FINAL

PERFLUORINATED COMPOUNDS PRELIMINARY ASSESSMENT SITE VISIT REPORT

WISCONSIN AIR NATIONAL GUARD
TRUAX FIELD
DANE COUNTY REGIONAL AIRPORT
MADISON, WISCONSIN

Prepared For:

Headquarters Air National Guard
Joint Base Andrews, Maryland

December 2015

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LIST OF ACRONYMS

AFFF	Aqueous Film Forming Foam
AOC	Area of Concern
ARNG	Army National Guard
BB&E	BB&E, Inc.
bgs	below ground surface
CAD	computer-aided design
FD	fire department
ft	feet
FTA	Fire Training Area
gal	gallons
GIS	geographical information system
HEF	high expansion foam
IRP	Installation Restoration Program
MATC	Madison Area Technical College
OWS	oil water separator
PA	Preliminary Assessment
PFCs	Perfluorinated Compounds
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonate
PHAL	Provisional Health Advisory Levels.
POL	petroleum, oil, and lubricant
ROD	Record of Decision
USEPA	United States Environmental Protection Agency
UST	underground storage tank
WIANG	Wisconsin Air National Guard
WDNR	Wisconsin Department of Natural Resources

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1.0 INTRODUCTION

A preliminary assessment (PA) site visit was conducted by BB&E, Inc. (BB&E) from August 10-11, 2015 for the Wisconsin Air National Guard (WIANG), at Truax Field, Dane County Regional Airport, Madison, Wisconsin (Base). The site location is shown on Figure 1. The purpose of the visit was to identify potential sites of historic environmental releases of perfluorinated compounds (PFCs), specifically from Aqueous Film Forming Foam (AFFF) usage and storage, as shown on Figure 2. Prior to the site visit, BB&E conducted research of any documented Fire Training Areas (FTAs) in operation since 1970, or any other use or release of AFFF in accordance with the Final Perfluorinated Compound (PFC) Preliminary Assessment Work Plan (BB&E, 2015).

Individuals contributing to this PA effort included the following:

- Lt. Matthew Shaw – WIANG, Base Environmental Officer
- Susan Gustke – WIANG, State Environmental Officer
- Sgt. Gary Peck – WIANG, Fire Chief
- Maj. Daniel Statz – WIANG, Base Civil Engineer
- Chief Martin – WIANG, Facilities Manager
- Maj. Dunlap – WIANG, GIS/CAD contact
- Mr. Bradley Stepp - Army National Guard Logistics Officer

Sections 2.0 and 3.0 outline the potential PFC sources identified on the Base property during the records review and site visit and Section 4.0 provides conclusions and recommendations; references are listed in Section 5.0. Representative photos of the subject sites taken during the site visit are attached as Appendix A, records of communication are included in Appendix B, and other supporting documentation is provided in Appendix C.

1.1 Hydrogeologic Setting

Hydrogeologic information was obtained from the 2013 Final Record of Decision (ROD) report (WDNR, 2013).

Regionally, groundwater is found in the unconsolidated glacial deposits and underlying bedrock formations including sandstone of the Trempealeau Group, the deeper Tunnel City Group, and the underlying Elk Mound Group. These bedrock aquifers comprise the principal water supply aquifers in Dane County. The Mt. Simon Sandstone underlying the glacial deposits in the vicinity of the Base is the lowermost formation of the Elk Mound Group.

Based on information collected during investigation activities at the installation restoration program (IRP) sites, monitoring wells within the water table zone indicate shallow groundwater flow is generally toward the south and southeast. The water table at the Base is generally encountered at depths of 5 to 10 feet below ground surface (bgs). The groundwater flow gradients calculated from the 2013 IRP investigations indicate groundwater flow velocities of 0.5 to 0.9 foot per day. Groundwater flow patterns at the Base are included in Appendix C-1.

There are currently no known drinking water supply wells at the Base and the shallow groundwater system in the area of the Base is not used as a source of drinking water. The Base is provided water via the municipal water distribution system operated by the City of Madison. The City of Madison obtains its public water supply from the Mt. Simon Sandstone from a network of pumping wells. The nearest municipal water supply wells are located approximately 1.5 miles southwest of the Base. Further discussion of water wells is included in Section 3.2.1.1 of this report.

Surface water drainage from the Base ultimately drains west into Starkweather Creek, which surrounds the Base on the north, west, and south sides. Starkweather Creek empties into Lake Monona approximately 2 miles to the south. Surface water flow around the Base is directed by man-made ditches and culverts which connect to Starkweather Creek. Because much of the Base is paved, infiltration and evapotranspiration of surface water are negligible.

2.0 FIRE TRAINING AREAS

Based on this PA investigation, there is no evidence that a FTA was located within the property boundaries of the Base. According to Base personnel, the FTA at Madison Area Technical College (MATC) has historically been used by the WIANG Fire Department (FD). The MATC is located south of the Base.

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3.0 NON-FIRE TRAINING AREAS

Non-FTA Areas of Concern (AOCs) are sites where AFFF has been released and may include crash sites, hangars, fuel spill areas, hazardous waste storage facilities, firefighting equipment testing areas, etc. The following section includes a description of any non-fire training AOCs, operational history, waste characteristics, and pathway evaluations.

3.1 AOC Description, Operational History, and Waste Characteristics

Records review focused on the potential PFC sources within the Base property boundaries. Current Base property boundaries, including leased land, are attached as Appendix C-2. The Army National Guard (ARNG) leases land from the ANG. The ARNG was questioned during the PA site visit, and confirmed that AFFF has not been used for any of their operations.

The following are the Non-FTA AOCs that were identified during this PA Investigation. Appendix A contains photos of these areas. The types of AFFF used and stored in the areas specified below included the following: National Foam Aer-O-Water 3EM (3%), ANSULITE (3%), 3M (3%), and Chemguard (3%).

3.1.1 Building 430 (Current Fire Station)

AFFF has been used by the WIANG FD for at least 20 years, and has been stored in Building 430 since it was built, circa 1995. Currently, there are approximately 471 gallons (gal) of AFFF carried in FD trucks and approximately 821 gal of AFFF serving as a backup supply, stored in the fire station. AFFF is transferred to vehicles within the fire station via overhead fill. Also, FD vehicles are washed within the fire station or the outside truck bays when necessary. There are trench drains located in the fire station and downgradient of the truck bays; therefore, any AFFF releases due to vehicle washing would be captured by the trench drains, which discharge into the sanitary sewer system.

FD-specific AFFF and vehicle inventories are included in Appendix C-3. The Base provided a sanitary sewer system map during the PA site visit, included as Appendix C-4.

3.1.2 Building 403 Nozzle Test Area 1

The AFFF nozzle systems on FD vehicles have been tested every six months. Nozzle tests are conducted in the grassy areas on the northwest and southwest (see Section 3.1.3) sides of Building 430. Any AFFF released in porous green spaces has the potential to seep into the subsurface and groundwater.

Foam testing procedures for FD vehicles are included in Appendix C-5. After foam is released, the area is typically watered down.

3.1.3 Building 403 Nozzle Test Area 2

The AFFF nozzle systems on FD vehicles have been tested every six months. Nozzle tests are conducted in the grassy areas on the northwest (see Section 3.1.2) and southwest sides of Building 430. Any AFFF released in porous green spaces has the potential to seep into the subsurface and groundwater.

Foam testing procedures for FD vehicles are included in Appendix C-5. After foam is released, the area is typically watered down.

3.1.4 Former Building 403 (Former Fire Station)

Prior to relocation to Building 430, the FD was stationed in Building 403, which was located southwest of Building 400. Building 403 was demolished in 1995/1996. An oil/water separator (OWS) and associated underground storage tank (UST) were also removed during demolition; no contamination was reported during removal (Leidos, 2015).According to Base personnel, AFFF has been in use since at least 1988 and was stored in Former Building 403. There are no records of AFFF nozzle testing from this time period.

3.1.5 Hangar 400

Although the installation date of the AFFF fire suppression system is unknown, Hangar 400 was equipped with an AFFF fire suppression system until approximately 2009, when the system was retrofitted for use of high expansion foam (HEF). According to Base personnel, hangar fire suppression systems have been tested annually; foam is discharged every other year during testing. No records of accidental AFFF releases exist. Any AFFF releases during testing or

accidental release within the hangar would have been routed to the trench drains that historically led to an OWS which then discharged into the sanitary sewer system. The OWS was removed in 2009; no contamination was observed during removal (Leidos, 2015).

HEF is currently stored in the mechanical room of Hangar 400. According to Base personnel, AFFF may have been stored in the mechanical room prior to the switch to HEF. Floor drains were present which likely discharge to the sanitary sewer system.

Records of AFFF fire suppression system testing for Hangar 400 were obtained during the PA site visit, and are included as Appendix C-6.

3.1.6 Hangar 406

Although the installation date of the AFFF fire suppression system is unknown, Hangar 400 was equipped with an AFFF fire suppression system until approximately 2006, when the system was retrofitted for use of HEF. According to Base personnel, hangar fire suppression systems have been tested annually; foam is discharged every other year during testing. No records of accidental AFFF releases exist. Any AFFF releases during testing or accidental release within the hangar would have been routed to the trench drains which then discharged into the sanitary sewer system.

HEF is currently stored in the mechanical room of Hangar 406. According to Base personnel, AFFF may have been stored in the mechanical room prior to the switch to HEF. Floor drains were present which likely discharge to the sanitary sewer system.

There were no records available for AFFF fire suppression system testing at Hangar 406.

3.1.7 Hangar 414

Hangar 414 has been equipped with an AFFF fire suppression system since 1994. According to Base personnel, hangar fire suppression systems have been tested annually; foam is discharged every other year during testing. No records of accidental AFFF releases exist. Any AFFF releases during testing or accidental release within the hangar would have been routed to the trench drains which discharge into the sanitary sewer system.

Several records of testing and maintenance of the AFFF fire suppression system for Hangar 414 are included in Appendix C-6.

3.1.8 Fuel Spill Ditch

On March 6, 1981, approximately 2,000 gal of JP-4 jet fuel spilled due to an overflow during refilling at the petroleum, oil, and lubricant (POL) pump house (Building 405). In response to the spill an existing drainage ditch (about 100 feet long) next to the spill was dammed off (ditch located between Hangars 400 and 414). The fire department foamed the fuel and flushed it toward the ditch, where it soaked into the ground and was covered with straw. By April 9, 1981, as directed by the Wisconsin Department of Natural Resources (WDNR), the affected soil was removed to a depth of approximately 6 ft in the ditch and to the limit of odor detection on the ditch side slopes (WDNR, 2013).

The type of foam used during the 1981 fuel spill is not specified on the incident report (Appendix C-7), but may have been AFFF based on its historic use. As PFC sampling was not conducted during soil excavation, PFCs from the foam may still be present in this area, particularly the ditch sidewalls, which were excavated based on odor detection. Any AFFF released in porous green spaces has the potential to seep into the subsurface and groundwater.

3.1.9 Building 503 Parking Lot

The soil removed from the 1981 POL spill area, as discussed above, was relocated to what is now the parking lot west of Building 503. The soil was placed on four concrete pads, spread at a depth of 6 to 10 inches, and was turned throughout the summer of 1981 to enhance volatilization. In the summer of 1982, the area was excavated to a depth of 3 ft and contaminated soil was disposed off-site along with the excavated material. The area was paved the same year (PEER, 1988).

Any AFFF runoff from this area would have impacted the soil and may have impacted the groundwater. Although the soil beneath the concrete pads was excavated and disposed off-site, there has been no PFC sampling for this area to confirm that the potential contamination has been delineated.

3.1.10 Building 510 (Supply)

Four full drums of AFFF on a wooden pallet were observed during the PA site visit inside Building 510, which is where excess AFFF has been stored for an unknown amount of time. No secondary containment was provided for the drums; however, there were no visible floor drains or nearby mandoors or overhead doors to facilitate an outside release of AFFF. There are no known records or personnel knowledge of accidental AFFF releases at Building 510.

3.2 Pathway and Environmental Hazard Assessment

The following is a preliminary evaluation of the threats and targets associated with each exposure pathway.

3.2.1 Groundwater

No documentation was available showing that groundwater at the Base has been tested for PFCs; therefore it is unknown whether PFCs are present in the groundwater. Based on historical practices, they may be present in the groundwater due to known or potential AFFF use at the following locations:

- Area surrounding Building 430 (Current Fire Station);
- Grassy areas northwest and southwest of Building 430 where FD vehicles have conducted AFFF system nozzle testing every six months;
- Area surrounding former Building 403 (Former Fire Station);
- Area surrounding Hangars 400, 406, and 414;
- Ditch between Hangar 414 and Hangar 400 where foam was used as a precaution during a fuel spill in 1981; and
- Area surrounding parking lot west of Building 503, where runoff may have occurred from the soil excavated from the 1981 fuel spill.

3.2.1.1 Water Wells

A review of the EDR Radius Map™ Report with Geocheck® dated July 21, 2015 (EDR, 2015) shows at least six water wells within a one-mile radius of the Base, located to the west, north and east of the property boundary (Appendix C-8). One well is also shown in the center of the Base property; according to WIANG personnel, there are no water wells on Base.

3.2.2 Soil

No documentation was available showing that soils at the Base have been tested for PFCs; therefore it is unknown whether PFCs are present in the soil. However, based on historical practices, they may be present in the soil due to known or potential AFFF use at the following locations:

- Area surrounding Building 430 (Current Fire Station);
- Grassy areas northwest and southwest of Building 430 where FD vehicles have conducted AFFF system nozzle testing every six months;
- Area surrounding former Building 403 (Former Fire Station);
- Area surrounding Hangars 400, 406, and 414;
- Ditch between Hangar 414 and Hangar 400 where foam was used as a precaution during a fuel spill in 1981; and
- Area surrounding parking lot west of Building 503, where runoff may have occurred from the soil excavated from the 1981 fuel spill.

In their anionic forms, perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are water soluble and can migrate readily from soil to groundwater. The United States Environmental Protection Agency (USEPA) has not established Provisional Health Advisory Levels (PHALs) for PFOS and PFOA in soil (USEPA, 2014). The primary exposure pathway for PFOS and PFOA would be the ingestion of contaminated drinking water.

3.2.3 Sediment

No documentation was available showing that sediments at the Base have been tested for PFCs; therefore it is unknown whether PFCs are present in sediments. Based on historical practices, PFCs could be present in sediment in locations that have received drainage from the Base storm sewer system. In general, surface releases at the Base would enter the series of man-made ditches and culverts and ultimately discharge to Starkweather Creek. Sediments are not a concern in the area of the 1981 fuel spill, as the soil (and sediments) was excavated and ultimately disposed off-site.

3.2.4 Surface Water

Surface water at the Base is dictated by the man-made surface drainage and storm sewer system. There are no open bodies of water on the Base. Precipitation is generally collected by the storm sewer system and discharged to Starkweather Creek, which runs north, west, and south of the Base.

A map showing the Base storm drainage system is included in Appendix C-9. Several environmentally sensitive areas surrounding the Base are identified to be on the National Wetland Inventory according to the EDR report, as shown in Appendix C-10.

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4.0 FINDINGS AND CONCLUSIONS

Ten potential release sites have been identified at the WIANG Base during this PA. Of those ten sites, nine are recommended for further investigation.

Further investigation is recommended at the Base to monitor and characterize any groundwater, soil, sediment, and/or surface water PFC contamination onsite. Sampling of soil and groundwater within the Base and at the outfalls of Starkweather Creek is recommended at a minimum to evaluate the potential of migration of PFCs. In addition, verification of the structural integrity of the Base sanitary sewer is advised.

Table 1 summarizes the recommendation and rationale for each AOC identified at the Base.

Table 1: Preliminary Assessment Report Summary and Recommendations

No.	Potential AFFF PFC AOCs	GPS Coordinates		Rationale	Recommendation
		Latitude	Longitude		
1	Building 430 (Current Fire Station)	43.131328°	-89.338141°	Current AFFF storage area. No documented releases. Any discharges likely entered the sanitary sewer; however, outside releases may have occurred.	Proceed to SI; focus on soil and groundwater.
2	Building 430 Nozzle Test Area 1	43.131662°	-89.338613°	Known FD equipment testing and calibration area. Possible AFFF discharges to surface soils. AFFF may have infiltrated into permeable ground soils.	Proceed to SI; focus on soil within the AFFF nozzle testing footprint and groundwater, which generally flows to the southeast.
3	Building 430 Nozzle Test Area 2	43.130905°	-89.338596°	Known FD equipment testing and calibration area. Possible AFFF discharges to surface soils. AFFF may have infiltrated into permeable ground soils.	Proceed to SI; focus on soil within the AFFF nozzle testing footprint and groundwater, which generally flows to the southeast.
4	Former Building 403 (Former Fire Station)	43.132525°	-89.335744°	Former AFFF storage area. No documented releases. Any discharges likely entered the sanitary sewer; however, outside releases may have occurred.	Proceed to SI; focus on soil and groundwater.
5	Hangar 400	43.132756°	-89.334965°	Fire suppression system formerly supplied with AFFF. No documented accidental releases. Any discharges from fire suppression system testing likely entered the sanitary sewer; however, outside releases to the concrete apron may have occurred.	Proceed to SI; focus on soil and groundwater at the downgradient edges of the concrete apron based on surface drainage patterns.
6	Hangar 406	43.133689°	-89.333669°	Fire suppression system formerly supplied with AFFF. No documented accidental releases. Any discharges from fire suppression system testing likely entered the sanitary sewer; however, outside releases to the concrete apron may have occurred.	Proceed to SI; focus on soil and groundwater at the downgradient edges of the concrete apron based on surface drainage patterns.

Table 1: Preliminary Assessment Report Summary and Recommendations (Cont.)

No.	Potential AFFF PFC AOCs	GPS Coordinates		Rationale	Recommendation
		Latitude	Longitude		
7	Hangar 414	43.132023°	-89.337643°	Fire suppression system supplied with AFFF. No documented accidental releases. Any discharges from fire suppression system testing likely entered the sanitary sewer; however, outside releases to the concrete apron may have occurred.	Proceed to SI; focus on soil and groundwater at the downgradient edges of the concrete apron based on surface drainage patterns.
8	Fuel Spill Ditch	43.132136°	-89.336922°	Foam use (possibly AFFF) in response to 1981 fuel spill may have impacted soil and groundwater.	Proceed to SI; focus on soil (primarily the sidewalls of the ditch) and groundwater, which generally flows to the southeast.
9	Building 503 Parking Lot	43.131136°	-89.335853°	Soil excavated from the 1981 fuel spill ditch was placed in this location on concrete pads. Any runoff from the excavated soil may have impacted soil and groundwater.	Proceed to SI; focus on soil adjacent to the footprint of the former concrete pads and groundwater, which generally flows to the southeast.
10	Building 510 (Supply)	43.130679°	-89.334263°	Current AFFF storage area. No documented releases. Any discharges were likely contained within the building.	NFA.

AFFF – Aqueous Film Forming Foam
AOC – Area of Concern
FD – Fire Department
GPS – Global Positioning Satellite
NFA – No Further Action
PFC – Perfluorinated Compound
SI – Site Investigation

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5.0 REFERENCES

BB&E Inc (BB&E), 2015. Final Perfluorinated Compound (PFC) Preliminary Assessment Work Plan, Prepared for Headquarters Air National Guard Andrews AFB, Maryland. July.

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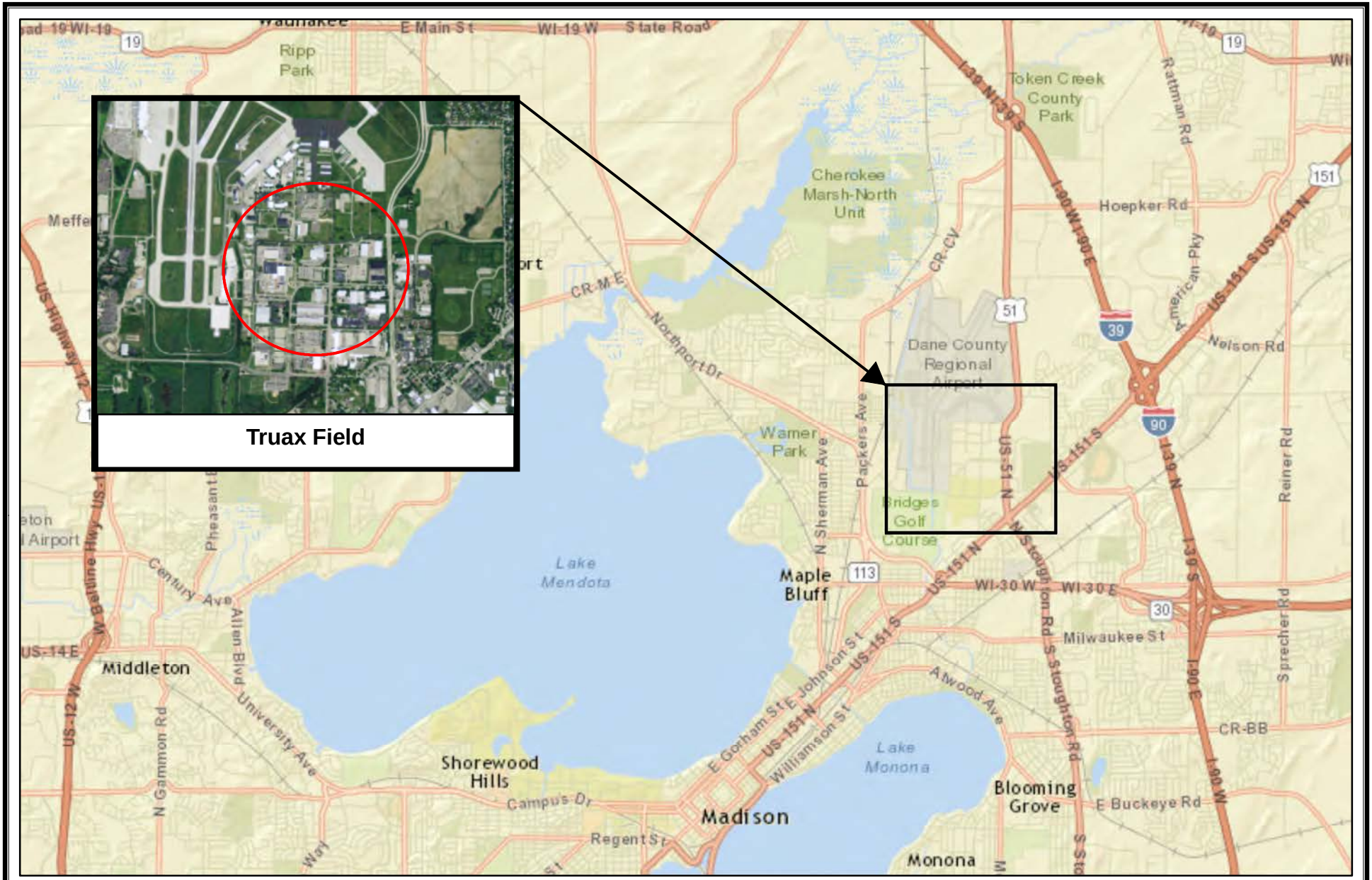
FIGURES



NORTH

0 1 2

Miles

Figure 1
Site Location Map

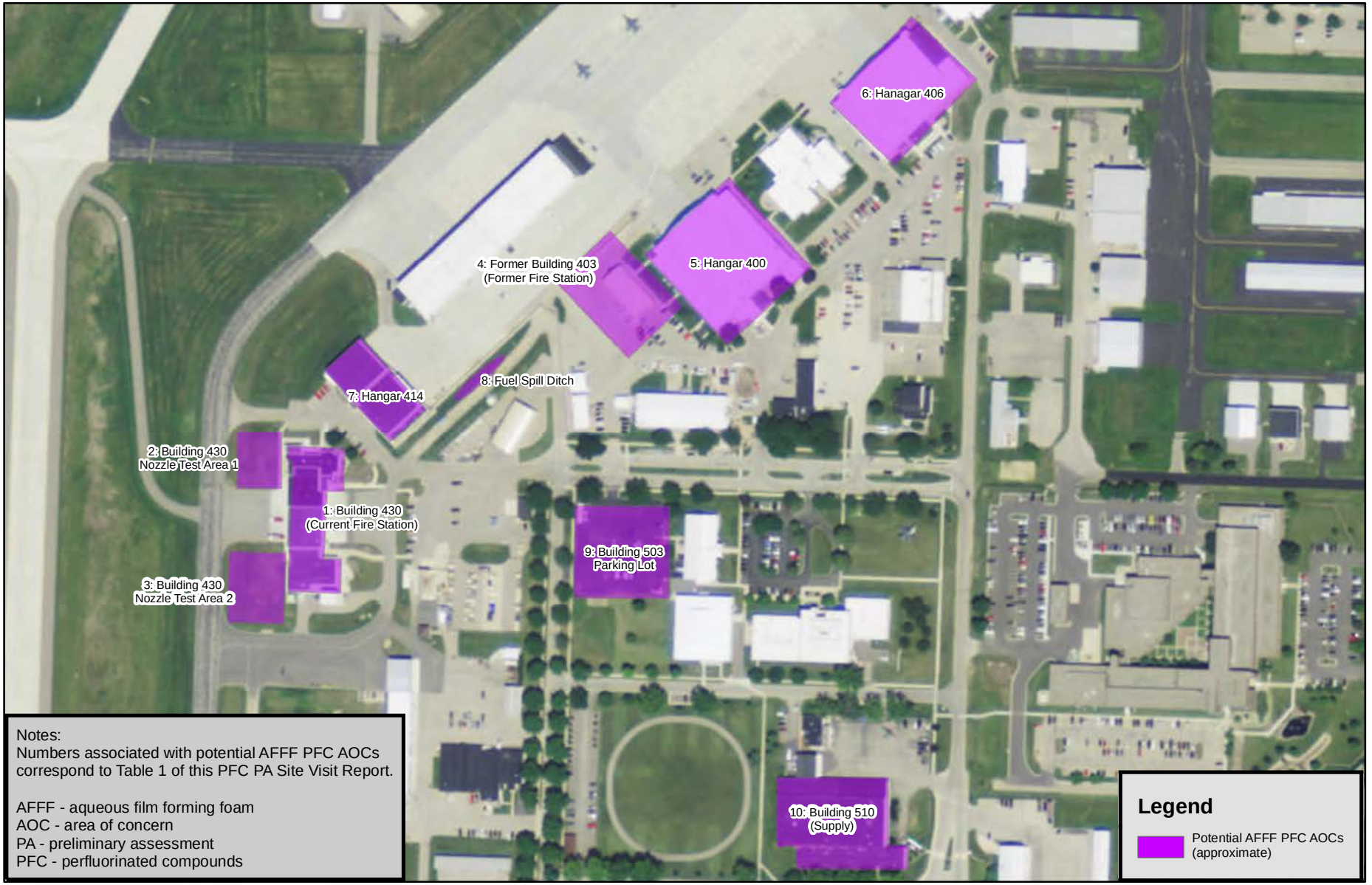
Wisconsin Air National Guard - Truax Field
Madison, Wisconsin

BB&E

Document Path: H:\IT\GIS\ANG\AFFF PFC\Truax\Site Location Map Truax.mxd

Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap

KMA 8/27/2015



NORTH

0 400 800

Feet

Figure 2
Site Features and Potential AOCs

Wisconsin Air National Guard- Truax Field
Madison, Wisconsin

BB&E

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Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

KMG 8/27/2015

APPENDIX A

PHOTO DOCUMENTATION

Appendix A
Wisconsin Air National Guard, PFC PA Site Visit, Madison, WI – August 11, 2015

Photo 1: Overhead foam fill at Fire Station (Building 430).

Photo 2: Trench drain (one of several) in the Fire Station (Building 430)

Appendix A
Wisconsin Air National Guard, PFC PA Site Visit, Madison, WI – August 11, 2015

Photo 3: Looking south on west side of Fire Station (Building 430) where vehicle spray pattern tests are conducted.

Photo 4: Looking north on west side of Fire Station (Building 430) where vehicle spray pattern tests are conducted.

Photo 5: HEF storage (historically may have been AFFF storage) in the Mechanical Room of Hangar 400.

Photo 6: HEF storage (historically may have been AFFF storage) in the Mechanical Room of Hangar 406.

Photo 7: AFFF storage in the Mechanical Room of Hangar 414.

Photo 8: One of four fire suppression systems inside Hangar 414.

Photo 9: One of several trench drain inside Hangar 414.

Photo 10: Drainage ditch between Buildings 414 and 431 – suspected area of 1981 fuel spill where foam was used.

Photo 11: Looking east toward parking lot west of Building 503 where soil from 1981 fuel spill was placed on top of concrete pads and later disposed offsite.

Photo 12: AFFF storage in Building 510 (Supply).

APPENDIX B

RECORDS OF COMMUNICATION

Sgt. Gary Peck - Fire Dept Chief
- On Base since 1991
- FD Chief since 2005

Also present during interview:
- Susan Gustke (SEO)
- Lt Matthew Shaw (EM)

Interview Questions regarding AFFF use
(At Present and back to 1970)

1. When did AFFF first start being used on this installation?

   Prior to 1988

2. What are the years of active use for each Fire Training Area (FTA), Aircraft Hangar, Fire Department, other places AFFF may have been used (collectively Potential Areas of Concern (PAOC)?

   None

   Prior to 1988
   - not sure of exact dates

3. What type of AFFF is used or has been used on this installation (i.e. 3%, 6%, High Expansion Foam)?

   Note: vehicles rated at 6%, but only using 3%

4. What manufacturer's AFFF products are used or were used on this installation (i.e. 3M, Ansul, Chemguard, etc.)?

   3M - now, and primarily in last 5 years
   In the past, Chemguard & Ansul

5. Did you ever dispose of old bulk AFFF, if so, when and where?

   Not aware

6. Is the AFFF stored as a mixed solution (3% or 6%) or do you formulate the AFFF on the installation?

   No

   ~~Note: vehicles rated at 6%~~

7. If AFFF is formulated on base, where is the solution mixed, contained, transferred, etc.?

   NA

8. Are your automated fire suppression systems currently charged with AFFF or have they been retrofitted for use of high expansion foam? -yes

   AFFF = Bldg 414
   Bldgs 400 & 406 previously had AFFF; now have HEF
   Bldg 412 - has always had HEF

9. If retrofitted, when was that done?

Bldgs 400
406 - not sure of exact date, a couple yrs ago

10. Do you have an inventory of the amount of AFFF stored on the installation, now and in the past, or present in automated fire suppression systems? Were retention ponds built to store discharged AFFF? Was the AFFF trickled to the sanitary sewer or left in the pond to infiltrate?

↳ not aware of pond.

Records: yes - will print them.

The City has called in the past about hits of foam in their system.

11. Provide a list of vehicles that carried AFFF, now and in the past, and where are/were they located? Any vehicles have a history of leaking AFFF?

↳ will print list.

Fire Station (Bldg 430)
Formerly at old Fire Station on flightline (next to 400) - torn down in 1994 or 95.

No, but if overfilled, AFFF may spill when vehicle turns a corner.

12. How much AFFF (gallons) is/was carried/stored in the specified vehicles?

- Will print inventory

13. Do you ever dispose of unused AFFF? If so, how and where?

Not aware of - would not dump down drain.

Hazmart Pharmacy may have records?

14. Has unused AFFF ever been disposed of in the past? If so, how and where?

Not aware of disposal, but if so, would have been disposed as a waste.

15. Do you/did you test the vehicles spray patterns to make sure equipment is working properly?

Yes. - Weekly ops checks - turn pump on and spray minimal amounts of foam.

- 6 months foam testing required by FA
↳ conduct on west side of Fire Station on grass.

16. How often are/were these spray tests performed and can you provide the locations of these tests, now and in the past?

See above

Foam testing procedure:
1. Test % of foam
2. Take sample of foam during test & after test.

17. Can you describe the procedure on how vehicles and systems are/were supplied with AFFF?

Loaded via overhead fill in Fire Station.
↳ trench drains in building that go to sanitary

18. Can you provide the procedures on how these vehicles are/were cleaned/decontaminated and where vehicle cleaning is performed currently as well as performed in the past?

Clean inside the station in the stalls or outside in the truck bays. If foam on trucks, clean off so paint is not ruined.

19. Is/was there a specified area on the installation where vehicles are filled with AFFF and does this area have secondary containment in case of spills?

1 inside station

Will look into to see if trench drains can be closed off.

20. When a release of AFFF occurs during a fire training exercise, now and in the past, how is the AFFF cleaned and disposed of?

Rinse off area with water.
System on trucks flushed out once used.

21. How many FTAs are/were on this installation and where are they?

None on installation, but 1 used by MATC (College)

22. How many FTAs are active and inactive?

NA

23. What types of fuels/flammables were used at the FTAs?

Aviation fuel - JP8

24. For inactive FTAs, when was the last time that fire training using AFFF was conducted at them? Find out ahead of time in Admin Record for former FTAs.

NA

Also, responded to tanker fire off-Base @ beltline (between the 2 lakes in Madison, by Harley Davidson exit).
↳ 2003 or 2004

25. What are/were the non-FTA locations where PFCs or AFFF release systems are installed (i.e. Hangars, Wastewater Treatment Plants, Fire Stations, etc.)? Where are/were these locations (Building numbers)?

Not aware of

26. Do you have a list (Building names and numbers, current and demolished) where the fire suppression systems either currently contain or have contained AFFF?

See #8

Not aware of any other bldgs. Very few bldg's have been torn down.

27. Do you have records of fuel spill logs and emergency response logs? Knowledge of aircraft mishaps/crashes? There are incident reports, but are strictly for fuel.

- Mid 90s (94?) at ~~end~~ end of runway - AFFF probably used
- Off-Base mishap (2011?) - AFFF not used

* During 70s & early 80s, it was common practice to foam runways during crash ↳ no records though.

28. Do you have recollection or records of AFFF being used as a precaution in response to fuel releases to prevent fires?

No recollection. Retired (late '80s) Fire Chief (Bill Skinner) was questioned as well - no recollection.
Assume that this happened in early 70s.

29. Do you have recollection or records of historical emergency response sites (i.e. crash sites and fires) where AFFF was used?

See #27

30. Do you have recollection or record of emergency runway landings where foam might have been used as a precaution?

Not on Base

31. If not written records or incomplete written records, do you have anecdotal/verbal information and locations of spills or other emergency response incidents where AFF was used?

Aware of 2 @ Hangar 400 (early-mid '90s) - accidental
↳ cause: there was no protective cover for system activation buttons and people would bump into button.
↳ now have covers.
Release would have discharged to sanitary sewer.

32. What is the typical procedure for removing dispensed AFFF from an area where it has been used?

Dissipate, then flush out with water

33. 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)?

NA

34. Do you have or did you have a chrome plating shop on base? If no, skip to Question #38.

Not aware

35. What were/are the years of operation of that chrome plating shop?

—

36. Do you know whether the shop has/had a foam blanket mist suppression system or used a fume hood for emissions control?

—

37. If foam blanket mist suppression was used, where was the foam stored, mixed, applied, etc.?

—

38. Is there anyone else or other base organization personnel that you would recommend we interview? Name, organization, position, phone number, e-mail.

Chief Peck: Deputy Fire Chief (Eugene) - back on Wednesday

Sue: Hazmart Pharmacy

39. Was it common practice to wash away fuel spills with AFFF?

Yes, especially class 3 if large amount.

Doesn't happen often.

Common practice, but not personally aware of.

40. Identify drainage patterns around flightline/ramp area. Point source discharge is likely AFFF Area of Concern (AOC).

Sue: Installation located in a basin, so everything is basically flat.

Chief Martin - Facilities Manager
- Associated w/ Base since '93
- Full time since 2005
- Facilities Manager since 2008

Interview Questions regarding AFFF use
(At Present and back to 1970)

1. When did AFFF first start being used on this installation?
   Bldg 414 was first to have system installed
   ↳ remodeled in 1994 and updated with AFFF

2. What are the years of active use for each Fire Training Area (FTA), Aircraft Hangar, Fire Department, other places AFFF may have been used (collectively Potential Areas of Concern (PAOC)?
   Bldg 400 built in 1957? - not sure when foam installed, but had AFFF until remodel in 2009/10's, switch to HEF.
   Bldg 406 = 2006
   Bldg 412 = cardox, then HEF

3. What type of AFFF is used or has been used on this installation (i.e. 3%, 6%, High Expansion Foam)?
   Bldg 412 = 2%
   Hangars 400 & 406 = 2 3/4 % jetex foam concentrate HEF
   Hush House (Bldg 56) = HEF
   AFFF = 3% where used.

4. What manufacturer's AFFF products are used or were used on this installation (i.e. 3M, Ansul, Chemguard, etc.)?
   Spec'd out to purchase soon 3% Chemguard
   - Foam purchased when needed.
   - Original AFFF from bldg 414 is still at installation.

5. Did you ever dispose of old bulk AFFF, if so, when and where?
   No knowledge - do not think any has been disposed.

6. Is the AFFF stored as a mixed solution (3% or 6%) or do you formulate the AFFF on the installation?
   No - when mixed, it gels up

7. If AFFF is formulated on base, where is the solution mixed, contained, transferred, etc.?
   —

8. Are your automated fire suppression systems currently charged with AFFF or have they been retrofitted for use of high expansion foam?
   See #2

9. If retrofitted, when was that done?

NA

10. Do you have an inventory of the amount of AFFF stored on the installation, now and in the past, or present in automated fire suppression systems? Were retention ponds built to store discharged AFFF? Was the AFFF trickled to the sanitary sewer or left in the pond to infiltrate?

NA

11. Provide a list of vehicles that carried AFFF, now and in the past, and where are/were they located? Any vehicles have a history of leaking AFFF?

NA

12. How much AFFF (gallons) is/was carried/stored in the specified vehicles?

NA

13. Do you ever dispose of unused AFFF? If so, how and where?

Not aware

14. Has unused AFFF ever been disposed of in the past? If so, how and where?

NA

15. Do you/did you test the vehicles spray patterns to make sure equipment is working properly?

NA

16. How often are/were these spray tests performed and can you provide the locations of these tests, now and in the past?

~~NA~~

Annually for hangars
↳ only flow foam every other year (average 15-20 gal at a time)

* No USTs have foam.

17. Can you describe the procedure on how vehicles and systems are/were supplied with AFFF?

Transfer pump to bladder tank on barrel.
Hangars have trench drains (1 out of 4 can be closed) - Bldg 412 left in closed position.
Foam drained to sanitary.

18. Can you provide the procedures on how these vehicles are/were cleaned/decontaminated and where vehicle cleaning is performed currently as well as performed in the past?

Hangars: Call City of Madison prior to foam flowing testing to notify of upcoming discharge. Call later to tell them the amount coming.
Base doesn't need to test discharge.

19. Is/was there a specified area on the installation where vehicles are filled with AFFF and does this area have secondary containment in case of spills?

No secondary containment in Hangar mechanical room (AFFF for hangars stored here)

20. When a release of AFFF occurs during a fire training exercise, now and in the past, how is the AFFF cleaned and disposed of?

Water

21. How many FTAs are/were on this installation and where are they?

NA

22. How many FTAs are active and inactive?

NA

23. What types of fuels/flammables were used at the FTAs?

NA

24. For inactive FTAs, when was the last time that fire training using AFFF was conducted at them? Find out ahead of time in Admin Record for former FTAs.

NA

25. What are/were the non-FTA locations where PFCs or AFFF release systems are installed (i.e. Hangars, Wastewater Treatment Plants, Fire Stations, etc.)? Where are/were these locations (Building numbers)?

Not aware of.

26. Do you have a list (Building names and numbers, current and demolished) where the fire suppression systems either currently contain or have contained AFFF?

NA

27. Do you have records of fuel spill logs and emergency response logs? Knowledge of aircraft mishaps/crashes?

No

28. Do you have recollection or records of AFFF being used as a precaution in response to fuel releases to prevent fires?

Not aware of

29. Do you have recollection or records of historical emergency response sites (i.e. crash sites and fires) where AFFF was used?

NA

30. Do you have recollection or record of emergency runway landings where foam might have been used as a precaution?

NA

31. If not written records or incomplete written records, do you have anecdotal/verbal information and locations of spills or other emergency response incidents where AFF was used?

NA

32. What is the typical procedure for removing dispensed AFFF from an area where it has been used?

33. 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)?

Bldg 414 - Mechanical Room
Bldg 510 - Base Supply
Fire Station

34. Do you have or did you have a chrome plating shop on base? If no, skip to Question #38.

No

35. What were/are the years of operation of that chrome plating shop?

—

36. Do you know whether the shop has/had a foam blanket mist suppression system or used a fume hood for emissions control?

—

37. If foam blanket mist suppression was used, where was the foam stored, mixed, applied, etc.?

—

38. Is there anyone else or other base organization personnel that you would recommend we interview? Name, organization, position, phone number, e-mail.

Mike Dale (Alarm Maintenance) - since '92/'93

39. Was it common practice to wash away fuel spills with AFFF?

NA

40. Identify drainage patterns around flightline/ramp area. Point source discharge is likely AFFF Area of Concern (AOC).

NA

Major Daniel Statz - Base Civil Engineer
- Base CE since June 2014
- On Base since Nov 1992

Interview Questions regarding AFFF use
(At Present and back to 1970)

1. When did AFFF first start being used on this installation?

   Not known

2. What are the years of active use for each Fire Training Area (FTA), Aircraft Hangar, Fire Department, other places AFFF may have been used (collectively Potential Areas of Concern (PAOC)?

   NA

3. What type of AFFF is used or has been used on this installation (i.e. 3%, 6%, High Expansion Foam)?

   Aware that HEF & 3% AFFF is present in trucks, 414, 406, 412, & 400

4. What manufacturer's AFFF products are used or were used on this installation (i.e. 3M, Ansul, Chemguard, etc.)?

   NA

5. Did you ever dispose of old bulk AFFF, if so, when and where?

   NA

6. Is the AFFF stored as a mixed solution (3% or 6%) or do you formulate the AFFF on the installation?

   NA

7. If AFFF is formulated on base, where is the solution mixed, contained, transferred, etc.?

   NA

8. Are your automated fire suppression systems currently charged with AFFF or have they been retrofitted for use of high expansion foam?

   NA

9. If retrofitted, when was that done?

NA

10. Do you have an inventory of the amount of AFFF stored on the installation, now and in the past, or present in automated fire suppression systems? Were retention ponds built to store discharged AFFF? Was the AFFF trickled to the sanitary sewer or left in the pond to infiltrate?

no retention pond

11. Provide a list of vehicles that carried AFFF, now and in the past, and where are/were they located? Any vehicles have a history of leaking AFFF?

NA

12. How much AFFF (gallons) is/was carried/stored in the specified vehicles?

NA

13. Do you ever dispose of unused AFFF? If so, how and where?

NA

14. Has unused AFFF ever been disposed of in the past? If so, how and where?

NA

15. Do you/did you test the vehicles spray patterns to make sure equipment is working properly?

NA

16. How often are/were these spray tests performed and can you provide the locations of these tests, now and in the past?

NA

17. Can you describe the procedure on how vehicles and systems are/were supplied with AFFF?

NA

18. Can you provide the procedures on how these vehicles are/were cleaned/decontaminated and where vehicle cleaning is performed currently as well as performed in the past?

NA

19. Is/was there a specified area on the installation where vehicles are filled with AFFF and does this area have secondary containment in case of spills?

Known in 412 - HEF here though

20. When a release of AFFF occurs during a fire training exercise, now and in the past, how is the AFFF cleaned and disposed of?

NA

21. How many FTAs are/were on this installation and where are they?

NA

22. How many FTAs are active and inactive?

NA

23. What types of fuels/flammables were used at the FTAs?

NA

24. For inactive FTAs, when was the last time that fire training using AFFF was conducted at them? Find out ahead of time in Admin Record for former FTAs.

NA

25. What are/were the non-FTA locations where PFCs or AFFF release systems are installed (i.e. Hangars, Wastewater Treatment Plants, Fire Stations, etc.)? Where are/were these locations (Building numbers)?

NA

26. Do you have a list (Building names and numbers, current and demolished) where the fire suppression systems either currently contain or have contained AFFF?

NA

27. Do you have records of fuel spill logs and emergency response logs? Knowledge of aircraft mishaps/crashes?

NA

28. Do you have recollection or records of AFFF being used as a precaution in response to fuel releases to prevent fires?

Have not seen on flightline.

29. Do you have recollection or records of historical emergency response sites (i.e. crash sites and fires) where AFFF was used?

- Aircraft crash off runway (411)
- Crash (Aircraft 374) at Volk Field - 2003

Maj. not present at either crash.

30. Do you have recollection or record of emergency runway landings where foam might have been used as a precaution?

NA

31. If not written records or incomplete written records, do you have anecdotal/verbal information and locations of spills or other emergency response incidents where AFF was used?

NA

32. What is the typical procedure for removing dispensed AFFF from an area where it has been used?

NA

33. 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)?

NA

34. Do you have or did you have a chrome plating shop on base? If no, skip to Question #38.

~~NA~~ Not known

35. What were/are the years of operation of that chrome plating shop?

—

36. Do you know whether the shop has/had a foam blanket mist suppression system or used a fume hood for emissions control?

—

37. If foam blanket mist suppression was used, where was the foam stored, mixed, applied, etc.?

—

38. Is there anyone else or other base organization personnel that you would recommend we interview? Name, organization, position, phone number, e-mail.

Contact Maintenance to check on existance of chrome plating
↳ Metals Tech

39. Was it common practice to wash away fuel spills with AFFF?

NA

40. Identify drainage patterns around flightline/ramp area. Point source discharge is likely AFFF Area of Concern (AOC).

NA

	8/11/15 Time: ≈1400	**COMMUNICATION RECORD**
Name of Base, State:	Regarding WIANG - Madison, WI	
Interviewer:	JACLYN PLUMMER	
Organization:	BB&E	**Phone:** 248.489.9636 EXT 307
Position/role on this project:		**Email:** jplummer@bbande.com
Interviewee:	Mr. Bradley Stepp	
Organization:	WI Army Nat'l Guard	**Phone:** 608-301-8340
Position/Job Title:	Logistics Officer	**Email:** —
How Long in this Postion?	NA	
How long at this Base in current and previous positions?	NA	
Have you held similar positions at other bases?	NA	
Which bases?	—	
How long?	—	
Discussion:		

Background Info: Ms. Gustke provided several contact numbers for Army Nat'l Guard. Scott Rickard (Hazardous Waste Manager) was called first, and directed to Mr. Stepp.

According to Mr. Stepp, there have been no fire training areas on the site. Foam of any sort is no used. Only fire extinguishers are used (on the flightline). There are no fire suppression systems.

APPENDIX C

SUPPORTING DOCUMENTATION

APPENDIX C-1

GROUNDWATER CONTOUR MAPS

TRUAX FIELD

SITE ASSESSMENT REPORT
HANGAR 414 EXPANSION AREA

WISCONSIN AIR NATIONAL GUARD
128th FIGHTER WING
DANE COUNTY AIRPORT, TRUAX FIELD
MADISON, WISCONSIN

FINAL

Prepared for:

National Guard Bureau ANGRC/CEVR
Andrews AFB, Maryland 20331-6008

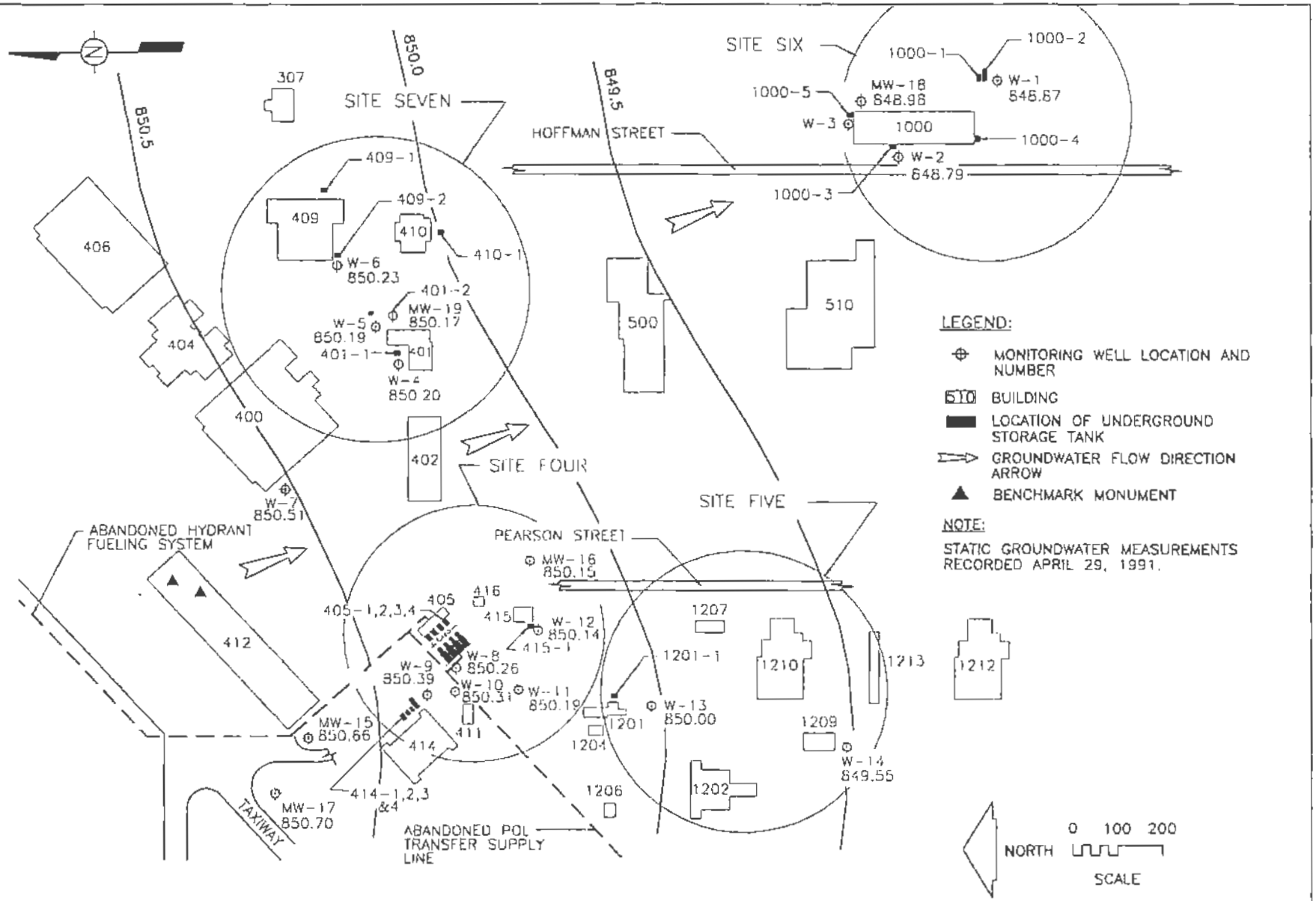
Prepared by:

Advanced Sciences, Inc.
165 Mitchell Road
Oak Ridge, Tennessee 37830

Submitted to:

Hazardous Waste Remedial Action Program
Martin Marietta Energy Systems, Inc.
Oak Ridge, Tennessee 37830

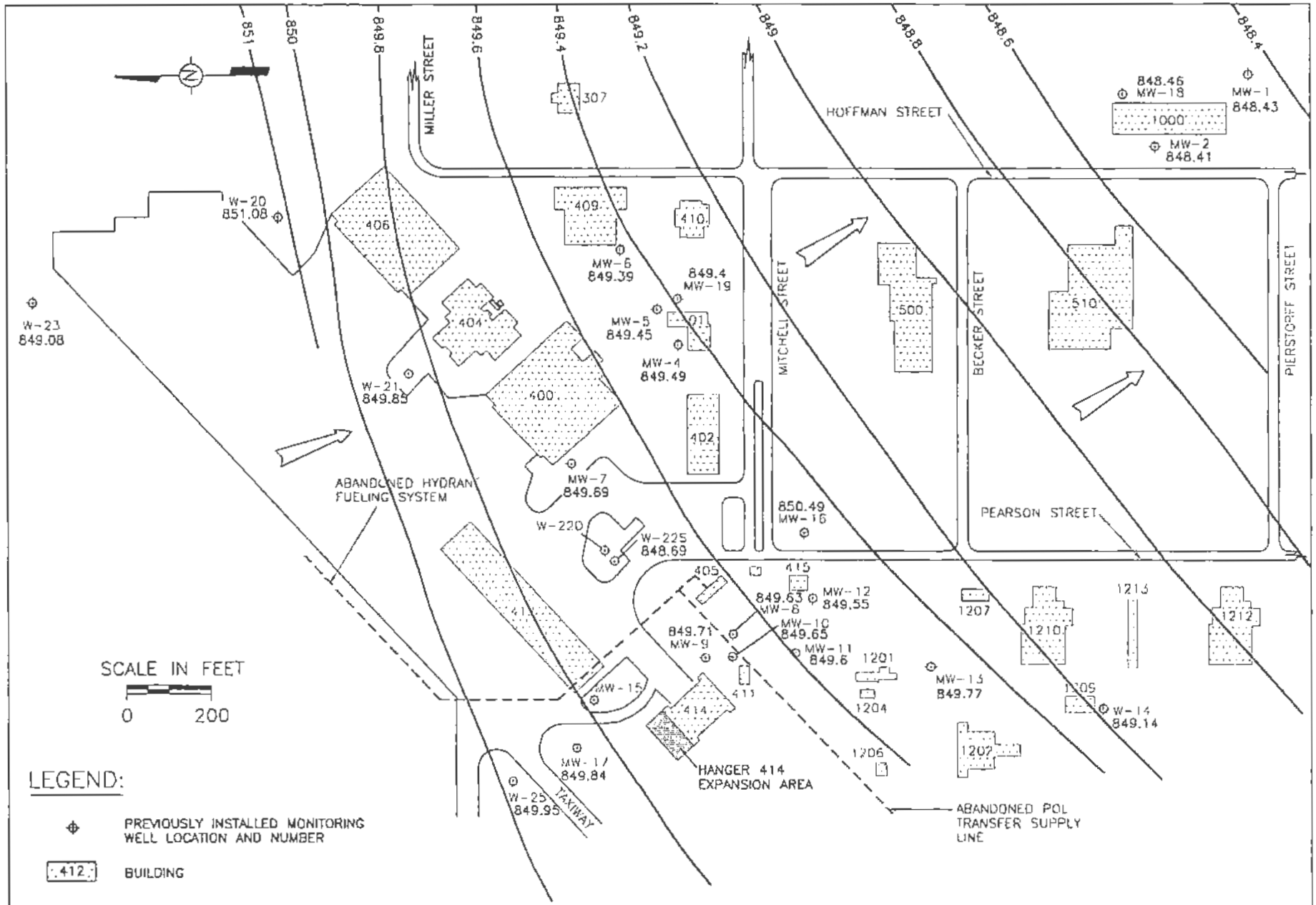
July, 1994



ADVANCED SCIENCES, INC.

FIGURE 3.1
GROUNDWATER FLOW DIRECTION MAP
APRIL 1991

Drawn By:	Approved By:
Checked By:	Drawing No. WANG10A
Project Number: 9750.K19	



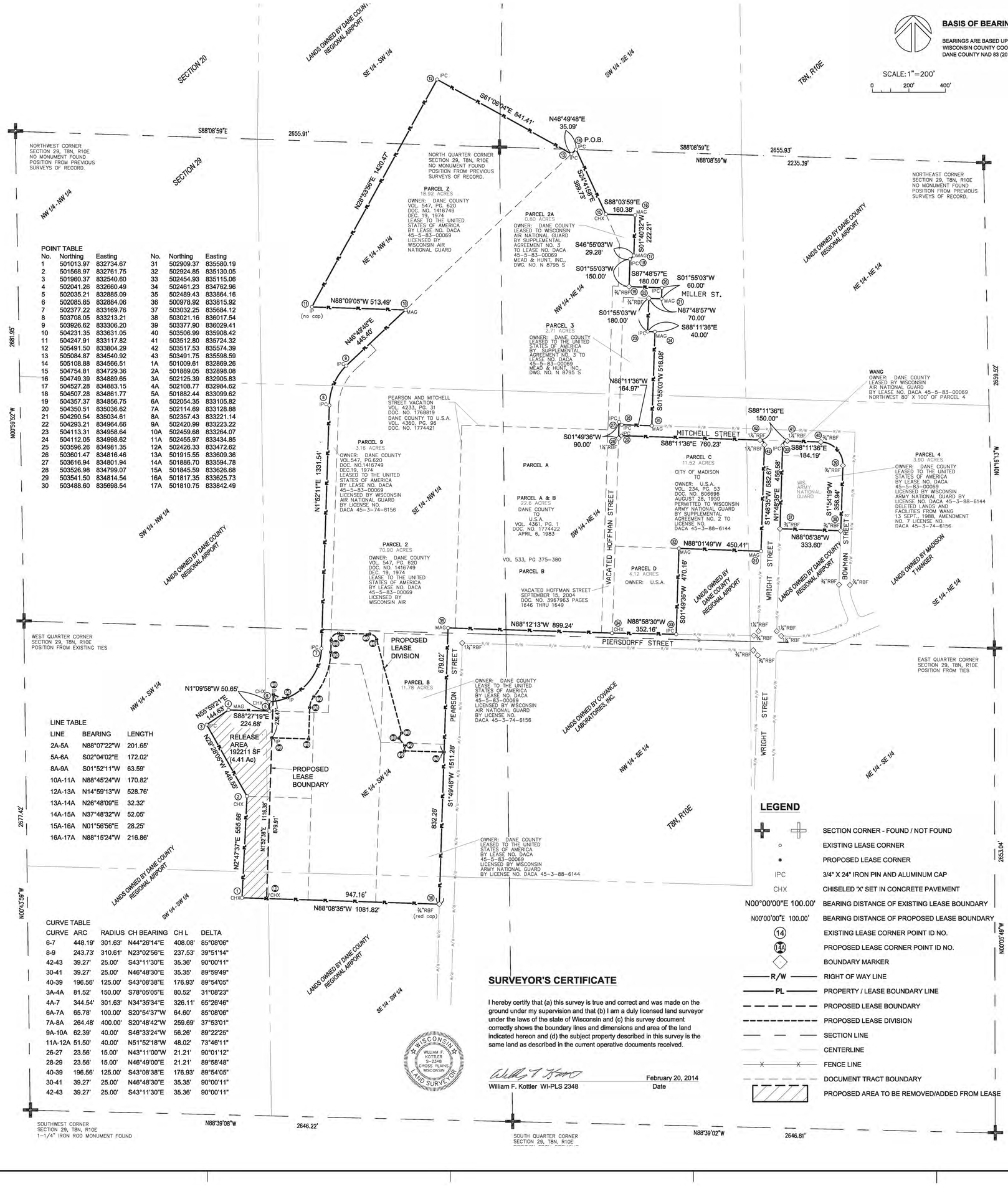
ADVANCED SCIENCES, INC.

FIGURE 3.2
GROUNDWATER FLOW DIRECTION MAP
JANUARY 1993

Drawn By:	Approved By:
Checked By:	Drawing No. WANG46P
Project Number: 9750.K19	

APPENDIX C-2

BASE PROPERTY BOUNDARIES



LEGEND

- SECTION CORNER - FOUND / NOT FOUND
- EXISTING LEASE CORNER
- PROPOSED LEASE CORNER
- IPC — 3/4" X 24" IRON PIN AND ALUMINUM CAP
- CHX — CHISELED 'X' SET IN CONCRETE PAVEMENT
- N00°00'00"E 100.00' — BEARING DISTANCE OF EXISTING LEASE BOUNDARY
- N00°00'00"E 100.00' — BEARING DISTANCE OF PROPOSED LEASE BOUNDARY
- (14) — EXISTING LEASE CORNER POINT ID NO.
- (14A) — PROPOSED LEASE CORNER POINT ID NO.
- BOUNDARY MARKER
- R/W — RIGHT OF WAY LINE
- PL — PROPERTY / LEASE BOUNDARY LINE
- PROPOSED LEASE BOUNDARY
- PROPOSED LEASE DIVISION
- SECTION LINE
- CENTERLINE
- FENCE LINE
- DOCUMENT TRACT BOUNDARY
- PROPOSED AREA TO BE REMOVED/ADDED FROM LEASE

SURVEYOR'S CERTIFICATE

I hereby certify that (a) this survey is true and correct and was made on the ground under my supervision and that (b) I am a duly licensed land surveyor under the laws of the state of Wisconsin and (c) this survey document correctly shows the boundary lines and dimensions and area of the land indicated hereon and (d) the subject property described in this survey is the same land as described in the current operative documents received.

WILLIAM F. KOTTLER S-2348 CROSS PLAINS WISCONSIN LAND SURVEYOR

William F. Kottler WI-PLS 2348 — February 20, 2014 Date

PLAT OF SURVEY
FOR
WISCONSIN AIR NATIONAL GUARD

LEGAL DESCRIPTIONS

LEGAL DESCRIPTION--CURRENT LEASE

All that part of the Southeast 1/4 of the Southwest 1/4 and part of the Southwest 1/4 of the Southeast 1/4 of Section 20 and part of the Northwest 1/4 of the Northeast 1/4, part of the Southwest 1/4 of the Northeast 1/4, part of the Southeast 1/4 of the Northeast 1/4, part of the Northeast 1/4 of the Northwest 1/4, part of the Southeast 1/4 of the Northwest 1/4 , part of the Northeast 1/4 of the Southwest 1/4, part of the Northwest 1/4 of the Southwest 1/4, part of the Southwest 1/4 of the Southwest 1/4 and part of the Southeast 1/4 of the Southwest 1/4 of Section 29, all in Township 8 North, Range 10E, City of Madison, Dane County, Wisconsin, containing 6,586,463 square feet (151.2044 acres) bounded and described as follows:

Commencing at the Northeast corner of Section 29; thence S88°08'59"W, 2235.39 feet along the North line of the Northeast 1/4 of said Section 29 to the Point of Beginning; thence S24°41'58"E, 389.73 feet; thence S88°03'59"E, 160.38 feet; thence S01°40'32"W, 222.21 feet; thence S46°55'03"W, 29.28 feet; thence S01°55'03"W, 150.00 feet; thence S87°48'57"E, 180.00 feet; thence S01°55'03"W, 60.00 feet; thence N87°48'57"W, 70.00 feet; thence S01°55'03"W, 180.00 feet; thence S88°11'36"E, 40.00 feet; thence S01°55'03"W, 516.08 feet; thence N88°11'36"W, 164.97 feet; thence 23.56 feet along the arc of a curve to the right with a radius of 15.00 feet and a chord of N43°11'00"W, 21.21 feet; thence S01°49'36"W, 90.00 feet; thence 23.56 feet along the arc of a curve to the right with a radius of 15.00 feet and a chord of N46°49'00"E, 21.21 feet; thence S88°11'36"E, 760.23 feet; thence S88°11'36"E, 150.00 feet; thence S88°11'36"E, 184.19 feet; thence 196.56 feet along the arc of a curve to the right with a radius of 150.00 feet and a chord of S43°08'38"E, 176.93 feet; thence S01°54'19"W, 356.94 feet; thence N88°05'38"W, 333.60 feet; thence N01°48'36"E, 456.58 feet; thence 39.27 feet along the arc of a curve to the right with a radius of 25.00 feet and a chord of N46°48'30"E, 35.35 feet; thence N88°11'36"W, 150.00 feet; thence 39.27 feet along the arc of a curve to the right with a radius of 25.00 feet and a chord of S43°11'30"E, 35.36 feet; thence S01°48'35"W, 582.67 feet; thence N88°01'49"W, 450.41 feet; thence S01°49'36"W, 470.16 feet; thence N88°58'30"W, 352.16 feet; thence N88°12'13"W, 899.24 feet; thence S01°49'46"W, 1511.28 feet; thence N88°08'35"W, 1081.82 feet; thence N02°47'37"E, 555.66 feet; thence N29°28'05"W, 449.55 feet; thence N55°59'21"E, 144.63 feet; thence S88°27'19"E, 224.68 feet; thence N01°09'58"W, 50.65 feet; thence 448.19 feet along the arc of a curve to the left with a radius of 301.63 feet and a chord of N44°26'14"E, 408.08 feet; thence N01°52'11"E, 1331.54 feet; thence 243.73 feet along the arc of a curve to the right with a radius of 310.61 feet and a chord of N23°02'56"E, 237.53 feet; thence N46°49'48"E, 445.40 feet; thence N88°09'05"W, 513.49 feet; thence N28°53'56"E, 1420.47 feet; thence S61°06'04"E, 841.41 feet; thence N46°49'48"E, 35.09 feet to the Point of Beginning.

LEGAL DESCRIPTION--PROPOSED LEASE

All that part of the Southeast 1/4 of the Southwest 1/4 and part of the Southwest 1/4 of the Southeast 1/4 of Section 20 and part of the Northwest 1/4 of the Northeast 1/4, part of the Southwest 1/4 of the Northeast 1/4, part of the Southeast 1/4 of the Northeast 1/4, part of the Northeast 1/4 of the Northwest 1/4, part of the Southeast 1/4 of the Northwest 1/4 , part of the Northeast 1/4 of the Southwest 1/4, part of the Northwest 1/4 of the Southwest 1/4, part of the Southwest 1/4 of the Southwest 1/4 and part of the Southeast 1/4 of the Southwest 1/4 of Section 29, all in Township 8 North, Range 10E, City of Madison, Dane County, Wisconsin, containing 6,395,611 square feet (146.8230 acres) bounded and described as follows:

Commencing at the Northeast corner of Section 29; thence S88°08'59"W, 2235.39 feet along the North line of the Northeast 1/4 of said Section 29 to the Point of Beginning; thence S24°41'58"E, 389.73 feet; thence S88°03'59"E, 160.38 feet; thence S01°40'32"W, 222.21 feet; thence S46°55'03"W, 29.28 feet; thence S01°55'03"W, 150.00 feet; thence S87°48'57"E, 180.00 feet; thence S01°55'03"W, 60.00 feet; thence N87°48'57"W, 70.00 feet; thence S01°55'03"W, 180.00 feet; thence S88°11'36"E, 40.00 feet; thence S01°55'03"W, 516.08 feet; thence N88°11'36"W, 164.97 feet; thence 23.56 feet along the arc of a curve to the right with a radius of 15.00 feet and a chord of N43°11'00"W, 21.21 feet; thence S01°49'36"W, 90.00 feet; thence 23.56 feet along the arc of a curve to the right with a radius of 15.00 feet and a chord of N46°49'00"E, 21.21 feet; thence S88°11'36"E, 760.23 feet; thence S88°11'36"E, 150.00 feet; thence S88°11'36"E, 184.19 feet; thence 196.56 feet along the arc of a curve to the right with a radius of 150.00 feet and a chord of S43°08'38"E, 176.93 feet; thence S01°54'19"W, 356.94 feet; thence N88°05'38"W, 333.60 feet; thence N01°48'36"E, 456.58 feet; thence 39.27 feet along the arc of a curve to the right with a radius of 25.00 feet and a chord of N46°48'30"E, 35.35 feet; thence N88°11'36"W, 150.00 feet; thence 39.27 feet along the arc of a curve to the right with a radius of 25.00 feet and a chord of S43°11'30"E, 35.36 feet; thence S01°48'35"W, 582.67 feet; thence N88°01'49"W, 450.41 feet; thence S01°49'36"W, 470.16 feet; thence N88°58'30"W, 352.16 feet; thence N88°12'13"W, 899.24 feet; thence S01°49'46"W, 1511.28 feet; thence N88°08'35"W, 947.16 feet; thence N01°52'38"E, 1116.38 feet; thence 81.52 feet along the arc of a curve to the left with a radius of 150.00 feet and a chord of S78°05'05"E, 80.52 feet; thence 344.54 feet along the arc of a curve to the left with a radius of 301.63 feet and a chord of N34°35'34"E, 326.11 feet; thence N01°52'11"E, 1331.54 feet; thence 243.73 feet along the arc of a curve to the right with a radius of 310.61 feet and a chord of N23°02'56"E, 237.53 feet; thence N46°49'48"E, 445.40 feet; thence N88°09'05"W, 513.49 feet; thence N28°53'56"E, 1420.47 feet; thence S61°06'04"E, 841.41 feet; thence N46°49'48"E, 35.09 feet to the Point of Beginning.

LEGAL DESCRIPTION--PROPOSED LEASE NORTH OF DIVISION LINE

All that part of the Southeast 1/4 of the Southwest 1/4 and part of the Southwest 1/4 of the Southeast 1/4 of Section 20 and part of the Northwest 1/4 of the Northeast 1/4, part of the Southwest 1/4 of the Northeast 1/4, part of the Southeast 1/4 of the Northeast 1/4, part of the Northeast 1/4 of the Northwest 1/4, part of the Southeast 1/4 of the Northwest 1/4 , part of the Northeast 1/4 of the Southwest 1/4, part of the Northwest 1/4 of the Southwest 1/4, part of the Southwest 1/4 of the Southwest 1/4 and part of the Southeast 1/4 of the Southwest 1/4 of Section 29, all in Township 8 North, Range 10E, City of Madison, Dane County, Wisconsin, containing 6,395,611 square feet (146.8230 acres) bounded and described as follows:

Commencing at the Northeast corner of Section 29; thence S88°08'59"W, 2235.39 feet along the North line of the Northeast 1/4 of said Section 29 to the Point of Beginning; thence S24°41'58"E, 389.73 feet; thence S88°03'59"E, 160.38 feet; thence S01°40'32"W, 222.21 feet; thence S46°55'03"W, 29.28 feet; thence S01°55'03"W, 150.00 feet; thence S87°48'57"E, 180.00 feet; thence S01°55'03"W, 60.00 feet; thence N87°48'57"W, 70.00 feet; thence S01°55'03"W, 180.00 feet; thence S88°11'36"E, 40.00 feet; thence S01°55'03"W, 516.08 feet; thence N88°11'36"We, 164.97 feet; thence 23.56 feet along the arc of a curve to the right with a radius of 15.00 feet and a chord of N43°11'00"W, 21.21 feet; thence S01°49'36"W, 90.00 feet; thence 23.56 feet along the arc of a curve to the right with a radius of 15.00 feet and a chord of N46°49'00"E, 21.21 feet; thence S88°11'36"E, 760.23 feet; thence S88°11'36"E, 150.00 feet; thence S88°11'36"E, 184.19 feet; thence 196.56 feet along the arc of a curve to the right with a radius of 150.00 feet and a chord of S43°08'38"E, 176.93 feet; thence S01°54'19"W, 356.94 feet; thence N88°05'38"W, 333.60 feet; thence N01°48'36"E, 456.58 feet; thence 39.27 feet along the arc of a curve to the right with a radius of 25.00 feet and a chord of N46°48'30"E, 35.35 feet; thence N88°11'36"W, 150.00 feet; thence 39.27 feet along the arc of a curve to the right with a radius of 25.00 feet and a chord of S43°11'30"E, 35.36 feet; thence S01°48'35"W, 582.67 feet; thence N88°01'49"W, 450.41 feet; thence S01°49'36"W, 470.16 feet; thence N88°58'30"W, 352.16 feet; thence N88°12'13"W, 899.24 feet; thence S01°49'46"W, 679.02 feet; thence N88°15'24"W, 216.86 feet; thence N01°56'56"E, 28.25 feet; thence N37°48'32"W, 52.05 feet; thence N26°48'09"W, 32.32 feet; thence N14°59'13"W, 528.76 feet; thence 51.50 feet along the arc of a curve to the left with a radius of 40.00 feet and a chord of N51°52'18"W, 48.02 feet; thence N88°45'24"W, 170.82 feet; thence 62.39 feet along the arc of a curve to the left with a radius of 40.00 feet and a chord of S46°33'24"W, 56.26 feet; thence S01°52'11"W, 63.59 feet; thence 264.48 feet along the arc of a curve to the right with a radius of 400.00 feet and a chord of S20°48'42"W, 259.69 feet; thence 65.78 feet along the arc of a curve to the left with a radius of 100.00 feet and a chord of S20°54'37"W, 64.60 feet; thence S02°04'02"E, 172.02 feet; thence N88°07'22"W, 201.65 feet; thence N01°52'38"E, 236.47 feet; thence 81.52 feet along the arc of a curve to the left with a radius of 150.00 feet and a chord of S78°05'05"E, 80.52 feet; thence 344.54 feet along the arc of a curve to the left with a radius of 301.63 feet and a chord of N34°35'34"E, 326.11 feet; thence N01°52'11"E, 1331.54 feet; thence 243.73 feet along the arc of a curve to the right with a radius of 310.61 feet and a chord of N23°02'56"E, 237.53 feet; thence N46°49'48"E, 445.40 feet; thence N88°09'05"W, 513.49 feet; thence N28°53'56"E, 1420.47 feet; thence S61°06'04"E, 841.41 feet; thence N46°49'48"E, 35.09 feet to the Point of Beginning.

PLAT OF SURVEY
FOR
WISCONSIN AIR NATIONAL GUARD - TRUAX

Mead & Hunt — TETRA TECH Joint Venture
2440 Deming Way, Middleton, WI 53562
PHONE: (800) 298-4974 FAX: (608) 273-6486

MARK	DESCRIPTION	DATE	APPR.	MARK

DATE: 2012
DWN BY: DSW
CKD BY: MW
SUBMITTED BY: MW
F.E.# NUMBERS: 7404280001006a.01
SCALE: 1" = 250'
PLOT DATE: 2013
SIZE: ANSI E
FILE NAME: PE_E_NAME

U.S. ARMY CORPS OF ENGINEERS DISTRICT MADISON, WI

MEAD & HUNT, INC. 6501 WATTS ROAD MADISON, WI 53719

SHEET 1 OF 1

APPENDIX C-3

FIRE DEPARTMENT VEHICLE AND AFFF INVENTORY

Current Inventory of Vehicles

DOD ARFF Vehicle Information

Airport: Truax Field FD

Call Sign	Model Year	Manufacturer	Model (Type)	Vehicle Status	Water Capacity	AFFF Capacity	AFFF Concentration %	Dry Chemical Type	Dry Chemical Capacity	Maximum Primary Turret Discharge Rate
Foam 3	2013	KME-RIV	P-34	In Service	400	56	3			60 gpm
Foam 4	2013	KME-RIV	P-34	In Service	400	56	3			60 gpm
Foam 5	2006	OshKosh	P-19	In Service	1500	200	3	Sodium-Based	450	750 gpm

Summary:

Number of Vehicles:	**3 Vehicles**
Total Water Capacity:	**2300 Gallons**
Total AFFF Capacity:	**312 Gallons**
Total Dry Chemical Capacity:	**450 Pounds**

INDEX REQTS

INDEX A

- 1 vehicle with 500 lbs sodium based dry chemical/Halon 1211/clean agent; or 450 lbs of potassium based dry chemical and 100 gal AFFF

INDEX B

- 1 vehicle with 500 pounds of sodium based dry chemicalchemical/Halon 1211/clean agent and 1500 gals AFFF; or
- 2 vehicles: 1 vehicle with 500 lbs sodium based dry chemical/Halon 1211/clean agent; or 450 lbs of potassium based dry chemical and 100 gal AFFF; and 1 vehicles with 1500 gals AFFF

INDEX C

- 3 vehicles: 1 vehicle with 500 lbs sodium based dry chemical/Halon 1211/clean agent; or 450 lbs of potassium based dry chemical and 100 gal AFFF and 2 vehicles with 3000 gals of AFFF (in all 3 vehicles combined)
- 2 vehicles: 1 vehicle with 500 lbs sodium based dry chemical/Halon 1211/clean agent; or 450 lbs of potassium based dry chemical and 100 gal AFFF and 1 vehicle with 3000 gals of AFFF (in both vehicles combined)

INDEX D

- 3 vehicles: 1 vehicle with 500 lbs sodium based dry chemical/Halon 1211/clean agent; or 450 lbs of potassium based dry chemical and 100 gal AFFF and 2 vehicles with 4000 gals of AFFF (in all 3 vehicles combined)

INDEX E

Recently Submitted

115th CEF- AFFF Inventory

* The amount you have in your trucks ANSWER : 471 Gallons

* The amount you have at station as back up ANSWER : 821 Gallons

* The amount you may have in your base warehouse ANSWER : 220 Gallons

* I need to know how much is 3M brand on each item above ANSWER : 55 Gallons

AS OF 1 Aug. 2015

Current Year Agent Inventory			Date: 2/3/2015
Fire Department			
AFFF **Foam**	**Count**	**Gallons**	**Variance**
Overhead		375	
5 gallon pails	32	160	
55 gallon drums	6	330	
Total Gallons of Foam on Hand (412 required)		535	
Total Gallons of Foam on Hand w/Vehicles (824 required)		887	63
Dry Chemical	**Count**	**lbs**	**Variance**
Dry Chemical	37	1850	
Total Pounds of Dry Chem on Hand (950 required)	37	1850	900
Base Supply			
Foam	**Count**	**Gallons**	
5 gallon pails	0	0	
55 gallon drums	4	220	
Total Gallons of Foam on Hand (824 required)		220	-604
Dry Chemical	**Count**	**lbs.**	
Dry Chemical	17	850	
Total Pounds of Dry Chem on Hand (950 required)	17	850	-100

* Need to test rapid resupply plan yearly.

**** Agent Stock is limited to 1 complete refill of Assigned Fire Fighting Vehicles - AFI32-2001 Feb.2014 (#4.1.6)***

352 total gallons of foam on all vehicles F-3,4,5,E-9

950 lb. of dry chem total for F-5, Car-2

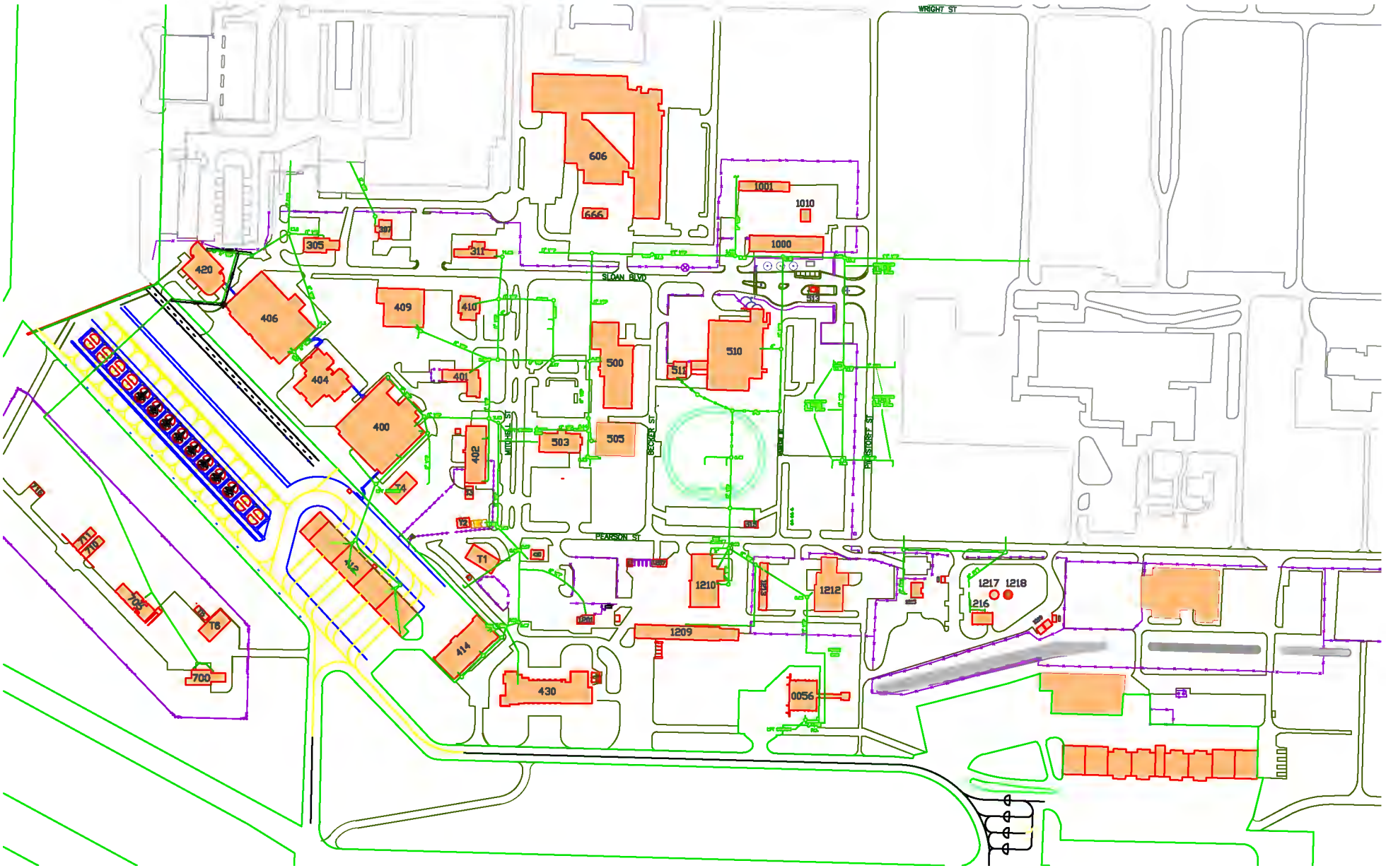
Class A-foam for F-3,4,E-9 not included

Current Year Agent Inventory			Date: 1/3/2013
Fire Department			
Foam	**Count**	**Gallons**	**Variance**
Overhead		425	
5 gallon pails	4	20	
55 gallon drums	4	220	
Total Gallons of Foam on Hand (650 required)		665	
Total Gallons of Foam on Hand w/Vehicles (1300 required)		1315	15
Dry Chemical	**Count**	**lbs**	**Variance**
Dry Chemical	40	2000	
Total Pounds of Dry Chem on Hand (2000 required)	40	2000	0
Base Supply			
Foam	**Count**	**Gallons**	
5 gallon pails	98	490	
55 gallon drums	23	1265	
Total Gallons of Foam on Hand (1300 required)		1755	455
Dry Chemical	**Count**	**lbs**	
Dry Chemical	40	2000	
Total Pounds of Dry Chem on Hand (2000 required)	40	2000	0

Need to test rapid resupply plan yearly.

APPENDIX C-4

BASE SANITARY SEWER SYSTEM MAP


WRIGHT ST
SLOAN BLVD
PEARSON ST
BECKER ST
MITCHELL ST
606
666
1001
1010
1000
305
311
420
406
409
410
404
401
400
500
510
511
503
505
402
414
412
T1
T4
T5
T6
700
701
710
1210
1212
1209
1217
1218
1216
430
0056

APPENDIX C-5

FIRE DEPARTMENT VEHICLE AFFF SPRAY TESTING PROCEDURES

APPENDIX C-5

FIRE DEPARTMENT VEHICLE AFFF NOZZLE TESTING PROCEDURES

YEARLY AGENT TESTING REQUIREMENTS FOR AIRCRAFT RESCUE AND FIRE FIGHTING VEHICLES

Foam Testing Requirements

- NFPA 412 Standard for Evaluating Foam Fire Fighting Equipment on Aircraft Rescue and Fire Fighting Vehicles.
- NFPA 412 page 412-5, States Two different methods of testing. Method A is for a refractometer or conductivity meter.
- Advisory Circular 150/5220-10C pages 29 – 32 illustrates the performance requirements for both foam and dry chemical.
- ***TESTING RESULTS DOCUMENTED PROPERLY!***

Problems Throughout the Industry

- Foam Too Rich
- Foam Too Lean
- Valve failure
- Air Line failure
- Dry Chemical system failure.

Yearly Agent Foam Testing Required

- Annual expansion, drain and distance testing.

- Combination of the expansion, drain and conductivity readings monthly. The distance testing annual.

Conductivity Meter vs The Refractometer

- Different Technologies
- ***Conductivity Meter*** more precise.
- ***Refractometer*** leaves every test up to for different interpretation.

Omega CDH-280 *Courtesy of Omega Enginering*

Refractometer

Equipment/Tools Needed

- 1000 ML Graduated Cylinder
- Distilled Water
- Conductivity Meter & Probe
- Syringes
- Gram Scale
- 100 ML Graduated Cylinders
- Calibration Solution

Collecting Samples

Deflector Plate Set Up

- Clear open area to conduct the test.
- Secure the deflector plate.
- Ensure the plate is clean and free of debris.

Testing - Shooting Agent/Foam

- Position ARFF Vehicle at least 50 – 100 feet away.
- Activate Foam System
- Direct stream away from deflector plate for at least 15 to 30 seconds.
- Then direct stream to the middle of the target and fill the graduated cylinder.

Final Steps

APPENDIX C-6

AFFF FIRE SUPPRESSION SYSTEM TESTING AND MAINTENANCE LOGS – HANGARS 400 AND 414

WISCONSIN AIR NATIONAL GUARD
HEADQUARTERS 115 FIGHTER WING (ACC) (ANG)
3110 MITCHELL STREET
MADISON WISCONSIN 53704-2591

MEMORANDUM FOR RECORD

FROM: 115 CES/CEOR
3110 Mitchell Street
Madison WI 53704-2591

SUBJECT: FIRE SUPPRESSION SYSTEM TESTING

1. A check of the Fire Suppression System in Building 400 was accomplished on 30 Aug 05 by Jim Lannigan, Ed Tilbert, Mike Dale and Hoyt Halvarson.

The test was accomplished in accordance with UFC 3-600-2, the following was tested:

~~UV/IR Detectors with JP-8 Pan Fire~~ Retest for foam Concentration Tested 26 May 04
System operation with abort switch
System operation without abort switch
Foam Flow
Foam concentration by Fire Dept.

2. The following decrepancies were noted

None

3. If you have any questions, please call me at (608) 245-4677. Thank you.

HOYT S. HALVERSON, MSgt, WI ANG
Production Controller Construction

cc:
Facility Folder

Truax ARFF

Foam Expansion and Drain Time Test

Bldg Hngr 400 **Date** 30-Aug-05 **Pattern** **Turret**

Operating Pressure Psi @ Pump **Nozzle Flow**

Air Temp **H2o Temp** **Wind** **Direction**

Foam Expansion Test

Gross weight of container	284	G
Empty weight of container	204	G
Net Weight of Foam Sample	80	G

Foam Expansion

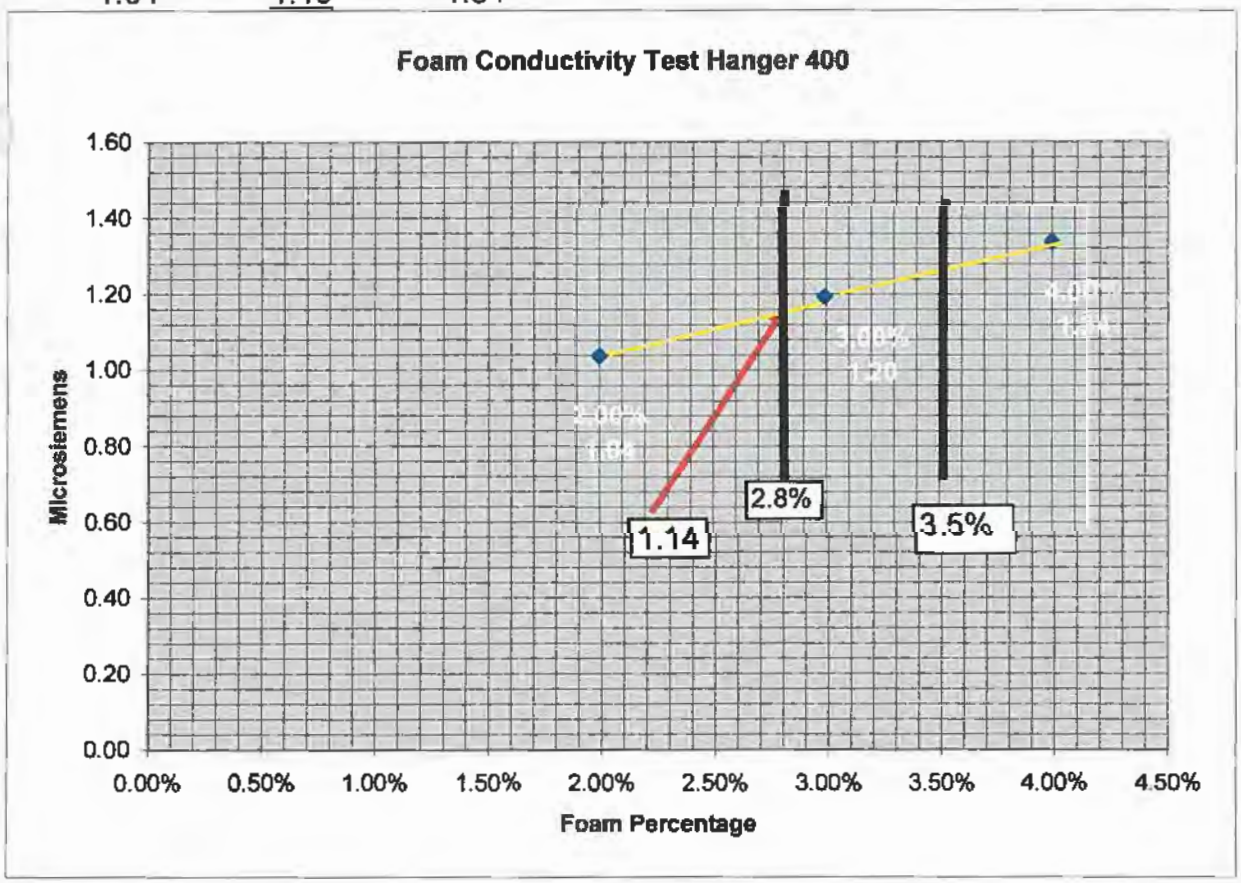
Foam Expansion = Volume of foam container / Net weight of foam sample = 1000 ML / 80 G = **12.5**

25% Volume Test

Twenty-five % Volume = Net weight of foam sample / 4 = 80 G / 4 = **20**

Baseline Readings

2.00%	*2.99%*	*4.00%*	**Test Foam Reading**	**1.14**
1.04	1.19	1.34		



Test performed by:
Leo R. Sedlmeyer, Deputy Fire Chief
Eric T. Fredrickson, Fire Fighter/EMT

WISCONSIN AIR NATIONAL GUARD
HEADQUARTERS 115 FIGHTER WING (ACC) (ANG)
3110 MITCHELL STREET
MADISON WISCONSIN 53704-2591

MEMORANDUM FOR RECORD

FROM: 115 CES/CEOR
3110 Mitchell Street
Madison WI 53704-2591

SUBJECT: FIRE SUPPRESSION SYSTEM TESTING

1. A check of the Fire Suppression System in Building 400 was accomplished on 26 May 2004 by Ed Jilbert, Jim Lannigan, Mike Dale, Hoyt Halverson.

The test was accomplished in accordance with UFC 3-600-2, the following was tested:

UV/IR Detectors with JP-8 Pan Fire
System operation with abort switch
System operation without abort switch
Foam Flow
Foam concentration by Fire Dept.

2. The following decrepancies were noted

Foam Concentration ~~Not Set~~ @ 1% need to check proportioner.

Found Concentrate value ~~Not~~ fully open.

Will retest

3. If you have any questions, please call me at (608) 245-4677. Thank you.

HOYT S. HALVERSON, MSgt, WI ANG
Production Controller Construction

cc:
Facility Folder

Truax ARFF

Foam Expansion and Drain Time Test

Hanger 400	**Date**	26-May-04	**Pattern**		
Operating Pressure Psi @ Pump			**Nozzle Flow**	Floor Nozzles	
Air Temp	**H2o Temp**		**Wind**	**Direction**	

Foam Expansion Test

Gross weight of container	439 G
Empty weight of container	227 G
Net Weight of Foam Sample	212 G

Foam Expansion

Foam Expansion = Volume of foam container / Net weight of foam sample = 1000 ML / 212 G = **4.716981**

25% Volume Test

Twenty-five % Volume = Net weight of foam sample / 4 = 212 G / 4 = **53**

Base Lines

Conductivity Readings		
2%	3%	4%
1.06 ms	1.17 ms	1.35 ms

Actual Test Conductivity Reading

.80 ms

Refract Readings		
1	1	1.25

Refractometer Reading

50

Pan Fire Start	**8:25:30**
Alarm Activation	**8:26:22**
Time to activation	**8:26:56**
Good Foam pattern	**8:27:20**
Sample taken	**8:27:49**

Raw System Foam Cond Reading

6.98 ms

Refilling foam Drums

Year	Cond Reading
1995	6.22
1995	6.82
1995	6.92
1990	4.54
1995	6.07
	6.114 ***Average reading***

Test Conducted by:
Deputy Fire Chief Sedlmeyer
Asst Fire Chief Schultz
FF/EMT Fredrickson

commerce.wi.gov
Wisconsin Department of Commerce

Cross Connection Control Performance Test

Safety and Buildings Division
P.O. Box 7302
Madison, WI 53707-7302
Fax: (608) 267-9723
TTY: (608) 264-8777
http://www.commerce.state.wi.us
http://www.wisconsin.gov

Regulated Object Number: 7 9 6 0 1 7

Personal information you provide may be used for secondary purposes [Privacy Law, s.1504 (1)(m)].

OWNER INFORMATION Please print clearly in ballpoint pen. Additional information on back page.

Owner Name	Street Address
WI Air National Guard	3110 Mitchell St
City / State / Zip Code	Owner's Contact Person / Telephone Number
Madison WI 53704	Dave Martin (608) 245-4571

FACILITY INFORMATION

Facility Name	Street Address
WI Air National Guard	3110 Mitchell St Bldg 414
City / Zip Code	County
Madison 53704	Dane

Assembly Location: Fire Panel / Water Supply Room

Manufacturer	Model	Serial Number
Ames	4000	4GJ0479

Size 8"10" Assembly Type ☒ RP ☐ RP Detector ☐ PVB/SVB

INITIAL TEST

RP relief valve: Opened at 24 PSID ☐ Did not open
1ST check: ☒ Closed tight ☐ Leaked Static 6.3 PSID
2nd check: ☒ Closed tight ☐ Leaked Static 1.3 PSID

FINAL TEST

Opened at _____ PSID
☐ Closed tight Static _____ PSID
☐ Closed tight Static _____ PSID

DETECTOR BYPASS ASSEMBLY INITIAL TEST

relief valve: Opened at _____ PSID ☐ Did not open
1ST check: ☐ Closed tight ☐ Leaked Static _____ PSID
2nd check: ☐ Closed tight ☐ Leaked Static _____ PSID

DETECTOR BYPASS ASSEMBLY FINAL TEST

Opened at _____ PSID
☐ Closed tight Static _____ PSID
☐ Closed tight Static _____ PSID

PRESSURE VACUUM BREAKER INITIAL TEST

Air inlet valve: Opened at _____ PSID ☐ Did not open
Check valve: ☐ Closed tight ☐ Leaked Static _____ PSID

PRESSURE VACUUM BREAKER FINAL TEST

Air inlet valve: Opened at _____ PSID
Check Valve: ☐ Closed tight Static _____ PSID

ASSEMBLIES IN FIRE PROTECTION SYSTEMS

Note: Include hose stream demand where applicable

Forward Flow Test
Designed flow rate _____ GPM
Actual flow rate 1744 GPM @ 78 Inlet 68 Outlet PSI

Indicating Control Valves
☒ No. one control valve open ☒ No. two control valve open Valve supervision: ☒ Tamper switch ☐ Locked

Part (s) Replaced/Comments _____

I HEREBY CERTIFY THE TEST RESULTS ARE TRUE AND THE TEST WAS CONDUCTED BY ME PERSONALLY.

Tester Name (print) Bruce Griepentrog Registration No. 220463 Time of Day 3:00pm

Tester Signature Bruce Griepentrog Phone No. 256-3900 Date 4-24-08

SBD-9927 (R.5/04) White-Department of Commerce, Pink-Tester, Canary-Owner, Blue-Surveyor

IEMS--Work Order

1232

WorkOrder# 200801330

PREVENTIVE MAINTENANCE **Priority Code** IV

orkOrderType ELECTRICAL

Date Required 4/8/2008

Date Scheduled 7/14/2008

Facility 00414 **Requestor** TED BENDLER

TRUAX FIELD

Unit:

Discrepancy AFFF FIRE SUPPRESSION

Equipment Description: AFFF SUPRESSION SYSTEM, FIRE PROTECTION

EquipmentSubtype: FIRE_PROTECTION Manufacturer:

Model: UPRIGHT PENDANT Serial: XNNM95

Location: 00414 Room:

Floor: FIRST

1020

155 DEGREESVoltage: 0Watts: 0Amps: 0Phase: Life Date:

CFC TYPE_____

CFC QUAN_____

EQUIP. TON._____

ENDLER	POWER_PRO	Start Date	Start Time	End Time
		4/8/2008	17:15	17:30

PERFORM INSPECTION.

Remarks 00414 MAS-1232

Work Provider 0XGFG **FY** 2008

DONE

IEMS--Work Order

1232

WorkOrder# 200801329

PREVENTIVE MAINTENANCE **Priority Code** IV

orkOrderType ELECTRICAL

Date Required 4/8/2008

Date Scheduled 7/14/2008

Facility 00414 **Requestor** TED BENDLER

TRUAX FIELD

Unit:

Discrepancy AFFF FIRE SUPPRESSION

Equipment Description: AFFF SUPRESSION SYSTEM, FIRE PROTECTION

EquipmentSubtype: FIRE_PROTECTION Manufacturer:

Model: UPRIGHT PENDANT Serial: XNNM94

Location: 00414 Room:

Floor: FIRST

1019

155 DEGREESVoltage: 0Watts: 0Amps: 0Phase: Life Date:

CFC TYPE_____

CFC QUAN_____

EQUIP. TQN._____

ENDLER	POWER_PRO	Start Date	Start Time	End Time
		4/8/2008	17:15	17:30

PERFORM INSPECTIQN.

Remarks 00414 MAS-1232

Work Provider 0XGFG FY 2008

DONE

IEMS--Work Order

1232

WorkOrder# 200801328

PREVENTIVE MAINTENANCE **Priority Code** IV

orkOrderType ELECTRICAL

Date Required 4/8/2008

Date Scheduled 7/14/2008

Facility 00414 **Requestor** TED BENDLER

TRUAX FIELD

Unit:

Discrepancy AFFF FIRE SUPPRESSION

Equipment Description: AFFF SUPRESSION SYSTEM, FIRE PROTECTION

EquipmentSubtype: FIRE_PROTECTION Manufacturer:

Model: UPRIGHT PENDANT Serial: XNNM93

Location: 00414 Room:

Floor: FIRST

1018

CFC TYPE_____

CFC QUAN_____

EQUIP. TON._____

200 DEGREESVoltage: 0Watts: 0Amps: 0Phase: Life Date:

ENDLER	POWER_PRO	Start Date	Start Time	End Time
		4/8/2008	17:15	17:30

PERFORM INSPECTION.

Remarks 00414 MAS-1232

Work Provider 0XGFG **FY** 2008

DONE

IEMS--Work Order

WorkOrder# 201301002

PREVENTIVE MAINTENANCE **Priority Code** IV

WorkOrderType ELECTRICAL

Date Required 5/1/2013

Date Scheduled 5/29/2013

IN-SERVICE

Facility 00414 **Requestor** Martin.Sibiga

FUEL CELL MAINTENANCE **TRUAX FIELD**

Unit: 115MXS/LGMCF

Discrepancy RECEIVER/TRANSMITTER; FIRE ALARM CONTROL - ANNUAL

Equipment Description: RECEIVER / TRANSMITTER

EquipmentSubtype: ALARM_SYSTEMS Mfr: MONACO

Model: BT2-8 S/N: 3807

Location: 00414

Floor:

Room: MECH ROOM

1014

Voltage: 0Watts: 0Amps: 0Phase: Life Date:

CFC TYPE_____

CFC QUAN_____

EQUIP. TON._____

SIBIGA	POWER_PRO	Start Date	Start Time	End Time
		5/1/2013	10:27	10:42

RECEIVER/TRANSMITTER; FIRE ALARM CONTROL - ANNUAL

DISABLE FOAM RELEASE SOLENOIDS BEFORE TESTING SYSTEM ALARMS

1. COMPLETE VISUAL INSPECTION OF ALL OTHER AUXILIARY PANELS IN BUILDING.
2. NOTIFY THE FIRE DEPARTMENT BY RADIO AND VERIFY RESULT OF EACH TEST.
3. NOTIFY BUILDING OCCUPANTS BEFORE EACH OPERATIONAL TEST.
4. BATTERY TEST. CONNECT METER TO BATTERY TERMINALS (OBSERVE POLARITY) AND DISCONNECT AC POWER. TMX SHOULD SEND AN AC FAIL TROUBLE ALARM. RECORD BATTERY VOLTAGE DURING TMX. IF VOLTAGE IS LESS THAN 10 VDC, REPLACE BATTERY.
5. COMPLETE THE BATTERY TESTS OF ALL AUXILIARY PANELS IN BUILDING.
6. OPERATIONAL TESTS. (AC POWER STILL DISCONNECTED):

   A. TROUBLE ALARM.
   B. FIRE, SECURITY, AND AUXILIARY ALARMS, ACTIVATE ZONE DEVICE, RECORD LOCATION.
   C. TRANSMITTER SHOULD SEND AN ALARM. RETURN ZONE DEVICE TO NORMAL.
   D. SELECT DIFFERENT ZONE EVERY MONTH. (ONE ZONE TESTED/MONTH).

7. RECONNECT AC POWER TO ALL PANELS IN THE BUILDING.
8. INFORM FIRE DEPARTMENT THAT YOU ARE FINISHED WITH THE BUILDING.

REPLACED BATTERY
NEEDS BATTERY

Remarks 00414 MAS-318

Work Provider 0XGFG **FY** 2013

5/1/2013 **9:31 AM**

COMPLETE
6/2/13

Truax ARFF

Foam Expansion and Drain Time Test

Vehicle 414 **Date** 17-Nov-10 **Pattern** **Turret Roof**

Operating Pressure Psi @ Pump **Nozzle Flow**

Air Temp **H2o Temp** **Wind** **Direction** **North**

Foam Expansion Test

Gross weight of container	380	G
Empty weight of container	276	G
Net Weight of Foam Sample	104	G

Foam Expansion

Foam Expansion = Volume of foam contain 1000 ML

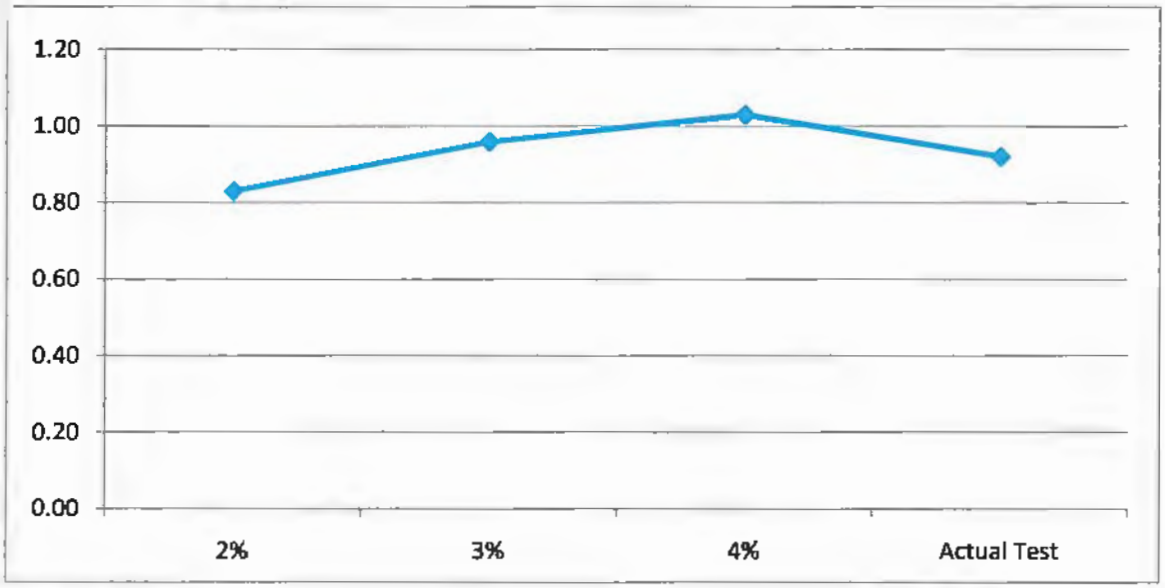
Net weight of foam sam 104 G **9.6153846**

25% Volume Test

Twenty-five % Volume = Net weight of foam sam / 4 = 104 G / 4 **26**

Base Lines

2%	3%	4%	Actual Test
0.83	0.96	1.03	0.92



PH Levels

System 7.2

Testing Officer	Fire Fighters	
Leo R. Sedlmeyer	Paul Leverich	Josh Ramsey
Deputy Fire Chief	Jake Lucht	

Hngr 414 Corrosion Bay **Truax ARFF**

Foam Expansion and Drain Time Test

Vehicle	414	**Date**	10-Jan-07	**Pattern**	**Turret Roof**
Operating Pressure Psi @ Pump				**Nozzle Flow**	
Air Temp	32F	**H2o Temp**	54 F	**Wind**	**Direction**	**North**

Water temp will affect the expansion ratio

Foam Expansion Test

			PH Levels	
Gross weight of container	647	G	System	7.2
Empty weight of container	227	G	Containers	
Net Weight of Foam Sample	420	G		

Foam Expansion

Foam Expansion = Volume of foam container 1000 ML

Net weight of foam sample 420 G 2.380952

25% Volume Test

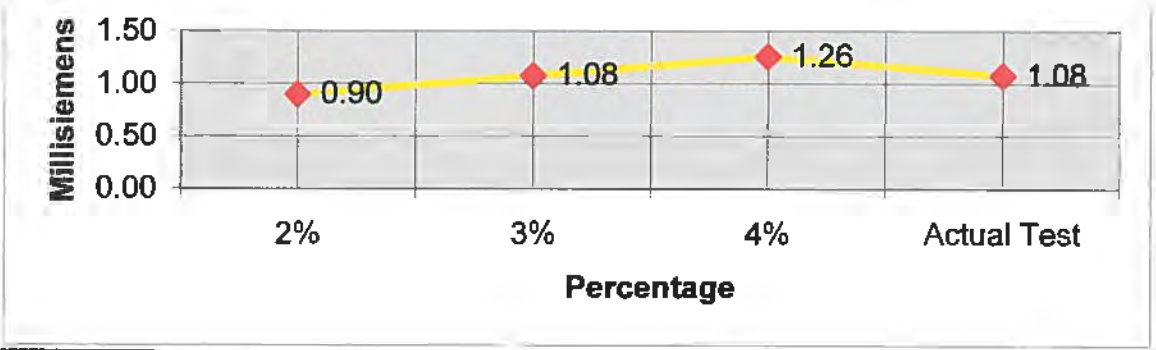
Twenty-five % Volume Net weight of foam sample 420 G

4 4 105

Base Lines

2%	3%	4%	Actual Test
0 90	1 08	1.26	1.08

Hngr 414 Corrosion Bay Test 10 Jan 2007



Fire Times	
Start	915
Activation	915
Extinguish	916

Test Officer

Leo R. Sedlmeyer CMF
Deputy Fire Chief

Volume Time

Min/Sec	**Drained solution in Milliliters**		
00:00	0		
00:30	2		
01:00	8		
01:30	12		
02:00	16		
02:30	18		
03:00	24		

Hngr 414 Fuel Bay

Truax ARFF

Foam Expansion and Drain Time Test

Vehicle	414	**Date**	10-Jan-07	**Pattern**	**Turret Roof**
Operating Pressure Psi @ Pump				**Nozzle Flow**	
Air Temp	32F	**H2o Temp**	54 F	**Wind**	**Direction**	**North**

Water temp will affect the expansion ratio

Foam Expansion Test

			PH Levels	
Gross weight of container	688	G	System	7.2
Empty weight of container	227	G	Containers	
Net Weight of Foam Sample	461	G		

Foam Expansion

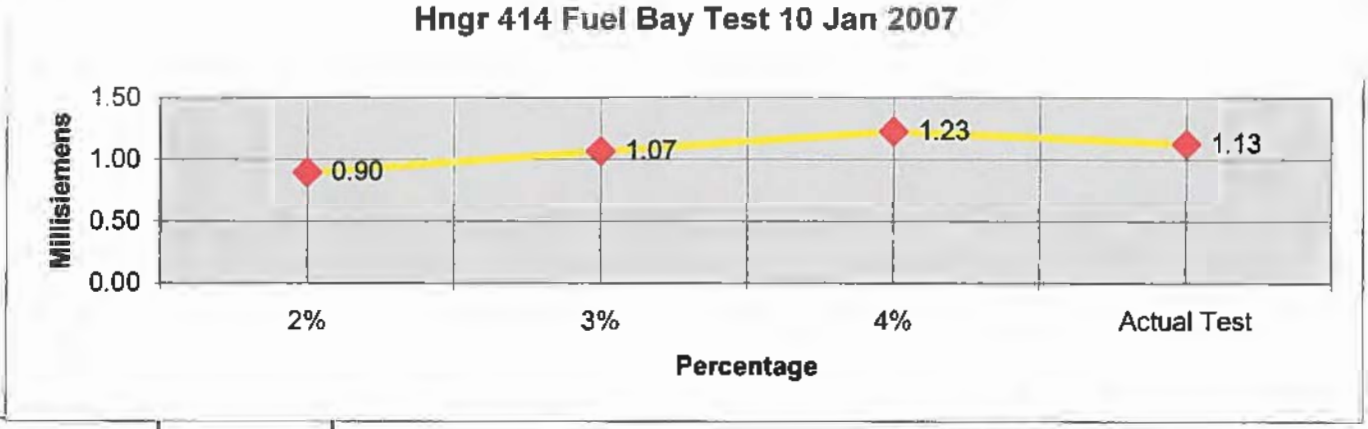
Foam Expansion = Volume of foam container / Net weight of foam sample = 1000 ML / 461 G = **2.1691974**

25% Volume Test

Twenty-five % Volume = Net weight of foam sample / 4 = 461 G / 4 = **115.25**

Base Lines

2%	3%	4%	Actual Test
0.90	1.07	1.23	1.13



Fire Times	
Start	852
Activation	853
Extinguish	854

Volume Time

Min/Sec	**Drained solution in Milliliters**		
00:00	0		
00:30	5		
01:00	8		
01:30	9		
02:00	9		
02:30	10		
03:00	12		

Test Officer

Leo R. Sedlmeyer CMF
Deputy Fire Chief

WISCONSIN AIR NATIONAL GUARD
HEADQUARTERS 115 FIGHTER WING (ACC) (ANG)
3110 MITCHELL STREET
MADISON WISCONSIN 53704-2591

MEMORANDUM FOR RECORD

FROM: 115 CES/CEOR
3110 Mitchell Street
Madison WI 53704-2591

SUBJECT: FIRE SUPPRESSION SYSTEM TESTING

1. A check of the Fire Suppression System in Building 414 was accomplished on 2+3 Jun 04 by Ed Jilbert, Mike Dale, Jim Lannigan, Hoyt Halverson.

The test was accomplished in accordance with UFC 3-600-2, the following was tested:

UV/IR Detectors with JP-8 Pan Fire
System operation with abort switch
System operation without abort switch
Foam Flow
Foam concentration by Fire Dept.

2. The following decrepancies were noted

None

3. If you have any questions, please call me at (608) 245-4677. Thank you.

HOYT S. HALVERSON, MSgt, WI ANG
Production Controller Construction

cc:
Facility Folder

Truax ARFF

Foam Expansion and Drain Time Test

Bldg 414 A **Date** 2-Jun-04 **Pattern**

Operating Pressure Psi @ Pump **Nozzle Flow** Floor Nozzles

Air Temp 58 F **H2o Temp** **Wind** NA **Direction** NA

Foam Expansion Test

Gross weight of container	403	G
Empty weight of container	227	G
Net Weight of Foam Sample	176	G

Foam Expansion

Foam Expansion = Volume of foam container / Net weight of foam sample

1000 ML / 176 G = **5.681818**

25% Volume Test

Twenty-five % Volume = Net weight of foam sample / 4

176 G / 4 = **44**

Base Lines

Conductivity Readings		
2%	3%	4%
1.04 ms	1.09 ms	1.25 ms

Actual Test Conductivity Reading

.86 ms

Refract Readings		
0.5	0.75	1

Refractometer Reading

est. .75

Pan Fire Start	**0:00:01**
Alarm Activation	**0:00:05**
Time to activation	**0:00:29**
Good Foam pattern	**0:01:09**
Sample taken	**0:02:08**

Raw System Foam Cond Reading

6.57 ms

Refilling foam Drums

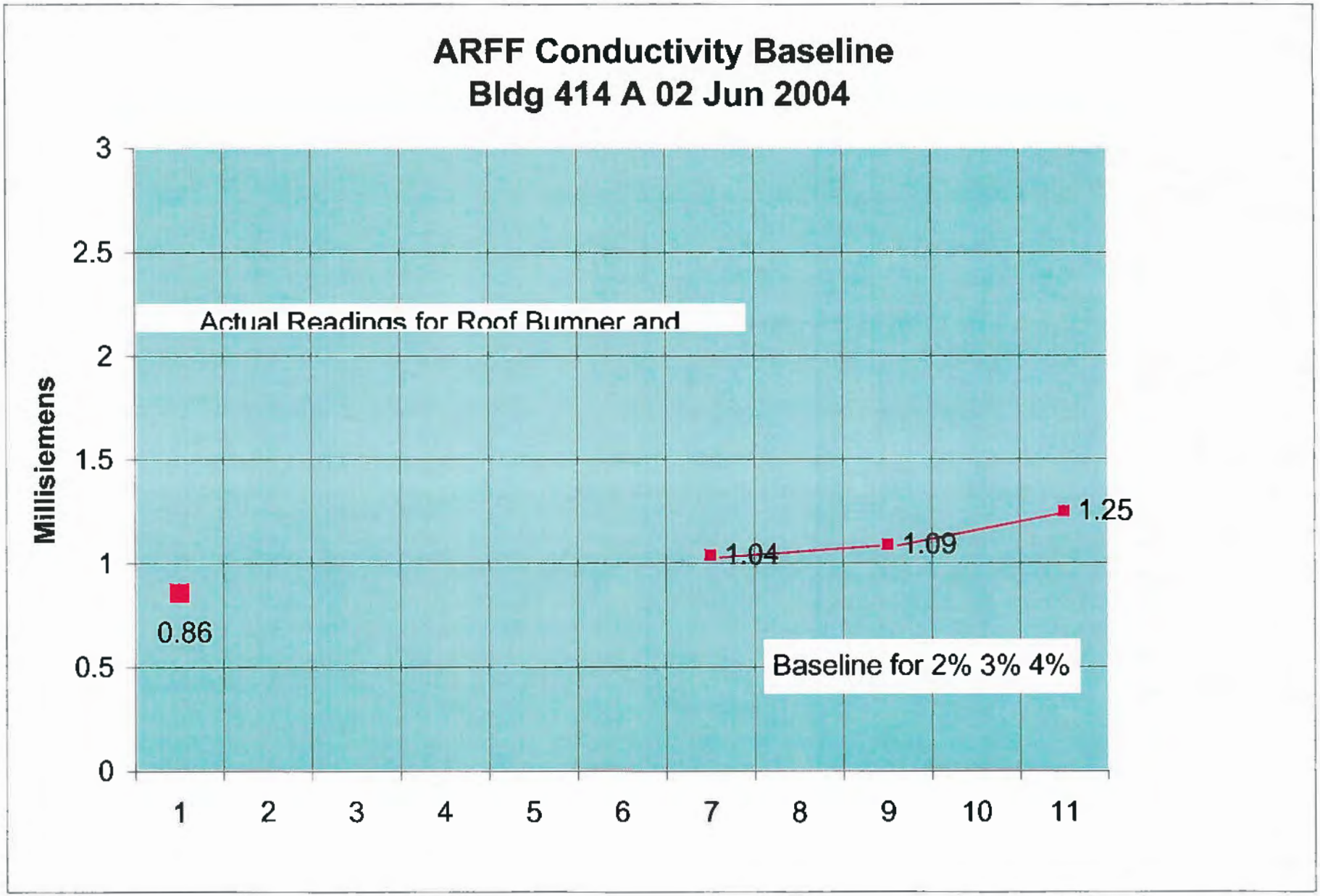
Year	Cond Reading
1990	7.05
1993	6.54

Test Conducted by:

Asst Fire Chief Schultz

FF/EMT Fredrickson

6.795 ***Average reading***


ARFF Conductivity Baseline
Bldg 414 A 02 Jun 2004
Millisiemens
3
2.5
2
1.5
1
0.5
0
1
2
3
4
5
6
7
8
9
10
11
Actual Readings for Roof Bumper and
0.86
1.04
1.09
1.25
Baseline for 2% 3% 4%

Truax ARFF
Foam Expansion and Drain Time Test

Bldg 414 B **Date** 3-Jun-04 **Pattern**
Operating Pressure Psi @ Pump **Nozzle Flow** Floor Nozzles
Air Temp 56 F **H2o Temp** **Wind** NA **Direction** NA

Foam Expansion Test

Gross weight of container	406	G
Empty weight of container	227	G
Net Weight of Foam Sample	179	G

Foam Expansion

Foam Expansion = Volume of foam container / Net weight of foam sample = 1000 ML / 179 G = **5.586592**

25% Volume Test

Twenty-five % Volume = Net weight of foam sample / 4 = 179 G / 4 = **44.75**

Base Lines

Conductivity Readings		
2%	3%	4%
1.04 ms	1.09 ms	1.25 ms

Actual Test Conductivity Reading
1.06 ms

Refract Readings		
0.5	0.75	1

Refractometer Reading
est. .90

Pan Fire Start	**0:00:01**
Alarm Activation	**0:00:10**
Time to activation	**0:00:29**
Good Foam pattern	**0:00:39**
Sample taken	**0:01:39**

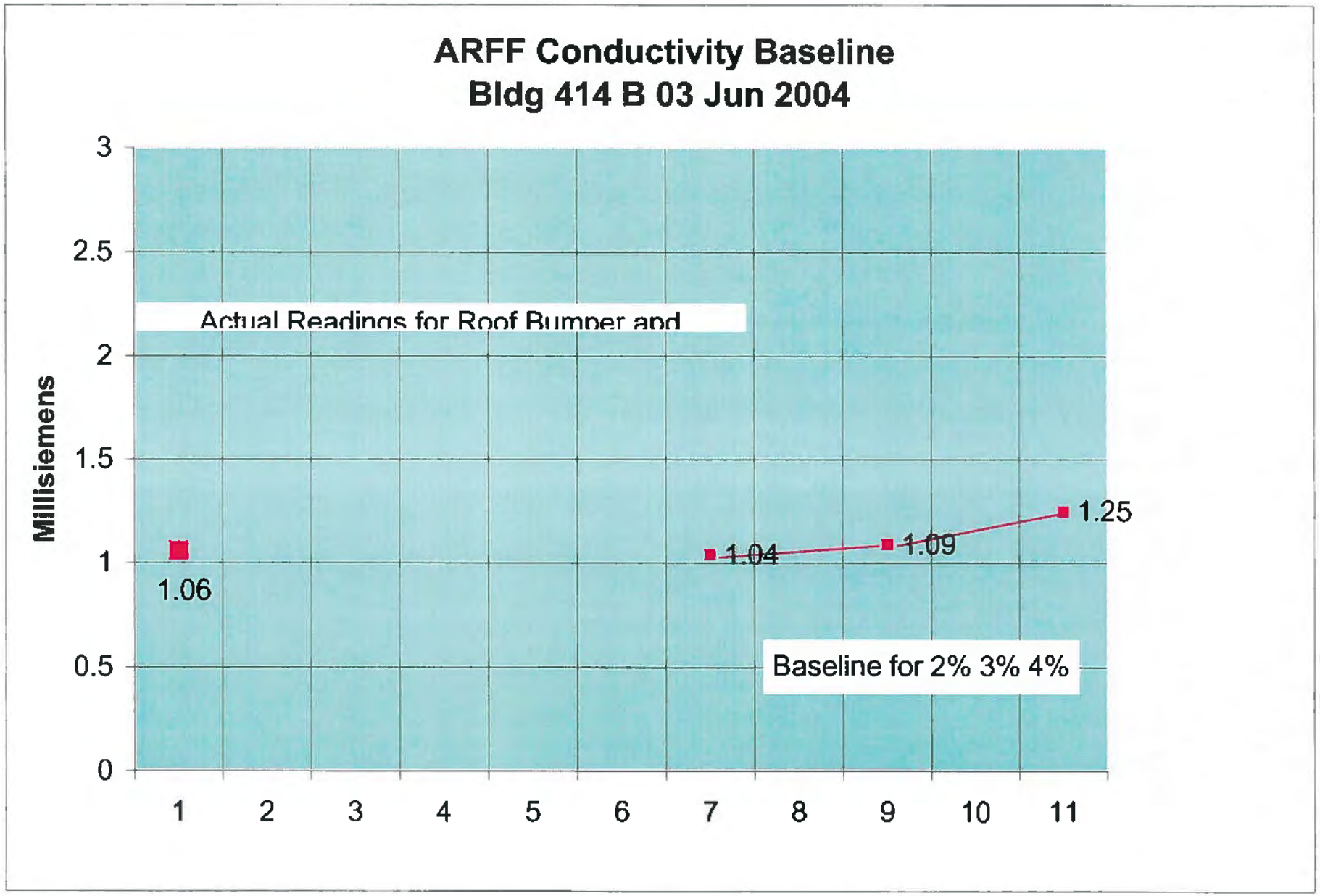
Raw System Foam Cond Reading
6.57 ms

Refilling foam Drums

Year	Cond Reading
1990	7.05
1993	6.54

Test Conducted by:
Asst Fire Chief Schultz
FF/EMT Fredrickson

6.795 ***Average reading***


ARFF Conductivity Baseline
Bldg 414 B 03 Jun 2004
Millisiemens
3
2.5
2
1.5
1
0.5
0
1
2
3
4
5
6
7
8
9
10
11
Actual Readings for Roof Bumper and
1.06
1.04
1.09
1.25
Baseline for 2% 3% 4%

APPENDIX C-7

1981 FUEL SPILL INCIDENT REPORT AND LOCATION MAP

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

KERN

RECEIVED

TOXIC AND HAZARDOUS INCIDENT REPORT

FORM 3200-49 REV. 7-79

STATE DIV. EMERGENCY GOVT. 608/266-3232
U.S. NAT'L. RESPONSE CENTER 800/424-8802
CHEMTREC/PESTICIDES/CHLORINE 800/424-9300

DATE OF INCIDENT	DAY OF WEEK	TIME OF INCIDENT	REPORTED BY (NAME)	TELEPHONE NUMBER
3/81	Friday	1:30 ☐ AM ☒ PM	SD HDQRS Jack Norgard	608/241-6271
DATE REPORTED	**DAY OF WEEK**	**TIME REPORTED**	**AGENCY OR FIRM REPORTING**	**REPORTED THRU DIV. EMERGEN. GOVT.**
3/6/81	Friday	2:20 ☐ AM ☒ PM	Wi. Air Nat. Guard	☐ YES ☐ NO

SUBSTANCE INVOLVED	QUANTITY	UNITS	PERSON OR FIRM RESPONSIBLE
Jet naptha - JP-4	1935	Gal.	Wi. Air National Guard
SUBSTANCE INVOLVED	QUANTITY	UNITS	CONTACT NAME / TELEPHONE NUMBER
			Jack Norgard 241/6271-(608)

PHYSICAL CHARACTERISTICS
☐ SOLID ☒ LIQUID COLOR _____
☐ SEMISOLID ☐ GAS ODOR Petroleum

ADDRESS — STREET OR ROUTE
3110 Mitchell St.

CITY, STATE, ZIP CODE
Madison, Wisc. 53704

CAUSE OF INCIDENT
Storage tank overflow

☐ TRANSP. RELATED ☒ FACILITY RELATED
SPCC PLAN ☒ YES ☐ NO ☐ NA

ACTION TAKEN BY SPILLER
☐ NO ACTION TAKEN ☐ NO NOTIFICATION ☐ DELAYED NOTIFICATION
☒ CONTAINMENT; TYPE Blocked ditch, covered w/ hay
☒ CLEANUP; METHOD Remove contaminated soil
☒ DISPOSAL; LOCATION Concrete slabs nearby
☒ FIRE DEPARTMENT ACTION Foamed area - 150 gal
☐ CONTRACTOR HIRED; NAME _____
☐ OTHER ACTION _____

EXACT LOCATION DESCRIPTION (INTERSECTION, MILEAGE, ETC.)
400' N of Bldg 1210, Pearson St.

COUNTY LOCATION	1/4-1/4, 1/4, SECTION, TOWN, RANGE
Dane	NE, NW, 29, T 8 N, R 10 E.

DNR DISTRICT	DNR AREA	SURFACE WATERS AFFECTED	DRAIN. BASIN
Southern	Madison	☐ YES ☒ NO ☐ POT	012

NAME OF SURFACE WATER	NEAREST SURF. WATER	NEAREST STORM SEWER
Starkweather Ck.	>2000 FT.	Ditches FT.

GROUNDWATERS AFFECTED	NEAREST WELL
☐ YES ☐ NO ☒ POT	☐ PRIV. ☒ MUNIC. >5000 FT.

WEATHER CONDITIONS
TEMPERATURE _____ °F
WIND SPEED _____ MPH DIRECTION OF WIND _____
PRECIPITATION: ☐ YES ☒ NO
DIRECTION OF SPILL MOVEMENT Contained on site

DISTRICT NOTIFIED	DAY OF WEEK	TIME DISTRICT NOTIFIED
3/9/81	Monday	8:15 ☒ AM ☐ PM

DISTRICT PERSON NOTIFIED	TELEPHONE NUMBER
Henry Kern	608/266-2868

DATE INVESTIGATED	DAY OF WEEK	TIME INVESTIGATED
3/9/81	Monday	9:30 ☒ AM ☐ PM

PERSON INVESTIGATING	TELEPHONE NUMBER
George Osipoff	608/267-9424

ACTION TAKEN BY DNR
☐ NO ACTION TAKEN ☒ INVESTIGATION ☐ 29.29 ENFORCEMENT
☐ CONTAINMENT; TYPE _____
☐ CLEANUP; METHOD _____
☐ SUPERVISE CLEANUP (PERSON) _____
☐ DISPOSAL; LOCATION _____
☐ SPILLER REQUIRED TO TAKE ACTION; TYPE _____
☐ CONTRACTOR HIRED BY DNR; NAME _____
☐ DNR SPILL EXPENSE SENT TO MADISON CENTRAL OFFICE.
☐ EVIDENCE COLLECTED:
☐ PHOTOGRAPHS _____ ☐ STATEMENTS OF WITNESSES
☐ SAMPLES _____ ☐ OTHER _____

LIST HUMAN HAZARDS OR CASUALTIES
☐ REAL ☐ POTENTIAL ☒ NONE

ENVIRONMENTAL HAZARD/DAMAGE
☐ REAL ☒ POTENTIAL
☐ VEGETATION _____
☒ FISH If storm runoff reached Starkweather Ck
☐ WILDLIFE _____
☐ BIRDS _____
☐ OTHER _____
☐ NONE _____
COMMENTS: _____

OTHER AGENCIES ON SCENE
LOCAL _____
STATE Wisc. Air National Guard
FEDERAL _____

PERSON FILING THIS REPORT (PRINT NAME)
George Osipoff

SIGNATURE George Osipoff DATE SIGNED 3/9/81

ADDITIONAL COMMENTS:
Spill occurred when storage tank overflowed during loading operation. Material flowed to drainage ditch which was dammed at both ends, material flow covered with hay. Seeped into ground rapidly. Dammed ditch segment ≈ 100' long. Estimate 50-60 cu yds to be removed & spread thinly on available concrete slabs for volatilization

DCN: Truax 2 00215
Title: PA Report
ARF Final
01 Aug 1988

PRELIMINARY ASSESSMENT

128th Tactical Fighter Wing
Wisconsin Air National Guard
Truax Field
Madison, Wisconsin

August 1988

HAZWRAP SUPPORT CONTRACTOR OFFICE
Oak Ridge, Tennessee 37831
Operated by MARTIN MARIETTA ENERGY SYSTEMS, INC.
For the U.S. DEPARTMENT OF ENERGY under contract DE-AC05-840R21400

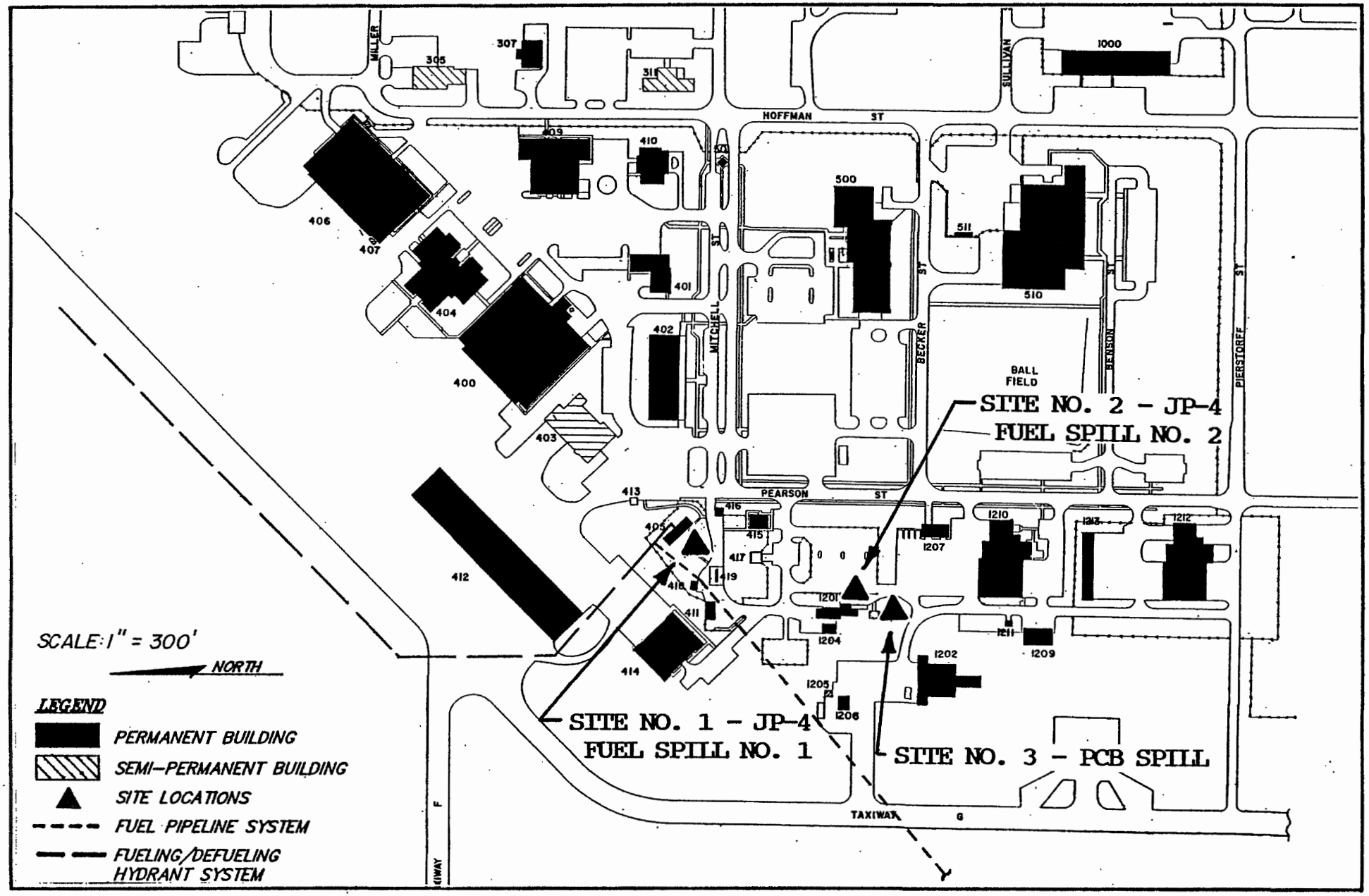
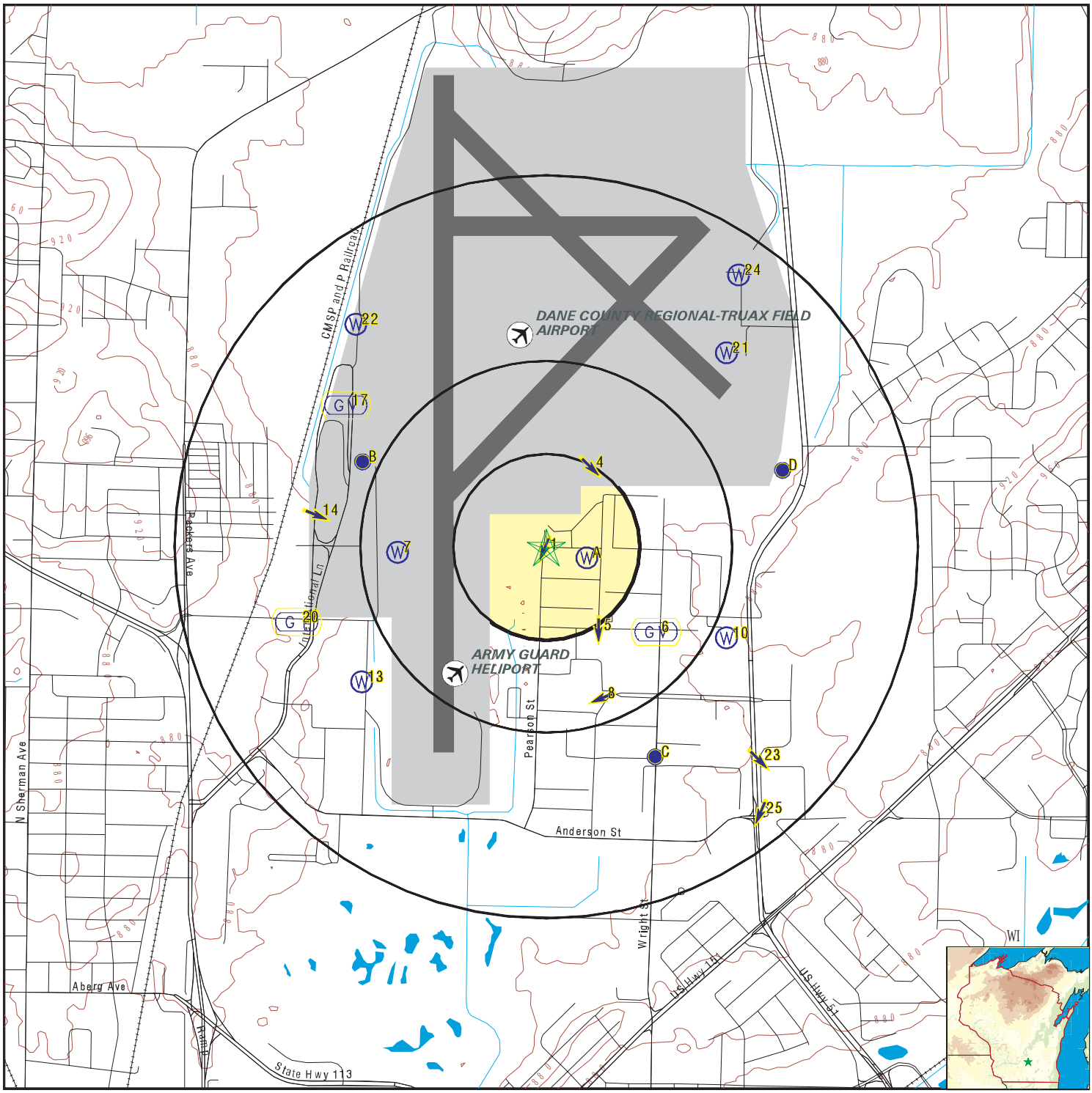


Figure IVA. LOCATION OF SITES 1, 2, AND 3.
128th TFW, WISCONSIN AIR NATIONAL GUARD, TRUAX FIELD, MADISON, WISCONSIN

APPENDIX C-8

EDR ONE-MILE RADIUS WATER WELLS MAP

PHYSICAL SETTING SOURCE MAP - 4360094.2s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data

SITE NAME: Truax Field ANG	CLIENT: B.B. & E
ADDRESS: 3110 Mitchell Street Madison WI 53704	CONTACT: Veronica Allen INQUIRY #: 4360094.2s
LAT/LONG: 43.1316 / 89.3361	DATE: July 21, 2015 2:22 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
WI WELLS	**WI4000000017427**

A2
ESE
0 - 1/8 Mile
Higher

Wi unique :	WM818
County cod:	13
Complete d:	01/21/2009
Municipal :	C
Municipal1:	MADISON
Quar quar:	SW
Quar:	NE
Section:	29
Township n:	8
Range no:	10
E w:	E
Replace re:	Not Reported
Cls to amt:	250.00000000000
Bottom:	250.00000000000
County wel:	Not Reported
District c:	SC
Tax parcel:	Not Reported
Owner name:	Truax Field
Owner mail:	W11366 Blancaue Rd
Owner city:	Randolph
Owner stat:	WI
Owner zip1:	53956
Owner zip2:	Not Reported
Owner are:	Not Reported
Owner phon:	Not Reported
Owner ph 1:	Not Reported
Dnr receiv:	02/12/2009
Dnr rece 1:	/ /
Dnr rece 2:	/ /
Constructo:	VAN DE YACHT BILL WTR WELL & SPECIA
Construc 1:	4462
Construc 2:	3671 MONROE RD
Construc 3:	DE PERE
Construc 4:	WI
Construc 5:	54115
Construc 6:	9711
Fire :	Not Reported
Well stree:	MITCHELL ST
Subdivisio:	Not Reported
Lot no:	Not Reported
Block no:	Not Reported
Govt lot:	Not Reported
Well statu:	1
Orig year:	Not Reported
Prev well :	Not Reported
New well i:	Not Reported
Well type :	1
Other expl:	Not Reported
Well categ:	LT
Service co:	1
Facility t:	Test Loop
Hicap well:	N

Map ID
Direction
Distance
Elevation Database EDR ID Number

Hicap prop:	N
Highest po:	Y
Flood plai:	N
Landfill q:	Not Reported
Landfill a:	0
Build over:	Not Reported
Build oh a:	0
Septic tan:	Not Reported
Septic t 1:	0
Sew absorb:	Not Reported
Sew abso 1:	0
Nonconform:	Not Reported
Nonconfo 1:	0
Buried oil:	Not Reported
Buried o 1:	0
Buried pet:	Not Reported
Buried p 1:	0
Shoreline :	Not Reported
Shorline p:	0
Dwnspot hy:	Not Reported
Dwnspot 1:	0
Privy code:	Not Reported
Privy amt:	0
Found clwt:	Not Reported
Found cl 1:	0
Found drai:	Not Reported
Found dr 1:	0
Build drai:	Not Reported
Build dr 1:	0
Build dr 2:	Not Reported
Build sewe:	Not Reported
Build se 1:	0
Build se 2:	Not Reported
Build se 3:	Not Reported
Coll sewer:	Not Reported
Coll sew 1:	0
Clewtr sum:	Not Reported
Clewtr amt:	0
Wastewtr s:	Not Reported
Wastewtr a:	0
Pav animal:	Not Reported
Pav anim 1:	0
Animal yar:	Not Reported
Animal y 1:	0
Silo:	Not Reported
Silo amt:	0
Silo type:	Not Reported
Barn gutte:	Not Reported
Barn gut 1:	0
Manure pip:	Not Reported
Manure p 1:	0
Manure typ:	Not Reported
Manure t 1:	Not Reported
Manure sto:	Not Reported
Manure s 1:	0
Manure s 2:	Not Reported
Nr 112 amt:	Not Reported

Map ID
Direction
Distance
Elevation Database EDR ID Number

Nr 112 a 1:	0
Nr112 text:	Not Reported
Dr1 dia am:	6.25000000000
Dr1 from a:	0
Dr1 to amt:	250.00000000000
Dr2 dia am:	0.00000000000
Dr2 from a:	0.00000000000
Dr2 to amt:	0.00000000000
Dr3 dia am:	0.00000000000
Dr3 from a:	0.00000000000
Dr3 to amt:	0.00000000000
Dr4 dia am:	0.00000000000
Dr4 from a:	0.00000000000
Dr4 to amt:	0.00000000000
Rot mud co:	X
Rot air co:	Not Reported
Rot foam c:	Not Reported
Rev rot co:	Not Reported
Cable bit :	Not Reported
Cable bit1:	0.00000000000
Tem otr ca:	Not Reported
Dia temp a:	0.00000000000
Temp otr r:	Not Reported
Remove exp:	Not Reported
Other dril:	Not Reported
Other ex 1:	Not Reported
Cls dia am:	6.00000000000
Cls dia 1:	0.00000000000
Cls dia 2:	0.00000000000
Cls dia 3:	0.00000000000
Cls desc t:	1 IN. SDR 11 160psi HDPE Closed Loop
Cls desc 1:	Not Reported
Cls desc 2:	Not Reported
Cls desc 3:	Not Reported
Cls from a:	0.00000000000
Cls from 1:	0.00000000000
Cls from 2:	0.00000000000
Cls from 3:	0.00000000000
Cls to a 1:	0.00000000000
Cls to a 2:	0.00000000000
Cls to a 3:	0.00000000000
Screen dia:	0.00000000000
Screen fro:	0.00000000000
Screen to :	0.00000000000
Seal metho:	Tremie Pipe - Pumped
Seal kind :	1.0 Thermal Lite
Seal from :	0.00000000000
Seal to am:	250.00000000000
Seal numbe:	16
Sacks yard:	Not Reported
Seal kind1:	Not Reported
Seal from1:	0.00000000000
Seal to 1:	0.00000000000
Seal num 1:	Not Reported
Sacks ya 1:	Not Reported
Depth:	Not Reported
Static wtr:	40.00000000000

Map ID
Direction
Distance
Elevation Database EDR ID Number

Static w 1:	B
Pump wtr b:	40.00000000000
Pump gals :	1.00000000000
Pump by co:	M
Pump hrs t:	1.00000000000
Well depth:	12
Well abvbe:	A
Well dev c:	Y
Well disin:	Y
Well cappe:	Y
Proper sea:	Y
Proper s 1:	Not Reported
Well cont :	tv
Wc sign da:	01/26/2009
Rig op ini:	cv
Ro sign da:	01/26/2009
Comment fl:	Not Reported
Label sent:	Y
Ditch amt:	0
Septic typ:	Not Reported
Shoreline1:	Not Reported
File creat:	02/17/2009
County tex:	DANE
Lat degree:	43
Lat minute:	7.877
Long degre:	89
Long minut:	20.0522
Lat long m:	GPS006
Drill casi:	Not Reported
Lower rota:	Not Reported
Lower ro 1:	Not Reported
Lower ro 2:	Not Reported
Lower cabl:	Not Reported
Temp outer:	Not Reported
Varince is:	N
Collect se:	Not Reported
Collet sew:	0.00000000000
Hicap no:	Not Reported
Common wel:	Not Reported
Fid 1:	Not Reported
Approval n:	Not Reported
Approval d:	/ /
Spec capac:	Not Reported
Batch:	888888888
Record sou:	ELECTRONICALLY SUBMITTED
Notificati:	Not Reported
Empty gy:	Not Reported
Site id:	WI4000000017427

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A3
ESE
1/8 - 1/4 Mile
Higher

WI WELLS **WI4000000020670**

Wi unique :	UK196
County cod:	13
Complete d:	03/23/2010
Municipal :	T
Municipal1:	BURKE
Quar quar:	SW
Quar:	NE
Section:	29
Township n:	8
Range no:	10
E w:	E
Replace re:	Not Reported
Cls to amt:	240.00000000000
Bottom:	240.00000000000
County wel:	Not Reported
District c:	SC
Tax parcel:	Not Reported
Owner name:	MACK, DAVID
Owner mail:	3110 MITCHELL ST #B1210
Owner city:	MADISON
Owner stat:	WI
Owner zip1:	53704
Owner zip2:	Not Reported
Owner are:	608
Owner phon:	245
Owner ph 1:	4563
Dnr receiv:	04/26/2010
Dnr rece 1:	/ /
Dnr rece 2:	/ /
Constructo:	WEBSTER BRAD & SONS DRILLING INC
Construc 1:	6574
Construc 2:	112 SKYLINE DR PO BOX 377
Construc 3:	ARLINGTON
Construc 4:	WI
Construc 5:	53911
Construc 6:	9505
Fire :	3110
Well stree:	MITCHELL ST #B500
Subdivisio:	TRUAX FIELD
Lot no:	Not Reported
Block no:	Not Reported
Govt lot:	Not Reported
Well statu:	1
Orig year:	Not Reported
Prev well :	Not Reported
New well i:	Not Reported
Well type :	1
Other expl:	Not Reported
Well categ:	L
Service co:	Not Reported
Facility t:	Not Reported
Hicap well:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation Database EDR ID Number

Hicap prop:	Not Reported
Highest po:	Not Reported
Flood plai:	Not Reported
Landfill q:	Not Reported
Landfill a:	0
Build over:	Not Reported
Build oh a:	0
Septic tan:	Not Reported
Septic t 1:	0
Sew absorb:	Not Reported
Sew abso 1:	0
Nonconform:	Not Reported
Nonconfo 1:	0
Buried oil:	Not Reported
Buried o 1:	0
Buried pet:	Not Reported
Buried p 1:	0
Shoreline :	Not Reported
Shorline p:	0
Dwnspot hy:	Not Reported
Dwnspot 1:	0
Privy code:	Not Reported
Privy amt:	0
Found clwt:	Not Reported
Found cl 1:	0
Found drai:	Not Reported
Found dr 1:	0
Build drai:	Not Reported
Build dr 1:	0
Build dr 2:	Not Reported
Build sewe:	Not Reported
Build se 1:	0
Build se 2:	Not Reported
Build se 3:	Not Reported
Coll sewer:	Not Reported
Coll sew 1:	0
Clewtr sum:	Not Reported
Clewtr amt:	0
Wastewtr s:	Not Reported
Wastewtr a:	0
Pav animal:	Not Reported
Pav anim 1:	0
Animal yar:	Not Reported
Animal y 1:	0
Silo:	Not Reported
Silo amt:	0
Silo type:	Not Reported
Barn gutte:	Not Reported
Barn gut 1:	0
Manure pip:	Not Reported
Manure p 1:	0
Manure typ:	Not Reported
Manure t 1:	Not Reported
Manure sto:	Not Reported
Manure s 1:	0
Manure s 2:	Not Reported
Nr 112 amt:	Not Reported

Nr 112 a 1:	0
Nr112 text:	Not Reported
Dr1 dia am:	6.00000000000
Dr1 from a:	0
Dr1 to amt:	240.00000000000
Dr2 dia am:	0.00000000000
Dr2 from a:	0.00000000000
Dr2 to amt:	0.00000000000
Dr3 dia am:	0.00000000000
Dr3 from a:	0.00000000000
Dr3 to amt:	0.00000000000
Dr4 dia am:	0.00000000000
Dr4 from a:	0.00000000000
Dr4 to amt:	0.00000000000
Rot mud co:	X
Rot air co:	Not Reported
Rot foam c:	Not Reported
Rev rot co:	Not Reported
Cable bit :	Not Reported
Cable bit1:	0.00000000000
Tem otr ca:	Not Reported
Dia temp a:	0.00000000000
Temp otr r:	Not Reported
Remove exp:	Not Reported
Other dril:	Not Reported
Other ex 1:	Not Reported
Cls dia am:	1.00000000000
Cls dia 1:	0.00000000000
Cls dia 2:	0.00000000000
Cls dia 3:	0.00000000000
Cls desc t:	CENTENNIAL SDR11 70 HOLES
Cls desc 1:	Not Reported
Cls desc 2:	Not Reported
Cls desc 3:	Not Reported
Cls from a:	0.00000000000
Cls from 1:	0.00000000000
Cls from 2:	0.00000000000
Cls from 3:	0.00000000000
Cls to a 1:	0.00000000000
Cls to a 2:	0.00000000000
Cls to a 3:	0.00000000000
Screen dia:	0.00000000000
Screen fro:	0.00000000000
Screen to :	0.00000000000
Seal metho:	PRESSURE TREMIE
Seal kind :	BLACK HILLS GEOTHERMAL LITE W/250LBS SAND
Seal from :	0.00000000000
Seal to am:	240.00000000000
Seal numbe:	980
Sacks yard:	S
Seal kind1:	Not Reported
Seal from1:	0.00000000000
Seal to 1:	0.00000000000
Seal num 1:	Not Reported
Sacks ya 1:	Not Reported
Depth:	Not Reported
Static wtr:	0.00000000000

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

Static w 1:	Not Reported
Pump wtr b:	0.00000000000
Pump gals :	0.00000000000
Pump by co:	Not Reported
Pump hrs t:	0.00000000000
Well depth:	0
Well abvbe:	Not Reported
Well dev c:	Not Reported
Well disin:	Not Reported
Well cappe:	Not Reported
Proper sea:	Not Reported
Proper s 1:	Not Reported
Well cont :	RW
Wc sign da:	04/07/2010
Rig op ini:	Not Reported
Ro sign da:	/ /
Comment fl:	Not Reported
Label sent:	Y
Ditch amt:	0
Septic typ:	Not Reported
Shoreline1:	Not Reported
File creat:	06/02/2010
County tex:	DANE
Lat degree:	43
Lat minute:	7.863
Long degre:	89
Long minut:	20.02
Lat long m:	GPS008
Drill casi:	Not Reported
Lower rota:	Not Reported
Lower ro 1:	Not Reported
Lower ro 2:	Not Reported
Lower cabl:	Not Reported
Temp outer:	Not Reported
Varince is:	Not Reported
Collect se:	Not Reported
Collet sew:	0.00000000000
Hicap no:	Not Reported
Common wel:	Not Reported
Fid 1:	Not Reported
Approval n:	Not Reported
Approval d:	/ /
Spec capac:	Not Reported
Batch:	1187
Record sou:	WELL CONSTRUCTION
Notificati:	Not Reported
Empty gy:	Not Reported
Site id:	WI4000000020670

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

7
West
1/4 - 1/2 Mile
Lower | **FED USGS** | **USGS40001310096**

Org. Identifier:	USGS-WI		
Formal name:	USGS Wisconsin Water Science Center		
Monloc Identifier:	USGS-430753089203801		
Monloc name:	DN-08/10E/29-0072		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	07090001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	43.1313835
Longitude:	-89.3440064	Sourcemap scale:	24000
Horiz Acc measure:	10	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	858.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	258
Welldepth units:	ft	Wellholedepth:	258
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

10
ESE
1/2 - 1 Mile
Higher | **FED USGS** | **USGS40001310083**

Org. Identifier:	USGS-WI		
Formal name:	USGS Wisconsin Water Science Center		
Monloc Identifier:	USGS-430741089193501		
Monloc name:	DN-08/10E/29-0085		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	07070005	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	43.1280503
Longitude:	-89.3265061	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	869.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Cambrian-Ordovician aquifer system		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	269
Welldepth units:	ft	Wellholedepth:	269
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1937-01-01	11.00	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database | EDR ID Number

13
SW
1/2 - 1 Mile
Lower

WI WELLS | **WI4000000030589**

Wi unique :	YJ743
County cod:	13
Complete d:	08/17/2013
Municipal :	T
Municipal1:	MADISON
Quar quar:	SE
Quar:	SE
Section:	30
Township n:	8
Range no:	10
E w:	E
Replace re:	24 GEOTHERMAL BORES
Cls to amt:	255.00000000000
Bottom:	255.00000000000
County wel:	99
District c:	SC
Tax parcel:	Not Reported
Owner name:	DANE COUNTY AIRPORT, SRE
Owner mail:	4000 INTERNATIONAL LANE
Owner city:	MADISON
Owner stat:	WI
Owner zip1:	53704
Owner zip2:	Not Reported
Owner are:	608
Owner phon:	790
Owner ph 1:	6601
Dnr receiv:	08/23/2013
Dnr rece 1:	/ /
Dnr rece 2:	/ /
Constructo:	SAM'S WELL DRILLING INC
Construc 1:	370
Construc 2:	PO BOX 150
Construc 3:	RANDOLPH
Construc 4:	WI
Construc 5:	53956
Construc 6:	0150
Fire :	4000
Well stree:	INTERNATIONAL LANE, MADISON
Subdivisio:	Not Reported
Lot no:	Not Reported
Block no:	Not Reported
Govt lot:	Not Reported
Well statu:	1
Orig year:	Not Reported
Prev well :	Not Reported
New well i:	Not Reported
Well type :	1
Other expl:	Not Reported
Well categ:	L
Service co:	1
Facility t:	GEOTHERMAL
Hicap well:	N

Map ID
Direction
Distance
Elevation Database EDR ID Number

Hicap prop:	N
Highest po:	Y
Flood plai:	N
Landfill q:	Not Reported
Landfill a:	0
Build over:	Not Reported
Build oh a:	0
Septic tan:	Not Reported
Septic t 1:	0
Sew absorb:	Not Reported
Sew abso 1:	0
Nonconform:	Not Reported
Nonconfo 1:	0
Buried oil:	Not Reported
Buried o 1:	0
Buried pet:	Not Reported
Buried p 1:	0
Shoreline :	Not Reported
Shorline p:	0
Dwnspot hy:	Not Reported
Dwnspot 1:	0
Privy code:	Not Reported
Privy amt:	0
Found clwt:	Not Reported
Found cl 1:	0
Found drai:	Not Reported
Found dr 1:	0
Build drai:	Not Reported
Build dr 1:	0
Build dr 2:	Not Reported
Build sewe:	Not Reported
Build se 1:	0
Build se 2:	Not Reported
Build se 3:	Not Reported
Coll sewer:	Not Reported
Coll sew 1:	0
Clewtr sum:	Not Reported
Clewtr amt:	0
Wastewtr s:	Not Reported
Wastewtr a:	0
Pav animal:	Not Reported
Pav anim 1:	0
Animal yar:	Not Reported
Animal y 1:	0
Silo:	Not Reported
Silo amt:	0
Silo type:	Not Reported
Barn gutte:	Not Reported
Barn gut 1:	0
Manure pip:	Not Reported
Manure p 1:	0
Manure typ:	Not Reported
Manure t 1:	Not Reported
Manure sto:	Not Reported
Manure s 1:	0
Manure s 2:	Not Reported
Nr 112 amt:	Not Reported

Nr 112 a 1:	0
Nr112 text:	Not Reported
Dr1 dia am:	6.00000000000
Dr1 from a:	0
Dr1 to amt:	255.00000000000
Dr2 dia am:	0.00000000000
Dr2 from a:	0.00000000000
Dr2 to amt:	0.00000000000
Dr3 dia am:	0.00000000000
Dr3 from a:	0.00000000000
Dr3 to amt:	0.00000000000
Dr4 dia am:	0.00000000000
Dr4 from a:	0.00000000000
Dr4 to amt:	0.00000000000
Rot mud co:	X
Rot air co:	Not Reported
Rot foam c:	Not Reported
Rev rot co:	Not Reported
Cable bit :	Not Reported
Cable bit1:	0.00000000000
Tem otr ca:	Not Reported
Dia temp a:	0.00000000000
Temp otr r:	Not Reported
Remove exp:	Not Reported
Other dril:	Not Reported
Other ex 1:	Not Reported
Cls dia am:	1.00000000000
Cls dia 1:	0.00000000000
Cls dia 2:	0.00000000000
Cls dia 3:	0.00000000000
Cls desc t:	DR-11, 200 PSI 4710 DD TECHNOLOGIES 24 BORES
Cls desc 1:	Not Reported
Cls desc 2:	Not Reported
Cls desc 3:	Not Reported
Cls from a:	0.00000000000
Cls from 1:	0.00000000000
Cls from 2:	0.00000000000
Cls from 3:	0.00000000000
Cls to a 1:	0.00000000000
Cls to a 2:	0.00000000000
Cls to a 3:	0.00000000000
Screen dia:	0.00000000000
Screen fro:	0.00000000000
Screen to :	0.00000000000
Seal metho:	Tremie Pipe - Pumped
Seal kind :	THERMAL GROUT SELECT
Seal from :	0.00000000000
Seal to am:	255.00000000000
Seal numbe:	260
Sacks yard:	Not Reported
Seal kind1:	Not Reported
Seal from1:	0.00000000000
Seal to 1:	0.00000000000
Seal num 1:	Not Reported
Sacks ya 1:	Not Reported
Depth:	Not Reported
Static wtr:	1.00000000000

Map ID
Direction
Distance
Elevation Database EDR ID Number

Static w 1:	B
Pump wtr b:	1.00000000000
Pump gals :	1.00000000000
Pump by co:	M
Pump hrs t:	1.00000000000
Well depth:	18
Well abvbe:	A
Well dev c:	Y
Well disin:	Y
Well cappe:	Y
Proper sea:	Not Reported
Proper s 1:	Not Reported
Well cont :	JVG
Wc sign da:	08/17/2013
Rig op ini:	SS
Ro sign da:	08/17/2013
Comment fl:	Not Reported
Label sent:	Y
Ditch amt:	0
Septic typ:	Not Reported
Shoreline1:	Not Reported
File creat:	08/26/2013
County tex:	DANE
Lat degree:	43
Lat minute:	7.58
Long degre:	89
Long minut:	20.755
Lat long m:	GPS008
Drill casi:	Not Reported
Lower rota:	Not Reported
Lower ro 1:	Not Reported
Lower ro 2:	Not Reported
Lower cabl:	Not Reported
Temp outer:	Not Reported
Varince is:	N
Collect se:	Not Reported
Collet sew:	0.00000000000
Hicap no:	Not Reported
Common wel:	Not Reported
Fid 1:	Not Reported
Approval n:	Not Reported
Approval d:	/ /
Spec capac:	Not Reported
Batch:	888888888
Record sou:	ELECTRONICALLY SUBMITTED
Notificati:	Not Reported
Empty gy:	Not Reported
Site id:	WI4000000030589

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database | EDR ID Number

21
NE
1/2 - 1 Mile
Lower

FED USGS | **USGS40001310157**

Org. Identifier:	USGS-WI		
Formal name:	USGS Wisconsin Water Science Center		
Monloc Identifier:	USGS-430821089193501		
Monloc name:	DN-08/10E/20-0060		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	07090001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	43.1391611
Longitude:	-89.326506	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	858.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Cambrian-Ordovician aquifer system		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	321
Welldepth units:	ft	Wellholedepth:	321
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1937-01-01	6.50	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

22
NW
1/2 - 1 Mile
Lower

FED USGS **USGS40001310164**

Org. Identifier:	USGS-WI		
Formal name:	USGS Wisconsin Water Science Center		
Monloc Identifier:	USGS-430825089204601		
Monloc name:	DN-08/10E/19-0115		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	07090001	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	43.1402722
Longitude:	-89.3462286	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	858.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Cambrian-Ordovician aquifer system		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	180
Welldepth units:	ft	Wellholedepth:	180
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1954-03-01	40.00	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database | EDR ID Number

24
NE
1/2 - 1 Mile
Lower

WI WELLS | **WI4000000020239**

Wi unique :	WO622
County cod:	13
Complete d:	02/19/2010
Municipal :	C
Municipal1:	MADISON
Quar quar:	NE
Quar:	SE
Section:	20
Township n:	8
Range no:	10
E w:	E
Replace re:	Not Reported
Cls to amt:	300.00000000000
Bottom:	300.00000000000
County wel:	Not Reported
District c:	SC
Tax parcel:	Not Reported
Owner name:	Promega Corp
Owner mail:	2800 Woods Hollow Rd
Owner city:	Madison
Owner stat:	WI
Owner zip1:	53711
Owner zip2:	Not Reported
Owner are:	Not Reported
Owner phon:	Not Reported
Owner ph 1:	Not Reported
Dnr receiv:	02/24/2010
Dnr rece 1:	/ /
Dnr rece 2:	/ /
Constructo:	GROUND SOURCE INC
Construc 1:	4462
Construc 2:	3671 MONROE RD
Construc 3:	DE PERE
Construc 4:	WI
Construc 5:	54115
Construc 6:	9711
Fire :	Not Reported
Well stree:	3792 CORBEN CT
Subdivisio:	Not Reported
Lot no:	Not Reported
Block no:	Not Reported
Govt lot:	Not Reported
Well statu:	1
Orig year:	Not Reported
Prev well :	Not Reported
New well i:	Not Reported
Well type :	1
Other expl:	Not Reported
Well categ:	L
Service co:	1
Facility t:	closed loop field
Hicap well:	N

Map ID
Direction
Distance
Elevation Database EDR ID Number

Hicap prop:	N
Highest po:	Y
Flood plai:	N
Landfill q:	Not Reported
Landfill a:	0
Build over:	Not Reported
Build oh a:	0
Septic tan:	Not Reported
Septic t 1:	0
Sew absorb:	Not Reported
Sew abso 1:	0
Nonconform:	Not Reported
Nonconfo 1:	0
Buried oil:	Not Reported
Buried o 1:	0
Buried pet:	Not Reported
Buried p 1:	0
Shoreline :	Not Reported
Shorline p:	0
Dwnspot hy:	Not Reported
Dwnspot 1:	0
Privy code:	Not Reported
Privy amt:	0
Found clwt:	Not Reported
Found cl 1:	0
Found drai:	Not Reported
Found dr 1:	0
Build drai:	Not Reported
Build dr 1:	0
Build dr 2:	Not Reported
Build sewe:	Not Reported
Build se 1:	0
Build se 2:	Not Reported
Build se 3:	Not Reported
Coll sewer:	Not Reported
Coll sew 1:	0
Clewtr sum:	Not Reported
Clewtr amt:	0
Wastewtr s:	Not Reported
Wastewtr a:	0
Pav animal:	Not Reported
Pav anim 1:	0
Animal yar:	Not Reported
Animal y 1:	0
Silo:	Not Reported
Silo amt:	0
Silo type:	Not Reported
Barn gutte:	Not Reported
Barn gut 1:	0
Manure pip:	Not Reported
Manure p 1:	0
Manure typ:	Not Reported
Manure t 1:	Not Reported
Manure sto:	Not Reported
Manure s 1:	0
Manure s 2:	Not Reported
Nr 112 amt:	Not Reported

Map ID
Direction
Distance
Elevation Database EDR ID Number

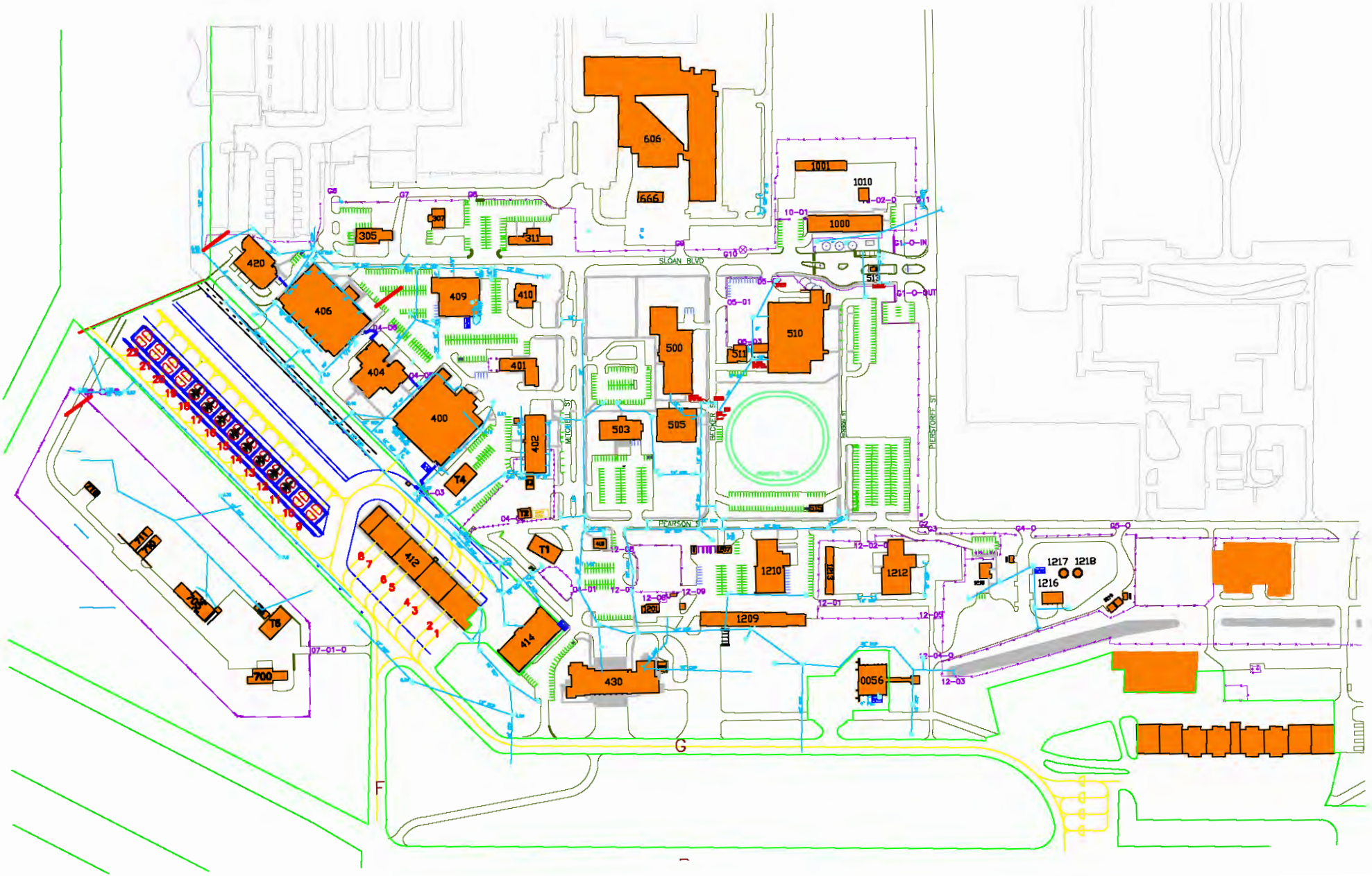
Nr 112 a 1:	0
Nr112 text:	Not Reported
Dr1 dia am:	6.00000000000
Dr1 from a:	0
Dr1 to amt:	300.00000000000
Dr2 dia am:	0.00000000000
Dr2 from a:	0.00000000000
Dr2 to amt:	0.00000000000
Dr3 dia am:	0.00000000000
Dr3 from a:	0.00000000000
Dr3 to amt:	0.00000000000
Dr4 dia am:	0.00000000000
Dr4 from a:	0.00000000000
Dr4 to amt:	0.00000000000
Rot mud co:	X
Rot air co:	Not Reported
Rot foam c:	Not Reported
Rev rot co:	Not Reported
Cable bit :	Not Reported
Cable bit1:	0.00000000000
Tem otr ca:	Not Reported
Dia temp a:	0.00000000000
Temp otr r:	Not Reported
Remove exp:	Not Reported
Other dril:	Not Reported
Other ex 1:	Not Reported
Cls dia am:	6.00000000000
Cls dia 1:	0.00000000000
Cls dia 2:	0.00000000000
Cls dia 3:	0.00000000000
Cls desc t:	1.25 IN. SDR 11 160psi Closed Loop
Cls desc 1:	Not Reported
Cls desc 2:	Not Reported
Cls desc 3:	Not Reported
Cls from a:	0.00000000000
Cls from 1:	0.00000000000
Cls from 2:	0.00000000000
Cls from 3:	0.00000000000
Cls to a 1:	0.00000000000
Cls to a 2:	0.00000000000
Cls to a 3:	0.00000000000
Screen dia:	0.00000000000
Screen fro:	0.00000000000
Screen to :	0.00000000000
Seal metho:	Bradenhead
Seal kind :	Thermal Lite 1.0
Seal from :	0.00000000000
Seal to am:	300.00000000000
Seal numbe:	12
Sacks yard:	Not Reported
Seal kind1:	Not Reported
Seal from1:	0.00000000000
Seal to 1:	0.00000000000
Seal num 1:	Not Reported
Sacks ya 1:	Not Reported
Depth:	Not Reported
Static wtr:	10.00000000000

Map ID
Direction
Distance
Elevation Database EDR ID Number

Static w 1:	B
Pump wtr b:	10.00000000000
Pump gals :	1.00000000000
Pump by co:	M
Pump hrs t:	1.00000000000
Well depth:	12
Well abvbe:	A
Well dev c:	Y
Well disin:	Y
Well cappe:	Y
Proper sea:	Y
Proper s 1:	Not Reported
Well cont :	tv
Wc sign da:	02/19/2010
Rig op ini:	cv
Ro sign da:	02/19/2010
Comment fl:	Not Reported
Label sent:	Y
Ditch amt:	0
Septic typ:	Not Reported
Shoreline1:	Not Reported
File creat:	02/26/2010
County tex:	DANE
Lat degree:	43
Lat minute:	8.5316
Long degre:	89
Long minut:	19.5516
Lat long m:	GPS006
Drill casi:	Not Reported
Lower rota:	Not Reported
Lower ro 1:	Not Reported
Lower ro 2:	Not Reported
Lower cabl:	Not Reported
Temp outer:	Not Reported
Varince is:	N
Collect se:	Not Reported
Collet sew:	0.00000000000
Hicap no:	Not Reported
Common wel:	Not Reported
Fid 1:	Not Reported
Approval n:	Not Reported
Approval d:	/ /
Spec capac:	Not Reported
Batch:	888888888
Record sou:	ELECTRONICALLY SUBMITTED
Notificati:	Not Reported
Empty gy:	Not Reported
Site id:	WI4000000020239

APPENDIX C-9

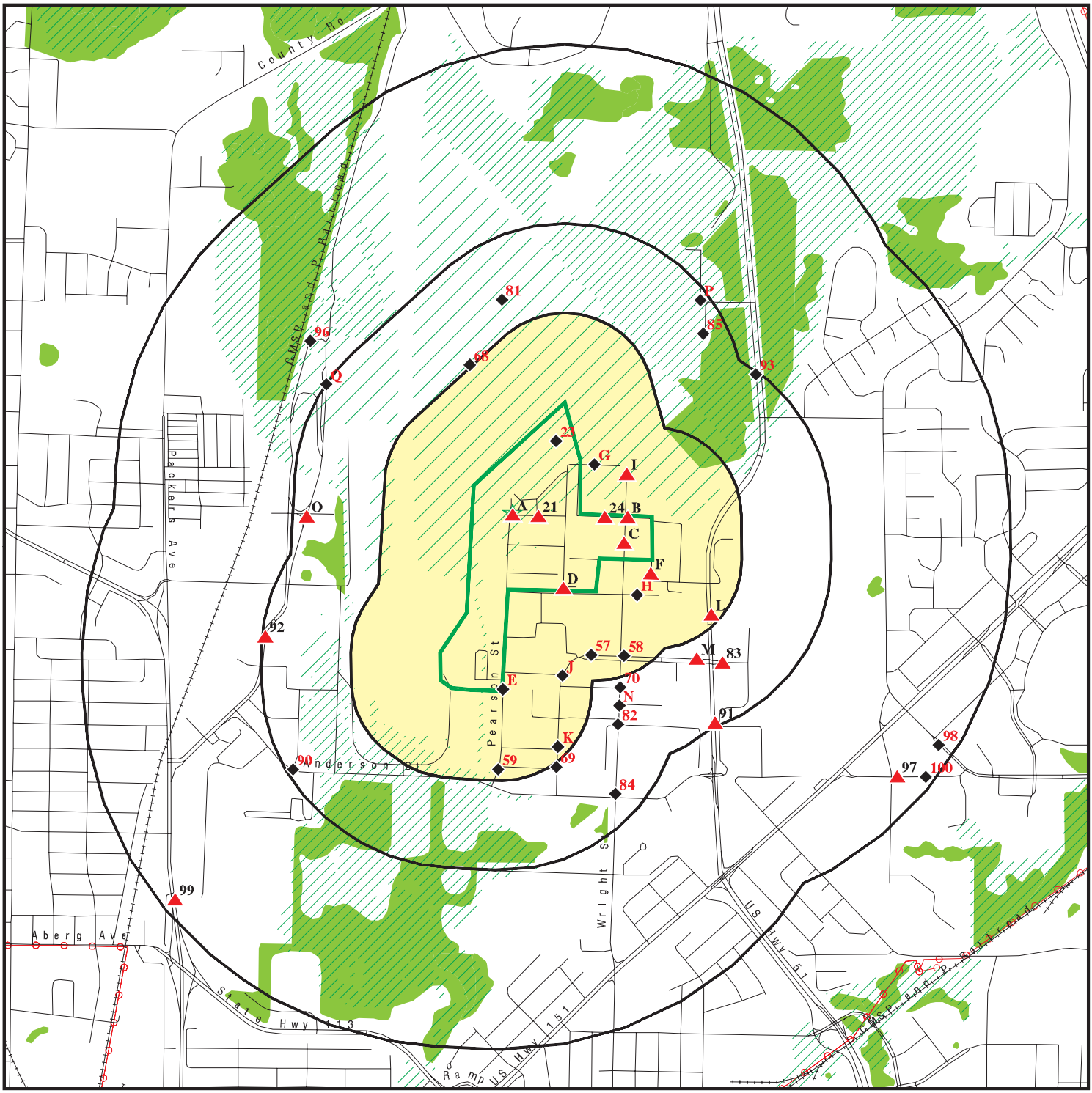
BASE STORM SEWER SYSTEM MAP


606
666
1001
1010
1000
305
307
311
420
406
409
410
404
401
400
402
503
505
500
510
511
515
SLOAN BLVD
MCGILL ST
BECKER ST
PIERSTORFF ST
PEARSON ST
T4
T1
T5
412
414
430
1209
1210
1212
1217
1218
1216
0056
700
F
G

APPENDIX C-10

EDR POTENTIALLY ENVIRONMENTALLY SENSITIVE AREAS MAP

OVERVIEW MAP - 4360094.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

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ADDRESS: 3110 Mitchell Street Madison WI 53704	CONTACT: Veronica Allen
LAT/LONG: 43.1316 / 89.3361	INQUIRY #: 4360094.2s DATE: July 21, 2015 2:19 pm