY SWF/LF..... Solid Waste Facilities List

State and tribal leaking storage tank lists

INDIAN LUST...... Leaking Underground Storage Tanks on Indian Land KY SB193..... SB193 Branch Site Inventory List

State and tribal registered storage tank lists

FEMA UST...... Underground Storage Tank Listing INDIAN UST...... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

KY ENG CONTROLS...... Engineering Controls Site Listing KY INST CONTROL...... State Superfund Database

State and tribal voluntary cleanup sites

KY VCP...... Voluntary Cleanup Program Sites INDIAN VCP...... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

KY BROWNFIELDS..... Kentucky Brownfield Inventory

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI...... Open Dump Inventory IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register KY CDL..... Clandestine Drub Lab Location Listing US CDL...... National Clandestine Laboratory Register

Local Land Records

LIENS 2..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System

KY SPILLS..... State spills

Other Ascertainable Records

RCRA NonGen / NLR...... RCRA - Non Generators / No Longer Regulated

FUDS..... Formerly Used Defense Sites DOD...... Department of Defense Sites

SCRD DRYCLEANERS...... State Coalition for Remediation of Drycleaners Listing

US FIN ASSUR..... Financial Assurance Information

EPA WATCH LIST..... EPA WATCH LIST

2020 COR ACTION........... 2020 Corrective Action Program List

TSCA..... Toxic Substances Control Act

TRIS...... Toxic Chemical Release Inventory System

SSTS..... Section 7 Tracking Systems ROD...... Records Of Decision RMP..... Risk Management Plans

RAATS...... RCRA Administrative Action Tracking System

PRP..... Potentially Responsible Parties PADS...... PCB Activity Database System

ICIS...... Integrated Compliance Information System

Act)/TSCA (Toxic Substances Control Act)

..... Material Licensing Tracking System COAL ASH DOE..... Steam-Electric Plant Operation Data

COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List

PCB TRANSFORMER_____PCB Transformer Registration Database

RADINFO...... Radiation Information Database

HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing

DOT OPS..... Incident and Accident Data

CONSENT..... Superfund (CERCLA) Consent Decrees

INDIAN RESERV..... Indian Reservations

FUSRAP..... Formerly Utilized Sites Remedial Action Program

UMTRA..... Uranium Mill Tailings Sites

LEAD SMELTERS..... Lead Smelter Sites

US AIRS..... Aerometric Information Retrieval System Facility Subsystem

US MINES..... Mines Master Index File

ABANDONED MINES..... Abandoned Mines

FINDS_____Facility Index System/Facility Registry System ECHO..... Enforcement & Compliance History Information DOCKET HWC..... Hazardous Waste Compliance Docket Listing FUELS PROGRAM..... EPA Fuels Program Registered Listing

KY ASBESTOS..... Asbestos Notification Listing

KY COAL ASH..... Coal Ash Disposal Sites KY DRYCLEANERS..... Drycleaner Listing

KY Financial Assurance Information Listing

KY LEAD..... Environmental Lead Program Report Tracking Database KY UIC...... UIC Information

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants EDR Hist Auto_____ EDR Exclusive Historical Auto Stations

EDR Hist Cleaner..... EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in bold italics are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS list

SEMS: SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the SEMS list, as provided by EDR, and dated 01/09/2018 has revealed that there is 1 SEMS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
KYARNG BOONE NATIONA	120 MINUTEMAN PKWY (ESE 1/4 - 1/2 (0.307 mi.)	1	8

State- and tribal - equivalent CERCLIS

KY SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Protection's Uncontrolled Site Branch List.

A review of the KY SHWS list, as provided by EDR, and dated 03/21/2018 has revealed that there are 2

KY SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page	
KY DEPT OF MILITARY Facility Id: 1423 Facility Status: Closed		E 1/2 - 1 (0.542 mi.)	A2	55	
Lower Elevation	Address	Direction / Distance	Map ID	Page	
HOPE LUTHERAN CHURCH Facility Id: 52359 Facility Status: Closed	1251 LOUISVILLE ROAD	S 1/2 - 1 (0.749 mi.)	4	78	

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

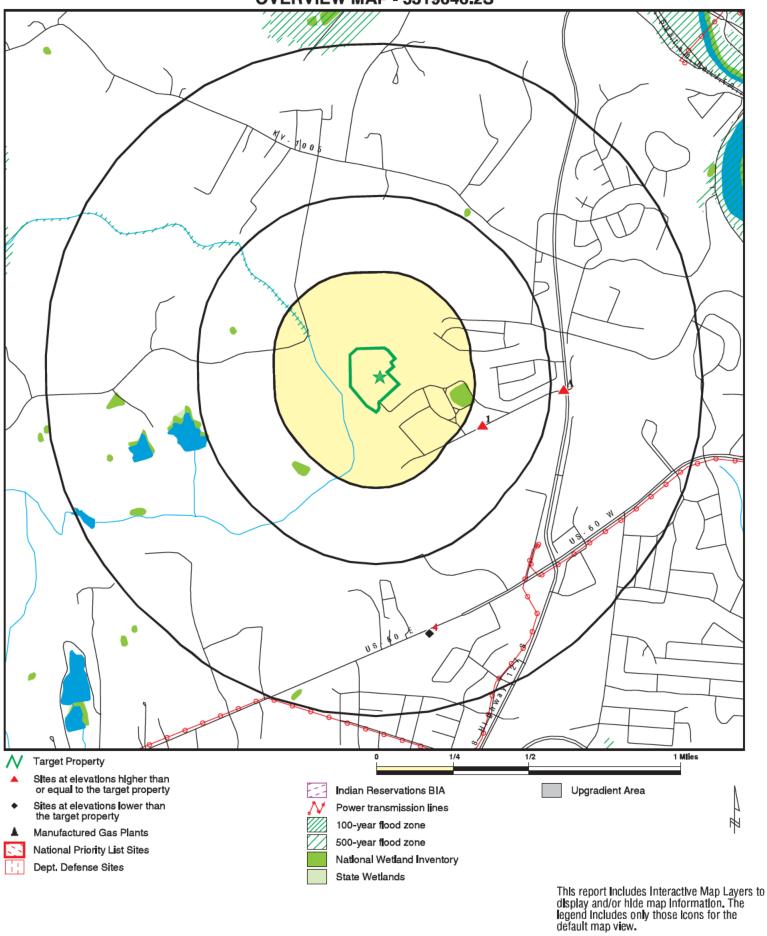
UXO: A listing of unexploded ordnance site locations

A review of the UXO list, as provided by EDR, and dated 09/30/2016 has revealed that there is 1 UXO site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NDNODS RAMEY RANGE	100 MINUTEMAN PARKWA	E 1/2 - 1 (0.542 mi.)	A3	78

There were no unmapped sites in this report.

OVERVIEW MAP - 5319646.2S



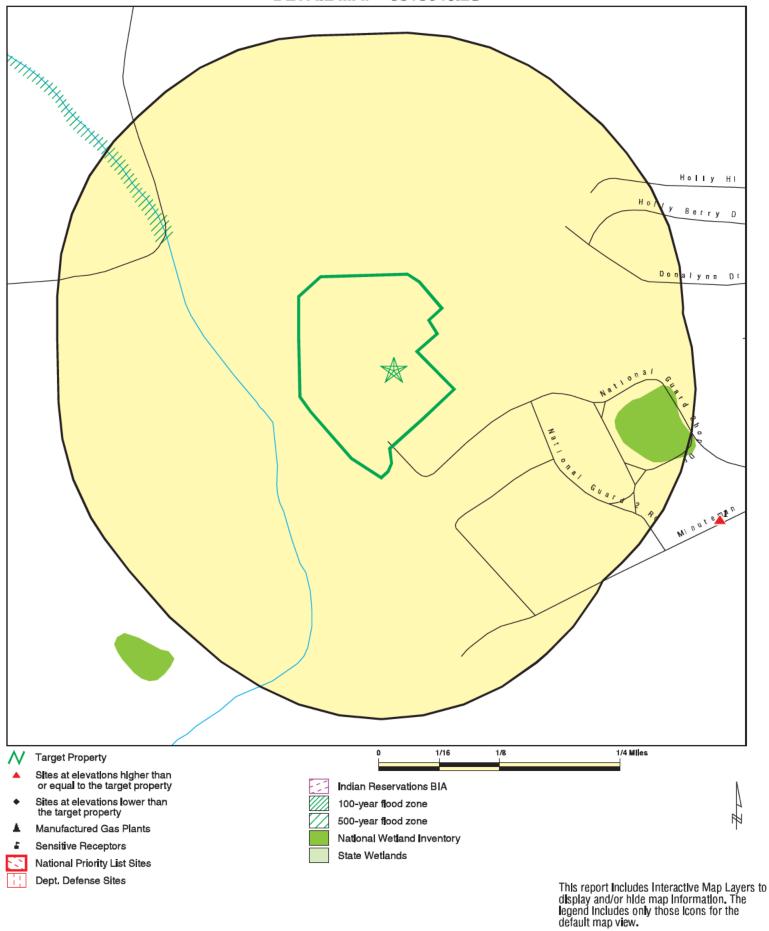
SITE NAME: Boone National Guard Center

ADDRESS: Boone National Guard Frankfort
Frankfort KY 40601

LAT/LONG: 38.189238 / 84.905212

CLIENT: AECOM
CONTACT: Jacquelyn Harrington
INQUIRY #: 5319646.2s
DATE: June 01, 2018 5:16 pm

DETAIL MAP - 5319646.2S



SITE NAME: Boone National Guard Center

ADDRESS: Boone National Guard Frankfort
Frankfort KY 40601

LAT/LONG: 38.189238 / 84.905212

CLIENT: AECOM
CONTACT: Jacquelyn Harrington
INQUIRY #: 5319646.2s
DATE: June 01, 2018 5:17 pm

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMEN	TAL RECORDS							
Federal NPL site list								
NPL Proposed NPL NPL LIENS	1.000 1.000 TP		0 0 NR	0 0 NR	0 0 NR	0 0 NR	NR NR NR	0 0 0
Federal Delisted NPL sit	te list							
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY SEMS	0.500 0.500		0 0	0 0	0 1	NR NR	NR NR	0 1
Federal CERCLIS NFRA	P site list							
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRAC	TS facilities lis	t						
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-COR	RACTS TSD fa	cilities list						
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generator	rs list							
RCRA-LQG RCRA-SQG RCRA-CESQG	0.250 0.250 0.250		0 0 0	0 0 0	NR NR NR	NR NR NR	NR NR NR	0 0 0
Federal institutional con engineering controls re								
LUCIS US ENG CONTROLS US INST CONTROL	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equiva	alent CERCLIS							
KY SHWS	1.000		0	0	0	2	NR	2
State and tribal landfill a solid waste disposal site								
KY SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking	storage tank lis	sts						
KY PSTEAF INDIAN LUST KY SB193	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0
State and tribal registere	ed storage tank	k lists						
FEMA UST	0.250		0	0	NR	NR	NR	0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
KY UST INDIAN UST	0.250 0.250		0 0	0	NR NR	NR NR	NR NR	0 0
State and tribal institutio control / engineering con		;						
KY ENG CONTROLS KY INST CONTROL	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
State and tribal voluntary	cleanup site	s						
KY VCP INDIAN VCP	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
State and tribal Brownfie	lds sites							
KY BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMEN	TAL RECORDS							
Local Brownfield lists				_	_			_
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / S Waste Disposal Sites	olid							
KY SWRCY KY HIST LF INDIAN ODI DEBRIS REGION 9 ODI IHS OPEN DUMPS	0.500 0.500 0.500 0.500 0.500 0.500		0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	NR NR NR NR NR	NR NR NR NR NR NR	0 0 0 0 0
Local Lists of Hazardous Contaminated Sites	waste /							
US HIST CDL KY CDL US CDL	TP TP TP		NR NR NR	NR NR NR	NR NR NR	NR NR NR	NR NR NR	0 0 0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency R	elease Repor	ts						
HMIRS KY SPILLS	TP TP		NR NR	NR NR	NR NR	NR NR	NR NR	0 0
Other Ascertainable Rec	ords							
RCRA NonGen / NLR FUDS DOD SCRD DRYCLEANERS US FIN ASSUR EPA WATCH LIST 2020 COR ACTION	0.250 1.000 1.000 0.500 TP TP 0.250		0 0 0 0 NR NR NR	0 0 0 0 NR NR 0	NR 0 0 0 NR NR NR	NR 0 0 NR NR NR NR	NR NR NR NR NR NR	0 0 0 0 0 0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted		
TSCA	TP		NR	NR	NR	NR	NR	0		
TRIS	TP		NR	NR	NR	NR	NR	0		
SSTS	TP		NR	NR	NR	NR	NR	0		
ROD	1.000		0	0	0	0	NR	0		
RMP	TP		NR	NR	NŘ	NR	NR	0		
RAATS	TP		NR	NR	NR	NR	NR	Õ		
PRP	TP		NR	NR	NR	NR	NR	Ö		
PADS	TP		NR	NR	NR	NR	NR	Ö		
ICIS	TP		NR	NR	NR	NR	NR	0		
FTTS	TP		NR	NR	NR	NR	NR	0		
MLTS	TP		NR	NR	NR	NR	NR	0		
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0		
COAL ASH EPA	0.500		0	0	0	NR	NR	0		
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0		
RADINFO	TP		NR	NR	NR	NR	NR	0		
HIST FTTS	TP		NR	NR	NR	NR	NR	0		
DOT OPS	TP		NR	NR	NR	NR	NR	0		
CONSENT	1.000		0	0	0	0	NR	0		
INDIAN RESERV	1.000		0	0	0	0	NR	0		
FUSRAP	1.000		0	0	0	0	NR	0		
UMTRA	0.500 TP		0	0 ND	0 NR	NR	NR	0		
LEAD SMELTERS US AIRS	TP		NR NR	NR NR	NR NR	NR NR	NR NR	0 0		
US MINES	0.250		0	0	NR NR	NR	NR	0		
ABANDONED MINES	0.250		0	0	NR	NR	NR	0		
FINDS	TP		NR	NR	NR	NR	NR	0		
ECHO	TP		NR	NR	NR	NR	NR	0		
DOCKET HWC	TP		NR	NR	NR	NR	NR	Õ		
UXO	1.000		0	0	0	1	NR	1		
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0		
KY AIRS	TP		NR	NR	NR	NR	NR	0		
KY ASBESTOS	TP		NR	NR	NR	NR	NR	0		
KY COAL ASH	0.500		0	0	0	NR	NR	0		
KY DRYCLEANERS	0.250		0	0	NR	NR	NR	0		
KY Financial Assurance	TP		NR	NR	NR	NR	NR	0		
KY LEAD	TP		NR	NR	NR	NR	NR	0		
NY MANIFEST	0.250		0	0	NR	NR	NR	0		
KY NPDES	TP		NR	NR	NR	NR	NR	0		
KY UIC	TP		NR	NR	NR	NR	NR	0		
EDR HIGH RISK HISTORICA	L RECORDS									
EDR Exclusive Records										
EDR MGP	1.000		0	0	0	0	NR	0		
EDR Hist Auto	0.125		Ō	NR	NR	NR	NR	0		
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0		
EDR RECOVERED GOVERNMENT ARCHIVES										
Exclusive Recovered Govt. Archives										
KY RGA HWS	TP		NR	NR	NR	NR	NR	0		
KT KOATIWO	11		INIX	1417	1417	1417	1417	J		

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
KY RGA LF	TP		NR	NR	NR	NR	NR	0
- Totals		0	0	0	1	3	0	4

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID MAP FINDINGS

Direction Distance

Elevation Site Database(s) EPA ID Number

 1
 KYARNG BOONE NATIONAL GUARD CENTER
 SEMS
 1015731138

 ESE
 120 MINUTEMAN PKWY (BLDG120)
 RCRA-SQG
 KY5211890004

 1/4-1/2
 FRANKFORT, KY 40601
 NY MANIFEST

1/4-1/2 FRANKFORT, KY 40601 0.307 mi. 1619 ft.

Relative: SEMS:

 Higher
 Site ID:
 405860

 Actual:
 EPA ID:
 KY5211890004

796 ft. Cong District: FIPS Code:

FIPS Code: 21073
Latitude: Not reported
Longitude: Not reported
FF: N

NPL: Not on the NPL

Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

SEMS Detail:

 Region:
 4

 Site ID:
 405860

 EPA ID:
 KY5211890004

Site Name: USPFO FOR KENTUCKY

 NPL:
 N

 FF:
 N

 OU:
 0

 Action Code:
 DS

 Action Name:
 DISCVRY

SEQ:

Start Date: 1981-08-13 00:00:00

Finish Date: 8/13/1981
Qual: Not reported
Current Action Lead: EPA Perf

Region: 4

 Site ID:
 405860

 EPA ID:
 KY5211890004

Site Name: USPFO FOR KENTUCKY

 NPL:
 N

 FF:
 N

 OU:
 0

 Action Code:
 PA

 Action Name:
 PA

 SEQ:
 1

Start Date:

Finish Date:

Qual:

Current Action Lead:

Not reported
8/13/1981
N
EPA Perf

RCRA-SQG:

Date form received by agency: 10/06/2017

Facility name: KYARNG BOONE NATIONAL GUARD CENTER

Facility address: 120 MINUTEMAN PKWY (BLDG120)

USPFO FOR KENTUCKY FRANKFORT, KY 40601-6192

EPA ID: KY5211890004
Mailing address: MINUTEMAN PKWY
BUILDING 162

FRANKFORT, KY 40601-6168

EDR ID Number

MAP FINDINGS Map ID

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

Contact: LINDA MITCHELL

MINUTEMAN PKWY BUILDING 162 Contact address:

FRANKFORT, KY 40601-6168

Contact country: US

Contact telephone: 502-607-1856 Contact email: Not reported

EPA Region: 04 Land type: State

Classification: Small Small Quantity Generator

Description: Handler: generates more than 100 and less than 1000 kg of hazardous

> waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of

hazardous waste at any time

Owner/Operator Summary:

NAME UNKNOWN Owner/operator name:

Owner/operator address: Not reported

Not reported

Owner/operator country: Not reported Owner/operator telephone: Not reported Owner/operator email: Not reported Owner/operator fax: Not reported Owner/operator extension: Not reported Legal status: Federal Owner/Operator Type: Operator Owner/Op start date: Not reported Owner/Op end date: Not reported

COMMONWEALTH OF KENTUCKY Owner/operator name: Owner/operator address: MINUTEMAN PKWY BUILDING 162

FRANKFORT, KY 40601

Owner/operator country: US

Owner/operator telephone: 502-607-6536 Not reported Owner/operator email: Owner/operator fax: Not reported Owner/operator extension: Not reported Legal status: State Owner/Operator Type: Owner Owner/Op start date: 01/01/1956 Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No Mixed waste (haz. and radioactive): No Recycler of hazardous waste: No Transporter of hazardous waste: No Treater, storer or disposer of HW: No Underground injection activity: No On-site burner exemption: No Furnace exemption: No Used oil fuel burner: No Used oil processor: No User oil refiner: No Used oil fuel marketer to burner: No Used oil Specification marketer: No

Distance EDR ID Number
Elevation Site EDR ID Number
Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

Used oil transfer facility: No Used oil transporter: No

. Waste code: D001

. Waste name: IGNITABLE WASTE

. Waste code: D002

. Waste name: CORROSIVE WASTE

. Waste code: D003

. Waste name: REACTIVE WASTE

. Waste code: D004 . Waste name: ARSENIC

. Waste code: D005 . Waste name: BARIUM

Waste code: D006
Waste name: CADMIUM

Waste code: D007

Waste name: CHROMIUM

. Waste code: D008 . Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D011 . Waste name: SILVER

Waste code: D013

Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D018
. Waste name: BENZENE

Waste code: D035

Waste name: METHYL ETHYL KETONE

Waste code: D040

Waste name: TRICHLORETHYLENE

Waste code: F003

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL

BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

Direction Distance Elevation

Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

EDR ID Number

. Waste code: F005

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P030

. Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste code: P042

. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

. Waste code: P098

. Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

Waste code: U002

Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

Waste code: U041

. Waste name: EPICHLOROHYDRIN (OR) OXIRANE, (CHLOROMETHYL)-

. Waste code: U075

. Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

. Waste code: U080

. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste code: U088

Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

. Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

Waste code: U226

Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

. Waste code: U227

. Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

. Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U279

. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

Distance Elevation Site

Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

EDR ID Number

. Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Historical Generators:

Date form received by agency: 10/06/2016

Site name: KYARNG BOONE NATIONAL GUARD CENTER

Classification: Small Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

. Waste code: D002

. Waste name: CORROSIVE WASTE

. Waste code: D003

. Waste name: REACTIVE WASTE

. Waste code: D004 . Waste name: ARSENIC

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006 . Waste name: CADMIUM

Waste code: D007

Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

Waste code: D011
Waste name: SILVER

. Waste code: D013

. Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D018
. Waste name: BENZENE

Waste code: D035

. Waste name: METHYL ETHYL KETONE

Waste code: D040

Waste name: TRICHLORETHYLENE

Waste code: F003

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED

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SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001. F002. OR F004: AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: P030

. Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste code: P042

Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

Waste code: P098

. Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

Waste code: U041

. Waste name: EPICHLOROHYDRIN (OR) OXIRANE, (CHLOROMETHYL)-

. Waste code: U075

. Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U080

Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

. Waste code: U088

Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

. Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

. Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

. Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

. Waste code: U226

. Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

. Waste code: U227

. Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

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. Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U279

. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 10/06/2015

Site name: KYARNG BOONE NATIONAL GUARD CENTER

Classification: Small Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

. Waste code: D002

. Waste name: CORROSIVE WASTE

. Waste code: D003

. Waste name: REACTIVE WASTE

. Waste code: D004
. Waste name: ARSENIC

. Waste code: D005 . Waste name: BARIUM

. Waste code: D006 . Waste name: CADMIUM

. Waste code: D007

Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

. Waste code: D011 . Waste name: SILVER

Waste code: D013

. Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D018
. Waste name: BENZENE

Waste code: D035

. Waste name: METHYL ETHYL KETONE

. Waste code: D040

. Waste name: TRICHLORETHYLENE

. Waste code: F003

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

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ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: P030

. Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste code: P042

Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

. Waste code: P098

. Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U041

Waste name: EPICHLOROHYDRIN (OR) OXIRANE, (CHLOROMETHYL)-

. Waste code: U075

. Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U080

Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste code: U088

. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

. Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

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. Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

. Waste code: U227

Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

. Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Waste code: U279

. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

. Waste code: U328

Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 10/06/2014

Site name: KYARNG BOONE NATIONAL GUARD CENTER

Classification: Small Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

. Waste code: D002

Waste name: CORROSIVE WASTE

. Waste code: D003

. Waste name: REACTIVE WASTE

. Waste code: D004 . Waste name: ARSENIC

Waste code: D006
Waste name: CADMIUM

. Waste code: D007

. Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

. Waste code: D011 . Waste name: SILVER

Waste code: D013

Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D035

. Waste name: METHYL ETHYL KETONE

. Waste code: D040

. Waste name: TRICHLORETHYLENE

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EDR ID Number

. Waste code: F003

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

Waste code: F005

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: P030

. Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste code: P042

. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

Waste code: P098

. Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U041

Waste name: EPICHLOROHYDRIN (OR) OXIRANE, (CHLOROMETHYL)-

Waste code: U075

Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U088

. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste code: U103

Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U209

. Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

. Waste code: U226

. Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

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. Waste code: U227

Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

. Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Waste code: U279

Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

. Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 10/16/2013

Site name: KYARNG BOONE NATIONAL GUARD CENTER

Classification: Small Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

Waste code: D002

Waste name: CORROSIVE WASTE

. Waste code: D006 . Waste name: CADMIUM

. Waste code: D007

. Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D011 . Waste name: SILVER

Waste code: D013

. Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

Waste code: D018
Waste name: BENZENE

Waste code: D035

. Waste name: METHYL ETHYL KETONE

Waste code: F003

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL

BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

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. Waste code: F005

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P030

. Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste code: P042

Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

. Waste code: P098

. Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

Waste code: U002

Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

Waste code: U041

. Waste name: EPICHLOROHYDRIN (OR) OXIRANE, (CHLOROMETHYL)-

. Waste code: U075

. Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U080

. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste code: U088

. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

. Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

Waste code: U226

Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

. Waste code: U227

. Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

. Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U279

. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

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. Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 11/14/2012

Site name: KYARNG BOONE NATIONAL GUARD CENTER

Classification: Small Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

Waste code: D002

. Waste name: CORROSIVE WASTE

. Waste code: D003

Waste name: REACTIVE WASTE

Waste code: D004
Waste name: ARSENIC

. Waste code: D006 . Waste name: CADMIUM

Waste code: D007

. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD
. Waste code: D009

Waste name: MERCURY

Waste code: D011

Waste code: D013

Waste name:

Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

Waste code: D018
Waste name: BENZENE

Waste code: D035

. Waste name: METHYL ETHYL KETONE

SILVER

Waste code: F003

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR

MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

. Waste code: F005

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

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KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P030

. Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste code: P042

Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

Waste code: P098

. Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

Waste code: U041

Waste name: EPICHLOROHYDRIN (OR) OXIRANE, (CHLOROMETHYL)-

Waste code: U075

. Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U080

. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

. Waste code: U088

. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

. Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U209

. Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

Waste code: U226

. Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

. Waste code: U227

Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U279

. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

. Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 10/12/2011

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Site name: KYARNG BOONE NATIONAL GUARD CENTER

Classification: Small Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

Waste code: D002

Waste name: CORROSIVE WASTE

. Waste code: D006 . Waste name: CADMIUM

Waste code: D007

. Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

. Waste code: D011 . Waste name: SILVER

Waste code: D013

. Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D018
. Waste name: BENZENE

Waste code: D035

. Waste name: METHYL ETHYL KETONE

Waste code: F003

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT

MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

Waste code: F005

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P030

. Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Distance Elevation

Site EDR ID Number

EDR ID Number

EPA ID Number

EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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. Waste code: P042

. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

. Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

Waste code: U075

. Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U080

. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste code: U088

. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

Waste code: U209

. Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

. Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

. Waste code: U226

. Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

. Waste code: U227

Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

. Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 11/22/2010

Site name: USPFO FOR KENTUCKY Classification: Small Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

Waste code: D002

. Waste name: CORROSIVE WASTE

. Waste code: D006 . Waste name: CADMIUM

. Waste code: D007 . Waste name: CHROMIUM

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KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

Waste code: D011
Waste name: SILVER

Waste code: D013

Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D018
. Waste name: BENZENE

Waste code: D035

. Waste name: METHYL ETHYL KETONE

Waste code: F003

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL

BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

Waste code: F005

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P030

. Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste code: P042

Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U075

Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

. Waste code: U080

. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste code: U088

. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

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KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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. Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

. Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

. Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

Waste code: U226

Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

. Waste code: U227

Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 10/15/2009

Site name: USPFO FOR KENTUCKY Classification: Small Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

. Waste code: D002

. Waste name: CORROSIVE WASTE

. Waste code: D006 . Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D011
Waste name: SILVER

Waste code: D013

Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D035

. Waste name: METHYL ETHYL KETONE

. Waste code: D040

. Waste name: TRICHLORETHYLENE

Distance Elevation

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KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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EDR ID Number

. Waste code: F003

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

. Waste code: F005

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: P030

. Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste code: P042

. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

. Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U075

Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U080

. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste code: U088

. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Waste code: U151
Waste name: MERCURY

Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

Waste code: U226

. Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

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EDR ID Number

Waste code: U227

1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-Waste name:

Waste code:

Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Waste code: U328

Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 09/24/2009

USPFO FOR KENTUCKY Site name: Classification: Large Quantity Generator

Waste code:

Waste name: **IGNITABLE WASTE**

Waste code: D002

Waste name: **CORROSIVE WASTE**

Waste code: D006 **CADMIUM** Waste name:

D007 Waste code: Waste name: **CHROMIUM**

Waste code: D008 Waste name: **LEAD** Waste code: D009

MERCURY Waste name: Waste code: D011

D013

Waste name:

Waste code:

LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER) Waste name:

Waste code: D018 Waste name: BENZENE

Waste code: D035

Waste name: METHYL ETHYL KETONE

SILVER

Waste code: D040

TRICHLORETHYLENE Waste name:

Waste code: F003

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL

BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

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KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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EDR ID Number

. Waste code: F005

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P030

. Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste code: P039

Waste name: DISULFOTON (OR) PHOSPHORODITHIOIC ACID, 0,0-DIETHYL

S-[2-(ETHYLTHIO)ETHYL] ESTER

Waste code: P042

Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

Waste code: P098

Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U075

. Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U080

. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste code: U088

Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

. Waste code: U151 . Waste name: MERCURY

Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

. Waste code: U226

. Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

. Waste code: U227

Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

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KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 05/12/2009

Site name: USPFO FOR KENTUCKY Classification: Large Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

Waste code: D002

. Waste name: CORROSIVE WASTE

. Waste code: D006
. Waste name: CADMIUM

Waste code: D007

. Waste name: CHROMIUM

. Waste code: D008 . Waste name: LEAD

Waste code: D009
Waste name: MERCURY

. Waste code: D011 . Waste name: SILVER

Waste code: D013

Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D018
. Waste name: BENZENE

Waste code: D035

. Waste name: METHYL ETHYL KETONE

Waste code: F003

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

. Waste code: F005

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS

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LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P030

. Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

. Waste code: P039

. Waste name: DISULFOTON (OR) PHOSPHORODITHIOIC ACID, O,O-DIETHYL

S-[2-(ETHYLTHIO)ETHYL] ESTER

Waste code: P042

. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

Waste code: P098

Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

. Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U075

. Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U080

. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

. Waste code: U088

. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

. Waste code: U151 . Waste name: MERCURY

. Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

. Waste code: U226

Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

Waste code: U227

. Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

. Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 09/25/2008

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KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

Site name: USPFO FOR KENTUCKY
Classification: Small Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

. Waste code: D002

Waste name: CORROSIVE WASTE

. Waste code: D003

. Waste name: REACTIVE WASTE

. Waste code: D004 . Waste name: ARSENIC

. Waste code: D006 . Waste name: CADMIUM

. Waste code: D007

Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

. Waste code: D009 . Waste name: MERCURY

. Waste code: D011 SILVER

Waste code: D013

Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D018
. Waste name: BENZENE

Waste code: D035

. Waste name: METHYL ETHYL KETONE

Waste code: F003

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT
MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT
NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS
CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED
SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR
MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL
BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

. Waste code: F005

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS

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EDR ID Number

LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P039

Waste name: DISULFOTON (OR) PHOSPHORODITHIOIC ACID, O,O-DIETHYL

S-[2-(ETHYLTHIO)ETHYL] ESTER

. Waste code: P042

Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

. Waste code: P098

Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

Waste code: U041

. Waste name: EPICHLOROHYDRIN (OR) OXIRANE, (CHLOROMETHYL)-

Waste code: U075

. Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U080

. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

. Waste code: U088

. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

. Waste code: U151 . Waste name: MERCURY

. Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

. Waste code: U226

Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

Waste code: U227

. Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

. Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U279

. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

Distance EDR ID Number
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Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 10/15/2007

Site name: USPFO FOR KENTUCKY
Classification: Small Quantity Generator

Waste code: D001

. Waste name: IGNITABLE WASTE

. Waste code: D002

. Waste name: CORROSIVE WASTE

Waste code: D003

. Waste name: REACTIVE WASTE

. Waste code: D004 . Waste name: ARSENIC

Waste code: D005 Waste name: BARIUM

. Waste code: D006 . Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008 . Waste name: LEAD

. Waste code: D009 . Waste name: MERCURY

Waste code: D011
Waste name: SILVER

Waste code: D013

Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

Waste code: D018
Waste name: BENZENE

. Waste code: D035

. Waste name: METHYL ETHYL KETONE

Waste code: F003

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL

BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

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KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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EDR ID Number

. Waste code: F005

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P039

Waste name: DISULFOTON (OR) PHOSPHORODITHIOIC ACID, 0,0-DIETHYL

S-[2-(ETHYLTHIO)ETHYL] ESTER

Waste code: P042

Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

Waste code: P098

Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U041

. Waste name: EPICHLOROHYDRIN (OR) OXIRANE, (CHLOROMETHYL)-

. Waste code: U075

. Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U080

. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste code: U088

. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Waste code: U151
Waste name: MERCURY

Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

. Waste code: U226

. Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

. Waste code: U227

. Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

Distance Elevation EDR ID Number
Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U279

Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

. Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 10/09/2006

Site name: USPFO FOR KENTUCKY Classification: Small Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

. Waste code: D002

. Waste name: CORROSIVE WASTE

. Waste code: D003

. Waste name: REACTIVE WASTE

. Waste code: D004 . Waste name: ARSENIC

. Waste code: D005 . Waste name: BARIUM

. Waste code: D006 . Waste name: CADMIUM

. Waste code: D007

. Waste name: CHROMIUM

. Waste code: D008 . Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

Waste code: D011
Waste name: SILVER

Waste code: D013

Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D018
. Waste name: BENZENE

Waste code: D035

Waste name: METHYL ETHYL KETONE

. Waste code: F003

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS

Direction Distance Elevation

Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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EDR ID Number

CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: P039

Waste name: DISULFOTON (OR) PHOSPHORODITHIOIC ACID, 0,0-DIETHYL

S-[2-(ETHYLTHIO)ETHYL] ESTER

Waste code: P042

Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

Waste code: P098

. Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

. Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U041

Waste name: EPICHLOROHYDRIN (OR) OXIRANE, (CHLOROMETHYL)-

Waste code: U075

Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U080

. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

. Waste code: U088

Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

. Waste code: U151 . Waste name: MERCURY

. Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

. Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

Distance Elevation

EDR ID Number
Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

. Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

. Waste code: U227

Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

. Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U279

. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

. Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 10/07/2005

Site name: USPFO FOR KENTUCKY
Classification: Small Quantity Generator

Waste code: D001

. Waste name: IGNITABLE WASTE

. Waste code: D002

. Waste name: CORROSIVE WASTE

. Waste code: D003

. Waste name: REACTIVE WASTE

. Waste code: D004 . Waste name: ARSENIC

. Waste code: D005 . Waste name: BARIUM

. Waste code: D006 . Waste name: CADMIUM

Waste code: D007

Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

. Waste code: D011 . Waste name: SILVER

Waste code: D013

Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D035

. Waste name: METHYL ETHYL KETONE

Distance Elevation

Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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EDR ID Number

. Waste code: F003

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

Waste code: F005

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: P039

Waste name: DISULFOTON (OR) PHOSPHORODITHIOIC ACID, O,O-DIETHYL

S-[2-(ETHYLTHIO)ETHYL] ESTER

. Waste code: P042

. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

Waste code: P098

. Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

Waste code: U041

. Waste name: EPICHLOROHYDRIN (OR) OXIRANE, (CHLOROMETHYL)-

Waste code: U075

Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U080

Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

. Waste code: U088

. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

. Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

. Waste code: U151
. Waste name: MERCURY

. Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

Direction Distance Elevation

Site EDR ID Number

Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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. Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

. Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

. Waste code: U226

. Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

. Waste code: U227

Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

. Waste code: U239

Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Waste code: U279

. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 09/21/2004

Site name: USPFO FOR KENTUCKY Classification: Small Quantity Generator

. Waste code: D001

Waste name: IGNITABLE WASTE

. Waste code: D002

. Waste name: CORROSIVE WASTE

. Waste code: D003

Waste name: REACTIVE WASTE

. Waste code: D004 . Waste name: ARSENIC

. Waste code: D005 . Waste name: BARIUM

Waste code: D006
Waste name: CADMIUM

Waste code: D007

Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D011 . Waste name: SILVER

Waste code: D013

. Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

Distance Elevation

Site EDR ID Number

EDR ID Number

EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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. Waste code: D018
. Waste name: BENZENE

Waste code: D035

. Waste name: METHYL ETHYL KETONE

Waste code: F003

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

. Waste code: F005

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: P039

. Waste name: DISULFOTON (OR) PHOSPHORODITHIOIC ACID, O,O-DIETHYL

S-[2-(ETHYLTHIO)ETHYL] ESTER

Waste code: P042

Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

Waste code: P098

. Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

Waste code: U041

. Waste name: EPICHLOROHYDRIN (OR) OXIRANE, (CHLOROMETHYL)-

Waste code: U075

Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U080

. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Waste code: U088

Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

. Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Distance Elevation

Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

EDR ID Number

. Waste name: MERCURY

. Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U220

Waste name: BENZENE, METHYL- (OR) TOLUENE

. Waste code: U226

. Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

Waste code: U227

Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Waste code: U279

. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 10/02/2003

Site name: USPFO FOR KENTUCKY Classification: Small Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

Waste code: D002

Waste name: CORROSIVE WASTE

. Waste code: D003

. Waste name: REACTIVE WASTE

Waste code: D004
Waste name: ARSENIC

Waste code: D005
Waste name: BARIUM

Waste code: D006
Waste name: CADMIUM

Waste code: D007

Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

Distance Elevation

Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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EDR ID Number

. Waste code: D011 . Waste name: SILVER

. Waste code: D013

. Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D018
. Waste name: BENZENE

Waste code: D035

. Waste name: METHYL ETHYL KETONE

Waste code: F003

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

Waste code: F005

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P039

Waste name: DISULFOTON (OR) PHOSPHORODITHIOIC ACID, O,O-DIETHYL

S-[2-(ETHYLTHIO)ETHYL] ESTER

Waste code: P042

Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

Waste code: P098

. Waste name: POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)

Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

Waste code: U041

. Waste name: EPICHLOROHYDRIN (OR) OXIRANE, (CHLOROMETHYL)-

Waste code: U075

Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

. Waste code: U080

. Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

Direction Distance Elevation

Site EDR ID Number

Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

. Waste code: U103

Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

. Waste code: U151 . Waste name: MERCURY

Waste code: U154

Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U220

Waste name: BENZENE, METHYL- (OR) TOLUENE

Waste code: U226

Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

Waste code: U227

. Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

. Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U279

. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 10/09/2002

Site name: USPFO FOR KENTUCKY Classification: Small Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

Waste code: D008
Waste name: LEAD

Waste code: D035

. Waste name: METHYL ETHYL KETONE

Waste code: U088

Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Waste code: U328

Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 10/09/2002

Site name: USPFO FOR KENTUCKY Classification: Large Quantity Generator

. Waste code: D001

. Waste name: IGNITABLE WASTE

Distance EDR ID Number Elevation Site EDR ID Number Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

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. Waste code: D006 . Waste name: CADMIUM

. Waste code: D007

. Waste name: CHROMIUM

. Waste code: D008 . Waste name: LEAD

Waste code: D009
Waste name: MERCURY

. Waste code: D011 . Waste name: SILVER

Waste code: D013

Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

Waste code: D035

. Waste name: METHYL ETHYL KETONE

Waste code: F003

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

. Waste code: F005

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: P030

. Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste code: P042

Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U075

. Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

Waste code: U088

. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER (OR) DIETHYL PHTHALATE

Direction Distance Elevation

EDR ID Number
Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

. Waste code: U103

. Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

Waste code: U151
Waste name: MERCURY

Waste code: U154

Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U209

Waste name: 1,1,2,2-TETRACHLOROETHANE (OR) ETHANE, 1,1,2,2-TETRACHLORO-

Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

Waste code: U226

. Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

Waste code: U227

Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

Waste code: U239

Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

. Waste code: U328

. Waste name: BENZENAMINE, 2-METHYL- (OR) O-TOLUIDINE

Date form received by agency: 07/11/2002
Site name: USP&FO FOR KY
Classification: Large Quantity Generator

Date form received by agency: 12/14/2001

Site name: USPFO FOR KENTUCKY Classification: Small Quantity Generator

. Waste code: D006 . Waste name: CADMIUM

Waste code: D007

Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

. Waste code: D011 SILVER

Waste code: D013

Waste name: LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)

. Waste code: D018
. Waste name: BENZENE

Map ID MAP FINDINGS
Direction

Distance EDR ID Number Elevation Site EDR ID Number Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

. Waste name: CHLOROBENZENE

. Waste code: D027

. Waste name: 1,4-DICHLOROBENZENE

. Waste code: D035

. Waste name: METHYL ETHYL KETONE

Waste code: D039

. Waste name: TETRACHLOROETHYLENE

. Waste code: D040

. Waste name: TRICHLORETHYLENE

Waste code: F002

. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE,

METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE,

CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE,

ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2,

TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND

SPENT SOLVENT MIXTURES.

Waste code: F003

. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL

ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL

ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT

MIXTURES.

. Waste code: F005

Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL

KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE,

2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF

THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: P030

Waste name: CYANIDES (SOLUBLE CYANIDE SALTS), NOT OTHERWISE SPECIFIED

Waste code: P042

Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR)

EPINEPHRINE

. Waste code: U002

. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U075

Direction Distance Elevation

tance EDR ID Number vation Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

. Waste name: DICHLORODIFLUOROMETHANE (OR) METHANE, DICHLORODIFLUORO-

. Waste code: U080

Waste name: METHANE, DICHLORO- (OR) METHYLENE CHLORIDE

. Waste code: U103

Waste name: DIMETHYL SULFATE (OR) SULFURIC ACID, DIMETHYL ESTER

. Waste code: U151 . Waste name: MERCURY

Waste code: U154

. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

Waste code: U220

. Waste name: BENZENE, METHYL- (OR) TOLUENE

Waste code: U226

Waste name: ETHANE, 1,1,1-TRICHLORO- (OR) METHYL CHLOROFORM

Waste code: U227

Waste name: 1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

Waste code: U239

. Waste name: BENZENE, DIMETHYL- (I,T) (OR) XYLENE (I)

Date form received by agency: 12/10/2001

Site name: USPFO FOR KENTUCKY Classification: Large Quantity Generator

Date form received by agency: 11/27/2001

Site name: USPFO FOR KENTUCKY Classification: Large Quantity Generator

Date form received by agency:11/27/2000
Site name: USP&FO FOR KY
Classification: Large Quantity Generator

Date form received by agency: 11/03/2000

Site name: USPFO FOR KENTUCKY Classification: Large Quantity Generator

Date form received by agency: 10/06/2000

Site name: USPFO FOR KENTUCKY Classification: Large Quantity Generator

Date form received by agency: 12/09/1999

Site name: USPFO FOR KENTUCKY Classification: Large Quantity Generator

Date form received by agency: 03/01/1998

Site name: USPFO FOR KENTUCKY Classification: Large Quantity Generator

Date form received by agency: 03/01/1996

Site name: USPFO FOR KENTUCKY Classification: Large Quantity Generator

Direction Distance

Elevation Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

EDR ID Number

Date form received by agency: 03/01/1994

Site name: USPFO FOR KENTUCKY Classification: Large Quantity Generator

Date form received by agency: 03/01/1992

Site name: USPFO FOR KENTUCKY Classification: Large Quantity Generator

Date form received by agency: 03/01/1990

Site name: USPFO FOR KENTUCKY Classification: Large Quantity Generator

Facility Has Received Notices of Violations:

Regulation violated: Not reported

Area of violation: State Statute or Regulation

Date violation determined: 09/28/2010
Date achieved compliance: 10/15/2010
Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date:

Enf. disposition status:

Enf. disp. status date:

Enforcement lead agency:

Proposed penalty amount:

Final penalty amount:

Paid penalty amount:

Enforcement lead agency:

State

Not reported

Not reported

Not reported

Not reported

Regulation violated: Not reported

Area of violation: Generators - Records/Reporting

Date violation determined: 09/28/2010
Date achieved compliance: 10/15/2010
Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 10/06/2010
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported

Proposed penalty amount: Not reported Final penalty amount: Not reported Paid penalty amount: Not reported

Regulation violated: SR - 35:180 5

Area of violation: Generators - Pre-transport

Date violation determined: 03/12/2002
Date achieved compliance: 03/14/2002
Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 03/12/2002
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SS - krs 224.46-580
Area of violation: Generators - General

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

Date violation determined: 03/29/1993 Date achieved compliance: 07/02/1993 Violation lead agency: State

WRITTEN INFORMAL Enforcement action:

Enforcement action date: 04/01/1993 Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: State Proposed penalty amount: Not reported Final penalty amount: Not reported Paid penalty amount: Not reported

SR - 32:030, sec 5 Regulation violated: Area of violation: Generators - Pre-transport

Date violation determined: 05/06/1992 Date achieved compliance: 05/14/1992 Violation lead agency: State

WRITTEN INFORMAL Enforcement action:

Enforcement action date: 05/06/1992 Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: State

Proposed penalty amount: Not reported Final penalty amount: Not reported Paid penalty amount: Not reported

Regulation violated: SR - 401 KAR 32:040 SEC 2 Area of violation: Generators - Pre-transport

Date violation determined: 03/27/1991 Date achieved compliance: 03/27/1991 Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 03/27/1991 Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: State Proposed penalty amount: Not reported Final penalty amount: Not reported Paid penalty amount: Not reported

Regulation violated: SR - 401 KAR 32:010 SEC 3 Area of violation: Generators - General

Date violation determined: 03/27/1991 Date achieved compliance: 05/20/1991 Violation lead agency: State

WRITTEN INFORMAL Enforcement action:

03/27/1991 Enforcement action date: Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: State Proposed penalty amount: Not reported

Final penalty amount: Not reported Paid penalty amount: Not reported

Regulation violated: SR - 401 KAR 32:030 SEC 5 Area of violation: Generators - Pre-transport

Date violation determined: 03/27/1991 Map ID MAP FINDINGS
Direction

Direction Distance Elevation

ion Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

EDR ID Number

Date achieved compliance: 03/27/1991 Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 03/27/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SS - KRS 224.46-580 Area of violation: Generators - General

Date violation determined: 01/30/1991
Date achieved compliance: 03/15/1994
Violation lead agency: State

Enforcement action: FINAL 3008(A) COMPLIANCE ORDER

Enforcement action date: 05/15/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State

Proposed penalty amount: Not reported Final penalty amount: Not reported Paid penalty amount: Not reported

Regulation violated: SS - KRS 224.46-580 Area of violation: Generators - General

Date violation determined: 01/30/1991
Date achieved compliance: 03/15/1994
Violation lead agency: State

Enforcement action: WRITTEN INFORMAL

Enforcement action date: 05/15/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SS - KRS 224.46-580
Area of violation: Generators - General
Date violation determined: 01/30/1991

03/15/1994

Violation lead agency: State Enforcement action: Not reported Enforcement action date: Not reported Enf. disposition status: Not reported Enf. disp. status date: Not reported Enforcement lead agency: Not reported Not reported Proposed penalty amount: Final penalty amount: Not reported Paid penalty amount: Not reported

Date achieved compliance:

Regulation violated: SS - KRS 224.46-580 Area of violation: Generators - General

Date violation determined: 01/30/1991
Date achieved compliance: 03/15/1994

Direction Distance

Elevation Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

EDR ID Number

Violation lead agency: State

Enforcement action: REFERRAL TO ENFORCEMENT

Enforcement action date: 06/20/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:

Evaluation date: 12/10/2013

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/10/2012

Evaluation: NON-FINANCIAL RECORD REVIEW

Area of violation:

Date achieved compliance:

Evaluation lead agency:

Not reported

Not reported

State

Evaluation date: 10/27/2010

Evaluation: FOLLOW-UP INSPECTION
Area of violation: Generators - Records/Reporting

Date achieved compliance: 10/15/2010 Evaluation lead agency: State

Evaluation date: 10/27/2010

Evaluation: FOLLOW-UP INSPECTION Area of violation: State Statute or Regulation

Date achieved compliance: 10/15/2010 Evaluation lead agency: State

Evaluation date: 09/28/2010

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: Generators - Records/Reporting

Date achieved compliance: 10/15/2010 Evaluation lead agency: State

Evaluation date: 09/28/2010

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: State Statute or Regulation

Date achieved compliance: 10/15/2010 Evaluation lead agency: State

Evaluation date: 05/04/2010

Evaluation: NON-FINANCIAL RECORD REVIEW

Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/12/2002

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: Generators - Pre-transport

Date achieved compliance: 03/14/2002

Direction Distance

Elevation Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

EDR ID Number

Evaluation lead agency: State

Evaluation date: 05/22/2000

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation:

Date achieved compliance:

Evaluation lead agency:

Not reported

Not reported

State

Evaluation date: 10/25/1995

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation:

Date achieved compliance:

Evaluation lead agency:

Not reported

Not reported

State

Evaluation date: 02/01/1994

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation:

Date achieved compliance:

Evaluation lead agency:

Not reported

Not reported

State

Evaluation date: 07/06/1993

Evaluation: COMPLIANCE SCHEDULE EVALUATION

Area of violation: Generators - General

Date achieved compliance: 07/02/1993 Evaluation lead agency: State

Evaluation date: 03/29/1993

Evaluation: NON-FINANCIAL RECORD REVIEW

Area of violation: Generators - General

Date achieved compliance: 07/02/1993 Evaluation lead agency: State

Evaluation date: 05/15/1992

Evaluation: COMPLIANCE SCHEDULE EVALUATION

Area of violation: Generators - Pre-transport

Date achieved compliance: 05/14/1992 Evaluation lead agency: State

Evaluation date: 04/21/1992

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: Generators - Pre-transport

Date achieved compliance: 05/14/1992 Evaluation lead agency: State

Evaluation date: 05/20/1991

Evaluation: COMPLIANCE SCHEDULE EVALUATION

Area of violation: Generators - General

Date achieved compliance: 05/20/1991 Evaluation lead agency: State

Evaluation date: 05/20/1991

Evaluation: COMPLIANCE SCHEDULE EVALUATION

Area of violation: Generators - Pre-transport

Date achieved compliance: 03/27/1991 Evaluation lead agency: State

Evaluation date: 03/27/1991

Direction Distance

Elevation Site Database(s) EPA ID Number

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

EDR ID Number

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: Generators - General

Date achieved compliance: 05/20/1991 Evaluation lead agency: State

Evaluation date: 03/27/1991

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Area of violation: Generators - Pre-transport

Date achieved compliance: 03/27/1991 Evaluation lead agency: State

Evaluation date: 01/30/1991

Evaluation: NON-FINANCIAL RECORD REVIEW

Area of violation: Generators - General

Date achieved compliance: 03/15/1994 Evaluation lead agency: State

Evaluation date: 10/09/1990

Evaluation: NON-FINANCIAL RECORD REVIEW

Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 11/16/1989

Evaluation: NON-FINANCIAL RECORD REVIEW

Area of violation:

Date achieved compliance:

Evaluation lead agency:

Not reported

State

Evaluation date: 05/24/1989

Evaluation: NON-FINANCIAL RECORD REVIEW

Area of violation:

Date achieved compliance:

Evaluation lead agency:

Not reported

State

NY MANIFEST:

Country: USA

EPA ID: KY5211890004 Facility Status: Not reported

Location Address 1: USPFO FOR KENTUCKY-BOONE CTR

Code: BP

Location Address 2: Not reported Total Tanks: Not reported Location City: FRANKFORT

Location State: KY
Location Zip: 40601
Location Zip 4: Not reported

NY MANIFEST:

EPAID: KY5211890004

Mailing Name: UNITED STATES MILITARY
Mailing Contact: UNITED STATES MILITARY

Mailing Address 1: USPFO FOR KENTUCKY-BOONE CTR

Mailing Address 2: Not reported
Mailing City: FRANKFORT
Mailing State:

Mailing State: KY
Mailing Zip: 40601
Mailing Zip 4: Not reported

Direction Distance Elevation

EDR ID Number Site Database(s) **EPA ID Number**

KYARNG BOONE NATIONAL GUARD CENTER (Continued)

1015731138

Mailing Country: USA

Mailing Phone: 6062933436

NY MANIFEST:

Document ID: NYB2359287

Manifest Status:

seq: Not reported Year: 1991

Trans1 State ID: Not reported Trans2 State ID: Not reported Generator Ship Date: 01/16/1991 Trans1 Recv Date: 01/16/1991 Trans2 Recv Date: 01/24/1991 TSD Site Recv Date: 02/11/1991 Part A Recv Date: 02/04/1991 Part B Recv Date: 02/27/1991 Generator EPA ID: KY5211890004 Trans1 EPA ID: TND987766292 Trans2 EPA ID: GAD984279794 TSDF ID 1: NYD000632372 TSDF ID 2: Not reported Manifest Tracking Number: Not reported

Import Indicator: Not reported **Export Indicator:** Not reported Discr Quantity Indicator: Not reported Discr Type Indicator: Not reported Not reported Discr Residue Indicator: Discr Partial Reject Indicator: Not reported Discr Full Reject Indicator: Not reported Manifest Ref Number: Not reported Alt Facility RCRA ID: Not reported Alt Facility Sign Date: Not reported

Not reported Waste Code: D003 - NON-LISTED REACTIVE WASTES

Waste Code: Not reported Waste Code: Not reported Waste Code: Not reported Waste Code: Not reported Waste Code: Not reported Quantity: 00146 P - Pounds Units: Number of Containers:

MGMT Method Type Code:

Container Type: DM - Metal drums, barrels

Handling Method: T Chemical, physical, or biological treatment.

Specific Gravity:

Click this hyperlink while viewing on your computer to access 3 additional NY_MANIFEST: record(s) in the EDR Site Report.

Direction Distance

Elevation Site Database(s) **EPA ID Number**

A2 KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD **KY SHWS** U001441482

East 100 MINUTEMAN PKWY KY PSTEAF N/A

FRANKFORT, KY 40601 **KY UST** 1/2-1 0.542 mi. **KY AIRS**

KY NPDES 2863 ft. Site 1 of 2 in cluster A

Relative: SHWS: Higher 1423 Facility Id:

Status:

Actual: ARMY NATIONAL GUARD BOONE CENTER / VETERANS AFFAIRS BLDG (Closed: Description: 810 ft.

Contained/Managed)

Closed

Closure Date: 07/23/2001 -84.899333 Longitude: Latitude: 38.187000 Subject Item County: Franklin Sub Item Longitude: -84.899408 Sub Item Latitude: 38.186965

Subject Item Address: 100 Minuteman Pkwy Subject Item Address2: Not reported Subject Item City,St,Zip: Frankfort, KY 40601 Regulatory Desc: Petroleum Cleanup

Closure Option: Option A No Action Necessary

Side SG: 57637

Facility Id: 1423 Status: Closed

Description: FRANKFORT NATIONAL GUARD ARMORY (Closed: Restored)

03/12/1998 Closure Date: Longitude: -84.899333 Latitude: 38.187000 Subject Item County: Franklin -84.901133 Sub Item Longitude: Sub Item Latitude: 38.186914

Subject Item Address: 100 Minuteman Pkwy

Subject Item Address2: Not reported Subject Item City, St, Zip: Frankfort, KY 40601 Petroleum Cleanup Regulatory Desc: Closure Option: Option C Restored

Side SG: 47774

1423 Facility Id: Status: Closed

Description: EOC-BOONE NATIONAL GUARD CENTER (Closed: Restored)

Closure Date: 04/09/2002 Longitude: -84.899333 Latitude: 38.187000 Subject Item County: Franklin Sub Item Longitude: -84.900555 Sub Item Latitude: 38.188889

Subject Item Address: 100 Minuteman Pkwy Subject Item Address2: Not reported Subject Item City, St, Zip: Frankfort, KY 40601 Regulatory Desc: Petroleum Cleanup Closure Option: Option C Restored

Side SG: 99205

Facility Id: 1423 Status: Closed

Description: USPFO FOR KENTUCKY **EDR ID Number**

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

Closure Date: 03/06/1998 Longitude: -84.899333 Latitude: 38.187000 Subject Item County: Franklin Sub Item Longitude: -84.896355 Sub Item Latitude: 38.187925

Subject Item Address: 100 Minuteman Pkwy

Subject Item Address2: Not reported Subject Item City,St,Zip: Frankfort, KY 40601 Regulatory Desc: State Superfund Closure Option: Option C Restored

Side SG: 15465

PSTEAF:

Facility Id: 1423 Al Number: 1423 UST Id Number: 304037 Rank: Pending Financial Account: Not reported

Project Manager: Hall

UST:

Facility Name: KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER

Sequence Id: 304037 Facility ID: 1423

Owner Name: Kentucky Dept Of Military Affairs

Not reported

Owner Address: 100 Minuteman Pkwy

Owner Address2: Not reported Owner Address3: Not reported

Owner City, St, Zip: Frankfort, KY 406016168

Internal Document ID: 0 Latitude: 38.187 Longitude: -84.899333

Inert Material Code:

Removed Date: 11/03/2009 Change in Service Date: Not reported Tank Pit Num: Not reported Tank Mfg Code: STI Tank Overfill Protection: ASD Last Tank Test Date: 09/18/1995 Relined Date: Not reported Lining Insp Date: Not reported LDX Pipe Release Detection:

LDX Pipe Rel Detect Suc Code: Pipe Leak Detect Code: NA

Last Contained Date: Not reported Pipe Mfg Code: Not reported Last Pipe Test Date: 09/18/1995 Last CP Test Date: 04/12/2007 Added To Flex Date: Not reported Added To Piping Date: 04/01/1988

Decode For Tstatus: Removed Tank Verified

Decode For Inertmatcd: Not reported Decode For Tmatcode: Single Wall Steel

Decode For Textcrprcd: Coating & Cathodic Protection

Direction Distance Elevation

ation Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Decode For Treldetcod: Automatic Tank Gauging

Decode For Tintprotcd: Not Applicable

Decode For Tsplprevcd: Spill Prevention Exempt (waste oil)
Decode For Tovflprvcd: Automatic Shutoff Device
Decode For Pmatcode: Fiberglass Reinforced Plastic

Decode For Pextcoprcd: Not Applicable

Decode For Ptypecode: Suction

Decode For Preldetcod: Exempt From Leak Detection
Decode For Preldetsuc: Exempt From Leak Detection

Decode For Plekdetcod: Not Applicable
Decode For Tsubcd: Used Oil
Decode For Tmancd: STI-P3
Decode For Pmancd: Not reported

Subject Item ID: 16
Tank Status: TRM
Installation Date: 04/01/1988
Closed In Place Date: Not reported
Capacity in Gallons: 1000
Compartment Number: 1

Piping Installation Date: Not reported Added To Tank Date: 04/01/1988

Inert Material Code: Not reported Removed Date: 01/01/1986 Change in Service Date: Not reported Tank Pit Num: Not reported Tank Mfg Code: Not reported Tank Overfill Protection: UNK

Last Tank Test Date:

Relined Date:

Lining Insp Date:

Not reported

Not reported

Not reported

Pipe Release Detection: UNK
Pipe Rel Detect Suc Code: UNK
Pipe Leak Detect Code: NA

Last Contained Date: Not reported
Pipe Mfg Code: Not reported
Last Pipe Test Date: Not reported
Last CP Test Date: Not reported
Added To Flex Date: Not reported
Added To Piping Date: Not reported

Decode For Tstatus: Removed Prior to 1988

Decode For Inertmatcd: Not reported
Decode For Tmatcode: Single Wall Steel

Decode For Textcrprcd:
Decode For Treldetcod:
Decode For Tintprotcd:
Decode For Tsplprevcd:
Decode For Tovflprvcd:
Decode For Tovflprvcd:
Decode For Pmatcode:
Unknown
Unknown
Decode For Pmatcode:
Single Wall Steel

Unknown Decode For Pextcoprcd: Decode For Ptypecode: Unknown Decode For Preldetcod: Unknown Decode For Preldetsuc: Unknown Decode For Plekdetcod: Not Applicable Gasoline Decode For Tsubcd: Decode For Tmancd: Not reported Decode For Pmancd: Not reported

Direction Distance Elevation

n Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Subject Item ID: 12
Tank Status: TR8
Installation Date: 01/01/1960
Closed In Place Date: Not reported
Capacity in Gallons: 3000
Compartment Number: 1

Piping Installation Date: Not reported Added To Tank Date: Not reported

Inert Material Code: Not reported Removed Date: 12/04/1997 Not reported Change in Service Date: Tank Pit Num: Not reported Tank Mfg Code: Not reported Tank Overfill Protection: UNK Last Tank Test Date: Not reported Not reported Relined Date:

Lining Insp Date:

Pipe Release Detection:

Pipe Rel Detect Suc Code:

Pipe Leak Detect Code:

NA

Not reported
LTT
ALT
NA

Last Contained Date:

Pipe Mfg Code:

Last Pipe Test Date:

Not reported

Decode For Tstatus: Removed Tank Verified

Decode For Inertmatcd: Not reported
Decode For Tmatcode: Single Wall Steel

Decode For Textcrprcd: Coating & Cathodic Protection

Decode For Treldetcod: Manual Tank Gauging

Decode For Tintprotcd: Interior Lining

Decode For Tsplprevcd: Single Wall Spill Bucket

Decode For Tovflprvcd: Unknown
Decode For Pmatcode: Single Wall Steel
Decode For Pextcoprcd: Other Please Specify

Decode For Ptypecode: Suction

Decode For Preldetcod: Line Tightness Test

Decode For Preldetsuc: Annual Rlease Testing (historic)

Decode For Plekdetcod: Not Applicable
Decode For Tsubcd: Used Oil
Decode For Tmancd: Not reported
Decode For Pmancd: Not reported
Subject Item ID: 17
Tank Status: TRM

Installation Date: 05/01/1988
Closed In Place Date: Not reported
Capacity in Gallons: 3000
Compartment Number: 1

Piping Installation Date: Not reported Added To Tank Date: Not reported

Inert Material Code:
Removed Date:
Change in Service Date:
Not reported
Not reported
Not reported
Not reported

Direction Distance Elevation

Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Tank Mfg Code: STI ASD Tank Overfill Protection: Last Tank Test Date: 09/18/1995 Relined Date: Not reported Lining Insp Date: Not reported Pipe Release Detection: NON CKV Pipe Rel Detect Suc Code: Pipe Leak Detect Code: NA

Last Contained Date:
Pipe Mfg Code:
FRP
Last Pipe Test Date:
09/18/1995
Last CP Test Date:
10/18/2016
Added To Flex Date:
Not reported
Added To Piping Date:
10/20/1987

Decode For Tstatus: Removed Tank Verified

Decode For Inertmatcd: Not reported
Decode For Tmatcode: Single Wall Steel

Decode For Textcrprcd: Coating & Cathodic Protection
Decode For Treldetcod: Automatic Tank Gauging

Decode For Tintprotcd: Not Applicable

Decode For Tsplprevcd: Single Wall Spill Bucket
Decode For Tovflprvcd: Automatic Shutoff Device
Decode For Pmatcode: Fiberglass Reinforced Plastic

Decode For Pextcoprcd:
Decode For Ptypecode:
Decode For Preldetcod:
Decode For Preldetsuc:
Decode For Plekdetcod:
Decode For Plekdetcod:
Decode For Tsubcd:
Decode For Tsubcd:
Decode For Plekdetcod:
Decode For Tsubcd:
Decode For Tsubcd:

Decode For Tmancd: STI-P3

Decode For Pmancd: Fiberglass Manufacturer Unknown

Subject Item ID: 15
Tank Status: TRM
Installation Date: 04/01/1988
Closed In Place Date: Not reported
Capacity in Gallons: 5100
Compartment Number: 1

Piping Installation Date: Not reported Added To Tank Date: 10/20/1987

Inert Material Code:
Removed Date:
Change in Service Date:
Tank Pit Num:
Not reported
Tank Mfg Code:
Not reported
Not reported
Not reported
Not reported
Not reported
UNK

Last Tank Test Date: Not reported
Relined Date: Not reported
Lining Insp Date: Not reported

Pipe Release Detection: LTT
Pipe Rel Detect Suc Code: ALT
Pipe Leak Detect Code: NA

Last Contained Date:

Pipe Mfg Code:

Last Pipe Test Date:

Not reported

Direction Distance Elevation

tion Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Added To Piping Date: Not reported

Decode For Tstatus: Removed Tank Verified

Decode For Inertmatcd: Not reported
Decode For Tmatcode: Single Wall Steel

Decode For Textcrprcd: Coating & Cathodic Protection

Decode For Treldetcod: Manual Tank Gauging

Decode For Tintproted: Interior Lining

Decode For Tintprotcd: Interior Lining

Decode For Tsplprevcd: Single Wall Spill Bucket

Decode For Tovflprvcd: Unknown
Decode For Pmatcode: Single Wall Steel
Decode For Pextcoprcd: Other Please Specify

Decode For Ptypecode: Suction

Decode For Preldetcod: Line Tightness Test

Decode For Preldetsuc: Annual Rlease Testing (historic)

Decode For Plekdetcod: Not Applicable Decode For Tsubcd: Used Oil Not reported Decode For Tmancd: Decode For Pmancd: Not reported Subject Item ID: 13 TRM Tank Status: Installation Date: 05/01/1986 Closed In Place Date: Not reported 1000 Capacity in Gallons:

Compartment Number: 1

Piping Installation Date: Not reported Added To Tank Date: Not reported

Inert Material Code:
Removed Date:
Change in Service Date:
Not reported

Tank Overfill Protection: UNK

Last Tank Test Date:

Relined Date:

Lining Insp Date:

Pipe Release Detection:

Pipe Rel Detect Suc Code:

Not reported

Not reported

UNK

Pipe Rel Detect Suc Code: UNIP
Pipe Leak Detect Code: NA

Last Contained Date: Not reported Pipe Mfg Code: Not reported Last Pipe Test Date: Not reported Last CP Test Date: Not reported Not reported Added To Flex Date: Not reported Added To Piping Date: Decode For Tstatus: Exempt Decode For Inertmatcd: Not reported Decode For Tmatcode: Unknown Decode For Textcrprcd: Unknown Decode For Treldetcod: None Decode For Tintprotcd: Unknown Decode For Tsplprevcd: Unknown Decode For Tovflprvcd: Unknown Decode For Pmatcode: Unknown Decode For Pextcoprcd: Unknown Decode For Ptypecode: Unknown Decode For Preldetcod: Unknown

Direction Distance Elevation

Site Database(s) **EPA ID Number**

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Decode For Preldetsuc: Unknown Decode For Plekdetcod: Not Applicable Fuel Oil Decode For Tsubcd: Not reported Decode For Tmancd: Decode For Pmancd: Not reported

Subject Item ID: Tank Status: TEX Installation Date: 01/01/1960 Closed In Place Date: Not reported Capacity in Gallons: 4000 Compartment Number:

Piping Installation Date: Not reported Added To Tank Date: Not reported

Inert Material Code: Not reported Removed Date: Not reported Not reported Change in Service Date: Tank Pit Num: Not reported Tank Mfg Code: Not reported UNK

Tank Overfill Protection: Last Tank Test Date: Not reported Relined Date: Not reported Not reported Lining Insp Date: Pipe Release Detection: UNK Pipe Rel Detect Suc Code: UNK

Pipe Leak Detect Code: NA Last Contained Date: Not reported

Pipe Mfg Code: Not reported Last Pipe Test Date: Not reported Last CP Test Date: Not reported Not reported Added To Flex Date: Added To Piping Date: Not reported Decode For Tstatus: Exempt Decode For Inertmatcd: Not reported Decode For Tmatcode: Unknown Decode For Textcrprcd: Unknown Decode For Treldetcod: None Decode For Tintprotcd: Unknown Decode For Tsplprevcd: Unknown Decode For Tovflprvcd: Unknown Decode For Pmatcode: Unknown Unknown Decode For Pextcoprcd: Decode For Ptypecode: Unknown Decode For Preldetcod: Unknown Decode For Preldetsuc: Unknown Decode For Plekdetcod: Not Applicable Decode For Tsubcd: Fuel Oil Decode For Tmancd: Not reported Decode For Pmancd: Not reported

Subject Item ID: Tank Status: TEX

Installation Date: 01/01/1975 Closed In Place Date: Not reported 15000 Capacity in Gallons:

Compartment Number: Piping Installation Date: Not reported

Direction Distance Elevation

Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Inert Material Code:
Removed Date:
O2/01/1999
Change in Service Date:
Not reported
Tank Pit Num:
Not reported
Tank Mfg Code:
Not reported
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Last Tank Test Date:

Relined Date:

Lining Insp Date:

Pipe Release Detection:

Pipe Rel Detect Suc Code:

Pipe Leak Detect Code:

Not reported

UNK

UNK

VINK

NA

Last Contained Date:

Pipe Mfg Code:

Last Pipe Test Date:

Not reported

Decode For Tstatus: Removed Tank Verified

Decode For Inertmatcd: Not reported
Decode For Tmatcode: Single Wall Steel

Decode For Textcrprcd: Unknown Decode For Treldetcod: None Decode For Tintprotcd: Unknown Decode For Tsplprevcd: Unknown Decode For Tovflprvcd: Unknown Decode For Pmatcode: Unknown Decode For Pextcoprcd: Unknown Decode For Ptypecode: Unknown Decode For Preldetcod: Unknown Decode For Preldetsuc: Unknown Decode For Plekdetcod: Not Applicable Decode For Tsubcd: Fuel Oil Decode For Tmancd: Not reported Not reported Decode For Pmancd:

Subject Item ID: 7
Tank Status: TRM
Installation Date: 01/01/1977
Closed In Place Date: Not reported
Capacity in Gallons: 10000
Compartment Number: 1

Piping Installation Date: Not reported Added To Tank Date: Not reported

Inert Material Code: Not reported 10/01/1987 Removed Date: Change in Service Date: Not reported Tank Pit Num: Not reported Tank Mfg Code: Not reported Tank Overfill Protection: UNK Last Tank Test Date: Not reported Relined Date: Not reported Not reported Lining Insp Date: Pipe Release Detection: UNK Pipe Rel Detect Suc Code: UNK Pipe Leak Detect Code: NA

Last Contained Date: Not reported

Direction Distance Elevation

n Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Pipe Mfg Code:

Last Pipe Test Date:

Last CP Test Date:

Added To Flex Date:

Added To Piping Date:

Not reported

Not reported

Not reported

Decode For Tstatus: Removed Prior to 1988

Decode For Inertmatcd:
Decode For Tmatcode:
Decode For Textcrprcd:
Decode For Treldetcod:
Decode For Treldetcod:
Decode For Tintprotcd:
Decode For Tsplprevcd:
Decode For Tovflprvcd:
Unknown
Unknown
Unknown
Unknown

Decode For Pmatcode: Single Wall Steel

Decode For Pextcoprcd: Unknown
Decode For Ptypecode: Unknown
Decode For Preldetcod: Unknown
Decode For Preldetsuc: Unknown
Decode For Plekdetcod: Not Applicable
Decode For Tsubcd: Diesel

Decode For Tsubcd: Diesel
Decode For Tmancd: Not reported
Decode For Pmancd: Not reported

Subject Item ID:

Tank Status: TR8
Installation Date: 01/01/1971
Closed In Place Date: Not reported
Capacity in Gallons: 5000
Compartment Number: 1

Piping Installation Date: Not reported Added To Tank Date: Not reported

Inert Material Code: Not reported Removed Date: Not reported Change in Service Date: Not reported Tank Pit Num: Not reported

Tank Mfg Code: STI Tank Overfill Protection: ASD Last Tank Test Date: 09/18/1995 Relined Date: Not reported Lining Insp Date: Not reported NON Pipe Release Detection: CKV Pipe Rel Detect Suc Code: Pipe Leak Detect Code: NA

Last Contained Date: Not reported

Pipe Mfg Code: FLU

Last Pipe Test Date: 09/18/1995
Last CP Test Date: 10/18/2016
Added To Flex Date: Not reported
Added To Piping Date: 10/17/2001
Decode For Tstatus: Active

Decode For Inertmatcd: Not reported
Decode For Tmatcode: Single Wall Steel

Decode For Textcrprcd: Coating & Cathodic Protection
Decode For Treldetcod: Automatic Tank Gauging

Decode For Tintprotcd: Not Applicable

Decode For Tsplprevcd: Single Wall Spill Bucket
Decode For Tovflprvcd: Automatic Shutoff Device

Direction
Distance

Elevation Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Decode For Pmatcode: Single Wall Steel
Decode For Pextcoprcd: Other Please Specify

Decode For Ptypecode:
Decode For Preldetcod:
Decode For Preldetsuc:
Decode For Plekdetcod:
Decode For Tsubcd:
Decode For Tmancd:
Suction
None
Check Valve
Not Applicable
Jet Fuel
STI-P3

Decode For Pmancd: FLEX Manufacturer Unknown

Subject Item ID: 3
Tank Status: TAC
Installation Date: 01/01/1984
Closed In Place Date: Not reported
Capacity in Gallons: 10000
Compartment Number: 1

Piping Installation Date: Not reported Added To Tank Date: 10/17/2001

Inert Material Code: Not reported Removed Date: 12/04/1997 Change in Service Date: Not reported Tank Pit Num: Not reported Tank Mfg Code: Not reported Tank Overfill Protection: UNK Last Tank Test Date: Not reported Relined Date: Not reported Lining Insp Date: Not reported Pipe Release Detection: NON Pipe Rel Detect Suc Code: NON MLD Pipe Leak Detect Code: Last Contained Date: Not reported

Pipe Mfg Code: Not reported
Last Pipe Test Date: Not reported
Last CP Test Date: Not reported
Added To Flex Date: Not reported
Added To Piping Date: Not reported

Decode For Tstatus: Removed Tank Verified

Decode For Inertmatcd: Not reported
Decode For Tmatcode: Single Wall Steel
Decode For Textcrprcd: Not Applicable

Decode For Treldetcod: Daily Inventory Rec Tank Tightness

Decode For Tintprotcd: Interior Lining
Decode For Tsplprevcd: Unknown
Decode For Tovflprvcd: Unknown
Decode For Pmatcode: Single Wall Steel
Decode For Pextcoprcd: Other Please Specify

Decode For Ptypecode: Pressurized
Decode For Preldetcod: None
Decode For Preldetsuc: None

Decode For Plekdetcod: Manual Line Leak Detection

Decode For Tsubcd: Jet Fuel
Decode For Tmancd: Not reported
Decode For Pmancd: Not reported

Subject Item ID: 1
Tank Status: TRM
Installation Date: 01/01/1974
Closed In Place Date: Not reported

Direction Distance Elevation

ion Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Capacity in Gallons: 4000 Compartment Number: 1

Piping Installation Date: Not reported Added To Tank Date: Not reported

Inert Material Code:
Removed Date:
Not reported
Change in Service Date:
Not reported
Not reported
Not reported
Tank Pit Num:
Not reported
Tank Mfg Code:
FRP
Tank Overfill Protection:
ASD

Last Tank Test Date:
Relined Date:
Not reported
Not reported
Not reported
Not reported
Not reported
Not reported
Non
Pipe Release Detection:
NON
Pipe Rel Detect Suc Code:
Pipe Leak Detect Code:
NA

Last Contained Date: Not reported

Pipe Mfg Code: ENV

Last Pipe Test Date:

Last CP Test Date:

Added To Flex Date:

Added To Piping Date:

Decode For Tstatus:

Decode For Inertmatcd:

Not reported

10/17/2001

Active

Not reported

Decode For Tmatcode: Double Wall Fiberglass

Decode For Textcrprcd: Not Applicable
Decode For Treldetcod: Automatic Tank Gauging

Decode For Tintprotcd: Not Applicable

Decode For Tsplprevcd: Single Wall Spill Bucket
Decode For Tovflprvcd: Automatic Shutoff Device

Decode For Pmatcode: Flexible Wall
Decode For Pextcoprcd: Not Applicable
Decode For Ptypecode: Suction
Decode For Preldetcod: None

Decode For Preldetsuc: Exempt From Leak Detection

Decode For Plekdetcod: Not Applicable

Decode For Tsubcd: Diesel

Decode For Tmancd: Fiberglass Manufacturer Unknown

Decode For Pmancd: Environ - Geoflex D

Subject Item ID: 18
Tank Status: TAC
Installation Date: 12/01/2001
Closed In Place Date: Not reported
Capacity in Gallons: 15000
Compartment Number: 1

Piping Installation Date: Not reported Added To Tank Date: 10/17/2001

Inert Material Code: Not reported Removed Date: 11/13/2017 Change in Service Date: Not reported Tank Pit Num: Not reported Tank Mfq Code: STI

Tank Mfg Code: STI
Tank Overfill Protection: ASD
Last Tank Test Date: 09/18/1995
Relined Date: Not reported

Direction Distance

Elevation Site Database(s) **EPA ID Number**

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Lining Insp Date: Not reported Pipe Release Detection: NON Pipe Rel Detect Suc Code: CKV Pipe Leak Detect Code: NA

Last Contained Date: Not reported Pipe Mfg Code: **FRP** Last Pipe Test Date: 09/18/1995 Last CP Test Date: 03/09/2017 Added To Flex Date: Not reported Added To Piping Date: 10/20/1987

Decode For Tstatus: Removed Tank Verified

Not reported Decode For Inertmatcd: Decode For Tmatcode: Single Wall Steel

Decode For Textcrprcd: Coating & Cathodic Protection Decode For Treldetcod: Automatic Tank Gauging

Decode For Tintprotcd: Not Applicable

Decode For Tsplprevcd: Single Wall Spill Bucket Decode For Tovflprvcd: Automatic Shutoff Device Decode For Pmatcode: Fiberglass Reinforced Plastic

Decode For Pextcoprcd: Not Applicable Decode For Ptypecode: Suction Decode For Preldetcod: None Decode For Preldetsuc: Check Valve Decode For Plekdetcod: Not Applicable Decode For Tsubcd: Diesel Decode For Tmancd: STI-P3

Decode For Pmancd: Fiberglass Manufacturer Unknown

Subject Item ID: 14 Tank Status: TRM 04/01/1988 Installation Date: Not reported Closed In Place Date: Capacity in Gallons: 8000 Compartment Number:

Piping Installation Date: Not reported 10/20/1987 Added To Tank Date:

Inert Material Code: Not reported Removed Date: 11/01/1992 Change in Service Date: Not reported Tank Pit Num: Not reported Tank Mfg Code: Not reported

Tank Overfill Protection: UNK

Last Tank Test Date: Not reported Not reported Relined Date: Not reported Lining Insp Date:

UNK Pipe Release Detection: Pipe Rel Detect Suc Code: UNK Pipe Leak Detect Code: NA

Last Contained Date: Not reported Pipe Mfg Code: Not reported Last Pipe Test Date: Not reported Last CP Test Date: Not reported Added To Flex Date: Not reported Added To Piping Date: Not reported Decode For Tstatus: Exempt Not reported Decode For Inertmatcd: Decode For Tmatcode: Single Wall Steel

Direction Distance Elevation

ce EDR ID Number ion Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

Decode For Textcrprcd: Unknown Decode For Treldetcod: None Decode For Tintprotcd: Unknown Decode For Tsplprevcd: Unknown Decode For Tovflprvcd: Unknown Single Wall Steel Decode For Pmatcode: Decode For Pextcoprcd: Unknown Decode For Ptypecode: Unknown Decode For Preldetcod: Unknown Decode For Preldetsuc: Unknown Not Applicable Decode For Plekdetcod: Fuel Oil Decode For Tsubcd: Decode For Tmancd: Not reported Decode For Pmancd: Not reported Subject Item ID:

Subject Item ID: 10

Tank Status: TEX
Installation Date: 01/01/1958

Closed In Place Date: Not reported
Capacity in Gallons: 4000

Capacity in Gallons: 400 Compartment Number: 1

Piping Installation Date: Not reported Added To Tank Date: Not reported

Inert Material Code:
Removed Date:
Not reported
Change in Service Date:
Not reported
Not reported
Not reported
Tank Pit Num:
Not reported
Tank Mfg Code:
Not reported
Volume Not reported
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Last Tank Test Date: Not reported Relined Date: Not reported Lining Insp Date: Not reported

Pipe Release Detection: UNK
Pipe Rel Detect Suc Code: UNK
Pipe Leak Detect Code: NA

Last Contained Date: Not reported Pipe Mfg Code: Not reported Last Pipe Test Date: Not reported Last CP Test Date: Not reported Added To Flex Date: Not reported Not reported Added To Piping Date: Decode For Tstatus: Exempt Decode For Inertmatcd: Not reported Unknown Decode For Tmatcode: Decode For Textcrprcd: Unknown Decode For Treldetcod: None Decode For Tintprotcd: Unknown Decode For Tsplprevcd: Unknown Decode For Tovflprvcd: Unknown Unknown Decode For Pmatcode: Decode For Pextcoprcd: Unknown Decode For Ptypecode: Unknown Decode For Preldetcod: Unknown Decode For Preldetsuc: Unknown Decode For Plekdetcod: Not Applicable Fuel Oil Decode For Tsubcd: Decode For Tmancd: Not reported

Map ID MAP FINDINGS
Direction

Distance Elevation

Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Decode For Pmancd: Not reported

Subject Item ID: 8
Tank Status: TEX
Installation Date: 01/01/1973
Closed In Place Date: Not reported
Capacity in Gallons: 12000
Compartment Number: 1

Piping Installation Date: Not reported Added To Tank Date: Not reported

Inert Material Code:
Removed Date:
Change in Service Date:
Not reported
Not reported
Tank Pit Num:
Not reported
Tank Mfg Code:
Not reported
Not reported
Not reported
ASD

Last Tank Test Date:
Relined Date:
Lining Insp Date:
Not reported
Not reported
Not reported
Not reported
Not reported
OTH
Pipe Rel Detect Suc Code:
OTH

Pipe Rel Detect Suc Code: OTH Pipe Leak Detect Code: NA

Last Contained Date:

Pipe Mfg Code:

Last Pipe Test Date:

Not reported

Decode For Tstatus: Removed Tank Verified

Decode For Inertmatcd: Not reported
Decode For Tmatcode: Single Wall Steel

Decode For Textcrprcd: Coating & Cathodic Protection
Decode For Treldetcod: Automatic Tank Gauging

Decode For Tintprotcd: Interior Lining

Decode For Tsplprevcd: Single Wall Spill Bucket
Decode For Tovflprvcd: Automatic Shutoff Device

Decode For Pmatcode: Single Wall Steel
Decode For Pextcoprcd: Other Please Specify

Decode For Ptypecode: Suction

Decode For Preldetsuc:

Other, Please Specify
Other, Please Specify

Decode For Plekdetcod: Not Applicable
Decode For Tsubcd: Gasoline
Decode For Tmancd: Not reported
Decode For Pmancd: Not reported

Subject Item ID: 6
Tank Status: TRM
Installation Date: 01/01/1977
Closed In Place Date: 10/06/1998
Capacity in Gallons: 10000
Compartment Number: 1

Piping Installation Date: Not reported Added To Tank Date: Not reported

Inert Material Code: Not reported Removed Date: 10/01/1987 Change in Service Date: Not reported

Direction Distance Elevation

Site Database(s) **EPA ID Number**

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Tank Pit Num: Not reported Tank Mfg Code: Not reported Tank Overfill Protection: UNK Last Tank Test Date: Not reported Relined Date: Not reported Lining Insp Date: Not reported Pipe Release Detection: UNK Pipe Rel Detect Suc Code: UNK Pipe Leak Detect Code: NA

Last Contained Date: Not reported Pipe Mfg Code: Not reported Last Pipe Test Date: Not reported Last CP Test Date: Not reported Added To Flex Date: Not reported Added To Piping Date: Not reported

Decode For Tstatus: Removed Prior to 1988

Not reported Decode For Inertmatcd: Decode For Tmatcode: Single Wall Steel

Decode For Textcrprcd: Unknown Decode For Treldetcod: None Decode For Tintprotcd: Unknown Decode For Tsplprevcd: Unknown Decode For Tovflprvcd: Unknown Decode For Pmatcode: Single Wall Steel Decode For Pextcoprcd: Unknown

Decode For Ptypecode: Unknown Decode For Preldetcod: Unknown Decode For Preldetsuc: Unknown Decode For Plekdetcod: Not Applicable Gasoline Decode For Tsubcd: Not reported Decode For Tmancd: Decode For Pmancd: Not reported

Subject Item ID: Tank Status: TR8 01/01/1956 Installation Date: Not reported Closed In Place Date: 12000 Capacity in Gallons: Compartment Number:

Piping Installation Date: Not reported Added To Tank Date: Not reported

Inert Material Code: Not reported Removed Date: 12/04/1997 Change in Service Date: Not reported Tank Pit Num: Not reported Tank Mfg Code: Not reported Tank Overfill Protection: UNK

Last Tank Test Date: Not reported Relined Date: Not reported Not reported Lining Insp Date: Pipe Release Detection: NON Pipe Rel Detect Suc Code: NON MLD Pipe Leak Detect Code:

Last Contained Date: Not reported Pipe Mfg Code: Not reported Last Pipe Test Date: Not reported Last CP Test Date: Not reported

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

Added To Flex Date: Not reported Added To Piping Date: Not reported

Decode For Tstatus: Removed Tank Verified

Decode For Inertmatcd: Not reported Decode For Tmatcode: Single Wall Steel

Coating & Cathodic Protection Decode For Textcrprcd: Daily Inventory Rec Tank Tightness Decode For Treldetcod:

Decode For Tintprotcd: Interior Lining Decode For Tsplprevcd: Unknown Decode For Tovflprvcd: Unknown Decode For Pmatcode: Single Wall Steel Decode For Pextcoprcd: Other Please Specify

Decode For Ptypecode: Suction Decode For Preldetcod: None Decode For Preldetsuc: None

Decode For Plekdetcod: Manual Line Leak Detection

Decode For Tsubcd: Jet Fuel Decode For Tmancd: Not reported Decode For Pmancd: Not reported

Subject Item ID: 2 TRM Tank Status: Installation Date: 01/01/1984 Closed In Place Date: Not reported Capacity in Gallons: 6000 Compartment Number: Piping Installation Date: Not reported

Added To Tank Date: Not reported

AIRS:

2107300054 Facility: Mailing Address 3: Not reported

Emps: 40

Plant Class Description: 0; Conditional Major

Acreage: 590.8

Alternate Facility Name: KY Dept of Military Affairs - Boone National Guard Center

Alternate Facility End Date: Not reported Principal Product: **MILITARY** State Plant Class Code: 0000

GOVT- Federal Agency/Organization (92) DAQ AI Type:

DAQ Reg Comment: Not reported Mailing Address Line 2: Not reported Inspector Assigned AI: Anthony Hanley Last Inspection Lead: Chad Bergenson 03/14/2013 Last Inspection Date:

Air Programs: 0-SIP Source; 9-NSPS; G-Area Source MACT; M-MACT Air Subparts: Not Applicable; 9-IIII-Compression Igntion Int. Comb Eng;

G-ZZZZ-Recipro. Int. Comb Engine (RICE); M-ZZZZ-Recipro. Int. Comb

Engine (RICE)

Emission:

2014 Year: County: Franklin 2107300054 Facility ID:

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: CO (Carbon Monoxide) Actual Emissions: 0.44517861000000003

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

Year: 2014 County: Franklin Facility ID: 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID:

NO2 (Nitrogen Dioxide) Pollutant: 0.60906506999999999 Actual Emissions:

2014 Year: County: Franklin Facility ID: 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID:

Pollutant: PM10 (Particulate Matter - 10 Microns Or Less)

Actual Emissions: 0.04575282

2014 Year: County: Franklin Facility ID: 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: PT (Particulate Matter)

Actual Emissions: 0.04575282

2014 Year: County: Franklin Facility ID: 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID:

Pollutant: SO2 (Sulfur Dioxide) 1.001095999999999E-2 Actual Emissions:

2014 Year: County: Franklin Facility ID: 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID:

Pollutant: VOC (Volatile Organic Compounds)

6.260058999999998E-2 Actual Emissions:

2015 Year: Franklin County: Facility ID: 2107300054

KY Dept of Military Affairs - Boone National Guard Center Facility Name:

AI ID: 1423

Pollutant: CO (Carbon Monoxide) Actual Emissions: 0.41569847999999998

Year: 2015 Franklin County: Facility ID: 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID:

Pollutant: NO2 (Nitrogen Dioxide) 0.57426144000000001 Actual Emissions:

Year: 2015

Direction Distance

Elevation Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

County: Franklin Facility ID: 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: PM10 (Particulate Matter - 10 Microns Or Less)

Actual Emissions: 4.3121539999999993E-2

 Year:
 2015

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: PT (Particulate Matter)
Actual Emissions: 4.312153999999993E-2

 Year:
 2015

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: SO2 (Sulfur Dioxide)
Actual Emissions: 9.825580000000004E-3

 Year:
 2015

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: VOC (Volatile Organic Compounds)

Actual Emissions: 0.06146049

 Year:
 2010

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: CO (Carbon Monoxide)
Actual Emissions: 0.4430056400000003

 Year:
 2010

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: NO2 (Nitrogen Dioxide) Actual Emissions: 0.94976857999999997

 Year:
 2010

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: PM10 (Particulate Matter - 10 Microns Or Less)

Actual Emissions: 6.5388149999999992E-2

Year: 2010 County: Franklin

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

Facility ID: 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: PT (Particulate Matter) 6.5388149999999992E-2 Actual Emissions:

2010 Year: County: Franklin Facility ID: 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

SO2 (Sulfur Dioxide) Pollutant: 3.089649999999997E-2 Actual Emissions:

Year: 2010 County: Franklin Facility ID: 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID:

VOC (Volatile Organic Compounds) Pollutant:

0.64213500000000001 Actual Emissions:

2016 Year: County: Franklin Facility ID: 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID:

Pollutant: CO (Carbon Monoxide) 0.35035522000000002 Actual Emissions:

2016 Year: County: Franklin Facility ID: 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID:

NO2 (Nitrogen Dioxide) Pollutant: Actual Emissions: 0.51804676000000005

2016 Year: County: Franklin Facility ID: 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID:

PM10 (Particulate Matter - 10 Microns Or Less) Pollutant:

3.6767560000000005E-2 Actual Emissions:

Year: 2016 County: Franklin 2107300054 Facility ID:

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: PT (Particulate Matter) 3.6767560000000005E-2 Actual Emissions:

Year: 2016 County: Franklin Facility ID: 2107300054

Direction Distance

Elevation Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: SO2 (Sulfur Dioxide)
Actual Emissions: 9.566789999999986E-3

 Year:
 2016

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: VOC (Volatile Organic Compounds)

Actual Emissions: 6.400498000000003E-2

 Year:
 2011

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: CO (Carbon Monoxide)
Actual Emissions: 0.49816042000000005

 Year:
 2011

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: NO2 (Nitrogen Dioxide) Actual Emissions: 1.2577885100000001

 Year:
 2011

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: PM10 (Particulate Matter - 10 Microns Or Less)

Actual Emissions: 8.520806999999997E-2

 Year:
 2011

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: PT (Particulate Matter)
Actual Emissions: 8.520806999999997E-2

 Year:
 2011

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

 AI ID:
 1423

 Pollutant:
 SO2 (Sulfur Dioxide)

 Actual Emissions:
 5.2173049999999999-2-2

 Year:
 2011

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

Direction Distance

Elevation Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

AI ID: 1423

Pollutant: VOC (Volatile Organic Compounds)

Actual Emissions: 0.61067355999999995

 Year:
 2012

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: CO (Carbon Monoxide)
Actual Emissions: 0.40807585000000002

 Year:
 2012

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: NO2 (Nitrogen Dioxide)
Actual Emissions: 0.8534746300000001

 Year:
 2012

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: PM10 (Particulate Matter - 10 Microns Or Less)

Actual Emissions: 5.810158000000007E-2

 Year:
 2012

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: PT (Particulate Matter)
Actual Emissions: 5.810158000000007E-2

 Year:
 2012

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: SO2 (Sulfur Dioxide)
Actual Emissions: 2.845546999999997E-2

 Year:
 2012

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: VOC (Volatile Organic Compounds)

Actual Emissions: 0.72622397000000005

 Year:
 2013

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Direction Distance

Elevation Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

Pollutant: CO (Carbon Monoxide)
Actual Emissions: 0.46459892000000003

 Year:
 2013

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: NO2 (Nitrogen Dioxide)
Actual Emissions: 0.61515332999999994

 Year:
 2013

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: PM10 (Particulate Matter - 10 Microns Or Less)

Actual Emissions: 4.63166399999999999999-2

 Year:
 2013

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

 Year:
 2013

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

ALID: 1423

Pollutant: SO2 (Sulfur Dioxide)
Actual Emissions: 8.67870000000001E-3

 Year:
 2013

 County:
 Franklin

 Facility ID:
 2107300054

Facility Name: KY Dept of Military Affairs - Boone National Guard Center

AI ID: 1423

Pollutant: VOC (Volatile Organic Compounds)

Actual Emissions: 0.05400659

NPDES:

Federal Facility ID: Not reported Facility Status: Effective KY DES #: KYR003295 Total App# Design Flow (MGD): Not reported Horizontal Collect Method Desc: Not reported Not reported Facility Addr 2: Inactive Date: Not reported Design Capacity: Not reported Fee Category: Not reported

SIC Code: 9711

Lat/Long: 38.187 / -84.899333 Lat/Long Method: Not reported

Direction Distance Elevation

evation Site Database(s) EPA ID Number

KY DEPT OF MILITARY AFFAIRS - BOONE NATIONAL GUARD CENTER (Continued)

U001441482

EDR ID Number

USGS Hydrologic Basin Code: 021

Facility Stream Segment:

Facility Mileage Indicator:

Basin Code:

Basin Code Description:

DMR Contact:

Contact Telephone:

Mot reported

Not reported

Not reported

Jeremy Cossel

502-607-1854

Mailing Address:

Not reported

Jeremy Cossel

100 Minuteman Pkwy

Mailing Address 2: Not reported
Mailing City,St,Zip: Frankfort, KY 40601

Permit Issued: 10/30/2013
Permit Expires: 05/31/2018
SIC Code Description: National Security
Reveiving Waters: Not reported
Major/Minor: Minor
Effective Date: 11/01/2013
Affiliation Type Desc: PMA

Organization Formal Name: Kentucky Dept of Military Affairs - Boone National Guard Center

Facility Type Desc: State Government

State Facility ID: 1423
Original Issue Date: 10/30/2013
Approved For Electronic DMR Submission: Yes

Federal Facility ID: Not reported Facility Status: **INACTIVE** KY DES #: KYR105430 Total App# Design Flow (MGD): Not reported Horizontal Collect Method Desc: Not reported Facility Addr 2: Not reported Inactive Date: 06/14/2005 Design Capacity: Not reported Fee Category: Not reported SIC Code: 8741

Lat/Long: Not reported Not reported Lat/Long Method: USGS Hydrologic Basin Code: Not reported Facility Stream Segment: Not reported Facility Mileage Indicator: Not reported Basin Code: Not reported Basin Code Description: Not reported **DMR Contact:** JOE SANDERSON 5026071535 Contact Telephone:

Mailing Address: DEPT OF MILITARY AFFAIRS
Mailing Address 2: 100 MINUTEMAN PKWY BLDG 162

Mailing City, St, Zip: FRANKFORT, KY 40601

Permit Issued: 10/06/2003 Permit Expires: 09/30/2007

SIC Code Description: MANAGEMENT SERVICES
Reveiving Waters: SOUTH BENSON CRK

Major/Minor: MINOR
Effective Date: Not reported
Affiliation Type Desc: Not reported
Organization Formal Name: Not reported
Facility Type Desc: Not reported
State Facility ID: Not reported
Original Issue Date: Not reported

Approved For Electronic DMR Submission: Not reported

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

А3 **NDNODS RAMEY RANGE** UXO 1018152627 **East 100 MINUTEMAN PARKWAY**

N/A

1/2-1 FRANKFORT, KY

0.542 mi.

2863 ft. Site 2 of 2 in cluster A

UXO: Relative:

Higher DoD Component: Army

Installation Name: JFHQ KY ARNG Actual: Facility Address 2: Not reported 810 ft. Site ID: KYHQ-003-R-01 Site Type: Small Arms Range

Latitude: Not reported Not reported Longitude:

HOPE LUTHERAN CHURCH **KY SHWS** S106884859 4 N/A

1251 LOUISVILLE ROAD South 1/2-1 FRANKFORT, KY 40601

0.749 mi. 3956 ft.

Relative: SHWS: Lower 52359 Facility Id: Status: Closed Actual:

HOPE LUTHERAN CHURCH (Closed: No Action Necessary) 747 ft. Description:

> Closure Date: 04/29/2003 Longitude: -84.902383 Latitude: 38.176926 Subject Item County: Franklin Sub Item Longitude: -84.902221 Sub Item Latitude: 38.176943 Subject Item Address: 1251 Louisville Rd

Subject Item Address2: Not reported Subject Item City,St,Zip: Frankfort, KY 40601 Regulatory Desc: Petroleum Cleanup

Closure Option: Option A No Action Necessary

Side SG: 61021 Count: 0 records. ORPHAN SUMMARY

City EDR ID Site Name Site Address Zip Database(s)

NO SITES FOUND

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/11/2017 Source: EPA
Date Data Arrived at EDR: 12/22/2017 Telephone: N/A

Number of Days to Update: 14 Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources

EPA's Environmental Photographic Interpretation Center (EPIC)

Telephone: 202-564-7333

EPA Region 1 EPA Region 6

Telephone 617-918-1143 Telephone: 214-655-6659

EPA Region 3 EPA Region 7

Telephone 215-814-5418 Telephone: 913-551-7247

EPA Region 4 EPA Region 8

Telephone 404-562-8033 Telephone: 303-312-6774

EPA Region 5 EPA Region 9

Telephone 312-886-6686 Telephone: 415-947-4246

EPA Region 10

Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/11/2017 Source: EPA
Date Data Arrived at EDR: 12/22/2017 Telephone: N/A

Number of Days to Update: 14 Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991 Date Data Arrived at EDR: 02/02/1994 Date Made Active in Reports: 03/30/1994

Number of Days to Update: 56

Source: EPA

Telephone: 202-564-4267 Last EDR Contact: 08/15/2011

Next Scheduled EDR Contact: 11/28/2011 Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/11/2017 Date Data Arrived at EDR: 12/22/2017 Date Made Active in Reports: 01/05/2018

Number of Days to Update: 14

Source: EPA Telephone: N/A

Last EDR Contact: 05/30/2018

Next Scheduled EDR Contact: 07/16/2018 Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017

Number of Days to Update: 92

Source: Environmental Protection Agency Telephone: 703-603-8704

Last EDR Contact: 04/06/2018

Next Scheduled EDR Contact: 07/16/2018 Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/09/2018 Date Data Arrived at EDR: 02/06/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 66

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 05/30/2018

Next Scheduled EDR Contact: 07/30/2018 Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/09/2018 Date Data Arrived at EDR: 02/06/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 66

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 05/30/2018

Next Scheduled EDR Contact: 07/30/2018 Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/11/2017 Date Data Arrived at EDR: 12/26/2017 Date Made Active in Reports: 02/09/2018

Number of Days to Update: 45

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 03/28/2018

Next Scheduled EDR Contact: 07/09/2018 Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/11/2017 Date Data Arrived at EDR: 12/26/2017 Date Made Active in Reports: 02/09/2018

Number of Days to Update: 45

Source: Environmental Protection Agency

Telephone: (404) 562-8651 Last EDR Contact: 03/28/2018

Next Scheduled EDR Contact: 07/09/2018 Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/11/2017 Date Data Arrived at EDR: 12/26/2017 Date Made Active in Reports: 02/09/2018

Number of Days to Update: 45

Source: Environmental Protection Agency

Telephone: (404) 562-8651 Last EDR Contact: 03/28/2018

Next Scheduled EDR Contact: 07/09/2018 Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/11/2017 Date Data Arrived at EDR: 12/26/2017 Date Made Active in Reports: 02/09/2018

Number of Days to Update: 45

Source: Environmental Protection Agency

Telephone: (404) 562-8651 Last EDR Contact: 03/28/2018

Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/11/2017 Date Data Arrived at EDR: 12/26/2017 Date Made Active in Reports: 02/09/2018

Number of Days to Update: 45

Source: Environmental Protection Agency

Telephone: (404) 562-8651 Last EDR Contact: 03/28/2018

Next Scheduled EDR Contact: 07/09/2018 Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/16/2018 Date Data Arrived at EDR: 02/22/2018 Date Made Active in Reports: 05/11/2018

Number of Days to Update: 78

Source: Department of the Navy Telephone: 843-820-7326 Last EDR Contact: 05/09/2018

Next Scheduled EDR Contact: 08/27/2018 Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2018 Date Data Arrived at EDR: 02/27/2018 Date Made Active in Reports: 05/11/2018

Number of Days to Update: 73

Source: Environmental Protection Agency

Telephone: 703-603-0695 Last EDR Contact: 05/29/2018

Next Scheduled EDR Contact: 09/10/2018 Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2018 Date Data Arrived at EDR: 02/27/2018 Date Made Active in Reports: 05/11/2018

Number of Days to Update: 73

Source: Environmental Protection Agency

Telephone: 703-603-0695 Last EDR Contact: 05/29/2018

Next Scheduled EDR Contact: 09/10/2018

Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 01/16/2018 Date Data Arrived at EDR: 01/19/2018 Date Made Active in Reports: 03/23/2018

Number of Days to Update: 63

Source: National Response Center, United States Coast Guard

Telephone: 202-267-2180 Last EDR Contact: 03/27/2018

Next Scheduled EDR Contact: 07/09/2018 Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

SHWS: State Leads List

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 03/21/2018 Date Data Arrived at EDR: 03/22/2018 Date Made Active in Reports: 04/18/2018

Number of Days to Update: 27

Source: Department of Environmental Protection

Telephone: 502-564-6716 Last EDR Contact: 05/29/2018

Next Scheduled EDR Contact: 09/10/2018 Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facilities List

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/20/2018 Date Data Arrived at EDR: 02/23/2018 Date Made Active in Reports: 04/18/2018

Number of Days to Update: 54

Source: Department of Environmental Protection

Telephone: 502-564-6716 Last EDR Contact: 04/30/2018

Next Scheduled EDR Contact: 08/13/2018 Data Release Frequency: Semi-Annually

State and tribal leaking storage tank lists

PSTEAF: Facility Ranking List

The Underground Storage Tank Branch (USTB) has ranked all PSTEAF reimbursable facilities requiring corrective action, in accordance with 401 KAR 42:290. Directive letters will be issued on the basis of facility ranking and available PSTEAF funding in sequential order as ranked. For example, Rank 2 facilities will be issued directives before Rank 3 facilities.

Date of Government Version: 04/01/2018 Date Data Arrived at EDR: 04/11/2018 Date Made Active in Reports: 04/26/2018

Number of Days to Update: 15

Source: Department of Environmental Protection

Telephone: 502-564-5981 Last EDR Contact: 04/11/2018

Next Scheduled EDR Contact: 07/23/2018 Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/16/2017 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA, Region 5 Telephone: 312-886-7439 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/06/2018

Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/24/2017 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2017 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA Region 4 Telephone: 404-562-8677 Last EDR Contact: 05/16/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 09/30/2017 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: Environmental Protection Agency Telephone: 415-972-3372

Last EDR Contact: 05/18/2018 Next Scheduled EDR Contact: 08/06/2018

Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/12/2017 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 01/06/2018 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA Region 6 Telephone: 214-665-6597 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/12/2017 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA Region 8 Telephone: 303-312-6271 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/14/2017 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA Region 1 Telephone: 617-918-1313 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

SB193: SB193 Branch Site Inventory List

The inventory indicates facilities that have performed permanent closure activities at a regulated underground storage tank facility and have known soil and/or groundwater contamination.

Date of Government Version: 09/05/2006 Date Data Arrived at EDR: 09/13/2006 Date Made Active in Reports: 10/18/2006

Number of Days to Update: 35

Source: Department of Environmental Protection

Telephone: 502-564-5981 Last EDR Contact: 04/08/2016

Next Scheduled EDR Contact: 07/25/2016

Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017 Date Data Arrived at EDR: 05/30/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 136

Source: FEMA

Telephone: 202-646-5797 Last EDR Contact: 04/13/2018

Next Scheduled EDR Contact: 07/23/2018 Data Release Frequency: Varies

UST: Underground Storage Tank Database

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 01/26/2018 Date Data Arrived at EDR: 02/28/2018 Date Made Active in Reports: 04/19/2018

Number of Days to Update: 50

Source: Department of Environmental Protection

Telephone: 502-564-5981 Last EDR Contact: 02/28/2018

Next Scheduled EDR Contact: 06/11/2018 Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/24/2017 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 09/30/2017 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA Region 9 Telephone: 415-972-3368 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/12/2017 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA Region 8 Telephone: 303-312-6137 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/24/2017 Date Data Arrived at EDR: 07/27/2017 Date Made Active in Reports: 12/08/2017

Number of Days to Update: 134

Source: EPA Region 6 Telephone: 214-665-7591 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/16/2017 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA Region 5 Telephone: 312-886-6136 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/14/2017 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA Region 4 Telephone: 404-562-9424 Last EDR Contact: 05/16/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/14/2017 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA, Region 1 Telephone: 617-918-1313 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 01/13/2018 Date Data Arrived at EDR: 01/23/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 80

Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Controls Site Listing A listing of sites that use engineering controls.

Date of Government Version: 03/21/2018 Date Data Arrived at EDR: 03/22/2018 Date Made Active in Reports: 04/18/2018

Number of Days to Update: 27

Source: Department of Environmental Protection

Telephone: 502-564-6716 Last EDR Contact: 05/29/2018

Next Scheduled EDR Contact: 09/10/2018 Data Release Frequency: Varies

INST CONTROL: State Superfund Database

A list of closed sites in the State Superfund Database. Institutional controls would be in place at any site that uses Contained or Managed as a Closure Option.

Date of Government Version: 03/21/2018 Date Data Arrived at EDR: 03/22/2018 Date Made Active in Reports: 04/24/2018

Number of Days to Update: 33

Source: Department of Environmental Protection

Telephone: 502-564-6716 Last EDR Contact: 05/29/2018

Next Scheduled EDR Contact: 09/10/2018 Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015 Date Data Arrived at EDR: 09/29/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 142

Source: EPA, Region 1 Telephone: 617-918-1102 Last EDR Contact: 03/21/2018

Next Scheduled EDR Contact: 07/09/2018 Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Sites

Sites that have been accepted into the Voluntary Cleanup Program or have submitted an application.

Date of Government Version: 03/21/2018 Date Data Arrived at EDR: 03/22/2018 Date Made Active in Reports: 04/18/2018

Number of Days to Update: 27

Source: Department of Environmental Protection

Telephone: 502-564-6716 Last EDR Contact: 05/29/2018

Next Scheduled EDR Contact: 09/10/2018 Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008 Date Data Arrived at EDR: 04/22/2008 Date Made Active in Reports: 05/19/2008

Number of Days to Update: 27

Source: EPA, Region 7 Telephone: 913-551-7365 Last EDR Contact: 04/20/2009

Next Scheduled EDR Contact: 07/20/2009 Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Kentucky Brownfield Inventory

The Kentucky Brownfield Program has created an inventory of brownfield sites in order to market the properties to those interested in brownfield redevelopment. The Kentucky Brownfield Program is working to promote the redevelopment of these sites by helping to remove barriers that prevent reuse, providing useful information to communities, developers and the public and encouraging a climate that fosters redevelopment of contaminated sites.

Date of Government Version: 02/06/2018 Date Data Arrived at EDR: 02/07/2018 Date Made Active in Reports: 02/21/2018

Number of Days to Update: 14

Source: Division of Compliance Assistance

Telephone: 502-564-0323 Last EDR Contact: 04/16/2018

Next Scheduled EDR Contact: 07/30/2018 Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 01/19/2018 Date Data Arrived at EDR: 01/19/2018 Date Made Active in Reports: 02/09/2018

Number of Days to Update: 21

Source: Environmental Protection Agency

Telephone: 202-566-2777 Last EDR Contact: 03/21/2018

Next Scheduled EDR Contact: 07/02/2018 Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: Recycling Facilities

A listing of recycling facilities located in the state of Kentucky.

Date of Government Version: 03/07/2018 Date Data Arrived at EDR: 04/20/2018 Date Made Active in Reports: 04/26/2018

Number of Days to Update: 6

Source: Department of Environmental Protection

Telephone: 502-564-6716 Last EDR Contact: 04/16/2018

Next Scheduled EDR Contact: 07/30/2018 Data Release Frequency: Varies

HIST LF: Historical Landfills

This solid waste facility listing contains detail information that is not included in the landfill listing. A listing with detail information is no longer available by the Department of Environmental Protection.

Date of Government Version: 05/01/2003 Date Data Arrived at EDR: 03/30/2006 Date Made Active in Reports: 05/01/2006

Number of Days to Update: 32

Source: Department of Environmental Protection

Telephone: 502-564-6716 Last EDR Contact: 02/23/2009

Next Scheduled EDR Contact: 05/25/2009 Data Release Frequency: No Update Planned

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998 Date Data Arrived at EDR: 12/03/2007 Date Made Active in Reports: 01/24/2008

Number of Days to Update: 52

Source: Environmental Protection Agency

Telephone: 703-308-8245 Last EDR Contact: 01/30/2018

Next Scheduled EDR Contact: 05/14/2018 Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009 Date Data Arrived at EDR: 05/07/2009 Date Made Active in Reports: 09/21/2009

Number of Days to Update: 137

Source: EPA, Region 9 Telephone: 415-947-4219 Last EDR Contact: 04/18/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985 Date Data Arrived at EDR: 08/09/2004 Date Made Active in Reports: 09/17/2004

Number of Days to Update: 39

Source: Environmental Protection Agency

Telephone: 800-424-9346 Last EDR Contact: 06/09/2004 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014 Date Data Arrived at EDR: 08/06/2014 Date Made Active in Reports: 01/29/2015

Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service

Telephone: 301-443-1452 Last EDR Contact: 05/04/2018

Next Scheduled EDR Contact: 08/13/2018 Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 02/22/2018 Date Data Arrived at EDR: 03/01/2018 Date Made Active in Reports: 05/11/2018

Number of Days to Update: 71

Source: Drug Enforcement Administration Telephone: 202-307-1000

Last EDR Contact: 05/30/2018

Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: No Update Planned

CDL: Clandestine Drub Lab Location Listing Clandestine drug lab site locations.

Date of Government Version: 03/21/2018 Date Data Arrived at EDR: 03/22/2018 Date Made Active in Reports: 04/18/2018

Number of Days to Update: 27

Source: Department of Environmental Protection

Telephone: 502-564-6716 Last EDR Contact: 05/29/2018

Next Scheduled EDR Contact: 09/10/2018 Data Release Frequency: Varies

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/22/2018 Date Data Arrived at EDR: 03/01/2018 Date Made Active in Reports: 05/11/2018

Number of Days to Update: 71

Source: Drug Enforcement Administration

Telephone: 202-307-1000 Last EDR Contact: 05/30/2018

Next Scheduled EDR Contact: 09/10/2018 Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 01/09/2018 Date Data Arrived at EDR: 02/06/2018 Date Made Active in Reports: 05/11/2018

Number of Days to Update: 94

Source: Environmental Protection Agency

Telephone: 202-564-6023 Last EDR Contact: 05/30/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 01/19/2018 Date Data Arrived at EDR: 01/19/2018 Date Made Active in Reports: 03/23/2018

Number of Days to Update: 63

Source: U.S. Department of Transportation

Telephone: 202-366-4555 Last EDR Contact: 03/27/2018

Next Scheduled EDR Contact: 07/09/2018 Data Release Frequency: Quarterly

SPILLS: State spills

A listing of spill and/or release related incidents.

Date of Government Version: 01/26/2018 Date Data Arrived at EDR: 02/09/2018 Date Made Active in Reports: 02/20/2018

Number of Days to Update: 11

Source: DEP, Emergency Response

Telephone: 502-564-2380 Last EDR Contact: 04/16/2018

Next Scheduled EDR Contact: 07/30/2018 Data Release Frequency: Varies

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/11/2017 Date Data Arrived at EDR: 12/26/2017 Date Made Active in Reports: 02/09/2018

Number of Days to Update: 45

Source: Environmental Protection Agency

Telephone: (404) 562-8651 Last EDR Contact: 03/28/2018

Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015 Date Data Arrived at EDR: 07/08/2015 Date Made Active in Reports: 10/13/2015

Number of Days to Update: 97

Source: U.S. Army Corps of Engineers

Telephone: 202-528-4285 Last EDR Contact: 05/25/2018

Next Scheduled EDR Contact: 09/03/2018 Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 11/10/2006 Date Made Active in Reports: 01/11/2007

Number of Days to Update: 62

Source: USGS

Telephone: 888-275-8747 Last EDR Contact: 04/13/2018

Next Scheduled EDR Contact: 07/23/2018 Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 02/06/2006 Date Made Active in Reports: 01/11/2007

Number of Days to Update: 339

Source: U.S. Geological Survey Telephone: 888-275-8747 Last EDR Contact: 04/11/2018

Next Scheduled EDR Contact: 07/23/2018

Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017 Date Data Arrived at EDR: 02/03/2017 Date Made Active in Reports: 04/07/2017

Number of Days to Update: 63

Source: Environmental Protection Agency

Telephone: 615-532-8599 Last EDR Contact: 05/15/2018

Next Scheduled EDR Contact: 08/27/2018 Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 01/11/2018 Date Data Arrived at EDR: 01/19/2018 Date Made Active in Reports: 03/02/2018

Number of Days to Update: 42

Source: Environmental Protection Agency

Telephone: 202-566-1917 Last EDR Contact: 03/27/2018

Next Scheduled EDR Contact: 07/09/2018 Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013 Date Data Arrived at EDR: 03/21/2014 Date Made Active in Reports: 06/17/2014

Number of Days to Update: 88

Source: Environmental Protection Agency

Telephone: 617-520-3000 Last EDR Contact: 05/07/2018

Next Scheduled EDR Contact: 08/20/2018 Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013 Date Data Arrived at EDR: 03/03/2015 Date Made Active in Reports: 03/09/2015

Number of Days to Update: 6

Source: Environmental Protection Agency

Telephone: 703-308-4044 Last EDR Contact: 05/08/2018

Next Scheduled EDR Contact: 08/20/2018 Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018

Number of Days to Update: 198

Source: EPA

Telephone: 202-260-5521 Last EDR Contact: 03/23/2018

Next Scheduled EDR Contact: 07/02/2018 Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016 Date Data Arrived at EDR: 01/10/2018 Date Made Active in Reports: 01/12/2018

Number of Days to Update: 2

Source: EPA

Telephone: 202-566-0250 Last EDR Contact: 05/25/2018

Next Scheduled EDR Contact: 09/03/2018 Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009 Date Data Arrived at EDR: 12/10/2010 Date Made Active in Reports: 02/25/2011

Number of Days to Update: 77

Source: EPA

Telephone: 202-564-4203 Last EDR Contact: 04/09/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/09/2018 Date Data Arrived at EDR: 02/06/2018 Date Made Active in Reports: 05/11/2018

Number of Days to Update: 94

Source: EPA

Telephone: 703-416-0223 Last EDR Contact: 05/30/2018

Next Scheduled EDR Contact: 06/18/2018 Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/02/2017 Date Data Arrived at EDR: 11/17/2017 Date Made Active in Reports: 12/08/2017

Number of Days to Update: 21

Source: Environmental Protection Agency

Telephone: 202-564-8600 Last EDR Contact: 04/20/2018

Next Scheduled EDR Contact: 08/06/2018 Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995 Date Data Arrived at EDR: 07/03/1995 Date Made Active in Reports: 08/07/1995

Number of Days to Update: 35

Source: EPA

Telephone: 202-564-4104 Last EDR Contact: 06/02/2008

Next Scheduled EDR Contact: 09/01/2008 Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013 Date Data Arrived at EDR: 10/17/2014 Date Made Active in Reports: 10/20/2014

Number of Days to Update: 3

Source: EPA

Telephone: 202-564-6023 Last EDR Contact: 05/30/2018

Next Scheduled EDR Contact: 08/20/2018 Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2017 Date Data Arrived at EDR: 06/09/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 126

Source: EPA

Telephone: 202-566-0500 Last EDR Contact: 04/13/2018

Next Scheduled EDR Contact: 07/23/2018 Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016 Date Data Arrived at EDR: 11/23/2016 Date Made Active in Reports: 02/10/2017

Number of Days to Update: 79

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 04/09/2018

Next Scheduled EDR Contact: 07/23/2018 Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-566-1667 Last EDR Contact: 08/18/2017

Next Scheduled EDR Contact: 12/04/2017 Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA

Telephone: 202-566-1667 Last EDR Contact: 08/18/2017

Next Scheduled EDR Contact: 12/04/2017 Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016 Date Data Arrived at EDR: 09/08/2016 Date Made Active in Reports: 10/21/2016

Number of Days to Update: 43

Source: Nuclear Regulatory Commission Telephone: 301-415-7169

Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 08/07/2009 Date Made Active in Reports: 10/22/2009

Number of Days to Update: 76

Source: Department of Energy Telephone: 202-586-8719 Last EDR Contact: 03/09/2018

Next Scheduled EDR Contact: 06/18/2018 Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014 Date Data Arrived at EDR: 09/10/2014 Date Made Active in Reports: 10/20/2014

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: N/A

Last EDR Contact: 03/06/2018

Next Scheduled EDR Contact: 06/18/2018 Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017 Date Data Arrived at EDR: 11/30/2017 Date Made Active in Reports: 12/15/2017

Number of Days to Update: 15

Source: Environmental Protection Agency

Telephone: 202-566-0517 Last EDR Contact: 04/27/2018

Next Scheduled EDR Contact: 08/06/2018

Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/03/2018 Date Data Arrived at EDR: 01/04/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 99

Source: Environmental Protection Agency

Telephone: 202-343-9775 Last EDR Contact: 04/05/2018

Next Scheduled EDR Contact: 07/16/2018 Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2007

Next Scheduled EDR Contact: 03/17/2008 Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2008

Next Scheduled EDR Contact: 03/17/2008 Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012 Date Data Arrived at EDR: 08/07/2012 Date Made Active in Reports: 09/18/2012

Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety

Telephone: 202-366-4595 Last EDR Contact: 05/03/2018

Next Scheduled EDR Contact: 08/13/2018 Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2017 Date Data Arrived at EDR: 01/24/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 79

Source: Department of Justice, Consent Decree Library

Telephone: Varies

Last EDR Contact: 04/06/2018

Next Scheduled EDR Contact: 07/02/2018

Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015 Date Data Arrived at EDR: 02/22/2017 Date Made Active in Reports: 09/28/2017

Number of Days to Update: 218

Source: EPA/NTIS Telephone: 800-424-9346 Last EDR Contact: 05/25/2018

Next Scheduled EDR Contact: 09/03/2018 Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 07/14/2015 Date Made Active in Reports: 01/10/2017

Number of Days to Update: 546

Source: USGS

Telephone: 202-208-3710 Last EDR Contact: 04/11/2018

Next Scheduled EDR Contact: 07/23/2018 Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016 Date Data Arrived at EDR: 12/27/2016 Date Made Active in Reports: 02/17/2017

Number of Days to Update: 52

Source: Department of Energy Telephone: 202-586-3559 Last EDR Contact: 05/07/2018

Next Scheduled EDR Contact: 08/20/2018 Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017 Date Data Arrived at EDR: 10/11/2017 Date Made Active in Reports: 11/03/2017

Number of Days to Update: 23

Source: Department of Energy Telephone: 505-845-0011 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/09/2018 Date Data Arrived at EDR: 02/06/2018 Date Made Active in Reports: 03/02/2018

Number of Days to Update: 24

Source: Environmental Protection Agency

Telephone: 703-603-8787 Last EDR Contact: 05/30/2018

Next Scheduled EDR Contact: 07/16/2018 Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites

may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001 Date Data Arrived at EDR: 10/27/2010 Date Made Active in Reports: 12/02/2010

Number of Days to Update: 36

Source: American Journal of Public Health Telephone: 703-305-6451

Last EDR Contact: 12/02/2009 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016 Date Data Arrived at EDR: 10/26/2016 Date Made Active in Reports: 02/03/2017

Number of Days to Update: 100

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data A listing of minor source facilities.

Date of Government Version: 10/12/2016 Date Data Arrived at EDR: 10/26/2016 Date Made Active in Reports: 02/03/2017

Number of Days to Update: 100

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 01/25/2018 Date Data Arrived at EDR: 02/28/2018 Date Made Active in Reports: 05/11/2018

Number of Days to Update: 72

Source: Department of Labor, Mine Safety and Health Administration

Telephone: 303-231-5959 Last EDR Contact: 05/31/2018

Next Scheduled EDR Contact: 09/10/2018 Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005 Date Data Arrived at EDR: 02/29/2008 Date Made Active in Reports: 04/18/2008

Number of Days to Update: 49

Source: USGS

Telephone: 703-648-7709 Last EDR Contact: 05/30/2018

Next Scheduled EDR Contact: 09/10/2018 Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011 Date Data Arrived at EDR: 06/08/2011 Date Made Active in Reports: 09/13/2011

Number of Days to Update: 97

Source: USGS

Telephone: 703-648-7709 Last EDR Contact: 05/30/2018

Next Scheduled EDR Contact: 09/10/2018 Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/20/2017 Date Data Arrived at EDR: 12/21/2017 Date Made Active in Reports: 03/23/2018

Number of Days to Update: 92

Source: Department of Interior Telephone: 202-208-2609 Last EDR Contact: 03/07/2018

Next Scheduled EDR Contact: 06/25/2018 Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/21/2018 Date Data Arrived at EDR: 02/23/2018 Date Made Active in Reports: 03/23/2018

Number of Days to Update: 28

Source: EPA

Telephone: (404) 562-9900 Last EDR Contact: 02/23/2018

Next Scheduled EDR Contact: 06/18/2018 Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2016 Date Data Arrived at EDR: 10/31/2017 Date Made Active in Reports: 01/12/2018

Number of Days to Update: 73

Source: Department of Defense Telephone: 703-704-1564 Last EDR Contact: 04/13/2018

Next Scheduled EDR Contact: 07/30/2018 Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 01/04/2018 Date Data Arrived at EDR: 01/19/2018 Date Made Active in Reports: 04/13/2018

Number of Days to Update: 84

Source: Environmental Protection Agency

Telephone: 202-564-0527 Last EDR Contact: 03/02/2018

Next Scheduled EDR Contact: 06/11/2018 Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/13/2018 Date Data Arrived at EDR: 01/19/2018 Date Made Active in Reports: 03/02/2018

Number of Days to Update: 42

Source: Environmental Protection Agency

Telephone: 202-564-2280 Last EDR Contact: 03/07/2018

Next Scheduled EDR Contact: 06/18/2018 Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels

Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/20/2018 Date Data Arrived at EDR: 02/21/2018 Date Made Active in Reports: 03/23/2018

Number of Days to Update: 30

Source: EPA

Telephone: 800-385-6164 Last EDR Contact: 05/23/2018

Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Quarterly

AIRS: Permitted Airs Facility Listing
A listing of permitted Airs facilities.

Date of Government Version: 02/20/2018 Date Data Arrived at EDR: 02/20/2018 Date Made Active in Reports: 04/09/2018

Number of Days to Update: 48

Source: Department of Environmental Protection

Telephone: 502-573-3382 Last EDR Contact: 04/30/2018

Next Scheduled EDR Contact: 08/13/2018 Data Release Frequency: Semi-Annually

ASBESTOS: Asbestos Notification Listing

Asbestos sites

Date of Government Version: 03/26/2018 Date Data Arrived at EDR: 03/29/2018 Date Made Active in Reports: 04/18/2018

Number of Days to Update: 20

Source: Department of Environmental Protection

Telephone: 502-782-6780 Last EDR Contact: 02/28/2018

Next Scheduled EDR Contact: 06/18/2018 Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Sites
A listing of coal ash pond site locations.

Date of Government Version: 12/09/2013 Date Data Arrived at EDR: 05/01/2014 Date Made Active in Reports: 07/07/2014

Number of Days to Update: 67

Source: Department of Environmental Protection

Telephone: 502-564-6716 Last EDR Contact: 04/30/2018

Next Scheduled EDR Contact: 08/13/2018 Data Release Frequency: Varies

DRYCLEANERS: Drycleaner Listing
A listing of drycleaner facility locations.

Date of Government Version: 02/20/2018 Date Data Arrived at EDR: 02/20/2018 Date Made Active in Reports: 04/18/2018

Number of Days to Update: 57

Source: Department of Environmental Protection

Telephone: 502-573-3382 Last EDR Contact: 04/30/2018

Next Scheduled EDR Contact: 08/13/2018 Data Release Frequency: Semi-Annually

Financial Assurance 1: Financial Assurance Information Listing

A listing of financial assurance information.

Date of Government Version: 02/20/2018 Date Data Arrived at EDR: 02/23/2018 Date Made Active in Reports: 04/18/2018

Number of Days to Update: 54

Source: Department of Environmental Protection

Telephone: 502-564-6716 Last EDR Contact: 04/30/2018

Next Scheduled EDR Contact: 08/13/2018

Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

Financial Assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/14/2014 Date Data Arrived at EDR: 06/06/2014 Date Made Active in Reports: 06/24/2014

Number of Days to Update: 18

Source: Department of Environmental Protection

Telephone: 502-564-5981 Last EDR Contact: 04/26/2018

Next Scheduled EDR Contact: 08/13/2018 Data Release Frequency: Varies

Financial Assurance 3: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/21/2018 Date Data Arrived at EDR: 02/23/2018 Date Made Active in Reports: 04/19/2018

Number of Days to Update: 55

Source: Department of Environmental Protection

Telephone: 502-564-6716 Last EDR Contact: 04/30/2018

Next Scheduled EDR Contact: 08/13/2018 Data Release Frequency: Varies

LEAD: Environmental Lead Program Report Tracking Database

Lead Report Tracking Database

Date of Government Version: 01/27/2017 Date Data Arrived at EDR: 02/02/2017 Date Made Active in Reports: 08/21/2017

Number of Days to Update: 200

Source: Department of Public Health

Telephone: 502-564-4537 Last EDR Contact: 05/07/2018

Next Scheduled EDR Contact: 08/20/2018 Data Release Frequency: Varies

NPDES: Permitted Facility Listing

A listing of permitted wastewater facilities.

Date of Government Version: 04/20/2018 Date Data Arrived at EDR: 04/24/2018 Date Made Active in Reports: 04/30/2018

Number of Days to Update: 6

Source: Department of Environmental Protection

Telephone: 502-564-3410 Last EDR Contact: 05/07/2018

Next Scheduled EDR Contact: 08/20/2018 Data Release Frequency: Semi-Annually

UIC: UIC Information

A listing of wells identified as underground injection wells, in the Kentucky Oil & Gas Wells data base.

Date of Government Version: 03/27/2018 Date Data Arrived at EDR: 04/17/2018 Date Made Active in Reports: 04/26/2018

Number of Days to Update: 9

Source: Kentucky Geological Survey Telephone: 859-323-0544 Last EDR Contact: 04/17/2018

Next Scheduled EDR Contact: 07/30/2018 Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Environmental Protection

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/15/2014
Number of Days to Update: 198

Source: Department of Environmental Protection

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/03/2018 Date Data Arrived at EDR: 02/14/2018 Date Made Active in Reports: 03/22/2018

Number of Days to Update: 36

Source: Department of Energy & Environmental Protection

Telephone: 860-424-3375 Last EDR Contact: 05/18/2018

Next Scheduled EDR Contact: 08/27/2018

Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016 Date Data Arrived at EDR: 04/11/2017 Date Made Active in Reports: 07/27/2017

Number of Days to Update: 107

Source: Department of Environmental Protection

Telephone: N/A

Last EDR Contact: 04/23/2018

Next Scheduled EDR Contact: 07/23/2018 Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD

facility.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/09/2018

Number of Days to Update: 37

Source: Department of Environmental Conservation

Telephone: 518-402-8651 Last EDR Contact: 05/03/2018

Next Scheduled EDR Contact: 08/13/2018 Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016 Date Data Arrived at EDR: 07/25/2017 Date Made Active in Reports: 09/25/2017

Number of Days to Update: 62

Source: Department of Environmental Protection

Telephone: 717-783-8990 Last EDR Contact: 04/12/2018

Next Scheduled EDR Contact: 07/30/2018 Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2017 Date Data Arrived at EDR: 02/23/2018 Date Made Active in Reports: 04/09/2018

Number of Days to Update: 45

Source: Department of Environmental Management

Telephone: 401-222-2797 Last EDR Contact: 05/21/2018

Next Scheduled EDR Contact: 09/03/2018 Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016 Date Data Arrived at EDR: 04/13/2017 Date Made Active in Reports: 07/14/2017

Number of Days to Update: 92

Source: Department of Natural Resources

Telephone: N/A

Last EDR Contact: 03/08/2018

Next Scheduled EDR Contact: 06/25/2018 Data Release Frequency: Annually

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services,

a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary

and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Certified Child Care Homes Source: Cabinet for Families & Children

Telephone: 502-564-7130

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Environmental & Public Protection Cabinet

Telephone: 502-564-6736

Current USGS 7.5 Minute Topographic Map Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK®-PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

BOONE NATIONAL GUARD CENTER BOONE NATIONAL GUARD FRANKFORT FRANKFORT, KY 40601

TARGET PROPERTY COORDINATES

Latitude (North): 38.189238 - 38° 11' 21.26" Longitude (West): 84.905212 - 84° 54' 18.76"

Universal Tranverse Mercator: Zone 16 UTM X (Meters): 683457.5 UTM Y (Meters): 4228679.5

Elevation: 776 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map: 5939421 FRANKFORT WEST, KY

Version Date: 2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

- 1. Groundwater flow direction, and
- 2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

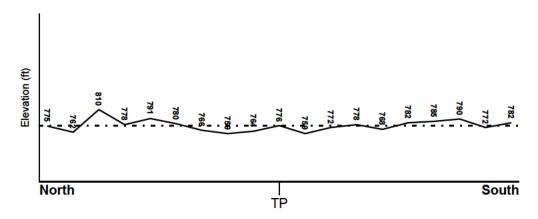
TOPOGRAPHIC INFORMATION

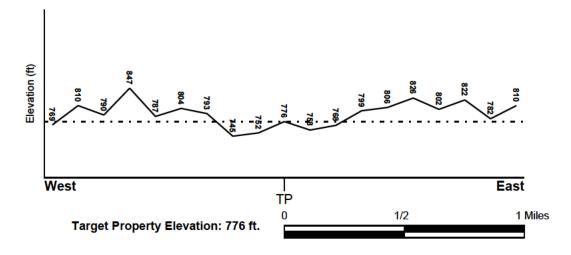
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General WNW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property FEMA Source Type

21005C0050C FEMA FIRM Flood data

Additional Panels in search area: FEMA Source Type

Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property Data Coverage

FRANKFORT WEST YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

 MAP ID
 FROM TP
 GROUNDWATER FLOW

 Not Reported
 GROUNDWATER FLOW

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

GEOLOGIC AGE IDENTIFICATION

Era: Paleozoic Category: Stratified Sequence

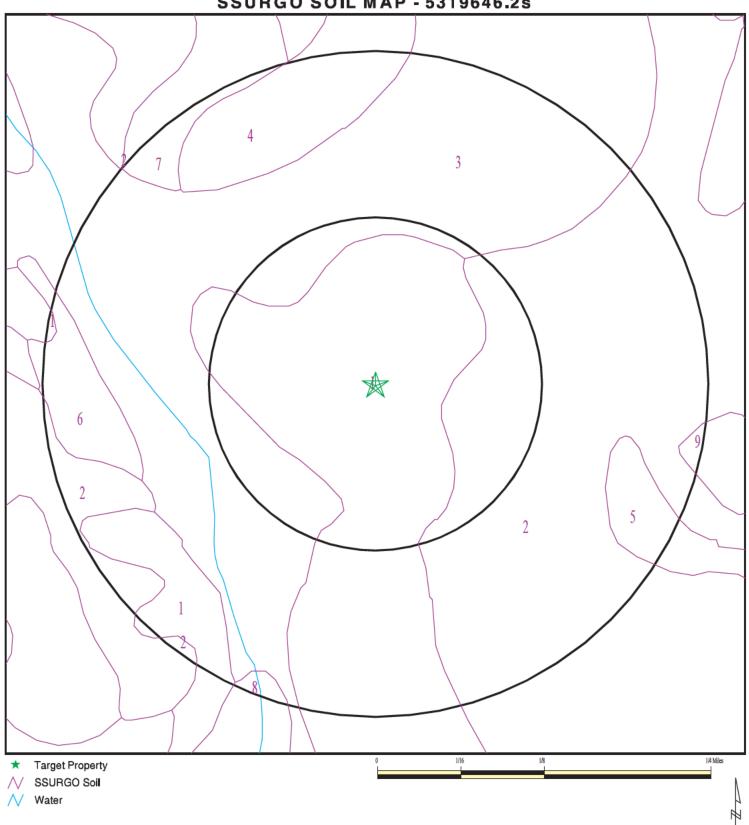
System: Ordovician

Series: Middle Ordovician (Mohawkian)

Code: O2 (decoded above as Era, System & Series)

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 5319646.2s



SITE NAME: Boone National Guard Center ADDRESS: Boone National Guard Frankfort

Frankfort KY 40601 38.189238 / 84.905212 LAT/LONG:

CLIENT: AECOM
CONTACT: Jacquelyn Harrington
INQUIRY#: 5319646.2s

June 01, 2018 5:18 pm DATE:

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: McAfee

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward

movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 79 inches

Depth to Watertable Min: > 0 inches

	Soil Layer Information									
	Вои	ındary	Soil Texture Class	Classi	fication	Saturated hydraulic				
Layer	Upper	Lower		AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)			
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 7.3 Min: 5.6			
2	7 inches	25 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 4 Min: 1.4	Max: 7.3 Min: 5.6			
3	25 inches	31 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 4 Min: 1.4	Max: 7.8 Min: 6.1			
4	31 inches	35 inches	unweathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:			

Soil Map ID: 2

Soil Component Name: Faywood

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward

movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 86 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information									
Layer	Вои	ındary	Soil Texture Class	Classi	fication	Saturated hydraulic			
	Upper	Lower		AASHTO Group	Unified Soil	conductivity micro m/sec			
1	0 inches	5 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 7.8 Min: 5.1		
2	5 inches	33 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 4 Min: 0.42	Max: 7.8 Min: 5.1		
3	33 inches	37 inches	unweathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:		

Soil Map ID: 3

Soil Component Name: McAfee
Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward

movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 79 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information										
	Bou	ındary		Classit	fication	Saturated hydraulic				
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)			
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 7.3 Min: 5.6			
2	7 inches	25 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 4 Min: 1.4	Max: 7.3 Min: 5.6			
3	25 inches	31 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 4 Min: 1.4	Max: 7.8 Min: 6.1			
4	31 inches	35 inches	unweathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:			

Soil Map ID: 4

Soil Component Name: Maury

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep,

moderately well and well drained soils with moderately coarse

textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

	Soil Layer Information								
	Boundary			Classification		Saturated hydraulic			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec			
1	0 inches	16 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 42 Min: 14	Max: 7.3 Min: 5.1		
2	16 inches	25 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 42 Min: 4	Max: 6.5 Min: 5.1		
3	25 inches	63 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 14 Min: 4	Max: 6 Min: 4.5		

Soil Map ID: 5

Soil Component Name: Lowell

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward

movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 145 inches

Depth to Watertable Min: > 0 inches

	Soil Layer Information									
	Bou	ındary		Classi	fication	Saturated hydraulic				
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)			
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 6.5 Min: 4.5			
2	7 inches	11 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 14 Min: 1.4	Max: 6.5 Min: 4.5			
3	11 inches	57 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 4 Min: 1.4	Max: 7.8 Min: 5.1			
4	57 inches	61 inches	unweathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:			

Soil Map ID: 6

Soil Component Name: McAfee Soil Surface Texture: silt loam

Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures. Hydrologic Group:

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 79 inches

Depth to Watertable Min: > 0 inches

	Soil Layer Information									
	Вои	ındary		Classi	fication	Saturated hydraulic				
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)			
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 7.3 Min: 5.6			
2	7 inches	25 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 4 Min: 1.4	Max: 7.3 Min: 5.6			
3	25 inches	31 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 4 Min: 1.4	Max: 7.8 Min: 6.1			
4	31 inches	35 inches	unweathered bedrock	Not reported	Not reported	Max: 14 Min: 0.42	Max: Min:			

Soil Map ID: 7

Soil Component Name: Lowell Soil Surface Texture: silt loam

Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures. Hydrologic Group:

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 145 inches

Depth to Watertable Min: > 0 inches

	Soil Layer Information									
	Воц	ındary		Classi	fication	Saturated hydraulic				
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)			
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 6.5 Min: 4.5			
2	7 inches	11 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 14 Min: 1.4	Max: 6.5 Min: 4.5			
3	11 inches	57 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 4 Min: 1.4	Max: 7.8 Min: 5.1			
4	57 inches	61 inches	unweathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:			

Soil Map ID: 8

Soil Component Name: Lawrence Soil Surface Texture: silt loam

Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures. Hydrologic Group:

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 46 inches

	Soil Layer Information									
	Вои	ındary		Classification		Saturated hydraulic				
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)			
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 6.5 Min: 4.5			
2	7 inches	24 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 6.5 Min: 4.5			
3	24 inches	61 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1.4 Min: 0.42	Max: 5.5 Min: 4.5			
4	61 inches	74 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 4 Min: 0.42	Max: 7.3 Min: 4.5			

Soil Map ID: 9

Soil Component Name: Water

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward

movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCATION

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE SEARCH DISTANCE (miles)

Federal USGS 1.000

Federal FRDS PWS Nearest PWS within 1 mile

State Database 1.000

FEDERAL USGS WELL INFORMATION

MAP ID WELL ID FROM TP

No Wells Found

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID WELL ID FROM TP

No PWS System Found

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	FROM TP
1	KY6000000077330	1/2 - 1 Mile South
A2	KY600000065278	1/2 - 1 Mile SSE
A3	KY600000065277	1/2 - 1 Mile SSE
A4	KY600000065280	1/2 - 1 Mile SSE
A5	KY600000065279	1/2 - 1 Mile SSE
A6	KY600000065276	1/2 - 1 Mile SSE
7	KY600000034713	1/2 - 1 Mile NE
8	KY600000069550	1/2 - 1 Mile SSE
B9	KY600000078341	1/2 - 1 Mile South
B10	KY600000078342	1/2 - 1 Mile South
B11	KY600000078339	1/2 - 1 Mile South
B12	KY600000078340	1/2 - 1 Mile South
B13	KY600000078343	1/2 - 1 Mile South
B14	KY600000078346	1/2 - 1 Mile South
B15	KY600000078351	1/2 - 1 Mile South
B16	KY600000078344	1/2 - 1 Mile South
B17	KY600000078345	1/2 - 1 Mile South
C18	KY600000096418	1/2 - 1 Mile South
C19	KY600000096419	1/2 - 1 Mile South
C20	KY600000096417	1/2 - 1 Mile South

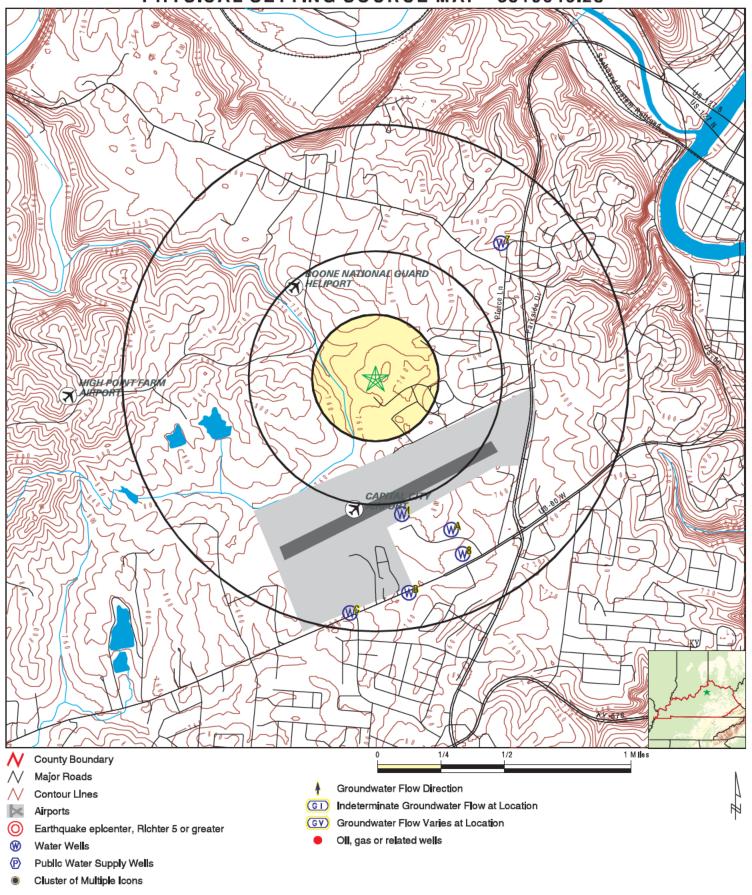
GEOCHECK[®] - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID WELL ID FROM TP

C21 KY6000000096420 1/2 - 1 Mile South

PHYSICAL SETTING SOURCE MAP - 5319646.2s



SITE NAME: Boone National Guard Center ADDRESS: Boone National Guard Frankfort

LAT/LONG:

Frankfort KY 40601 38.189238 / 84.905212

CLIENT: AECOM CONTACT: Jacquelyn Harrington INQUIRY#: 5319646.2s

DATE: June 01, 2018 5:18 pm

Map ID Direction Distance Elevation

KY WELLS KY600000077330 South

1/2 - 1 Mile Higher

> Fid: 77329 Akgwa: 80034541

Altid: Not Reported Latdecimal: 38.18144 -84.90329 Longdecima: County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: Μ

Surfaceele: 776 Monitoring Well - Ambient Monitoring Usage:

Enddate: 11-NOV-13 Site id: KY6000000077330

1/2 - 1 Mile Higher

Akgwa:

Fid: 65277 Altid: MW-06 Latdecimal: 38.18055556 Longdecima: -84.89972222 County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Μ

Type: Surfaceele: 775

Usage: Monitoring Well - Ambient Monitoring

24-SEP-93 KY6000000065278 Enddate: Site id:

A3 SSE 1/2 - 1 Mile Higher

> 80010163 Fid: 65276 Akgwa:

Altid: MW-05 Latdecimal: 38.18055556 Longdecima: -84.89972222 County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: Μ

Surfaceele: 775

Monitoring Well - Ambient Monitoring Usage:

Enddate: 24-SEP-93 Site id: KY6000000065277

Database

KY WELLS

KY WELLS

80010164

EDR ID Number

KY600000065278

KY600000065277

Map ID Direction Distance

Elevation Database EDR ID Number

1/2 - 1 Mile Higher

Fid: 65279 Akgwa: 80010166

Altid: MW-08 38.18055556 Latdecimal: -84.89972222 Longdecima: County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: Μ Surfaceele: 775

Usage: Monitoring Well - Ambient Monitoring

Enddate: 25-SEP-93 Site id: KY6000000065280

A5 SSE KY WELLS KY600000065279 1/2 - 1 Mile

Higher

Fid: 65278 Akgwa: 80010165

Altid: MW-07
Latdecimal: 38.18055556
Longdecima: -84.89972222
County: Franklin
Quadname: Frankfort West
Physiograp: Bluegrass
Type: M

Surfaceele: 775

Usage: Monitoring Well - Ambient Monitoring

Enddate: 25-SEP-93 Site id: KY6000000065279

A6 SSE KY WELLS KY600000065276

1/2 - 1 Mile Higher

Fid: 65275 Akgwa: 80010162

Altid: MW-04
Latdecimal: 38.18055556
Longdecima: -84.89972222
County: Franklin
Quadname: Frankfort West
Physiograp: Bluegrass
Type: M

Surfaceele: 775

Usage: Monitoring Well - Ambient Monitoring

Enddate: 10-SEP-93 Site id: KY6000000065276

Map ID Direction Distance

Elevation Database EDR ID Number 7 NE **KY WELLS** KY600000034713

1/2 - 1 Mile Higher

> Fid: 34712 Akgwa: 58440

Altid: Not Reported 38.19694444 Latdecimal: -84.89611111 Longdecima: County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: W Surfaceele: 810

Usage: Agriculture - Irrigation

Enddate: 09-APR-02 Site id: KY600000034713

1/2 - 1 Mile

Lower

Akgwa:

Fid: Altid: Not Reported Latdecimal: 38.17916667 Longdecima: -84.89888889 County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: Μ

Surfaceele: 755

Usage: Monitoring Well - Ambient Monitoring

69549

KY6000000069550 Enddate: 01-JAN-00 Site id:

B9 South 1/2 - 1 Mile Lower

> 78340 80036071 Fid: Akgwa:

Altid: MW-01 Latdecimal: 38.17694444 Longdecima: -84.90277778 County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: Μ

Surfaceele: 800

Monitoring Well - Ambient Monitoring Usage:

Enddate: 26-MAR-99 Site id: KY6000000078341 KY600000069550

KY6000000078341

KY WELLS

KY WELLS

80018341

Map ID Direction Distance Elevation

Elevation Database EDR ID Number B10

South KY WELLS KY600000078342

1/2 - 1 Mile Lower

Fid: 78341 Akgwa: 80036072

Altid: MW-02 38.17694444 Latdecimal: -84.90277778 Longdecima: County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: Μ Surfaceele: 800

Usage: Monitoring Well - Ambient Monitoring

Enddate: 26-MAR-99 Site id: KY6000000078342

B11 South KY WELLS KY600000078339 1/2 - 1 Mile

Lower

Fid: 78338 Akgwa: 80036068

Altid: MW-06
Latdecimal: 38.17694444
Longdecima: -84.90277778
County: Franklin
Quadname: Frankfort West
Physiograp: Bluegrass
Type: M

Surfaceele: 800

Usage: Monitoring Well - Ambient Monitoring

Enddate: 26-MAR-99 Site id: KY600000078339

B12 South KY WELLS KY600000078340

1/2 - 1 Mile Lower

Fid: 78339 Akgwa: 80036069

Altid: MW-07
Latdecimal: 38.17694444
Longdecima: -84.90277778
County: Franklin
Quadname: Frankfort West
Physiograp: Bluegrass
Type: M

Surfaceele: 800

Usage: Monitoring Well - Ambient Monitoring

Enddate: 26-MAR-99 Site id: KY6000000078340

Map ID Direction Distance Elevation

Database **EDR ID Number** B13

KY WELLS KY600000078343 South

1/2 - 1 Mile Lower

> Fid: 78342 Akgwa: 80036073

Altid: MW-03 38.17694444 Latdecimal: -84.90277778 Longdecima: County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: Μ Surfaceele: 800

Usage: Monitoring Well - Ambient Monitoring

Enddate: 26-MAR-99 KY6000000078343 Site id:

B14 KY600000078346 South **KY WELLS** 1/2 - 1 Mile

Lower

Fid: 78345 Akgwa: 80036076

Altid: MW-05 Latdecimal: 38.17694444 -84.90277778 Longdecima: County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: Μ

Surfaceele: 800

Usage: Monitoring Well - Ambient Monitoring

KY6000000078346 Enddate: 26-MAR-99 Site id:

B15

South 1/2 - 1 Mile Lower

> 78350 80036085 Fid: Akgwa:

Altid: MW-09 Latdecimal: 38.17694444 Longdecima: -84.90277778 County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: Μ

Surfaceele: 800

Monitoring Well - Ambient Monitoring Usage:

Enddate: 11-MAY-99 Site id: KY6000000078351

KY WELLS

KY600000078351

Map ID Direction Distance Elevation

Elevation Database EDR ID Number B16

South KY WELLS KY600000078344

1/2 - 1 Mile Lower

Fid: 78343 Akgwa: 80036074

Altid: MW-04 38.17694444 Latdecimal: -84.90277778 Longdecima: County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: Μ Surfaceele: 800

Usage: Monitoring Well - Ambient Monitoring

Enddate: 26-MAR-99 Site id: KY6000000078344

B17
South
1/2 - 1 Mile

KY WELLS

KY600000078345

Lower

Fid: 78344 Akgwa: 80036075

Altid: MW-08
Latdecimal: 38.17694444
Longdecima: -84.90277778
County: Franklin
Quadname: Frankfort West
Physiograp: Bluegrass
Type: M

Surfaceele: 800
Usage: Monitoring \

Usage: Monitoring Well - Ambient Monitoring
Enddate: 26-MAR-99 Site id: KY600000078345

1/2 - 1 Mile Higher

Fid: 96417 Akgwa: 80062914

Altid: MW-02 Latdecimal: 38.175839 Longdecima: -84.907027 County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: Μ Surfaceele: 790

Usage: Remediation

Enddate: 14-JUL-11 Site id: KY600000096418

Map ID Direction Distance Elevation

C19 South KY WELLS KY600000096419

1/2 - 1 Mile Higher

Fid: 96418 Akgwa: 80062915

Altid: MW-04 38.175812 Latdecimal: -84.907119 Longdecima: County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: Μ Surfaceele: 790

 Usage:
 Remediation

 Enddate:
 14-JUL-11
 Site id:
 KY600000096419

C20
South
1/2 - 1 Mile
Higher

KY WELLS
KY6000000096417

Fid: 96416 Akgwa: 80062913 Altid: MW-01

Latdecimal: 38.175763
Longdecima: -84.907002
County: Franklin
Quadname: Frankfort West
Physiograp: Bluegrass
Type: M
Surfaceele: 790

 Usage:
 Remediation

 Enddate:
 14-JUL-11

 Site id:
 KY600000096417

C21
South
1/2 - 1 Mile

KY WELLS

KY600000096420

Higher

Fid: 96419 Akgwa: 80062916

Altid: MW-03 Latdecimal: 38.175753 Longdecima: -84.907042 County: Franklin Quadname: Frankfort West Physiograp: Bluegrass Type: Μ Surfaceele: 790 Remediation

 Usage:
 Remediation

 Enddate:
 14-JUL-11

 Site id:
 KY600000096420

Database

EDR ID Number

AREA RADON INFORMATION

State Database: KY Radon

Radon Test Results

Zip	Test Date	Test Result
40601	7/13/2003	3.40
40601	7/14/2003	1.30
40601	7/15/2003	3.30
40601	8/29/2003	6.00
40601	9/3/2003	1.10
40601	9/7/2003	6.70
40601	9/11/2003	0.80
40601	9/19/2003	0.20
40601	9/23/2003	11.00
40601	10/13/2003	5.50
40601	12/12/2003	13.90
40601	12/3/2003	3.70
40601	1/24/2004	3.50
40601	1/26/2004	6.80
40601	3/18/2004	1.20
40601	3/27/2004	1.50
40601	4/19/2004	9.30
40601	8/9/2004	0.60
40601	9/23/2004	2.70
40601	10/24/2004	21.70
40601	11/14/2004	2.40
40601	12/6/2004	0.50
40601	12/7/2004	1.50
40601	12/11/2004	8.90
40601	12/12/2004	3.30
40601	12/15/2004	0.40
40601	1/4/2005	18.90
40601	1/19/2005	15.40
40601	1/25/2005	10.10
40601	1/30/2005	11.30
40601	1/31/2005	21.00
40601	2/8/2005	8.20
40601	3/8/2005	2.60
40601	3/19/2005	9.80
40601	3/23/2005	2.60
40601	3/30/2005	13.70
40601	4/3/2005	1.00
40601	4/3/2005	0.70
40601	5/3/2005	5.70
40601	9/15/2005	18.80
40601	9/15/2005	18.80
40601	1/10/2006	0.70
40601	5/30/2006	1.10
40601	10/16/2006	14.35
40601	2/27/2002	4.10
40601	2/27/2002	1.30
40601		

AREA RADON INFORMATION

40601 40601	2/27/2002 2/27/2002 2/27/2002 1/15/2002 1/15/2002 2/27/2002 2/27/2002 2/27/2002 2/27/2002 5/10/2002 5/20/2002 3/27/2002 6/10/2002 7/15/2002 11/23/2002 11/23/2003 1/28/2003 1/28/2003 2/2/2003 3/9/2003 2/10/2003 2/11/2003 2/11/2003 2/11/2003 2/15/2003 3/30/2003 2/15/2003 3/30/2003 4/1/2003 4/1/2003 4/29/2003 4/29/2003 4/29/2003	0.60 1.50 1.40 13.50 13.50 4.10 1.30 0.60 1.50 1.40 1.60 1.40 0.60 0.60 13.90 1.80 5.60 1.30 1.00 2.30 16.10 1.00 0.50 2.00 6.90 0.80 11.00 1.40 1.40 4.60 0.20 3.40 0.00 11.20 2.550 1.30
40601	7/19/2003	0.20
40601 40601	7/27/2003 4/8/2003	0.00 11.20

Federal EPA Radon Zone for FRANKLIN County: 1

Note: Zone 1 indoor average level > 4 pCi/L.

: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.

: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 40601

Number of sites tested: 14

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	4.475 pCi/L	75%	25%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	4.979 pCi/L	43%	57%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Environmental & Public Protection Cabinet

Telephone: 502-564-6736

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Kentucky Water Well Records Database Source: Kentucky Geological Survey

Telephone: 859-257-5500

Water Wells in Kentucky. Data from the Kentucky Ground Water Data Repository.

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Locations

Source: Kentucky Geological Survey

Telephone: 859-257-5500

Oil and gas well locations in the state of Kentucky

RADON

State Database: KY Radon

Source: Department of Public Health

Telephone: 502-564-4856 Radon Test Results

Area Radon Information Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency

(USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor

radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

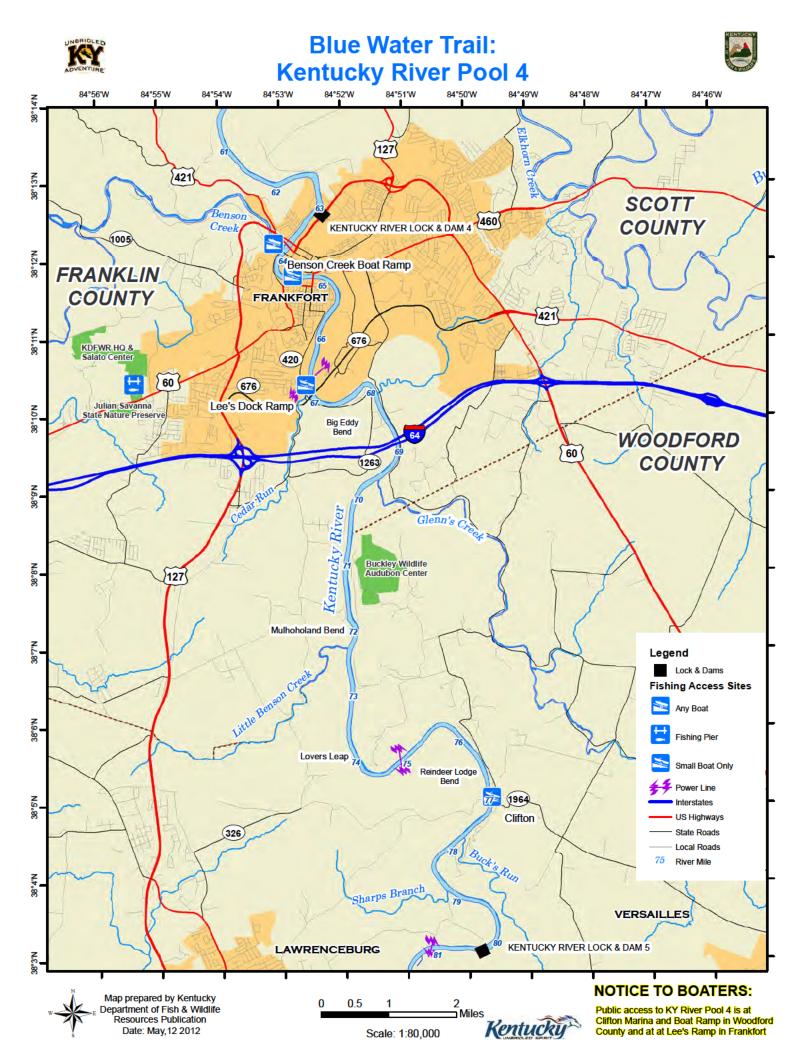
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Report to consumers on

Water Quality

Findings for 2017

This is an annual report delivered by the Frankfort Plant Board (KY0370143). It meets the federal Safe Drinking Water Act (SDWA) requirement for "Consumer Confidence Reports" and contains information on the source of our water, its constituents, and the health risks associated with any contaminant. Safe water is vital to our community.

Please read this report carefully, and, if you have questions, contact Shannon Young at (502) 352-4349 or syoung@fewpb.com. Board meetings regarding decisions about our drinking water are typically held the third Tuesday of every month. Please call (502) 352-4372 for additional information and to verify the date and location of the next opportunity to participate.

ATTENCION

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

The Frankfort Plant Board is a member of the Partnership for Safe Water, a national initiative to help achieve operational excellence in water treatment. The partnership was developed through cooperation among the U.S. Environmental Protection Agency (EPA), states, and water supply associations to provide better protection for consumers from microbial contaminants that can cause intestinal illness.

Find out more about the Frankfort Plant Board on-line at www.fpb.cc, and, for further information, see U.S. Environmental Protection Agency (EPA) water information at www.epa.gov/safewater.

Water Quality Data for community water systems throughout the United States is available at www.waterdata.com.



We're lucky to live in a community where safe and clean drinking water is local and available at the turn of a tap. We are proud of the quality of water provided by FPB's water treatment plant. So proud, in fact, that we have named it Frankfort On Tap! This month, we are excited to launch our Frankfort On Tap water branding campaign to promote the value of our public-sourced tap water here in Frankfort and surrounding counties. For more information, go to www.FrankfortOnTap.com.



HOW TO READ THE TABLES

These tables show the results of our water quality analysis for the calendar year 2017. Some contaminants are monitored less frequently, and the most recent testing, done in accordance with the regulations, is shown in parenthesis.

Every regulated contaminant that we detected in the water, even in the most minute trace, is listed here. The regulated contaminants table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health, the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement.

WATER FINDINGS

INORGANIC CONTAMINANTS Barium ppm 2 2 2 0.0.23 - Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits. Chromium ppb 100 100 100 0.3 - Discharge from steel and pulp mills; erosion of natural deposits. Copper (2016) ppm AL=1.3 1.3 0.17¹ 0.007 - 0.34 Corrosion of household plumbing systems; Erosion of natural deposits; Waster additive which promoses trong teetter. Discharge from preservative. Fluoride ppm 10 10 0.60 0.3 - 0.6 Runoff from fertilizer use, Leaching from preservative which promoses trong teetter. Discharge from Septic tanks, sewage strong teetter. Discharge from Septic tanks, sewage strong teetter. Discharge from Rot Septiment of natural deposits. Waster additive which promoses trong teetter. Discharge from Septiment Septime	REGULAI	ED CONTAM	INANI	3				
Barium ppm 2 2 2 0.023 - Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits. Chromium ppb 100 100 100 0.3 - Discharge from steel and pulp mills; erosion of natural deposits. Copper (2016) ppm AL=1.3 1.3 0.17¹ 0.007 - 0.34 Erosion of natural deposits, Leaching from preservative more reservative. Fluoride ppm 4 4 4 0.4 - Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from free fittilizer and instinum factories. NC Provide ppm 10 10 0.66 0.3 - 0.6 Runoff from fertilizer use; Leaching from preservative metal promotes strong teeth; Discharge from free fittilizer and instinum factories. NC Provide ppm AL=15 0 ND¹ ND - Corrosion of natural deposits; Water additive which promotes strong teeth; Discharge from free fittilizer and instinum factories. NC Provide positive strong teeth; Discharge from free fittilizer and free	Contaminant	Unit	MCL	MCLG		Range	Major Sources	Violation
Chromium ppb 100 100 0.3 - Distange from steel and pulp mills; erosion of natural deposits. Copper (2016) ppm AL=1.3 1.3 0.17¹ 0.007 - 0.34 Corosion of household plumbing systems; Erosion of natural deposits; Leaching from preservative process of the first pro	INORGANIC C	ONTAMINANTS						
Copper (2016) ppm AL=1.3 1.3 0.17¹ 0.007 - 0.34 Corrosion of household plumbing systems; From fratural deposits; Water additive which promotes strong teeth; Discharge from preservative. Fluoride ppm 4 4 4 0.4 - which promotes strong teeth; Discharge from fertilizer and aluminum factories. Nitrate ppm 10 10 0.60 0.3 - 0.6 Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. NC Lead (2016) ppb AL=15 0 ND¹ ND - 2 Corrosion of household plumbing systems; Ero-sion of natural deposits. NC Water shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. MICROBIOLOGICAL CONTAMINANTS Turbidity NTU TT¹ N/A 0.26 0.06 - 0.26 Soil runoff. NC Tarbidity reported as a ratio² TT² N/A 1.43 (lowest annual average) 1.0 - 2.67 Naturally present in environment. NC water and the effectiveness of the filtration system. **Nonthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be at least 1.00 to meet the TT. RADIOACTIVE CONTAMINANTS Total Trihalomethanes ppb 80 N/A 44¹ 19 - 44 By-product of drinking water chlorination. NC (THMs) Haloacetic acids (HAAs) ppb 60 N/A 43¹ 14 - 54 By-product of drinking water chlorination. NC (HAAS)	Barium	ppm	2	2	0.023	-	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	NO
Copper (2016) ppm AL=1.3 1.3 0.171 0.007 - 0.34 Erosion of natural deposits; Leaching from preservative. Fluoride ppm 4 4 0.4 - Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. NC	Chromium	ppb	100	100	0.3	-		NO
Fluoride ppm 4 4 4 0.4 - which promotes strong teeth; Discharge from fertilizer and aluminum factories. Nitrate ppm 10 10 10 0.60 0.3 - 0.6 Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. NC Lead (2016) ppb AL=15 0 ND¹ ND - 2 Corrosion of household plumbing systems; Erosion of natural deposits. NC Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. MICROBIOLOGICAL CONTAMINANTS Turbidity NTU TT¹ N/A 0.26 0.06 - 0.26 Soil runoff. NC Tarbon repricted as a ratio² TT² N/A 1.43 (lowest annual average) NC Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. MICROBIOLOGICAL CONTAMINANTS Turbidity NTU TT¹ N/A 0.26 0.06 - 0.26 Soil runoff. NC NC Carbon repricted as a ratio² TT² N/A 1.43 (lowest annual average) NC 1.43 (lowest annual average) NC 2.67 Naturally present in environment. NC NC NC Soil runoff. NC	Copper (2016)	ppm	AL=1.3	1.3	0.171	0.007 - 0.34	Erosion of natural deposits; Leaching from	NO
Lead (2016) ppb AL=15 0 ND¹ ND-2 Corrosion of household plumbing systems; Ero-sion of natural deposits. NC Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. MICROBIOLOGICAL CONTAMINANTS Turbidity NTU TT¹ N/A 0.26 0.06 - 0.26 Soil runoff. NC Total Organic Carbon Measured as ppm but reported as a ratio² TT² N/A 1.43 (lowest annual average) 1.0 - 2.67 Naturally present in environment. NC "Greater than 95% of samples must be <0.3NTU and never more than 1 NTU. 100% was the lowest monthly percent. Turbidity is a measure of the quality of t water and the effectiveness of the filtration system. "Monthly ratio is the %TOC removal achieved to the %TOC removal required. Annual average of the monthly ratios must be at least 1.00 to meet the TT. RADIOACTIVE CONTAMINANTS Combined Radium (2017) PCi/l 5 0 2.66 - Erosion of natural deposits. NC VOLATILE ORGANIC CONTAMINANTS Total Tri-halomethanes ppb 80 N/A 44¹ 19 - 44 By-product of drinking water chlorination. NC Haloacetic acids (HAAs) Ppb 60 N/A 43¹ 14 - 54 By-product of drinking water chlorination. NC	Fluoride	ppm	4	4	0.4	-	which promotes strong teeth; Discharge from	NO
Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Zero homes exceeded the action levels for both lead and copper. Value shown is the 90 percentile. Packet and shows a stance of the soil unoff. Value shown is the stance of the stance of the soil unoff. Value shown is the stance of the stan	Nitrate	ppm	10	10	0.60	0.3 - 0.6		NO
Turbidity NTU TT1 N/A 0.26 0.06 - 0.26 Soil runoff. NC Total Organic Carbon Reasured as ppm but reported as a ratio TT2 N/A 1.43 (lowest annual average) Total Organic Carbon Semples must be <0.3NTU and never more than 1 NTU. 100% was the lowest monthly percent. Turbidity is a measure of the quality of twater and the effectiveness of the filtration system. **Monthly ratio is the %TOC removal achieved to the %TOC removal required. Annual average of the monthly ratios must be at least 1.00 to meet the TT. **RADIOACTIVE CONTAMINANTS** **Combined Radium (2017)** **Description of natural deposits.** **NOTATILE ORGANIC CONTAMINANTS** **Total Trihalomethanes (TTHMs)** **ppb** **Bo** **NOTAMINANTS** **Total Trihalomethanes (TTHMs)** **ppb** **Bo** **NOTAMINANTS** **NOTAMINANTS** **Total Trihalomethanes (TTHMs)** **Pppb** **Bo** **NOTAMINANTS** **NOTAMINANTS** **Total Trihalomethanes (TTHMs)** **Pppb** **Bo** **NOTAMINANTS** **Total Trihalomethanes (TTHMs)** **Pppb** **Pppb** **Bo** **NOTAMINANTS** **NOTAMINANTS** **NOTAMINANTS** **Total Trihalomethanes (TTHMs)** **Pppb** **Pppb** **Bo** **NOTAMINANTS** **NOTAMINANTS** **Total Trihalomethanes (TTHMs)** **Pppb** **Pppb*	Lead (2016)	ppb	AL=15	0	ND ¹	ND - 2		NO
Turbidity NTU TT¹ N/A 0.26 0.06 - 0.26 Soil runoff. NCO Total Organic Carbon Reasured as ppm but reported as a ratio² TT² N/A 1.43 (lowest annual average) 1.0 - 2.67 Naturally present in environment. NCO ¹Greater than 95% of samples must be <0.3NTU and never more than 1 NTU. 100% was the lowest monthly percent. Turbidity is a measure of the quality of twater and the effectiveness of the filtration system. ²Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be at least 1.00 to meet the TT. RADIOACTIVE CONTAMINANTS Combined Radium (2017) PCi/I 5 0 2.66 - Erosion of natural deposits. NCO VOLATILE ORGANIC CONTAMINANTS Total Tri-halomethanes (TTHMs) Ppb 80 N/A 44¹ 19 - 44 By-product of drinking water chlorination. NCO Haloacetic acids (HAAs) Ppb 60 N/A 43¹ 14 - 54 By-product of drinking water chlorination. NCO	¹Value shown is th	ne 90 percentile. Zero h	nomes excee	ded the actio	n levels for both le	ad and copper.		
Total Organic Carbon Measured as ppm but reported as a ratio ² TT ² N/A annual average) 1.0 - 2.67 Naturally present in environment. NC 1.43 (lowest annual average) 1.0 - 2.67 Naturally present in environment. NC 1.43 (lowest annual average) 1.0 - 2.67 Naturally present in environment. NC 1.43 (lowest annual average) 1.0 - 2.67 Naturally present in environment. NC 1.43 (lowest annual average) 1.0 - 2.67 Naturally present in environment. NC 1.43 (lowest annual average) 1.0 - 2.67 Naturally present in environment. NC 1.43 (lowest annual average) 1.0 - 2.67 Naturally present in environment. NC 2.46 Naturally present in environment. NC 2.46 Naturally present in environment. NC 2.46 Naturally present in environment. NC 3.46 Naturally present in environment. NC 4.46 Naturally prese	MICROBIOLO	GICAL CONTAMINA	ANTS					
TT2	Turbidity	NTU	TT ¹	N/A	0.26	0.06 - 0.26	Soil runoff.	NO
water and the effectiveness of the filtration system. **Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be at least 1.00 to meet the TT. **RADIOACTIVE CONTAMINANTS** Combined Radium (2017)	_		TT²	N/A	annual	1.0 - 2.67	Naturally present in environment.	NO
Combined Radium (2017)	water and the ef	ffectiveness of the filtr	ation systen	n.				•
Radium (2017) PCI/I 5 0 2.66 - Erosion of natural deposits. NC VOLATILE ORGANIC CONTAMINANTS Total Tri- halomethanes (TTHMs) ppb 80 N/A 44¹ 19 - 44 By-product of drinking water chlorination. NC (Haloacetic acids (HAAs) ppb 60 N/A 43¹ 14 - 54 By-product of drinking water chlorination. NC	RADIOACTIVE	CONTAMINANTS						
Total Tri- halomethanes (TTHMs) By-product of drinking water chlorination. NC NC (HAAs) Ppb 60 N/A 43¹ 14 - 54 By-product of drinking water chlorination. NC		pCi/l	5	0	2.66	-	Erosion of natural deposits.	NO
halomethanes (TTHMs) By-product of drinking water chlorination. NC (THMs) Haloacetic acids (HAAs) Ppb 60 N/A 431 14 - 54 By-product of drinking water chlorination. NC (HAAs)	VOLATILE OR	RGANIC CONTAM	INANTS					
(HAAs) ppb 60 N/A 43' 14-54 By-product of drinking water chlorination. NC	halomethanes	ppb	80	N/A	441	19 - 44	By-product of drinking water chlorination.	NO
Chloramines ppm MRDL=4 MRDLG=4 2.11 1.0 - 3.1 Water additive used to control microbes. NC		ppb	60	N/A	43¹	14 - 54	By-product of drinking water chlorination.	NO
	Chloramines	ppm	MRDL=4	MRDLG=4	2.11	1.0 - 3.1	Water additive used to control microbes.	NO



Water Source

The Frankfort Plant Board Water Treatment Facility at 200 Coffeetree Road, Frankfort, KY, withdraws surface water from pool #4 on the Kentucky River. The final source water assessment has been completed and is available in the Franklin County Water Supply Plan. The plan is available for inspection at the Frankfort Plant Board Water Treatment Plant.

An analysis of the susceptibility of our water supply to contamination indicates that this susceptibility is generally moderate. There are, however, a few areas of high concern.

Several highway bridges and major roads occur in the immediate vicinity of the intake. An accidental release of toxic materials from a nearby bridge or road could pose an immediate threat to Frankfort's intake. Other areas of concern that occur in the immediate vicinity of the intake include land used for agricultural purposes, firms that use Tier II hazardous chemicals, a Superfund site, a hazardous waste generator and/or transporter, sewer lines and a KPDES permitted discharger.

Within the greater watershed area, there are numerous permitted operations and activities and other potential contaminant sources of moderate concern that cumulatively increase the potential for the release of contaminants within the area. These potential contaminant sources include everything from underground storage tanks, to power line rights-ofway that may be treated with herbicides, to active and inactive landfills.

For information on the Kentucky River, contact the Kentucky River Authority.

Kentucky River Authority 5 Fountain Place, Frankfort, KY 40601 (502) 564-2866 | finance.ky.gov

KEYTO TABLES

MCL: Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL: Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

ppm: parts per million, or milligrams per liter (mg/l) which is equivalent to 1 inch in 16 miles.



Bottled water is the fastest growing segment in the beverage industry. But did you know the EPA regulates the filtration and disinfection methods of all tap water while the FDA offers no certain guidelines when overseeing such procedures of bottled water?

And while the FDA tests bottled water, if sub standard quality is determined, there is no law prohibiting the further sales of unsatisfactory water.

Bottled water is sold in 20 ounce sizes and can be purchased in vending machines at the same price as soft drinks. Assuming you're able to find a \$1 machine, that works out to roughly 5 cents an ounce while Frankfort On Tap is less than 1 cent per gallon.

Bottled water also means more plastic, which means more oil - up to 47 million gallons per year - to produce. And plastic has a slow decay rate. There are even islands of plastic swirling endlessly in the sea - causing significant risk to marine life, killing birds and fish.

In the end, there is no comparison: Frankfort On Tap is better for you and the environment.

MRDLG: Maximum Residual Disinfectant Level Goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

AL: Action Levels. The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

TT: Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water.

ND: Not detected/below detectable limit.

NTU: Nephelometric Turbidity Units ppb: parts per billion, or micrograms per liter (µg/l) which is equivalent to 1 inch in 16,000 miles.

ADDITIONAL HEALTH INFORMATION

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- (E) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably

be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling

Environmental Protection Agency's Safe Drinking Water Hot line 800-426-4791.

ABOUT LEAD

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Frankfort Plant Board is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing

your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hot line or at https://www.epa.gov/groundwater- and-drinking-water/basicinformation-about-lead-drinkingwater.

SPECIAL HEALTH INFORMATION FOR THE IMMUNO-COMPROMISED

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care providers about drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hot Line 800-426-4791.



Appendix B Preliminary Assessment Documentation

Appendix B.1 Interview Records

Preliminary Assessment – Pre-Interview Form

9	1 . 1	C I A I AAA		
	e National	Guard Center - AASF		
2. Primary Points of Contact: (No	ame/Title/Teleph	one Number/Email Address)		
ARNG:				
USACE:				
Installation:				
3. Suggested Personnel to Interv	iew (Name/Title/	Number of Years at Installation/Retired):		
To be Communicate	ed from KY	ARNG to AECOM during site visit		
		cility? What command or authority controls that		
facility? DoD or non-DoD? Does				
Boone National Goard C	venter is a st	cate—curred tacility		
		of activity, active airfield, firefighting training):		
To be obtained/communicated during site visit				
_		os, FTAs, TAs, paint shops and kitchen AFFF,		
plating areas): Old AASF	ited, new AA	SF.		
7. Have we requested the followi	ng information f			
Lease Information	(YES)/NO	Comment:		
Lease information	TES NO	4		
Maria Dala A Carri	(YES) NO	Comment:		
Material Purchase Information	YEST NO			
		Comment:		
Permit/Transfer Documents	(YES)/NO			
		Comment:		
Disposition Records for AFFF	(YES) NO			

(Attach to the front of the Interview Form)

$\label{eq:preliminary} \textbf{Pre-Interview Form}$

8. Does the Installation have an Administrative Record or a Document Repository? If so, does the installation have the following types of documents? Circle all that apply.
Historical Records Review - Unlikely has been requested
Preliminary Assessment - Unlikely, was veen requested
Site Inspections No
Remedial Investigation — No
Remedial Action Documentation — No
Cultural Resources Management Plan
Natural Resources Management Plan — No
Annual TAG Reports - Requested
Firefighting Training Records (if documented)
As Built Drawings for Buildings with AFFF Systems
Fire Suppression in Dining Facilities - Purple K or water
Responded to an Aircraft Crash - None
Responded to Forest Fires — NA
Federal Facility Agreement - State-owned facility
RCRA Permit Requested
· f
NPDES Permit
Environmental Baseline Study - Unlikely, requested
Groundwater Flow Information - Unlikely requested
Groundwater Studies — Nc
Groundwater Treatment Units - No
Groundwater Monitoring Well Location Map - None
Surface Water Flow Information - Nove
Historical Aerials - Will request if EDR to insofficient
9. What GIS data do we have (e.g., HQANG GIS)? Do we need (e.g., State GIS)? Will aerial photographs be needed? (These files will be asked for during the interview)
Historic areals are most likely unnecessary
,

Note: Information on this form was provided by Ricky French and the former KYARNG State Safety Officer/current Environmental Program Manager. They were interviewed simultaneously. Facility: Boone AASF PA Interview Questionnaire - Environmental Manager Information on this questionnaire and others result from a Interviewer: combination of answered accestions and absenuations during Date/Time: 5-14-18 visits to the old and new AASF Can your name/role be used in the PA Report? Y or N Interviewee: Title: Environmental Manager Can you recommend anyone we can interview? Yorn Frankfort City FD Chief Phone Number: Email: 1. Roles or activities with the Facility/years working at the Facility. Environmental Manager lat Boone National Courd Center 1998 to assent 2. Where can I find previous facility ownership information? Ownership information has been recoverted, but may not be available Boone National Guard Center is a state owned facility. A portion of the facility was a polf course until the 1990's. What can you tell us about the history of PFAS including aqueous film forming foam (AFFF) at the Facility? Was it used for any of the following activities, circle all that apply and indicate years of active use, if known? Identify these locations on a facility map. Maintenance -- No Fire Training Areas -Firefighting (Active Fire) - No Crash - No Fire Suppression Systems (Hangers/Dining Facilities) - Suppression systems use Porde K or Fire Protection at Fueling Stations - AFFF at the new and old AASF Non-Technical/Recreational/ Pest Management - No Metals Plating Facility - No Other -No Fill out CSM Information worksheet with the Environmental Manager. Are any current buildings constructed with AFFF dispensing systems or fire suppression systems? What are the AFFF/suppression system test requirements? What is the frequency of testing the AFFF/suppression system? Do you have "As Built" drawings for the buildings? No buildings AFFF suppression systems. No testing or maintenance of AFFF occurs at Book National Goard Center. As-built drawings for the new AASF may be

receivested.

r A Interview Questionnaire - Environmental Manager	Interviewer: Date/Time:
6. Are fire suppression systems currently charged with AFFF or have high expansion foam? If retrofitted, when was that done? No. Or exist at the facility. Suppression systems us The DFAC uses Purple K.	nly mobile AFFF containers
7. How is AFFF procured? Do you have an inventory/procurement syste	m that tracks use?
AFFF is procured by the Aviation Manager throu	gh the USFPO, and
returned to USFPO when appropriate. AFFF is	not disposed of at
Boone National Guard Center.	
8. What type of AFFF has been/is being used (3%, 6%, Mil Spec Mil-F-Manufacturer (3M, Dupont, Ansul, National Foam, Angus, Chemguard Chemguard Blizzard AFFF National Foam Aerowater 6 EM 6 % AFFF Halotron 1 "Clean Agent" Wheeled Stored Pressure Fire F	d, Buckeye, Fire Service Plus)? items were would during interview
9. Where is the AFFF stored? How is it stored (tanks, 55-gallon drum size are the storage tanks? Is the AFFF stored as a mixed solution material? 55-gal drums, mobile containers (approximately empty mobile containers also exist at the new they were discharged is unknown. Full containers new AASF.	(3% or 6%) or concentrated about 100-150 gallons) ew AASF. How or where
10. How many FTAs are/were on this facility and where are they? Locare active and inactive? For inactive FTAs, when was the last time was conducted at them? No FTAs exist at the fac	that fire training using AFFF

Frankforty City F.D. perform a training exercise at Boone National Good

Center's new AASF.

PA Interview Questionnaire - Environmental Manager	Facility: Interviewer:
	Date/Time:
11. When a release of AFFF occurs during a fire training exercise, a AFFF cleaned and disposed of? Were retention ponds built to st AFFF trickled to the sanitary sewer or left in the pond to infiltrate the facility. At the dd AASF drainage busins (12 fond on the west side of the concrete pad. Dischard naturally. At the new AASF	tore discharged AFFF? Was the late? No known uses of AFFF total) lead to a bioremediation geon the east may runoff
12. Can you recall specific times when city, county, and/or state perso please state which state/county agency or military entity? Do you I photographs to share with us? No training occurs regularized Center Aviation Manuser, training. Records will be requested.	have any records, including
13. Did military routinely or occasionally fire train off-post? List the u at various areas.	units that you can recall used/trained
14. Did individual units come with their own safety personnel, did the training with AFFF part of these exercises? How were emergencies Frankfort City FD provide their own resources. Frankfort City FD is the responsible FD for National Goard Center.	s handled under these circumstances?
15. Are there specific emergency response incident reports (i.e., aircra crash sites and fires)? If so, may we please copy these reports? What the responder? These reports will be requested.	no (entity) was

PA	Interview	Questionnaire	- Environmental	Manager
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Facility:	
Interviewer:	
Date/Time:	

14 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
16. Do you have records of fuel spill logs? Was it common practice to wash away fuel spills with
10. Bo you have records of fuel spill logs: was it common practice to wash away fuel spills with
AFFE? Idhana AFFE wand as a massarting in the first transfer of th
AFFF? Is/was AFFF used as a precaution in response to fuel releases or emergency runway
I will be a second of the seco
landings to prevent fires?
landings to prevent fires? No fuel spills were recoiled, nor were logs available.
The OWS's and oil sorbent socks at new AASF are in place to prevent
THE DWD D and Oil SOMEON DOCKS OIL NEW MADE BIR IN DIANA to Academia
the state of the s
Atticita misostimo at Calicallis
off-site migration of feel spills.
·

17. Was AFFF used for forest fires or fire management on-post/off-post? If so, please describe what happened and who was involved?

18. Are there mutual aid/use agreements between county, city, and local fire department? Please list, even if informal. If formalized, may we have a copy of the agreement? No mutual agreement or Contract, but the Trankfort City FD is responsible for emergences at Beane National Guard Center.

19. Can you provide any other locations where AFFF has been stored, released, or used (i.e. hangars, buildings, fire stations, firefighting equipment testing and maintenance areas, emergency response sites, storm water/surface water, waste treatment plants, and AFFF ponds)? AFFF is only stored at the old and new AASFs. A storage container at the new AASF also contains at AFFF in 55-gal. downs.

20. Are you aware of any other creative uses of AFFF? If so, how was AFFF used? What entities were involved?

PA Interview Questionnaire - Environmental Manager	Facility: Interviewer: Date/Time:
21. Are there past studies you are aware of with environmental information groundwater/soil types, etc., such as Integrated Cultural Resources M Natural Resources Management Plans?	anagement Plans or Integrated
HRRS, SIS, RIS, or NPDES permits are known, but will be submitted.	a document request
22. What other records might be helpful to us (environmental compliance	e, investigation records, admin
record) and where can we find them? Send a formal request	tive email to
There is an NDNOD's dump site south of the air	pact w/ written reports.
23. Do you have or did you have a chrome plating shop on base? What of that chrome plating shop?	t were/are the years of operation
*Cont. from a #23. An external E-pass report is wi	ritten for the site annually
KYARNG sends a spill plan to Frankfort FD as winformation.	ell as material storage
24. Do you know whether the shop has/had a foam blanket mist suppression was stored, mixed, applied, etc.?	ession system or used a fume used, where was the foam
25. How is off-spec AFFF disposed (used for training, turned in, or given applicable, do you know the name of the vendor that removes off-spe the manifest or B/L? AFFF is retained to the USFPC	c AFFF? Do you have copies of
be inavailable.	

PA Interview Questionnaire - Environmental Manager

Facility:	
Interviewer:	
Date/Time:	

26. Do you recommend anyone else we can interview? If so, do you have contact information for them?

Frankfort City FD Chief

Facility: Boone AAST Interviewer: Date/Time: 5-14-2018

Title: Assistant Fire Chief Phone Number: Email:		Can your name/role be used in the PA Report? Yor N Can you recommend anyone we can interview? Yor N Record keeper at Boone AASE
1.	Roles or activities with the Facility/years work	sing at the Facility.
	Assistant Fire Chief, Frankfor	+ City Fire Department
	Station Number One	
2.		F at the Facility? Was it used for any of the following ars of active use, if known? Identify these locations on a
	Maintenance (e.g., ramp washing) - None at	Boone AASF
	Fire Training Areas - News at Boone AASE	
	Firefighting (Active Fire) - None at Bo	one Mast
	Crash - None of Boone AASF Fire Suppression Systems (Hangers/Dining Fa	icilities) - Not responsibility of FD
	Fire Protection at Fueling Stations - Not (es	society of ED
	Non-Technical/Recreational/ Pest Managemen	nt-None
3.	What are the AFFF/suppression system test re	FFF dispensing systems or fire suppression systems? quirements? What is the frequency of testing at the
		it to operations at Boone AASF.
		emergencies at Boone National Guard
		rear, FD performs a training event
	at Boone AASF, No AFFF is u	sed during these events.
4.		ged with AFFF or have they been retrofitted for use of
	high expansion foam?	carried in buckets on select trucks.
	No AFFF has been used at	the new AASF at Boone Nat. Goard
	Center.	
	5	
5.	How is AFFF procured? Do you have an inver-	ntory/procurement system that tracks use?
	Procured by Frankfort City Fr	D for Frankfort City FD

PA I	Interview Questionnaire – Fire Station	Facility:nterviewer:
		Date/Time:
	What type of AFFF has been/is being used (3%, 6%, Mil Spec Mil-F-243 Manufacturer (3M, Dupont, Ansul, National Foam, Angus, Chemguard, 1	
1	National Form Centurion 3 stored in backets o	on trocks
7. I	Is AFFF formulated on base? If so, where is the solution mixed, con-	tained, transferred, etc.?
(On site at scene of emergency as needed. Nev	er at Boone
,	National Good Center.	
S	Where is the AFFF stored? How is it stored (tanks, 55-gallon drums, size are the storage tanks? Is the AFFF stored as a mixed solution (39 material?	
	see answer to goestion #6.	
e: d	How is the AFFF transferred to emergency response vehicles, suppresextinguishers? Is/was there a specified area on the facility where vehicles does this area have secondary containment in case of spills? How and what FFF cleaned/decontaminated?	s are filled with AFFF and here are vehicles storing
	AFFF cleaned/decontaminated? See answer to question #	1. Truck maintenance
	does not occur at Beone National Guard Center.	
	Provide a list of vehicles that carried AFFF, now and in the past, and v	•
Ve	chicles are stored/maintained at stations in Fran	lk fort.
m	Any vehicles have a history of leaking AFFF? Do you/did you test the nake sure equipment is working properly? How often are/were these so you provide the locations of these tests, now and in the past?	e vehicles spray patterns to spray tests performed and can

Not relevant. See answer to question #10.

Facility:	
Interviewer:	
Date/Time:	

12.	How many FTAs are/were on this facility and where are they? Locate on a map. How many FTAs
	are active and inactive? For inactive FTAs, when was the last time that fire training using AFFF
	was conducted at them? No FTA'S for Frankforty City FD at Boone National
	Good Center. Frankfort FD responds to emergencies at Boone AASF
	Training drills have been performed at the old and new AASFS.

13. What types of fuels/flammables were used at the FTAs?

None

- 14. What was the frequency of AFFF use at each location? When a release of AFFF occurs during a fire training exercise, now and in the past, how is/was the AFFF cleaned and disposed of? Were retention ponds built to store discharged AFFF? Was the AFFF trickled to the sanitary sewer or left in the pond to infiltrate? Any water from used at Boone AASFS travels the same way any other discharged efficient flows from the AASF. Discharge from the old AASF travels to a bioremediation pond or to the someording areas. Pischarge at the new AASF travels through an ows to a creek conside (This information was not given by
- 15. Are there mutual aid/use agreements between county, city, local fire department? Please list, even if informal. If formalized, may we have a copy of the agreement? Can you recall specific times when city, county, state personnel came on-post for training? If so, please state which state/county agency, military entity? Do you have any records, including photographs to share with us?

Trankfort City FD is responsible for all emergencies in Trankfort, including those at Boone National Goard Center. No contract or agreement exists.

16. Did individual units come on-post with their own safety personnel, did they also bring their own AFFF? Was training with AFFF part of these exercises? How were emergencies handled under these circumstances? Frankfert F.D. Provides its own safety reconcil, and

freetighting resources.

PA	Interview	Questionnaire – Fii	e Station
----	-----------	---------------------	-----------

Facility:	
Interviewer:	
Date/Time:	

Did military ro	utinely or occasionally	fire train off-post?	List units that you	can recall used/trained	at
various areas.					

18. Are there specific emergency response incident reports (i.e., aircraft or vehicle crash sites and fires)? If so, may we please copy these reports? Who (entity) was the responder?

These reports have been requested.

- 19. Do you have records of fuel spill logs? Was it common practice to wash away fuel spills with AFFF? Is/was AFFF used as a precaution in response to fuel releases or emergency runway landings to prevent fires? Any activity not related to Boone National ward Center is not relevant.
- 20. Was AFFF used for forest fires or fire management on-post/off-post? If so, please describe what happened and who was involved?
- 21. Can you provide any other locations where AFFF has been stored, released, or used (i.e. hangars, buildings, fire stations, firefighting equipment testing and maintenance areas, emergency response sites, storm water/surface water, waste water treatment plants, and AFFF ponds)?

AFFF is stored by Frankfort City F.D. outside of Boone National Goard Center.

PA Interview Questionna	ire – Fire Station		Interviewer: Date/Time:	
22. Are you aware of any oth	er creative uses of AF	FF? If so, how was AF	FF used? What entiti	es were
involved? No uca	eatine" uses	known. No kn	own use at 1	Boone
Nationa	Guard Cente	er in general.		
23. How is off-spec AFFF dis	the name of the vendo	r that removes off-spec	AFFF? Do you have	copies of
the manifest or B/L?	ow Frankfort C	ity FD disposes	of AFFF is u	nnelated
+	o Boone Nat	ronal Guard Cent	rer.	
24 D	us alsa wa aan intami	ave? If so, do you have	contact information f	or them?
24. Do you recommend anyo				or mem;
Kerocd Kee	nes at Koone	National Guar	a Center.	

Interviewee Title: Captain	Can your name/role be used in the PA Report? Yor N Can you recommend anyone we can interview?
Phone Number:	(Por N Assistant Chief
Email:	
1. Roles or activities with the Facility/years world	king at the Facility.
- Captain at Frankfort City Fin	`
-13 years with Frankfort City	
-Captain at Station No. 3 s	
facility map. No known uses at Book occur on site of Maintenance (e.g., ramp washing)	F at the Facility? Was it used for any of the following ars of active use, if known? Identify these locations on a one National Good Center, but training proximately once per year
Fire Training Areas - No Firefighting (Active Fire) - No	x x
Crash - No Fire Suppression Systems (Hangers/Dining Fa	politics) - No
Fire Protection at Fueling Stations -No	acritics) – (Co
Non-Technical/Recreational/ Pest Management	nt - No
	CDD 11
What are the AFFF/suppression system test re	FFF dispensing systems or fire suppression systems? equirements? What is the frequency of testing at the
AFFF/suppression systems? Frankford	City Fire Department Stores AFFF buckets but has not used it at
The state of the s	
Boone National Good	Center,
4. Are fire suppression systems currently charge	ged with AFFF or have they been retrofitted for use of
	FFF can be discharged during use
by mixing f	rom budgets and water.
,	
5. How is AFFF procured? Do you have an inve	ntory/procurement system that tracks use?
Frankfort City F.D.	procures their own AFFF

PA Interview Questionnaire - Fire Station	Facility:	
	Interviewer:	
	D - 4 - //T'	

	Date/Time:
6.	What type of AFFF has been/is being used (3%, 6%, Mil Spec Mil-F-24385, High Expansion)? Manufacturer (3M, Dupont, Ansul, National Foam, Angus, Chemguard, Buckeye, Fire Service Plus)? National Foam Centurion 3 is stored in 5-gal buckets on trucks
7.	Is AFFF formulated on base? If so, where is the solution mixed, contained, transferred, etc.?
	No
8.	Where is the AFFF stored? How is it stored (tanks, 55-gallon drums, 5-gallon buckets)? What size are the storage tanks? Is the AFFF stored as a mixed solution (3% or 6%) or concentrated
	material? AFFF at Frankfort City F.D. is stored an
	5-gal buckets
9.	How is the AFFF transferred to emergency response vehicles, suppression systems, flightline extinguishers? Is/was there a specified area on the facility where vehicles are filled with AFFF and does this area have secondary containment in case of spills? How and where are vehicles storing AFFF cleaned/decontaminated? AFFF buckets are showd on tracks and can
	be mixed at emergency response sites if necessary. Trucks are stored at F.D. stations.
10.	Provide a list of vehicles that carried AFFF, now and in the past, and where are/were they located?
11.	Any vehicles have a history of leaking AFFF? Do you/did you test the vehicles spray patterns to make sure equipment is working properly? How often are/were these spray tests performed and can you provide the locations of these tests, now and in the past? Does not cour at Brone National Court Center.
	Is not relevant to this investigation of the KYARNG site.
	Sixt.

PA I	Interview	Questionna	ire – Fire	Station
------	-----------	------------	------------	---------

Facility:	
Interviewer:	
Date/Time:	

12. How many FTAs are/wer	re on this facility and where are they? Locate on a map. How many FTAs
	For inactive FTAs, when was the last time that fire training using AFFF
was conducted at them?	No FTAs for Frankfort City F.D. at Boone
	National Guard Center. Emergency Response records

for the last 3 years showed no AFFF use.

13. What types of fuels/flammables were used at the FTAs?

NA

14. What was the frequency of AFFF use at each location? When a release of AFFF occurs during a fire training exercise, now and in the past, how is/was the AFFF cleaned and disposed of? Were retention ponds built to store discharged AFFF? Was the AFFF trickled to the sanitary sewer or left in the pond to infiltrate? IF AFFF was used during a training drill of during amergency response it travels the same way discharged efficient ensite would travel

15. Are there mutual aid/use agreements between county, city, local fire department? Please list, even if informal. If formalized, may we have a copy of the agreement? Can you recall specific times when city, county, state personnel came on-post for training? If so, please state which state/county agency, military entity? Do you have any records, including photographs to share with us?

Frankfort City F.D. is responsible for ail emergency response at Boone National Guard Center

16. Did individual units come on-post with their own safety personnel, did they also bring their own AFFF? Was training with AFFF part of these exercises? How were emergencies handled under these circumstances? Yes, F.D. weight and AFFF onsite if AFFF was used.

during a response or training.

PA I	nterview	Questionnaire –	Fire	Station
------	----------	-----------------	------	---------

Facility:	
Interviewer:	
Date/Time:	-

17. Did military routinely or occasionally fire train off-post? List units that you can recall used/trained at various areas.

18. Are there specific emergency response incident reports (i.e., aircraft or vehicle crash sites and fires)? If so, may we please copy these reports? Who (entity) was the responder?

These reports have been recruested

19. Do you have records of fuel spill logs? Was it common practice to wash away fuel spills with AFFF? Is/was AFFF used as a precaution in response to fuel releases or emergency runway landings to prevent fires?

20. Was AFFF used for forest fires or fire management on-post/off-post? If so, please describe what happened and who was involved? AFFF is procured, stored, and used by Frankfort City F.D. independently of Boone Not. Guard Center.

21. Can you provide any other locations where AFFF has been stored, released, or used (i.e. hangars, buildings, fire stations, firefighting equipment testing and maintenance areas, emergency response sites, storm water/surface water, waste water treatment plants, and AFFF ponds)?

No. AFFF is stored at F.D. stations F.D. uses outside of Boone Not. Guard Center is not relevant.

PA	Interview	Oue	stionnair	re – Fire	Station
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Facility:	
Interviewer:	
Date/Time;	

22. Are you aware of any other creative uses of AFFF? If so, how was AFFF used? What entities were involved?

23. How is off-spec AFFF disposed (used for training, turned in, or given to a local Fire Station)? If applicable, do you know the name of the vendor that removes off-spec AFFF? Do you have copies of the manifest or B/L? How Frankfort City F.D. disposes of AFFF is unknown.

24. Do you recommend anyone else we can interview? If so, do you have contact information for them?

Assistant ED. Chief



nterviewee: Can your name/role be used in the PA Report V or N			
Fitle: Aviation Mainterance Supervisor Can you recommend anyone we can interview?			
Phone Number:	hone Number: Y or N		
Email:			
Roles or activities with the Facility/Years worki	ng at the Facility:		
· Aviation Mahtenance Supervi	SOC		
· Procures foams at the Boone	National Guard Center		
· Maintains MSDS3 for those mater			
PFAS Use: Identify accidental/intentional release l			
storage container size (maintenance, fire training, f builts), fueling stations, crash sites, pest management			
waterproofing). How are materials ordered/purchas		otais planing, or	
· Halotron foam (MSDS) received	1) was procured for we	Known Uses	
at the new AASF.) 1005	Use	
· When the new AASF was complete	ed mobile AFFF containes	Procurement	
were brought to the new AASF from		Disposition	
Containers were empty. They con	And the second s	Storage (Mixed)	
· Foam is stored in a container		Storage (Solution)	
side of the facility.		Inventory, Off-Spec	
· The suppression system at the new 1	AASF is water, AFFF is	Containment	
only stored in mobile containers and		SOP on Filling	
AFFF has never been used by KYA		Leaking Vehicles	
at the facility.		Nozzle and Suppression System Testing	
· Frankfort FD performs training d	Icills at the new AASF	Dining Facilities	
about once per year. Once, a f		Vehicle Washing	
AST at the new AASF.		Ramp Washing	
→ After discussing with	Frankfort FD, this	Fuel Spill Washing and Fueling Stations	
was most likely Class A	,	Chrome Plating or Waterproofing	
train with AFFF, and	necolds of responses		
at the facility since a	onstruction of the		
new AASF did not inclu	ide AFTF use.		

PA	Interview	Questionnaire	_	Other
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Facility:	
Interviewer:	
Date/Time:	

plans to return half of the Halotron AFFF mobile containers
to the USFPO after 5 years.
· Halotron has a 10 year shelf-life and does contain Dichbrotrifluccoething
· All material purchases go through the USFPO.
· Discharge from the new AAST on the southern half (near the AST)
travels through an OWS and then to the creek at the facility.
Discharge from the hangar travels through a separate ouis, then
an oil sorbent sock, then to the creek at the facility.
*** shared us a trailer that overheated
and triggered the automatic fire suppression system years ago. The fire suppression system relies on ABC from. The trailer was located at
suppression system relies on ABC from. The trailer was located at
the SE corner of building BC 189 (Fitness Center) at the time of the
incident. All foam was contained within the trailer, and an EPA
contractor performed the clean-up. The trailer has since been moved to
the new AASF. The trailer did not contain any AFFF. The trailer may
have contained other hazardous materials.
VI II WITCH I ICH II I I I I I I I I I I I I I I
** No WWTPs or landfills exist at Boone National Guard Center
- IF92

Appendix B.2 Visual Site Inspection Checklists

Visual Site Inspection Checklist

Names(s) of people pe	rforming VSI:
Numes(s) of people pe	Recorded by:
A	RNG Contact:
D	Pate and Time: May 14, 2018 1015
Method of visit (walking, driv	104 14 1010
Source/Release Information	Warking
Site Name / Area Name / Unique ID:	Old AAAF acea
Site / Area Acreage:	C 10 (III C) SCEA
Historic Site Use (Brief Description):	Army aviction support facility, previously as a
	golf coorse
Current Site Use (Brief Description):	Armory
Physical barriers or access restrictions:	Brone National Guard Center Fence
1. Was PFAS used (or spilled) at the site/are	a? Y N
Emply AFFF mo	ow PFAS was used and usage time (e.g., fire fighting training 2001 to 2014): Sobile Containers Previously at the old AAST indicate potential
use at the sit	
Has usage been documented? 2a. If yes, keep a reco	Y/N rd (place electronic files on a disk):
What types of businesses are located near 3a. Indicate what businesses	the site? Industrial / Commercial / Plating / Waterproofing Residential nesses are located near the site
4. Is this site located at an airport/flightline?	weos exist to the east approx. ~0.2 miles Excription of the airport/flightline tenants:

A public airport exists south of the Boone National Goard Center

Other Significant Site Features:
1. Does the facility have a fire suppression system?
la. If yes, indicate which type of AFFF has been used:
Prevensly, mobile AFFF containers were stored at the site. 1b. If yes, describe maintenance schedule/leaks:
1c. If yes, how often is the AFFF replaced:
AFFF is not replaced at the dd AASF 1d. If yes, does the facility have floor drains and where do they lead? Can we obtain an as built drawing?
Outdoor downouse collects at designed bioremedication pond
Transport / Pathway Information
Migration Potential:
1. Does site/area drainage flow off installation?
1a. If so, note observation and location:
Drainage may leave the facility during heavy (or to the north and west. Most drainage is captured in a bicremediation pond. 2. Is there channelized flow within the site/area?
2a. If so, please note observation and location:
Caten basins more flow to a bioremediation pand. A creek barders to
3. Are monitoring or drinking water wells located near the site?
3a. If so, please note the location:
4. Are surface water intakes located near the site?
4a. If so, please note the location:
5. Can wind dispersion information be obtained?
5a. If so, please note and observe the location.
6. Does an adjacent non-ARNG PFAS source exist?
6a. If so, please note the source and location.
6b. Will off-site reconnaissance be conducted? Y(N)

Significant Topographical Features:
1. Has the infrastructure changed at the site/area?
1a. If so, please describe change (ex. Structures no longer exist):
the AASF is now an armory
2. Is the site/area vegetated?
2a. If not vegetated, briefly describe the site/area composition:
24. If not regulated, orterly describe the site area composition
Partially. Vegetation surrounds paved area and armory building
3. Does the site or area exhibit evidence of erosion?
3a. If yes, describe the location and extent of the erosion:
4. Does the site/area exhibit any areas of ponding or standing water?
4a. If yes, describe the location and extent of the ponding:
Standing water exists in the bionemediation fond
Receptor Information
1. Is access to the site restricted?
1a. If so, please note to what extent:
Boone National Guard Center Fence
Site Workers Construction Workers / Trespassers / Residential / Recreational
2. Who can access the site? Users / Ecological
2a. Circle all that apply, note any not covered above:
Only KYARNO acress the site. Once per year Frankfort City FD a
3. Are residential areas located near the site?
3a. If so, please note the location/distance:
(~0.2 miles east)
Central City residential areas are cost of Boone National Guard Co
4. Are any schools/day care centers located near the site?
4a. If so, please note the location/distance/type:
(0.5 miles north)
Dance as above West ridge Elementary School is 0.5 mi north of the o
5. Are any wetlands located near the site?
5a. If so, please note the location/distance/type:
A tributary of Benson Creek and the Kentucky River runs across Boon
National Guard Center.

Additional Notes		
Discharge esca	aping the site end	s up in a coelc/stream that towers the
facility. Disch	narge from the n	ew AAST ends up in the same stream. The
stream is son	nded by the kyf	
Photographic Log		
Photo ID/Name	Date & Location	Photograph Description
	(2)	

Visual Site Inspection Checklist

Names(s) of people p	erforming VSI:
	Recorded by:
A	ARNG Contact:
	Date and Time: May 14, 2018 1100
Method of visit (walking, dri	ving, adjacent): Walking
Source/Release Information	
Site Name / Area Name / Unique ID:	New AASF
Site / Area Acreage:	
Historic Site Use (Brief Description):	Newly constructed, always used as an AASF
Current Site Use (Brief Description):	AASF
Physical barriers or access restrictions:	Boone National Court Center Fence
Was PFAS used (or spilled) at the site/ar	ea? N
1a. If yes, document	how PFAS was used and usage time (e.g., fire fighting training 2001 to 2014):
	and Halctron containers stored at the site. 5-gul backets and
	ms of AFFF stored in shipping container at the site
2. Has usage been documented? 2a. If yes, keep a reco	ord (place electronic files on a disk):
3. What types of businesses are located nea 3a. Indicate what bus	r the site? Industrial Commercial Plating / Waterproofing / Residential sinesses are located near the site
4. Is this site located at an airport/flightline 4a. If yes, provide a	Airport is adjacent to the east/scotheast description of the airport/flightline tenants:
Adjacent to	the Capital City Airport

Other Significant Sit	e Features:
1. Does the facility ha	ve a fire suppression system?
	1a. If yes, indicate which type of AFFF has been used:
	The fire suppression system is water but mobile AFFF and Halotron
	Containers are stored at the site, as well as AFFF in buckets / drums
a	1b. If yes, describe maintenance schedule/leaks:
	Habton containers are returned to be serviced every 5 years
2	Die Me
	1c. If yes, how often is the AFFF replaced:
	The current schedule includes replacement every 5 years
9	1d. If yes, does the facility have floor drains and where do they lead? Can we obtain an as built drawing?
	As built drawings have been requested.
Transport / Pathw	ay Information As built drawings have been requested.
Migration Potential:	
1. Does site/area drain	age flow off installation?
	1a. If so, note observation and location:
	A tributary of Benson Creek/Kentucky hiver runs east/west
	across the Boone National Good Center
¥.	flow within the site/area?
	2a. If so, please note observation and location:
	Flow is channelized to one of two OWS's, past oil soment secks, and
	to a tributary of Benson Creek. Regular analysis is performed on discharged
3. Are monitoring or d	rinking water wells located near the site?
	3a. If so, please note the location:
8	
4. Are surface water in	takes located near the site?
	4a. If so, please note the location:
	A tributary of Benson Creek/Kentucky River runs east/west
- 1	across the Boore National Guard Conter
Can wind dispersion	n information be obtained?
	5a. If so, please note and observe the location.
6. Does an adjacent no	n-ARNG PFAS source exist?
_	6a. If so, please note the source and location.
(Capital City Airport is adjacent east/southeast of the AASF
9	6b. Will off-site reconnaissance be conducted?

Significant Topographical Features:
1. Has the infrastructure changed at the site/area?
1a. If so, please describe change (ex. Structures no longer exist):
2. Is the site/area vegetated? 2a. If not vegetated, briefly describe the site/area composition:
Areas surrounding the AASF are vegetated
3. Does the site or area exhibit evidence of erosion?
3a. If yes, describe the location and extent of the erosion:
4. Does the site/area exhibit any areas of ponding or standing water?
4a. If yes, describe the location and extent of the ponding:
Athibitary of Benson Credic/Kentudey River ons east/west across
the Beare National Good Center
Receptor Information 1. Is access to the site restricted? 1a. If so, please note to what extent:
Beore National Coard Center Fence Site Workers / Construction Workers / Trespassers / Residential / Recreational 2. Who can access the site? Users / Ecological
2a. Circle all that apply, note any not covered above:
3. Are residential areas located near the site? 3a. If so, please note the location/distance:
4. Are any schools/day care centers located near the site? 4a. If so, please note the location/distance/type:
5. Are any wetlands located near the site? 5a. If so, please note the location/distance/type: A tributory of Benson. Creek receives discharged water runoff from the
AASF after the water travels through an OWS and oil sochent sceles

dditional Notes		
hotographic Log		Α.
Photo ID/Name	Date & Location	Photograph Description
		· ·
	1	27

Appendix B.3 Conceptual Site Model Information

Preliminary Assessment – Conceptual Site Model Information

1, 4	Site Name: Boone National Guard Center
	Why has this location been identified as a site? The facility is a National Good
	Center with an old and new AASF that stores and may have used AFFF.
	Are there any other activities nearby that could also impact this location?
	The Capital City Airport south of the site may store or use AFFF. Frankfort City FD responds to emergencies at the airport and facility, and stores its air AFF.
	Training Events
	Have any training events with AFFF occurred at this site?
	If so, how often? NA
	How much material was used? Is it documented? Nine known to have been used.
	Identify Potential Pathways: Do we have enough information to fully understand over land surface water flow, groundwater flow, and geological formations on and around the facility? Any direct pathways to larger water bodies?
	Surface Water:
(U.S. Climate and	Surface water flow direction? Southeast from the top of the hill, tunnelized southeast of Frankf
CO S. Charlete University	
	Any flooding during rainy season? Not at the facility
	Direct or indirect pathway to ditches? Direct pathway to creek streamized
	Direct or indirect pathway to larger bodies of water? Yes creek at facility is a tributary of Kentucky Bise
	Does surface water pond any place on site? Yes, large pond on east side of facility, a biorem pand, and a cree
	Any impoundment areas or retention ponds? Yes see above
	Any NPDES location points near the site? None dentified
	How does surface water drain on and around the flight line? Surface water at the old and new
	AASF enters a cheek at the facility.

Preliminary Assessment - Conceptual Site Model Information

Groundwater: Groundwater flow direction? Depth to groundwater? Unknown Lots of knot formation and Uses (agricultural, drinking water, irrigation)? Any groundwater treatment systems? Any groundwater monitoring well locations near the site? None known Information Registers Is groundwater used for drinking water? Are there drinking water supply wells on installation? Do they serve off-post populations? Are there off-post drinking water wells downgradient Waste Water Treatment Plant: Has the installation ever had a WWTP, past or present? If so, do we understand the process and which water is/was treated at the plant? Do we understand the fate of sludge waste? Is surface water from potential contaminated sites treated? Ves sock exist at the new AASF A bioremediation and exists **Equipment Rinse Water** 1. Is firefighting equipment washed? Where does the rinse water go? washed, but consider from other tasks has the 2. Are nozzles tested? How often are nozzles tested? Where are nozzles tested? Are nozzles cleaned after use? Where does the rinse water flow after cleaning nozzles? tester nezzles are m 3. Other?

Preliminary Assessment – Conceptual Site Model Information

Identify Potential Receptors:

Site Worker It release confirmed
Construction Worker No
Recreational User No
Residential If release occurred.
Child the (elementary school 0.5 mi away). If release occurred, potential receptor.
Ecological IF release occurred.
Note what is located near by the site (e.g. daycare, schools, hospitals, churches, agricultural, livestock)?
School noted above. Salato Wildlife Center west of new AAST. Residential
area east of old AASF.
Documentation
Ask for Engineering drawings (if applicable). New AASF.
Has there been a reconstruction or changes to the drainage system? When did that occur?
pond constructed ~15 years ago. Od AAST converted to armory.
New AAST completed ~3 years ago.

Appendix C Photographic Log

Army National Guard, Preliminary Assessment for PFAS

Boone National Guard Center

Franklin County, Kentucky

Photograph No. 1

Description:

Southwestern area of the old AASF facing northeast. Amerex Model 630 wheeled extinguisher pictured in photograph.



Photograph No. 2

Description:

Western area of the old AASF area facing west.
Bioremediation pond where catch basins around the old AASF channel runoff pictured in photograph.



Army National Guard, Preliminary Assessment for PFAS

Boone National Guard Center

Franklin County, Kentucky

Photograph No. 3

Description:

Northern area of new AASF facing east. Mobile containers of Purple K and Amerex Model 630 wheeled extinguishers pictured in photograph.



Photograph No. 4

Description:

Amerex Model 630 wheeled extinguisher label at the new AASF.



Army National Guard, Preliminary Assessment for PFAS

Boone National Guard Center

Franklin County, Kentucky

Photograph No. 5

Description:

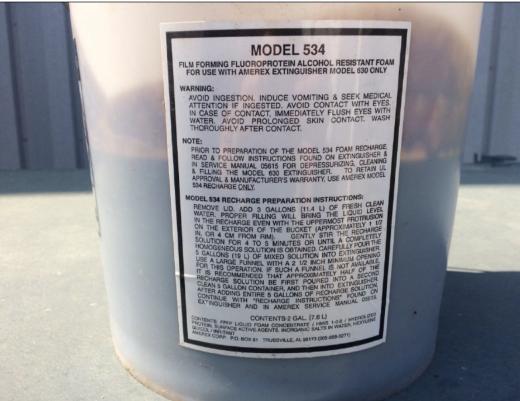
Empty AFFF Amerex Model 630 wheeled extinguishers pictured outside the northern wall of the new AASF.



Photograph No. 6

Description:

Amerex Model 534 AR-AFFF foam concentrate in a 5-gallon bucket pictured. This AR-AFFF foam is used with the Amerex Model 630 wheeled extinguisher



Army National Guard, Preliminary Assessment for PFAS

Boone National Guard Center

Franklin County, Kentucky

Photograph No. 7

Description:

Western area of the new AASF facing west. Storage unit containing 55-gallon drums of AFFF pictured.



Photograph No. 8

Description:

Chemguard Blizzard Freeze Protected Foam solution label on a 55-gallon drum of AFFF in a storage unit in the western area of the new AASF.



Army National Guard, Preliminary Assessment for PFAS

Boone National Guard Center

Franklin County, Kentucky

Photograph No. 9

Description:

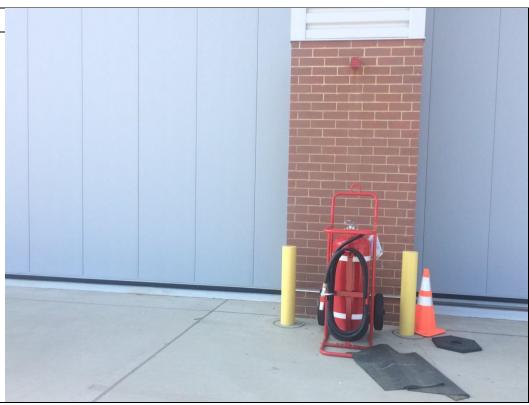
National Foam Aer-O-Water 6EM label on a 55-gallon drum of AFFF in a storage unit in the western area of the new AASF.



Photograph No. 10

Description:

Amerex Halotron 1 Clean Agent wheeled extinguisher pictured outside the northern wall of the new AASF.



Army National Guard, Preliminary Assessment for PFAS

Boone National Guard Center

Franklin County, Kentucky

Photograph No. 11

Description:

Amerex wheeled extinguisher Model B674, B675 Halotron 1 Clean Agent label at the new AASF.



Photograph No. 11

Description:

Southern area of the new AASF facing south. Aboveground storage tank pictured in the photograph.



Army National Guard, Preliminary Assessment for PFAS

Boone National Guard Center

Franklin County, Kentucky

Photograph No. 13

Description:

Drain adjacent to the southern wall of the hangar at the new AASF pictured. Drains run parallel to all four walls at the hangar.



Photograph No. 14

Description:

Drain to the oil-water separator in the northwest area at the new AASF pictured in photograph.



Army National Guard, Preliminary Assessment for PFAS

Boone National Guard Center

Franklin County, Kentucky

Photograph No. 125

Description:

Oil-sorbent sock at drainage outfall where runoff is discharged from the oil-water separator in the northwest area of the new AASF.



Photograph No. 136

Description:

Drainage channel to a tributary of Benson Creek from the oil-water separator in the northwest area of the new AASF.



Army National Guard, Preliminary Assessment for PFAS

Boone National Guard Center

Franklin County, Kentucky

Photograph No. 147

Description:

National Foam Centurion 3 AFFF in a 5-gallon bucket stored on a firetruck at Frankfort City Fire Department Station Three. The fire station is located southeast of the Capital City Airport, south of the Boone National Guard Training Center.

