

GIS REGISTRY
Cover Sheet

March, 2010
(RR 5367)

Source Property Information

CLOSURE DATE: Jun 16, 2010

BRRTS #: 02-41-207377
ACTIVITY NAME: 128th Air Refueling Wing - Building 304
PROPERTY ADDRESS: 1919 E Grange Ave/Main Gate
MUNICIPALITY: Milwaukee
PARCEL ID #: 6758999000

FID #: 241496970
DATCP #:
COMM #:

*WTM COORDINATES:

X: 692301 Y: 276583

* Coordinates are in
WTM83, NAD83 (1991)

WTM COORDINATES REPRESENT:

- Approximate Center Of Contaminant Source
 Approximate Source Parcel Center

Please check as appropriate: (BRRTS Action Code)

Contaminated Media:

Groundwater Contamination > ES (236)

Contamination in ROW

Off-Source Contamination

(note: for list of off-source properties
see "Impacted Off-Source Property" form)

Soil Contamination > *RCL or **SSRCL (232)

Contamination in ROW

Off-Source Contamination

(note: for list of off-source properties
see "Impacted Off-Source Property" form)

Land Use Controls:

N/A (Not Applicable)

Soil: maintain industrial zoning (220)

(note: soil contamination concentrations
between non-industrial and industrial levels)

Structural Impediment (224)

Site Specific Condition (228)

Cover or Barrier (222)

(note: maintenance plan for
groundwater or direct contact)

Vapor Mitigation (226)

Maintain Liability Exemption (230)

(note: local government unit or economic
development corporation was directed to
take a response action)

Monitoring Wells:

Are all monitoring wells properly abandoned per NR 141? (234)

Yes No N/A

* Residual Contaminant Level

**Site Specific Residual Contaminant Level

This Adobe Fillable form is intended to provide a list of information that is required for evaluation for case closure. It is to be used in conjunction with Form 4400-202, Case Closure Request. The closure of a case means that the Department has determined that no further response is required at that time based on the information that has been submitted to the Department.

NOTICE: Completion of this form is mandatory for applications for case closure pursuant to ch. 292, Wis. Stats. and ch. NR 726, Wis. Adm. Code, including cases closed under ch. NR 746 and ch. NR 726. The Department will not consider, or act upon your application, unless all applicable sections are completed on this form and the closure fee and any other applicable fees, required under ch. NR 749, Wis. Adm. Code, Table 1 are included. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than reviewing closure requests and determining the need for additional response action. The Department may provide this information to requesters as required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

BRRTS #: 02-41-207377

PARCEL ID #:

ACTIVITY NAME: WI Air National Guard, 128th ARW, Bldg. 304 Site

WTM COORDINATES: X: 692301 Y: 276583

CLOSURE DOCUMENTS (the Department adds these items to the final GIS packet for posting on the Registry)

Closure Letter

Maintenance Plan (if activity is closed with a land use limitation or condition (land use control) under s. 292.12, Wis. Stats.)

Conditional Closure Letter

Certificate of Completion (COC) for VPLE sites

SOURCE LEGAL DOCUMENTS

Deed: The most recent deed as well as legal descriptions, for the **Source Property** (where the contamination originated). Deeds for other, off-source (off-site) properties are located in the **Notification** section.

Note: If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.

Certified Survey Map: A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. (lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).

Figure #: (See Title) **Title:** Maps, figures, coordinates, and metadata in "Attachments" section noted as "Survey"

Signed Statement: A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description accurately describes the correct contaminated property.

MAPS (meeting the visual aid requirements of s. NR 716.15(2)(h))

Maps must be no larger than 8.5 x 14 inches unless the map is submitted electronically.

Location Map: A map outlining all properties within the contaminated site boundaries on a U.S.G.S. topographic map or plat map in sufficient detail to permit easy location of all parcels. If groundwater standards are exceeded, include the location of all potable wells within 1200 feet of the site.

Note: Due to security reasons municipal wells are not identified on GIS Packet maps. However, the locations of these municipal wells must be identified on Case Closure Request maps.

Figure #: 1 **Title:** Base Location and Surrounding Area

Detailed Site Map: A map that shows all relevant features (buildings, roads, individual property boundaries, contaminant sources, utility lines, monitoring wells and potable wells) within the contaminated area. This map is to show the location of all contaminated public streets, and highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding a ch. NR 140 Enforcement Standard (ES), and/or in relation to the boundaries of soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Levels (SSRCL) as determined under s. NR 720.09, 720.11 and 720.19.

Figure #: 2 **Title:** Building 304 Site Investigation Area, 2006

Soil Contamination Contour Map: For sites closing with residual soil contamination, this map is to show the location of all contaminated soil and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL) as determined under s. NR 720.09, 720.11 and 720.19.

Figure #: 3 **Title:** Soil Analytical Results for Analytes Exceeding Action Levels, 2007

BRRTS #: 02-41-207377

ACTIVITY NAME: WI Air National Guard, 128th ARW, Bldg. 304 Site

MAPS (continued)

- Geologic Cross-Section Map:** A map showing the source location and vertical extent of residual soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL). If groundwater contamination exceeds a ch. NR 140 Enforcement Standard (ES) when closure is requested, show the source location and vertical extent, water table and piezometric elevations, and locations and elevations of geologic units, bedrock and confining units, if any.

Figure #: 4 **Title:** Geologic Cross-Section, 2007

Figure #: **Title:**

- Groundwater Isoconcentration Map:** For sites closing with residual groundwater contamination, this map shows the horizontal extent of all groundwater contamination exceeding a ch. NR140 Preventive Action Limit (PAL) and an Enforcement Standard (ES). Indicate the direction and date of groundwater flow, based on the most recent sampling data.

Note: This is intended to show the total area of contaminated groundwater.

Figure #: 5 & 7 **Title:** Groundwater Analytical Results for Analytes Exceeding Action Levels, 2007 & 2009

- Groundwater Flow Direction Map:** A map that represents groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, submit 2 groundwater flow maps showing the maximum variation in flow direction.

Figure #: 6 **Title:** Potentiometric Surface Map (16 November 2007)

Figure #: 9 **Title:** Potentiometric Surface Map (September 2009)

TABLES (meeting the requirements of s. NR 716.15(2)(h)(3))

Tables must be no larger than 8.5 x 14 inches unless the table is submitted electronically. Tables must not contain shading and/or cross-hatching. The use of **BOLD** or *ITALICS* is acceptable.

- Soil Analytical Table:** A table showing remaining soil contamination with analytical results and collection dates.
Note: This is one table of results for the contaminants of concern. Contaminants of concern are those that were found during the site investigation, that remain after remediation. It may be necessary to create a new table to meet this requirement.

Table #: 1 **Title:** Soil Analytical Results for Analytes Detected, 2007

- Groundwater Analytical Table:** Table(s) that show the most recent analytical results and collection dates, for all monitoring wells and any potable wells for which samples have been collected.

Table #: 3, 4, 5 **Title:** Screening Results, 2007; Analytical Results 2007 & 2009; Historical Analytical Results

- Water Level Elevations:** Table(s) that show the previous four (at minimum) water level elevation measurements/dates from all monitoring wells. If present, free product is to be noted on the table.

Table #: 2 **Title:** Water Level Measurements and Well Construction Details

IMPROPERLY ABANDONED MONITORING WELLS

For each monitoring well not properly abandoned according to requirements of s. NR 141.25 include the following documents.

Note: If the site is being listed on the GIS Registry for only an improperly abandoned monitoring well you will only need to submit the documents in this section for the GIS Registry Packet.

- Not Applicable**

- Site Location Map:** A map showing all surveyed monitoring wells with specific identification of the monitoring wells which have not been properly abandoned.

Note: If the applicable monitoring wells are distinctly identified on the Detailed Site Map this Site Location Map is not needed.

Figure #: **Title:**

- Well Construction Report:** Form 4440-113A for the applicable monitoring wells.

- Deed:** The most recent deed as well as legal descriptions for each property where a monitoring well was not properly abandoned.

- Notification Letter:** Copy of the notification letter to the affected property owner(s).

BRRTS #: 02-41-207377

ACTIVITY NAME: WI Air National Guard, 128th ARW, Bldg. 304 Site

NOTIFICATIONS

Source Property

- Letter To Current Source Property Owner:** If the source property is owned by someone other than the person who is applying for case closure, include a copy of the letter notifying the current owner of the source property that case closure has been requested.
- Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying current source property owner.

Off-Source Property

Group the following information per individual property and label each group according to alphabetic listing on the "Impacted Off-Source Property" attachment.

- Letter To "Off-Source" Property Owners:** Copies of all letters sent by the Responsible Party (RP) to owners of properties with groundwater exceeding an Enforcement Standard (ES), and to owners of properties that will be affected by a land use control under s. 292.12, Wis. Stats.
Note: Letters sent to off-source properties regarding residual contamination must contain standard provisions in Appendix A of ch. NR 726.
Number of "Off-Source" Letters:
- Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying any off-source property owner.
- Deed of "Off-Source" Property:** The most recent deed(s) as well as legal descriptions, for all affected deeded **off-source property(ies)**. This does not apply to right-of-ways.
Note: If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.
- Letter To "Governmental Unit/Right-Of-Way" Owners:** Copies of all letters sent by the Responsible Party (RP) to a city, village, municipality, state agency or any other entity responsible for maintenance of a public street, highway, or railroad right-of-way, within or partially within the contaminated area, for contamination exceeding a groundwater Enforcement Standard (ES) and/or soil exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL).
Number of "Governmental Unit/Right-Of-Way Owner" Letters:



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary
Gloria L. McCutcheon, Regional Director

Southeast Region Headquarters
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee, Wisconsin 53212-3128
FAX 414-263-8606
Telephone 414-263-8500
TTY Access via relay - 711

June 16, 2010

In Reply Refer To: FID# 241496970
County of Milwaukee
BRRTS# 02-41-207377

Mr. Stanley Moore
Air National Guard – National Guard Bureau / A7OR
3500 Fetchet Ave
Andrews Air Force Base, MD 20762

Subject: Final Case Closure with Continuing Obligation, WI Air National Guard – 128th Air Refueling Wing – Building 304, 1919 E Grange Ave (Main Gate), Milwaukee, WI 53207

Dear Mr. Moore:

On June 16, 2010, the Wisconsin Department of Natural Resources (WDNR) reviewed your request for closure of the case described above. The WDNR reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases.

The WDNR had previously received a Case Closure Request from you and on February 5, 2010, the WDNR had issued a "Conditional Closure Decision" letter, listing the items necessary to have the case closed. Documentation of the items listed in the letter was received on May 5, 2010.

Based on the correspondence and data provided, it appears that your case meets the closure requirements in ch. NR 726, Wisconsin Administrative Code. The Department considers this case closed and no further investigation or remediation is required at this time, however, you and future property owners must comply with certain continuing obligations as explained in this letter.

GIS Registry

The conditions of case closure set out below in this letter require that your site be listed on the Remediation and Redevelopment Program's GIS Registry. The specific reasons are summarized below:

- Residual soil contamination exists that must be properly managed should it be excavated or removed
- The fence around the property must be maintained as a barrier to limit the public from accessing the contaminated soil

Information that was submitted with your closure request application will be included on the GIS Registry. To review the sites on the GIS Registry web page, visit the RR Sites Map page at <http://dnr.wi.gov/org/aw/rr/gis/index.htm>. If your property is listed on the GIS Registry because of remaining contamination and you intend to construct or reconstruct a well, you will need prior Department approval in accordance with s. NR 812.09(4)(w), Wis. Adm. Code. To obtain approval, Form 3300-254 needs to be completed and submitted to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line <http://dnr.wi.gov/org/water/dwg/3300254.pdf> or at the web address listed above for the GIS Registry.

Closure Conditions

Please be aware that pursuant to s. 292.12 Wisconsin Statutes, compliance with the requirements of this letter is a responsibility to which you and any subsequent property owners must adhere. If these requirements are not followed or if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, welfare, or the environment, the Department may take enforcement action under s. 292.11 Wisconsin Statutes to ensure compliance with the specified requirements, limitations or other conditions related to the property or this case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code. It is the Department's intent to conduct inspections in the future to ensure that the conditions included in this letter including compliance with referenced maintenance plans are met.

Barrier

Pursuant to s. 292.12(2)(a), Wis. Stats., the fence that currently exists around the property shall be maintained in order to prevent direct contact with residual soil contamination that might otherwise pose a threat to human health. If soil in the specific locations described in the GIS packet is excavated in the future, the property owner at the time of excavation must sample and analyze the excavated soil to determine if residual contamination remains. If sampling confirms that contamination is present the property owner at the time of excavation will need to determine whether the material is considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable statutes and rules. In addition, all current and future owners and occupants of the property need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken during excavation activities to prevent a health threat to humans.

Post-Closure Notification Requirements

In accordance with ss. 292.12 and 292.13, Wis. Stats., you must notify the Department before making changes that affect or relate to the conditions of closure in this letter. For this case, examples of changed conditions requiring prior notification include, but are not limited to:

- Development, construction or other changes, including zoning changes, that change the land use from military
- Disturbance or removal in whole or part of the fencing that must be maintained around the facility

Please send any written notifications in accordance with the above requirements to the Southeast Region Remediation & Redevelopment Program, to the attention of the Environmental Program Associate.

Chapter NR 140, Wis. Adm. Code Exemption

Recent groundwater monitoring data at this site indicates that for benzene, 1,2-dichloropropane, methylene chloride and naphthalene at MW-01, contaminant levels exceed the NR 140 preventive action limit (PAL) but are below the enforcement standard (ES). The Department may grant an exemption to a PAL for a substance of public health concern, other than nitrate, pursuant to s. NR 140.28(2)(b), Wis. Adm. Code, if all of the following criteria are met:

1. The measured or anticipated increase in the concentration of the substance will be minimized to the extent technically and economically feasible.
2. Compliance with the PAL is either not technically or economically feasible.

3. The enforcement standard for the substance will not be attained or exceeded at the point of standards application. [Note: at this site the point of standards application is all points where groundwater is monitored.]
4. Any existing or projected increase in the concentration of the substance above the background concentration does not present a threat to public health or welfare.

Based on the information you provided, the Department believes that these criteria have been or will be met. Therefore, pursuant to s. NR 140.28, Wis. Adm. Code, an exemption to the PAL is granted for benzene, 1,2-dichloropropane, methylene chloride and naphthalene at MW-01. Please keep this letter, because it serves as your exemption.

The Department appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Andy Boettcher at (414) 263-8541.

Sincerely,



James A Schmidt
SER Remediation & Redevelopment Team Supervisor

cc: Clair Breckenridge, 128ARW/CEV, 1685 East Grange Ave, Milwaukee, WI 53207
Deborah Hines, PEER Consultants, 7325 Oak Ridge Hwy, Ste 100, Knoxville, TN 37931
Case File



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary
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Southeast Region Headquarters
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee, Wisconsin 53212-3128
FAX 414-263-8606
Telephone 414-263-8500
TTY Access via relay - 711

February 5, 2010

In Reply Refer To: FID# 241496970
County of Milwaukee
BRRTS# 02-41-207377

Mr. Stanley Moore
Air National Guard – National Guard Bureau / A7OR
3500 Fetchet Ave
Andrews Air Force Base, MD 20762

Subject: Conditional Closure Decision, WI Air National Guard – 128th Air Refueling Wing –
Building 304, 1919 E Grange Ave (Main Gate), Milwaukee, WI 53207

Dear Mr. Moore:

On February 4, 2010, the Wisconsin Department of Natural Resources (WDNR) reviewed your request for closure of the case described above. The WDNR reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases. After careful review of the closure request, the WDNR has determined that the contamination on the site in the area of Building 304 appears to have been investigated and remediated to the extent practicable under site conditions. Your case has been remediated to Department standards in accordance with s. NR 726.05, Wis. Adm. Code and will be closed if the following conditions are satisfied:

1. The monitoring wells at the site must be properly abandoned in compliance with ch. NR 141, Wis. Adm. Code. Documentation of well abandonment must be submitted to me on Form 3300-005 found at <http://dnr.wi.gov/org/water/dwg/gw/> or provided by the Department of Natural Resources.
2. Any remaining purge water, waste and/or soil piles generated as part of site investigation or remediation activities must be removed from the site and disposed of or treated in accordance with Department of Natural Resources' rules. Once that work is completed, please send appropriate documentation regarding the treatment or disposal of the remaining purge water, waste and/or soil piles.

When the above conditions have been satisfied, please submit the appropriate documentation (for example, well abandonment forms, disposal receipts, copies of correspondence, etc.) to verify that applicable conditions have been met, and your case will be closed. Your site will be listed on the DNR Remediation and Redevelopment GIS Registry of Closed Remediation Sites. Information that was submitted with your closure request application will be included on the GIS Registry. To review the site on the GIS Registry web page, visit the RR Sites Map page at: <http://dnr.wi.gov/org/aw/rr/gis/index.htm>.

Please be aware that the case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code, if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment.

We appreciate your efforts to protect and restore the environment at this site. Please refer to the FID and BRRTS numbers on the top of this letter in any future correspondence. If you have any questions regarding this letter or the site in general, please contact me at 414-263-8541.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew F. Boettcher". The signature is fluid and cursive, with the first name being the most prominent.

Andrew F Boettcher
SER Hydrogeologist

cc: Clair Breckenridge, 128ARW/CEV, 1685 East Grange Ave, Milwaukee, WI 53207
Deborah Hines, PEER Consultants, 7325 Oak Ridge Hwy, Ste 100, Knoxville, TN 37931
Case File

REFL 426 IMAG 1925

JUN 27 1968 03575 4401170 A CHREC

This Indenture Made by Wisconsin State Armory Board, a corporation existing under section 21.615, Stats., located at Madison, Wisconsin, by Ralph J. Olson, Chairman, and John L. Downing, Jr., Secretary-Treasurer

grantor, of Dane County, Wisconsin, hereby quitclaims to The State of Wisconsin

grantee ~~XXXX~~ ~~XXXXXX~~ for the sum of One Dollar

the following tract of land in Milwaukee County, State of Wisconsin: Lands lying in the N.W. 1/4 Section 34 and the N.E. 1/4 Section 33, T 6 N, R 22 E, described as follows:

Commencing at the S.E. corner of the N.E. 1/4 Section 33, T 6 N, R 22 E, thence westerly along the South line of said 1/4 Section, 81.75 feet to a point, said point being 1,660 feet East of, measured at right angles, the centerline of Runway 1L-19R as said runway is now established and constructed at General Mitchell Field; thence northerly and parallel to the said centerline of said Runway 1L-19R to a point in the N.W. 1/4 Section 34, T 6 N, R 22 E, which point is 660 feet Southeasterly of, measured at right angles to, the centerline of Runway 7R-25L as said runway is now established and constructed at General Mitchell Field; thence Northeasterly and parallel to the said centerline of said Runway 7R-25L to a point which lies on the North Line of the N.W. 1/4 of Section 34, T 6 N, R 22 E, said point being 683.73 feet east of the N.W. corner of said 1/4 Section; thence Easterly on and along the North line of said 1/4 Section to a point which is 100 feet Westerly of the West right-of-way line of the Chicago and Northwestern Railroad, as said railroad right-of-way is laid out through the said 1/4 Section; thence Southerly and parallel to the said West right-of-way line 50 feet to a point; thence Easterly and parallel to the North line of said 1/4

In Witness Whereof, the said grantor has caused these presents to be signed by Ralph J. Olson, its Chairman, Treasurer, and countersigned by John L. Downing, Jr., its Secretary, at _____, Wisconsin, and its corporate seal to be hereto affixed, this 24TH day of JUNE, A. D., 1968. This Board has no corporate seal Signed and Sealed in Presence of

REGISTER'S OFFICE 1 ss Milwaukee County, Wis. RECORDED AT 2:16 PM M 4401170

on JUN 27 1968 in Reel 426 Image 1725-1726

Melan Patten Registrar of Deeds

WISCONSIN STATE ARMORY BOARD Corporate Name

Ralph J. Olson, Chairman

Countersigned: John L. Downing, Jr., Secretary-Treasurer

State of Wisconsin, DANE County, ss.

Personally came before me this twenty-fourth day of June, A. D., 1968.

Ralph J. Olson, Chairman, and John L. Downing, Jr., Secretary-Treasurer of the above named Corporation, to me known to be the persons who executed the foregoing instrument, and to me known to be such Chairman and Secretary of said Corporation, and acknowledged that they executed the foregoing instrument as such officers as the deed of said Corporation, by its authority.

Notary Public, Dane County, Wis.

My commission expires 1:00:00 A. D., 1970

Exhibit "A"

No. _____	
Wisconsin State Armory Board	
To _____	
The State of Wisconsin	
<p style="text-align: center;">QUITCLAIM DEED WARREN ROEBER</p>	
<p style="text-align: center;">REGISTER'S OFFICE, State of Wisconsin, _____ County.</p>	
Received for Record this _____ day of _____, 19____	at _____ o'clock _____ M., and recorded in
Vol. _____ of Deeds on page _____	Register of Deeds.
<p style="text-align: right;">WIS. STATE ARMORY BOARD Deputy. P.O. BOX 372 MADISON, WIS. 53701</p>	

(description continued from opposite side)

Section to a point which lies on the West right-of-way line of the Chicago and Northwestern Railroad; thence Southerly on and along said West right-of-way line to a point which lies on the South line of said N.W. 1/4 Section 34, T 6 N, R 22 E; thence Westerly on and along said South line of said 1/4 Section to the place of beginning, and containing 58-1/2 acres of land more or less, excepting and reserving to grantor, its successors and assigns, for the benefit of the general public at large, the right of way for the free and unobstructed passage of aircraft, by whomsoever owned or operated, in and through the air space, over, across, and above the land hereinabove described, and excepting the interest of the West Shore Pipe Line Company in the above-described premises.

Exhibit 4911

CLIENT: WISCONSIN AIR NATIONAL GUARD

LEASE LAND MAP

LEASE DESCRIPTION B

A parcel of land located in the NW1/4-NW1/4 and the SW1/4-NW1/4, Section 34, T6N, R22E, Milwaukee County, Wisconsin, more fully described as follows:

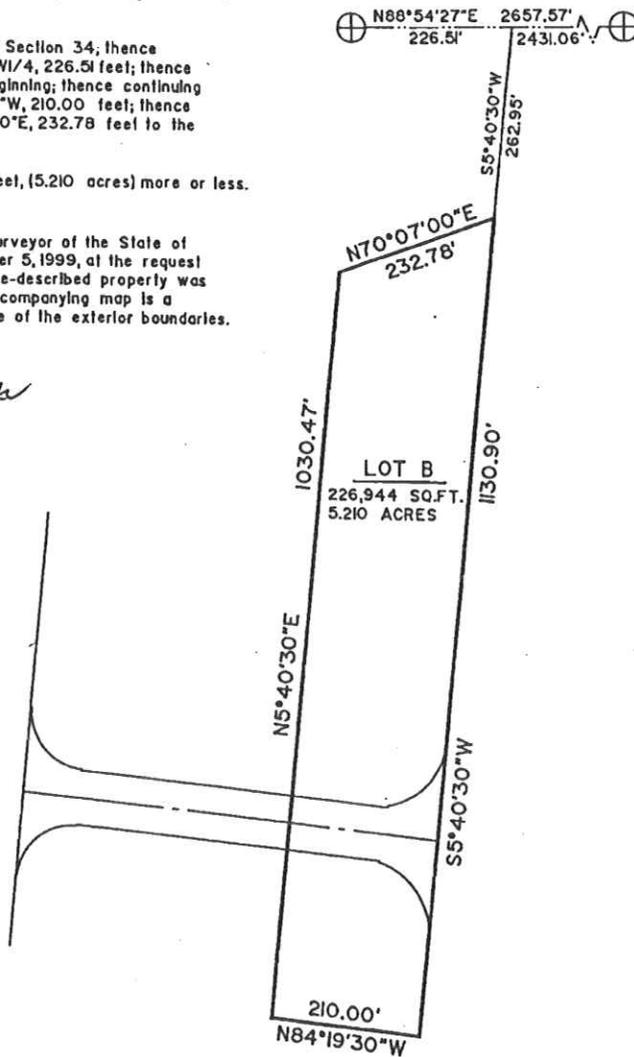
Commencing at the Northwest corner of said Section 34; thence N88°54'27"E, along the north line of said NW1/4, 226.51 feet; thence S5°40'30"W, 262.95 feet to the point of beginning; thence continuing S5°40'30"W, 1130.90 feet; thence N84°19'30"W, 210.00 feet; thence N5°40'30"E, 1030.47 feet; thence N70°07'00"E, 232.78 feet to the point of beginning.

This description contains 226,944 square feet, (5.210 acres) more or less.

I, Roger D. Schneeberger, a registered land surveyor of the State of Wisconsin, do hereby certify that on November 5, 1999, at the request of the Wisconsin Air National Guard, the above-described property was surveyed under my direction and that the accompanying map is a correctly-dimensioned representation to scale of the exterior boundaries.

Roger D. Schneeberger
Roger D. Schneeberger, S-1096

NW CORNER SECTION 34 T6N, R22E N1/4 CORNER SECTION 34 T6N, R22E



N

0 200 400

SCALE: 1" = 200'

LEGEND

⊕ ALUMINUM MONUMENT FOUND



MEAD & HUNT

Mead & Hunt, Inc.
6501 Watts Road, Suite 101
Madison, Wisconsin 53719-2700
Phone: 608-273-6380
Fax: 608-273-6391

Dwg. No. N 9304 S

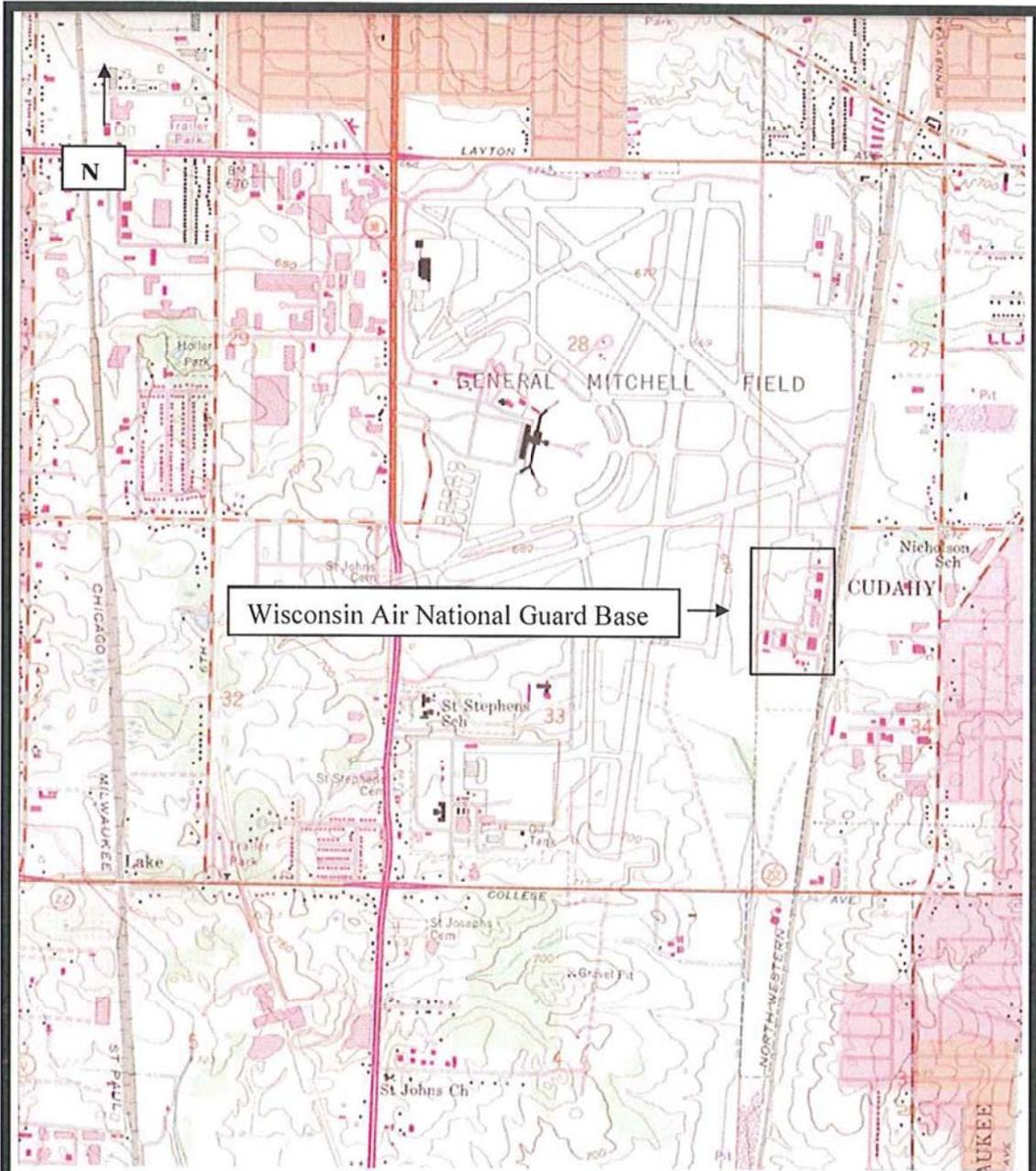
Sheet 1 of 1

Job No. W77-20-99G

h:\survey\99\w77-99g\w772099b.dgn

3. Parcel Identification Number—from Milwaukee County —Tax Key Code is 6409999117—owner is Milwaukee County.

Geographic position data (for center of concrete apron/cap): $x = 692300.9$; $y = 276583.38$
(meters--Wisconsin Transverse Mercator 1991 coordinate system).



SOURCE: USGS GREENDALE QUADRANGLE, WI

SCALE 1:24,000

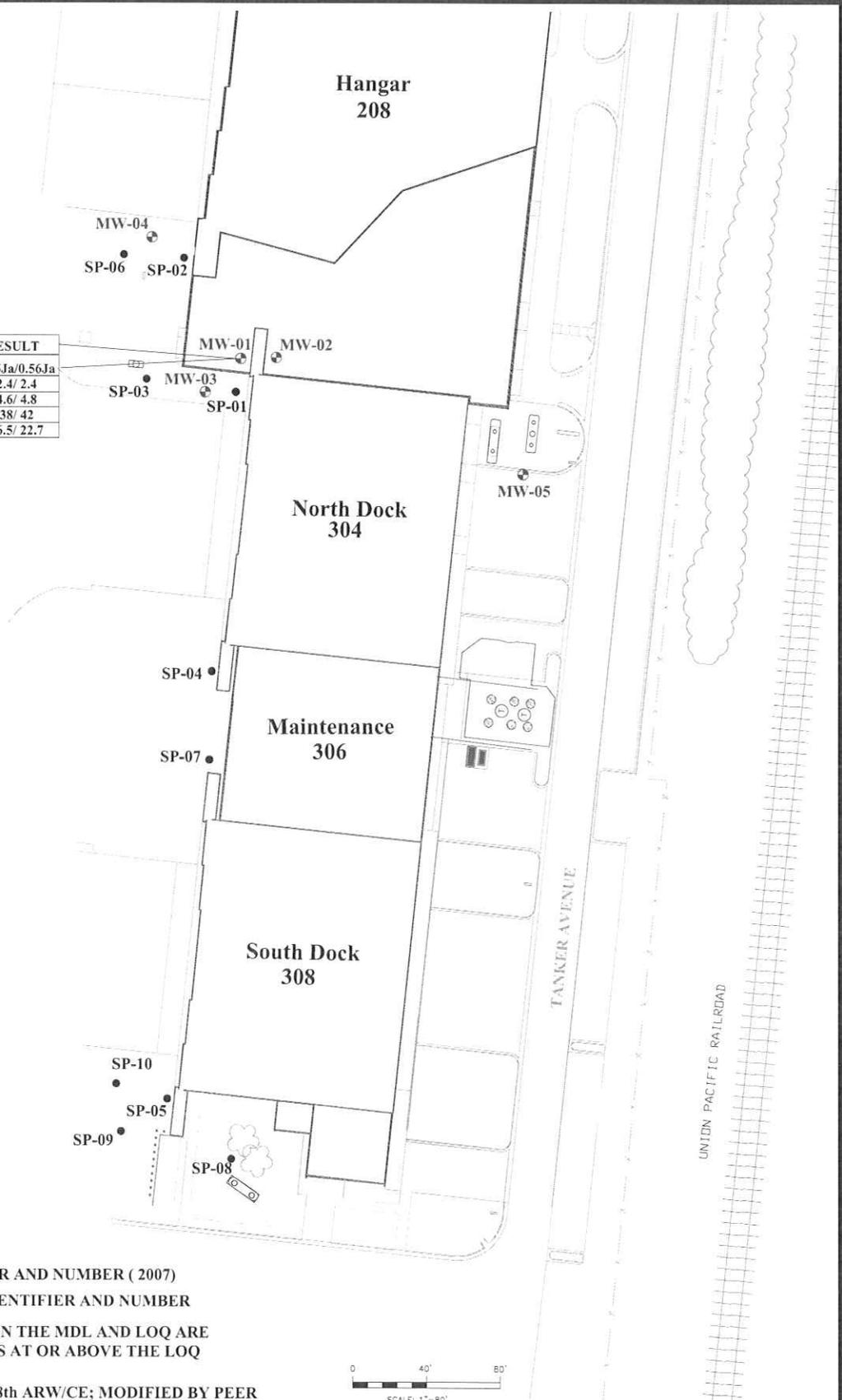
FIGURE 1

BASE LOCATION AND SURROUNDING AREA
 128TH AIR REFUELING WING
 BILLY MITCHELL FIELD
 MILWAUKEE, WISCONSIN





ANALYTE (ug/L)	ES	PAL	RESULT
BENZENE	5.0	0.5	0.55Ja/0.56Ja
1,2-DICHLOROPROPANE	5.0	0.5	2.4/ 2.4
METHYLENE CHLORIDE	5.0	0.5	4.6/ 4.8
NAPHTHALENE	100	10	38/ 42
NAPHTHALENE (PAH SCAN)	100	10	26.5/ 22.7



LEGEND

- SP-10 SOIL PROBE IDENTIFIER AND NUMBER (2007)
- ⊕ MW-04 MONITORING WELL IDENTIFIER AND NUMBER
- Ja RESULTS REPORTED BETWEEN THE MDL AND LOQ ARE LESS CERTAIN THAN RESULTS AT OR ABOVE THE LOQ

SOURCE: KAPUR & ASSOC. 2008; 128th ARW/CE; MODIFIED BY PEER



PEER

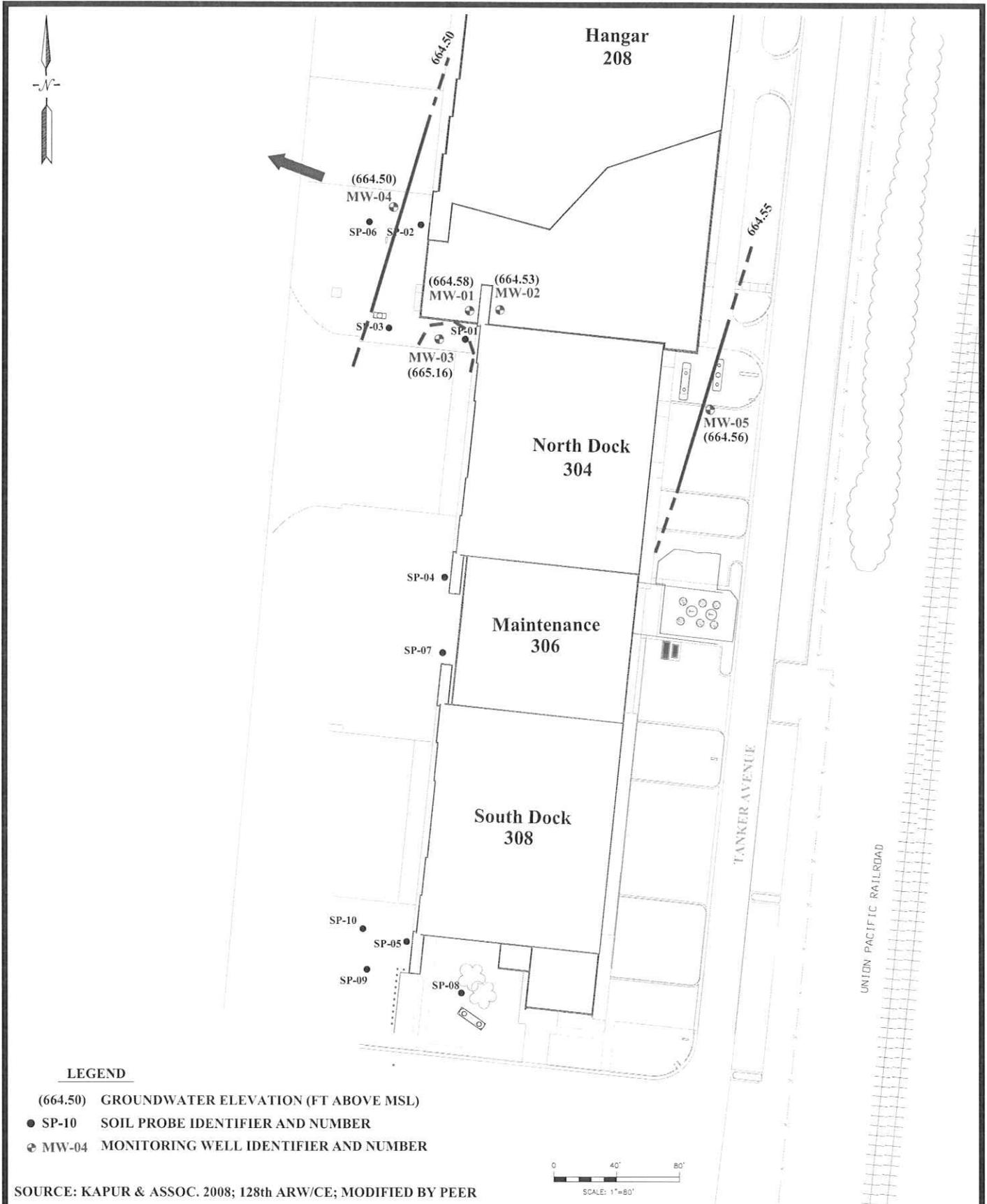
PROJ./3005-028
WI ANG/ FIG 7

GROUNDWATER ANALYTICAL RESULTS FOR ANALYTES EXCEEDING ACTION LEVELS, 2009

BUILDING 304-HANGAR, 128th AIR REFUELING WING WISCONSIN AIR NATIONAL GUARD, MILWAUKEE

FIGURE

7



PEER

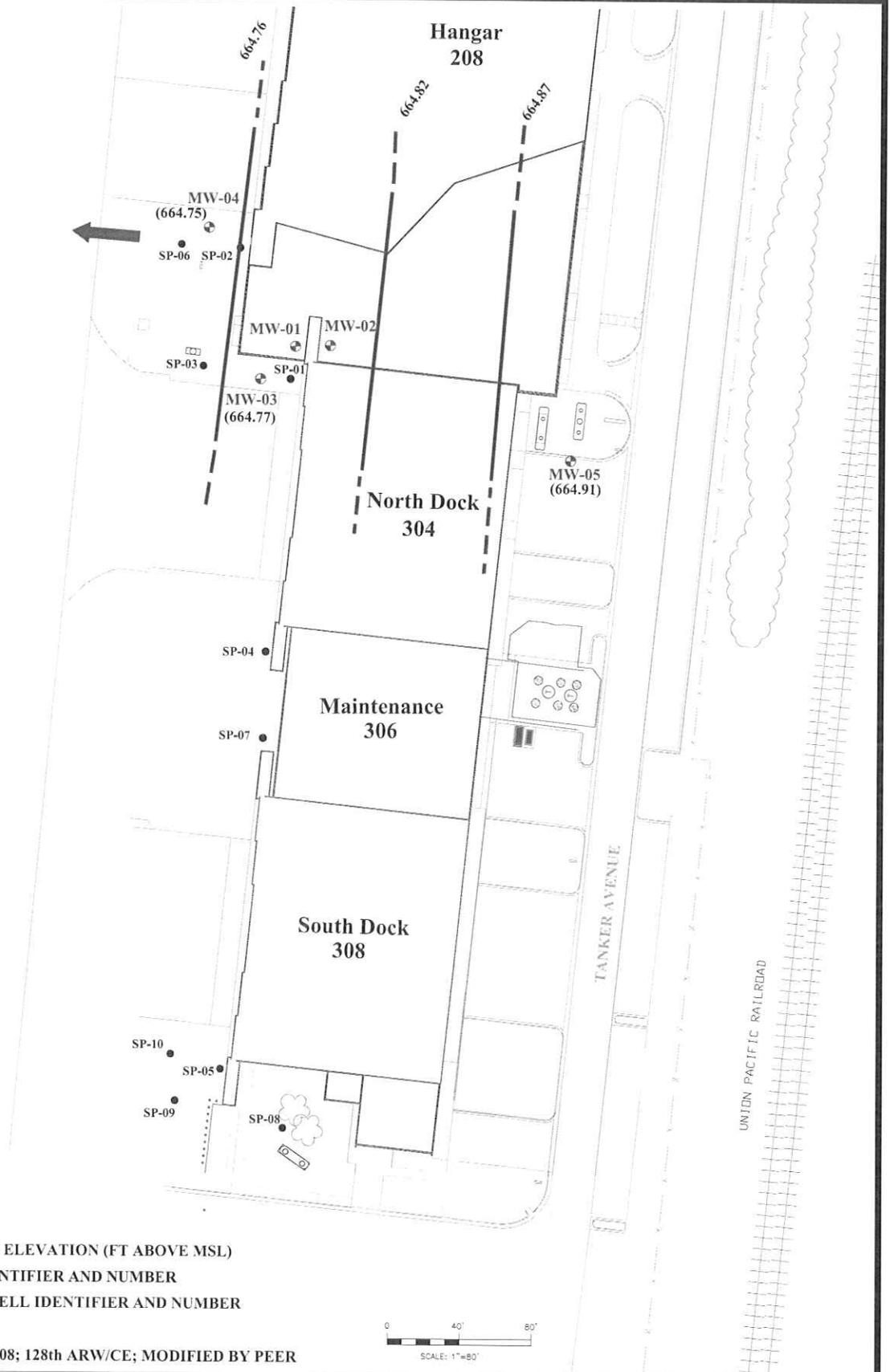
PROJ./3005-028
WI ANG/ FIG 9

POTENTIOMETRIC SURFACE MAP (SEPTEMBER 2009)

BUILDING 304-HANGAR, 128th AIR REFUELING WING
WISCONSIN AIR NATIONAL GUARD, MILWAUKEE

FIGURE

9



LEGEND

- (664.91) GROUNDWATER ELEVATION (FT ABOVE MSL)
- SP-10 SOIL PROBE IDENTIFIER AND NUMBER
- ⊕ MW-04 MONITORING WELL IDENTIFIER AND NUMBER

SOURCE: KAPUR & ASSOC. 2008; 128th ARW/CE; MODIFIED BY PEER



PEER

PROJ./3005-028
WI ANG/ FIG 6

POTENTIOMETRIC SURFACE MAP (16 NOVEMBER 2007)
BUILDING 304-HANGAR, 128th AIR REFUELING WING
WISCONSIN AIR NATIONAL GUARD, MILWAUKEE

FIGURE
6



ANALYTE (ug/kg)	SSL	RESULTS	
		0-2 ft BGS	8-10 ft BGS
METHYLENE CHLORIDE	1.5	31	< 25

ANALYTE (ug/kg)	RCL	RESULTS	
		0-2 ft BGS	9.5-10 ft BGS
BENZO(A)PYRENE	8.8	11	< 2.1

ANALYTE (ug/kg)	RCL	RESULT	
		0-2 ft BGS	8.0-8.8 ft BGS
BENZO(A)PYRENE	8.8	86	< 2.1
DIBENZ(A,H)ANTHRACENE	8.8	16	< 2.3

ANALYTE (ug/kg)	SSL	RESULTS	
		0-2 ft BGS	5.3-5.9 ft BGS
METHYLENE CHLORIDE	1.5	< 25	100

ANALYTE (ug/kg)	RCL	RESULT	
		0-2 ft BGS	10-11 ft BGS
NAPHTHALENE	400	< 25	950
BENZO(A)ANTHRACENE	88	31	97
BENZO(A)PYRENE	8.8	32	50
NAPHTHALENE (PAH SCAN)	400	12	560

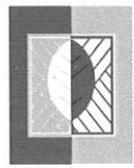
ANALYTE (ug/kg)	RCL	RESULT	
		0-2 ft BGS	5.0-6.3 ft BGS
BENZO(A)PYRENE	8.8	< 2.2	< 2.1/13 (DUP)

LEGEND

- RCL RESIDUAL CONTAMINANT LEVEL
- SSL SOIL SCREENING LEVEL
- OIL/WATER SEPARATOR
- SP-10 SOIL PROBE IDENTIFIER AND NUMBER
- MW-04 MONITORING WELL IDENTIFIER AND NUMBER



SOURCE: KAPUR & ASSOC. 2008; 128th ARW/CE; MODIFIED BY PEER



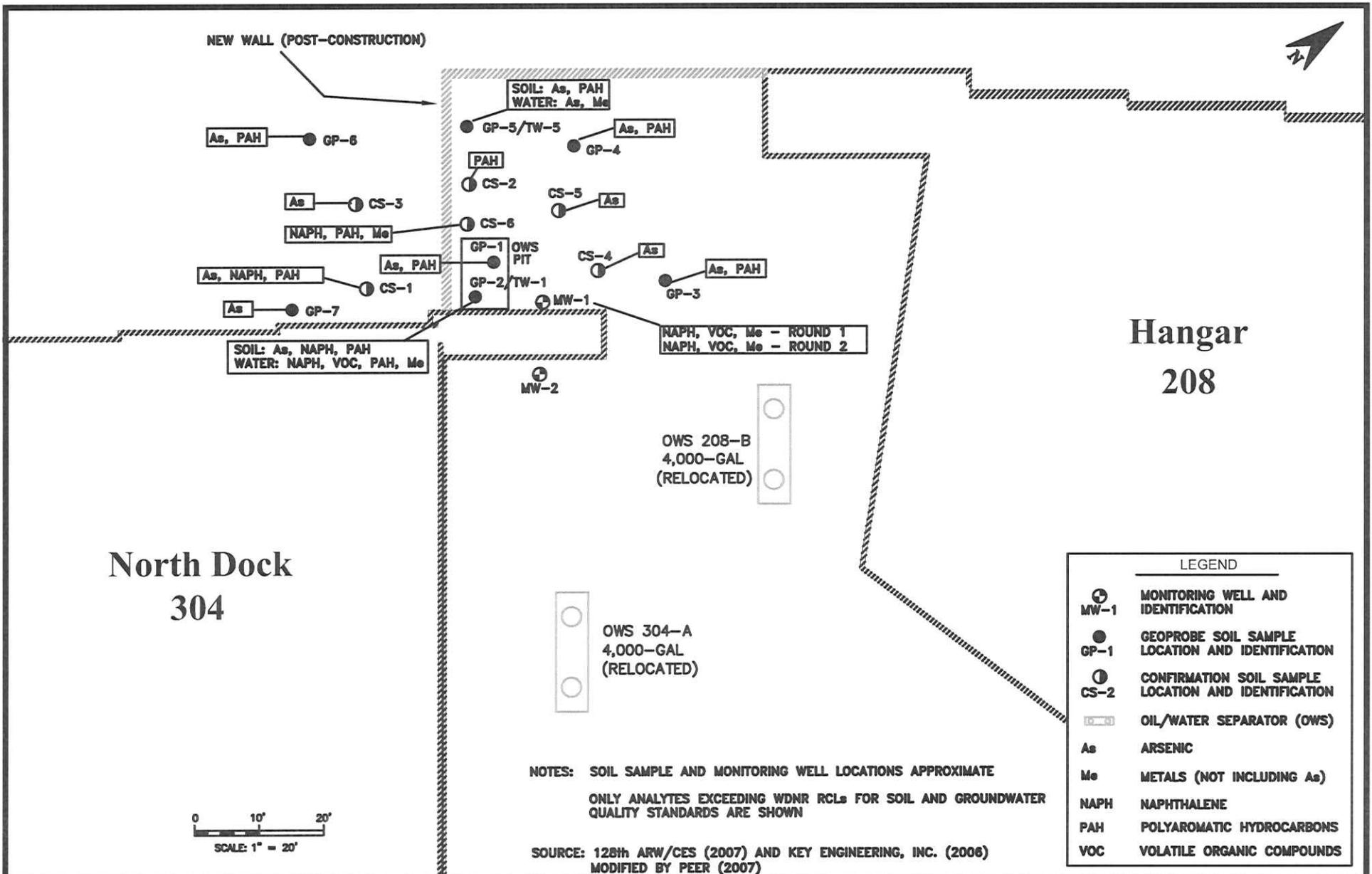
PEER
 PROJ./3005-028
 WI ANG/ FIG 3

SOIL ANALYTICAL RESULTS FOR ANALYTES EXCEEDING ACTION LEVELS, 2007

BUILDING 304-HANGAR, 128th AIR REFUELING WING WISCONSIN AIR NATIONAL GUARD, MILWAUKEE

FIGURE

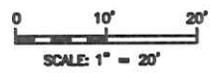
3



North Dock
304

Hangar
208

LEGEND	
	MONITORING WELL AND IDENTIFICATION
	GEOPROBE SOIL SAMPLE LOCATION AND IDENTIFICATION
	CONFIRMATION SOIL SAMPLE LOCATION AND IDENTIFICATION
	OIL/WATER SEPARATOR (OWS)
As	ARSENIC
Me	METALS (NOT INCLUDING As)
NAPH	NAPHTHALENE
PAH	POLYAROMATIC HYDROCARBONS
VOC	VOLATILE ORGANIC COMPOUNDS



NOTES: SOIL SAMPLE AND MONITORING WELL LOCATIONS APPROXIMATE
 ONLY ANALYTES EXCEEDING WDNr RCLs FOR SOIL AND GROUNDWATER QUALITY STANDARDS ARE SHOWN

SOURCE: 128th ARW/CES (2007) AND KEY ENGINEERING, INC. (2006)
 MODIFIED BY PEER (2007)

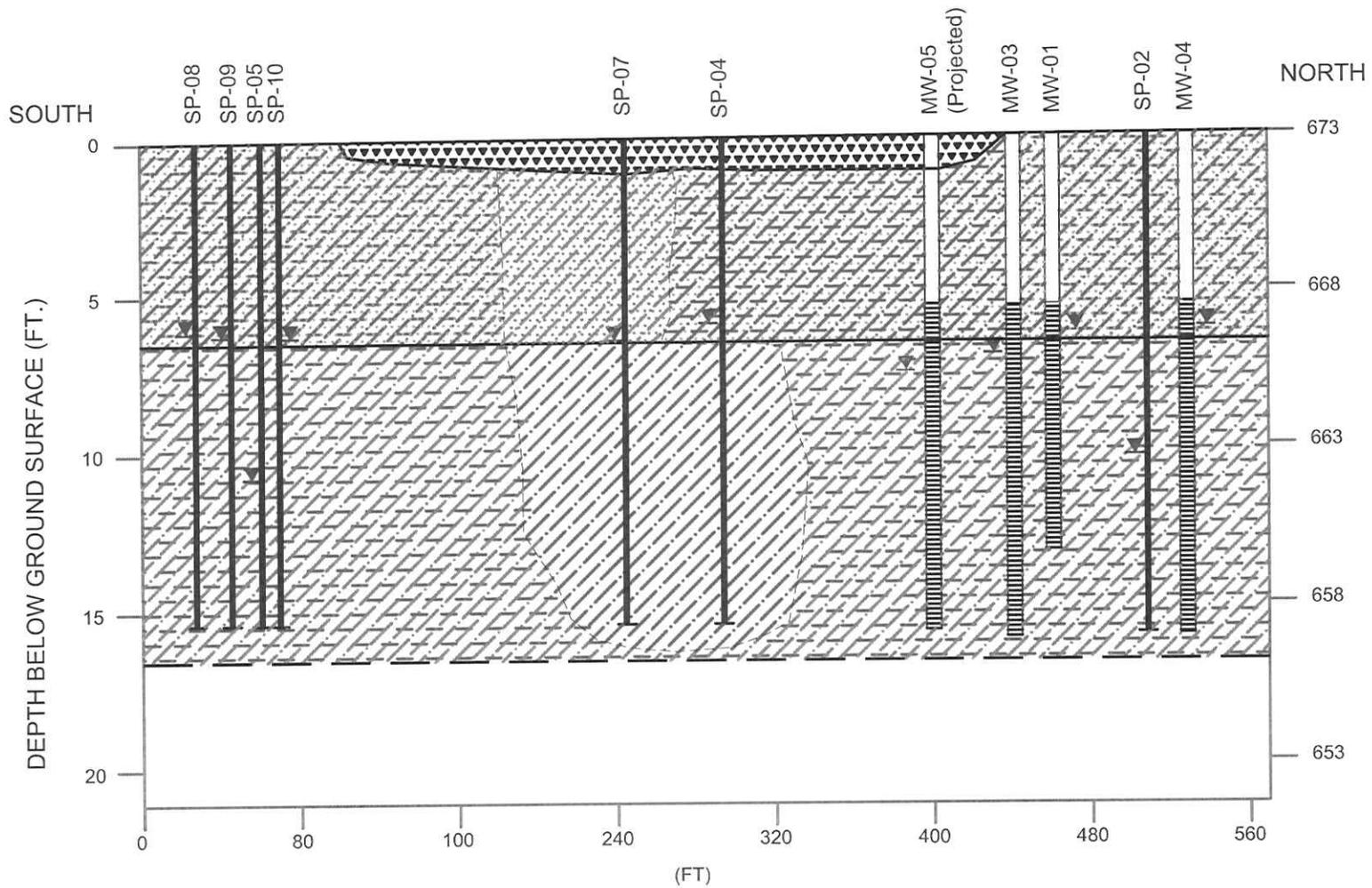


PEER

PROJ./3005-028
 WI ANG/FIG 2

BUILDING 304 SITE INVESTIGATION AREA, 2006
 128th AIR REFUELING WING
 MILWAUKEE, WISCONSIN

FIGURE
2



LEGEND

-  SAND
-  SILT
-  CLAY
-  GRAVEL

 GROUND WATER LEVEL
(SATURATION IN SOIL PROBES)

NOTE: WELL AND PROBE
DIAMETERS NOT TO SCALE.



PEER

PROJ./3005-028
WIS/FIG 4

GEOLOGIC CROSS-SECTION, 2007
BUILDING 304-HANGAR, 128th AIR REFUELING WING
WISCONSIN AIR NATIONAL GUARD, MILWAUKEE

FIGURE
4

Table 1. Soil Analytical Results for Analytes Detected, November 2007
 Building 304-Hangar, 128th ARW
 Wisconsin ANG, Milwaukee

Analyses (µg/kg)	Soil Screening Level ⁽²⁾	Preliminary Remediation Goals ⁽¹⁾			Sample Identification/Location and Depth Interval (ft BGS)									
		Protection of Groundwater	Direct-contact		WIS-SP-01-01	WIS-SP-01-02	WIS-SP-02-01	WIS-SP-02-02	WIS-SP-03-01	WIS-SP-03-02	WIS-SP-04-01	WIS-SP-04-02	WIS-SP-05-01	WIS-SP-05-02
			Non-indust.	Indust.	0 - 2	8.2 - 8.8	0 - 2	9.5 - 10	0 - 2	8.0 - 8.8	0 - 2	5.3 - 5.9	0 - 2	10 - 11
Volatile Organics (8260B)														
n-Butylbenzene	--	--	240,000	240,000	< 48	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	250
s-Butylbenzene	--	--	220,000	220,000	< 29	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	79
p-Isopropyltoluene	--	--	--	--	< 29	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	140
Methylene Chloride	1.5 ⁽³⁾	1.0	9,100	21,000	< 29	< 25	< 25	< 25	< 25	< 25	< 25	100	< 25	< 25
Naphthalene	2,700	400 ⁽²⁾	20,000 ⁽²⁾	11,000 ⁽²⁾	< 29	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	950
n-Propylbenzene	--	--	2,400,000	2,400,000	< 29	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	78
1,2,4-Trimethylbenzene	83,000 *	--	52,000	1,700,000	< 29	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	600
1,3,5-Trimethylbenzene	11,000 *	--	21,000	70,000	< 29	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	220
Toluene	38,000	1,500	5,200,000	5,200,000	< 29	< 25	< 25	< 25	< 25	< 25	< 25	46	< 25	< 25
Xylene, m + p (total)	42,000	4,100	270,000	420,000	< 59	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	75
Xylene, o					< 29	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	44
Semivolatile Organics - PAHs (8270C-SIM)														
Acenaphthene	190,000	38,000	900,000	60,000,000	< 1.8	< 2.0	< 1.8	< 1.9	4.4 Q	< 1.8	< 1.6	< 1.6	2.4 Q	130
Acenaphthylene	--	700	18,000	360,000	< 2.0	< 2.2	< 1.9	< 2.0	5.2 Q	< 2.0	< 1.8	< 1.8	4.2 Q	3.7 Q
Anthracene	4,000,000	3,000,000	5,000,000	300,000,000	< 2.1	< 2.4	2.8 Q	< 2.2	17	< 2.2	< 1.9	< 1.9	9.0	110
Benzo(a)anthracene	--	17,000	88	3,900	< 2.1	< 2.3	11	< 2.2	66	< 2.2	< 1.9	< 1.9	31	97
Benzo(a)pyrene	610 ⁽⁶⁾	48,000	8.8	390	3.6 Q	< 2.2	11	< 2.1	86	< 2.1	< 1.8	< 1.8	32	50
Benzo(b)fluoranthene	--	360,000	88	3,900	8.2	< 2.3	13	< 2.1	87	< 2.1	< 1.8	2.0 Q	49	54
Benzo(g,h,i)perylene	--	6,800,000	1,800	39,000	3.5 Q	< 2.4	7.1 Q	< 2.3	41	< 2.3	< 2.0	< 2.0	20	16
Benzo(k)fluoranthene	--	870,000	880	39,000	4.8 Q	< 2.2	10	< 2.0	79	< 2.0	< 1.8	< 1.8	27	44
Chrysene	--	37,000	8,800	390,000	10	< 2.6	15	< 2.4	85	< 2.4	< 2.1	2.8 Q	48	100
Dibenz(a,h)anthracene	--	38,000	8.8	390	< 2.2	< 2.4	< 2.2	< 2.3	16	< 2.3	< 2.0	< 2.0	6.7	7.3 Q
Fluoranthene	1,900,000	500,000	600,000	40,000,000	21	< 2.4	23	< 2.2	160	< 2.2	< 1.9	< 1.9	3.5 Q	74
Fluorene	250,000	100,000	600,000	40,000,000	< 1.9	< 2.1	< 1.9	< 2.0	5.3 Q	< 2.0	< 1.7	< 1.7	< 2.0	94
Indeno(1,2,3-cd)pyrene	--	680,000	88	3,900	2.1 Q	< 2.3	5.4 Q	< 2.2	38	< 2.2	< 1.9	< 1.9	17	16
1-Methylnaphthalene	--	23,000	1,100,000	70,000,000	2.7 Q	< 1.7	5.6	< 1.6	4.9 Q	< 1.6	< 1.4	< 1.4	10	190
2-Methylnaphthalene	--	20,000	600,000	40,000,000	3.8 Q	< 1.8	8.6	< 1.7	6.2	< 1.7	< 1.5	< 1.5	13	320
Naphthalene	18,000	400	20,000	110,000	3.8 Q	< 1.5	3.2 Q	< 1.4	20	< 1.4	< 1.2	< 1.2	12	560
Phenanthrene	--	1,800	18,000	390,000	15	< 2.3	12	< 2.2	65	< 2.1	< 1.9	2.1 Q	42	330
Pyrene	1,400,000	8,700,000	500,000	30,000,000	11	3.4	16	< 2.3	110	< 2.3	< 2.0	3.0 Q	56	180

NOTES:

- No standard established.
- Bold and boxed concentrations exceed interim guidance Residual Contaminant Level (RCL) based on protection of groundwater.
- Bold concentrations exceed NR 720, interim guidance RCL based on direct contact non-industrial land use, site-specific Soil Screening Levels (SSLs), or Preliminary Remediation Goals (PRGs).
- NS = Not sampled - sample interval contained mostly asphalt and gravel.
- * = Trimethylbenzenes (1,2,4- and 1,3,5- combined).
- (1) = Preliminary Remediation Goals (PRG), U.S. EPA Region IX, 2004.
- (2) = Soil Screening Levels (SSL), Wisconsin DNR, NR 746.06, Table 1.
- (3) = Site-Specific SSLs, Wisconsin DNR Determining RCLs Using the EPA SSL Web Site, 2002, and U.S.EPA Soil Screening Guidance for Chemicals, 2008.
- (4) = Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs), Interim Guidance, Table 1, Suggested Generic RCLs, Wisconsin DNR, Pub. RR-519-97, April 1997 (corrected).
- (5) = RCLs, Wisconsin DNR, NR 720.09, Table 1, based on protection of groundwater.
- (6) = Soil Cleanup Levels for PAHs, Interim Guidance, RCL for Benzo(a)pyrene-Equivalent Concentrations, non-industrial scenario for in-situ soil.
- Q = Laboratory qualifier: analyte detected between limit of detection (LOD) and limit of quantitation (LOQ); concentration uncertain in this range.

Table 1. (Continued)
Soil Analytical Results for Analytes Detected, November 2007
Building 304-Hangar, 128th ARW
Wisconsin ANG, Milwaukee

Analyses (µg/kg)	Soil Screening Level ⁽²⁾	Preliminary Remediation Goals ⁽¹⁾			Sample Identification/Location and Depth Interval (ft BGS)												
		Protection of Groundwater	Direct-contact		WIS-SP-06-01	WIS-SP-06-02	WIS-SP-07-07	WIS-SP-07-01	WIS-SP-08-01	WIS-SP-08-02	WIS-SP-08-02	WIS-SP-09-01	WIS-SP-09-02	WIS-SP-09-02-Dup	WIS-SP-10-01	WIS-SP-10-02	WIS-SP-10-02-Dup
			Non-indust.	Indust.	0 - 2	8 - 10	0 - 2	5.8 - 6.4	0 - 2	5 - 5.8	0 - 2	5 - 6.1	5 - 6.1	0 - 2	5 - 6.3	5 - 6.3	
Volatile Organics (8260B)																	
n-Butylbenzene	--	--	240,000	240,000	< 40	< 40	NS	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	
s-Butylbenzene	--	--	220,000	220,000	< 25	< 25	NS	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	
p-Isopropyltoluene	--	--	--	--	< 25	< 25	NS	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	
Methylene Chloride	1.5 ⁽³⁾	1.0	9,100	21,000	31	< 25	NS	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	
Naphthalene	2,700	400 ⁽⁴⁾	20,000 ⁽⁴⁾	110,000 ⁽⁴⁾	< 25	< 25	NS	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	
n-Propylbenzene	--	--	2,400,000	2,400,000	< 25	< 25	NS	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	
1,2,4-Trimethylbenzene	83,000 *	--	52,000	1,700,000	< 25	< 25	NS	< 25	< 25	< 25	< 25	< 25	< 25	< 25	37 Q	< 25	
1,3,5-Trimethylbenzene	11,000 *	--	21,000	70,000	< 25	< 25	NS	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	
Toluene	38,000	1,500 ⁽⁵⁾	5,200,000	5,200,000	< 25	< 25	NS	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	
Xylene, m + p (total)	42,000	4,100 ⁽⁵⁾	270,000	420,000	< 50	< 50	NS	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	
Xylene, o					< 25	< 25	NS	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	
Semivolatile Organics - PAHs (8270C-SIM)																	
Acenaphthene	190,000	38,000	900,000	60,000,000	< 1.7	< 1.8	NS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.9	< 1.9	< 1.8	
Acenaphthylene	--	700	18,000	360,000	< 1.9	< 2.0	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 1.9	< 1.9	< 2.1	< 2.1	< 2.0	
Anthracene	4,000,000	3,000,000	5,000,000	300,000,000	< 2.1	< 2.2	NS	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.3	< 2.2	3.6 Q	
Benzo(a)anthracene	--	17,000	88	3,900	< 2.1	< 2.2	NS	5.4 Q	< 2.1	2.7 Q	< 2.1	2.1 Q	3.1 Q	< 2.3	< 2.2	16	
Benzo(a)pyrene	610 ⁽⁶⁾	48,000	8.8	390	< 2.0	< 2.1	NS	5.7 Q	< 2.0	3.1 Q	< 2.0	2.9 Q	4.2 Q	< 2.2	< 2.1	13	
Benzo(b)fluoranthene	--	360,000	88	3,900	< 2.0	< 2.1	NS	9.0	< 2.0	3.7 Q	< 2.0	3.4 Q	5.1 Q	< 2.2	< 2.1	11	
Benzo(g,h,i)perylene	--	6,800,000	1,800	39,000	< 2.2	< 2.3	NS	5.7 Q	< 2.2	< 2.2	< 2.2	2.4 Q	3.7 Q	< 2.4	< 2.3	7.3 Q	
Benzo(k)fluoranthene	--	870,000	880	39,000	< 1.9	< 2.0	NS	6.2 Q	< 1.9	2.7 Q	< 2.0	3.2 Q	4.6 Q	< 2.1	< 2.1	13	
Chrysene	--	37,000	8,800	390,000	< 2.3	< 2.4	NS	11	< 2.3	3.7 Q	< 2.3	4.4 Q	5.9 Q	< 2.5	< 2.4	17	
Dibenz(a,h)anthracene	--	38,000	8.8	390	< 2.1	< 2.3	NS	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.4	< 2.3	2.3 Q	
Fluoranthene	1,900,000	500,000	600,000	40,000,000	< 2.1	< 2.2	NS	13	2.4 Q	5.7 Q	< 2.1	5.4 Q	7.9	< 2.3	< 2.2	26	
Fluorene	250,000	100,000	600,000	40,000,000	< 1.9	< 2.0	NS	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 2.1	< 2.0	< 1.9	
Indeno(1,2,3-cd)pyrene	--	680,000	88	3,900	< 2.1	< 2.2	NS	3.3 Q	< 2.1	< 2.1	< 2.1	< 2.1	2.6 Q	< 2.3	< 2.2	6.1 Q	
1-Methylnaphthalene	--	23,000	1,100,000	70,000,000	< 1.5	< 1.6	NS	2.6 Q	< 1.6	< 1.6	< 1.6	< 1.5	< 1.5	< 1.7	< 1.6	2.6 Q	
2-Methylnaphthalene	--	20,000	600,000	40,000,000	< 1.6	< 1.7	NS	3.2 Q	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.8	< 1.7	3.5 Q	
Naphthalene	18,000	400	20,000	110,000	< 1.3	< 1.4	NS	3.8 Q	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.4	< 1.4	3.0 Q	
Phenanthrene	--	1,800	18,000	390,000	< 2.0	< 2.1	NS	8.8	< 2.1	< 2.1	< 2.1	2.2 Q	3.4 Q	< 2.2	< 2.2	13	
Pyrene	1,400,000	8,700,000	500,000	30,000,000	< 2.2	< 2.3	NS	9.8	< 2.2	4.4 Q	< 2.2	4.4 Q	6.7 Q	< 2.4	< 2.3	21	

NOTES:

- No standard established.
- Bold and boxed concentrations exceed interim guidance Residual Contaminant Level (RCL) based on protection of groundwater.
- Bold concentrations exceed NR 720, interim guidance RCL based on direct contact non-industrial land use, site-specific Soil Screening Levels (SSLs), or Preliminary Remediation Goals (PRGs).
- NS = Not sampled - sample interval contained mostly asphalt and gravel.
- * = Trimethylbenzenes (1,2,4- and 1,3,5- combined).
- (1) = Preliminary Remediation Goals (PRG), U.S. EPA Region IX, 2004.
- (2) = Soil Screening Levels (SSL), Wisconsin DNR, NR 746.06, Table 1.
- (3) = Site-Specific SSLs, Wisconsin DNR Determining RCLs Using the EPA SSL Web Site, 2002, and U.S. EPA Soil Screening Guidance for Chemicals, 2008.
- (4) = Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs), Interim Guidance, Table 1, Suggested Generic RCLs, Wisconsin DNR, Pub. RR-519-97, April 1997 (corrected).
- (5) = RCLs, Wisconsin DNR, NR 720.09, Table 1, based on protection of groundwater.
- (6) = Soil Cleanup Levels for PAHs, Interim Guidance, RCL for Benzo(a)pyrene-Equivalent Concentrations, non-industrial scenario for in-situ soil.
- Q = Laboratory qualifier: analyte detected between limit of detection (LOD) and limit of quantitation (LOQ); concentration uncertain in this range.

Table 2.
Water Level Measurements and Well Construction Details
Building 304-Hangar, 128th ARW

Well ID/ Date Installed	Total Depth (ft BGS)	Screen Length (ft BGS)	TOC Elev. (ft AMSL)	DTW (ft BGS) 11-16-07	Potentiometric Surface Elev. (ft AMSL)	DTW (ft BGS) 11-17-07	Potentiometric Surface Elev. (ft AMSL)	DTW (ft BGS) 09-03-09	Potentiometric Surface Elev. (ft AMSL)
MW-01/Dec. 2006	12.8	Unknown ⁽¹⁾	670.988	NM	NM	6.18	664.81	6.41 ⁽³⁾	664.58
MW-02/Dec. 2006	12.5	Unknown ⁽¹⁾	670.478	NM	NM	5.71	664.77	5.95	664.53
MW-03/Nov. 2007	15.1	10	671.906	7.14	664.77	7.10	664.81	6.75	665.16
MW-04/Nov. 2007	14.9	10	671.433	6.68	664.75	5.61 ⁽²⁾	665.82 ⁽²⁾	6.93	664.50
MW-05/Nov. 2007	15.0	10	672.440	7.53	664.91	7.58	664.86	7.88	664.56

NOTES:

1. Well installed during previous investigation.
2. Depth to Water (DTW) seemingly recorded incorrectly based on significant difference observed on previous day.
3. Total depth measured at 9.57 ft BGS; previous TD was 12.8 ft BGS. Very soft bottom observed. Soft material appeared to be fine sediment or bentonite-grout mixture. The pH of MW-01 was approximately 12 (standard units); the pH in other wells ranged from 6.7 to 7.1.

AMSL Above mean sea level
 BGS Below ground surface
 DTW Depth to water
 NM Not measured
 TOC Top of casing

Table 3
Groundwater Screening Results for Analytes Detected, 2007
Building 304-Hangar, 128th ARW
Wisconsin ANG, Milwaukee

Analyte (µg/L)	Groundwater Quality Standards		Sample Identification/Location and Sample Date (µg/L)									
			WIS-GW-SP-01	WIS-GW-SP-02	WIS-GW-SP-03	WIS-GW-SP-04	WIS-GW-SP-05 ⁽³⁾	WIS-GW-SP-06	WIS-GW-SP-07	WIS-GW-SP-08	WIS-GW-SP-09	WIS-GW-SP-10
	ES ⁽¹⁾	PAL ⁽²⁾	11-13-07	11-13-07	11-13-07	11-13-07	11-13-07	11-14-07	11-14-07	11-16-07	11-17-07	11-17-07
Volatile Organics (8260B)												
Benzene	5	0.5	< 0.41	< 0.41	< 0.41	< 0.41	1.2 Q	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41
Methylene Chloride	5	0.5	< 0.43	< 0.43	< 0.43	0.59 Q	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43	< 0.43
Naphthalene	100	10	< 0.74	< 0.74	< 0.74	< 0.74	< 0.74	< 0.74	< 0.74	< 0.74	< 0.74	< 0.74
Semivolatile Organics - PAHs (8270C-SIM)												
Acenaphthene	--	--	< 0.0083	< 0.0082	< 0.0084	< 0.0082	0.094 Q	< 0.0083	< 0.0087	< 0.0083	< 0.0094	< 0.010
Acenaphthylene	--	--	< 0.0083	< 0.0081	< 0.0083	< 0.0081	< 0.035	< 0.0083	< 0.0087	0.015 Q	< 0.0093	< 0.010
Anthracene	3,000	600	< 0.012	< 0.012	< 0.012	< 0.012	< 0.051	< 0.012	< 0.012	0.023 Q	< 0.013	< 0.015
Benzo(a)anthracene	--	--	< 0.016	< 0.016	< 0.016	< 0.016	< 0.068	< 0.016	< 0.017	0.040 Q	< 0.018	0.027 Q
Benzo(a)pyrene ⁽⁴⁾	0.2	0.02	< 0.019	< 0.018	< 0.019	< 0.018	< 0.080	< 0.019	< 0.020	0.040 Q	< 0.021	< 0.023
Benzo(b)fluoroanthene ⁽⁴⁾	0.2	0.02	< 0.016 Z	< 0.016 Z	< 0.016 Z	< 0.016 Z	< 0.068 Z	< 0.016 Z	< 0.017 Z	0.039 QZ	< 0.018 Z	0.024 QZ
Benzo(g,h,i)perylene	--	--	< 0.020	< 0.019	< 0.020	< 0.019	< 0.084	< 0.020	< 0.021	0.040 Q	< 0.022	0.050 Q
Benzo(k)fluoroanthene	--	--	< 0.020 Z	< 0.019 Z	< 0.020 Z	< 0.019 Z	< 0.084 Z	< 0.020 Z	< 0.021 Z	0.040 QZ	< 0.022 Z	< 0.024 Z
Chrysene	0.2	0.02	0.020 Q	< 0.019	< 0.020	< 0.019	< 0.083	< 0.019	< 0.020	0.12	0.069 Q	0.13
Dibenz(a,h)anthracene	--	--	< 0.019	< 0.019	< 0.019	< 0.019	< 0.082	< 0.019	< 0.020	< 0.019	< 0.022	< 0.024
Fluoroanthene	400	80	< 0.016	< 0.015	0.023 Q	< 0.015	< 0.068	< 0.016	< 0.017	0.081	0.018 Q	0.032 Q
Fluorene	400	80	< 0.0092	< 0.0091	< 0.0093	< 0.0091	< 0.040	< 0.0092	0.012 Q	0.076	< 0.010	0.016 Q
Indeno(1,2,3-cd)pyrene	--	--	< 0.019	< 0.019	< 0.019	< 0.019	< 0.082	< 0.019	< 0.020	0.022 Q	< 0.022	< 0.024
1-Methylnaphthalene	--	--	< 0.010	< 0.010	< 0.010	0.024 Q	0.19	< 0.010	0.028 Q	0.018 Q	< 0.012	0.019 Q
2-Methylnaphthalene	--	--	0.017 Q	0.02 Q	0.028 Q	0.039 Q	0.19	0.028 Q	0.048	0.059	0.028 Q	0.055
Naphthalene	100	10	< 0.013	0.015 Q	0.019 Q	0.020 Q	0.93	0.020 Q	0.033 Q	0.029 Q	0.014 Q	0.020 Q
Phenanthrene	--	--	0.015 Q	0.012 Q	0.018 Q	0.017 Q	0.050 Q	< 0.012	0.029 Q	0.18	0.046	0.067
Pyrene	250	50	< 0.015	< 0.015	0.019 Q	< 0.015	< 0.064	< 0.015	< 0.016	0.081	0.033 Q	0.064

NOTES:

-- Groundwater Quality Standards not established.

Bold concentrations exceed Preventive Action Limits (PAL).

(1) = Wisconsin DNR, Groundwater Quality Standards, NR 140, Table 1, Enforcement Standards (ES).

(2) = Wisconsin DNR, Groundwater Quality Standards, NR 140, Table 1, Preventive Action Limits (PAL).

(3) = Sample analysis for PAHs required a dilution of 4x by the laboratory. Value reported as less than the minimum detection level may exceed PAL.

(4) = Value reported as less than the minimum detection level may exceed PAL.

Q = Laboratory qualifier: analyte detected between limit of detection (LOD) and limit of quantitation (LOQ); concentration uncertain in this range.

Z = Laboratory qualifier: compound did not meet resolution criteria.

Table 4. Groundwater Analytical Results for Analytes Detected, 2007 and 2009
 Building 304-Hangar, 128th ARW
 Wisconsin ANG, Milwaukee

Analyte (µg/L)	Groundwater Quality Standards ⁽¹⁾		Sample Identification/Location and Sample Date (µg/L)									
			WIS-MW-01		WIS-MW-02		WIS-MW-03		WIS-MW-04		WIS-MW-05	
	ES	PAL	11-17-07 ⁽²⁾	09-03-09/ DUP.	11-17-07	09-03-09	11-17-07/ DUP.	09-03-09	11-17-07	09-03-09	11-17-07	09-02-09
Volatile Organics (8260B)												
Benzene	5.0	0.5	< 4.1	0.55 Ja/ 0.56 Ja	< 0.41	< 0.20	< 0.41/ < 0.41	< 0.20	< 0.41	< 0.20	< 0.41	< 0.20
sec-Butylbenzene	--	--	< 8.9	0.68 Ja/ 0.65 Ja	< 0.89	< 0.25	< 0.89/ < 0.89	< 0.25	< 0.89	< 0.25	< 0.89	< 0.25
Chlorobenzene	--	--	< 4.1	0.24 Ja/ 0.25 Ja	< 0.41	< 0.20	< 0.41/ < 0.41	< 0.20	< 0.41	< 0.20	< 0.41	< 0.20
Chloromethane	3.0	0.3	< 2.4	< 0.30/ < 0.30	< 0.24	< 0.30	0.24 Q/ < 0.24	< 0.30	< 0.24	< 0.30	< 0.24	< 0.30
1,2-Dichloropropane	5.0	0.5	8.9 Q	2.4/ 2.4	< 0.46	< 0.50	< 0.46/ < 0.46	< 0.50	< 0.46	< 0.50	< 0.46	< 0.50
Ethylbenzene	700	140	< 5.4	0.69 Ja/ 0.62 Ja	< 0.54	< 0.50	< 0.54/ < 0.54	< 0.50	< 0.54	< 0.50	< 0.54	< 0.50
Isopropylbenzene	--	--	< 5.9	0.69/ 0.67	< 0.59	< 0.20	< 0.59/ < 0.59	< 0.20	< 0.59	< 0.20	< 0.59	< 0.20
p-Isopropyltoluene	--	--	9.7 Q	1.1/ 0.73	0.95 Q	< 0.20	< 0.67/ < 0.67	< 0.20	< 0.67	< 0.20	< 0.67	< 0.20
Methylene Chloride	5.0	0.5	10 Q	4.6/ 4.8	< 0.43	< 1.0	< 0.43/ < 0.43	< 1.0	< 0.43	< 1.0	< 0.43	< 1.0
Naphthalene	100	10	850	38/ 42	< 0.74	< 0.25	< 0.74/ < 0.74	< 0.25	< 0.74	< 0.25	< 0.74	< 0.25
n-Propylbenzene	--	--	9.0 Q	1.2 Ja/ 1.2 Ja	< 0.81	< 0.50	< 0.81/ < 0.81	< 0.50	< 0.81	< 0.50	< 0.81	< 0.50
Tetrachloroethene	5.0	0.5	< 4.5	1.0 Ja/ 1.1 Ja	< 0.45	< 0.50	< 0.45/ < 0.45	< 0.50	< 0.45	< 0.50	< 0.45	< 0.50
Toluene	1000	200	47	6.6/ 6.5	< 0.67	< 0.50	< 0.67/ < 0.67	< 0.50	< 0.67	< 0.50	< 0.67	< 0.50
Trichloroethene	5.0	0.5	< 4.8	0.69/ 0.69	< 0.48	< 0.20	< 0.48/ < 0.48	< 0.20	< 0.48	< 0.20	< 0.48	< 0.20
1,2,4-Trimethylbenzene	480*	96*	140	15/ 14	< 0.97	< 0.20	< 0.97/ < 0.97	< 0.20	< 0.97	< 0.20	< 0.97	< 0.20
1,3,5-Trimethylbenzene	480*	96*	40	14/ 14	< 0.83	< 0.20	< 0.83/ < 0.83	< 0.20	< 0.83	< 0.20	< 0.83	< 0.50
Xylenes, total	10,000**	1,000**	NR	5.7/ 5.6	NR	< 0.50	NR/ NR	< 0.50	NR	< 0.50	NR	< 0.50
Xylene, m + p	10,000**	1,000**	22 Q	NR/ NR	< 1.8	NR	< 1.8/ < 1.8	NR	< 1.8	NR	< 1.8	NR
Xylene, o	10,000**	1,000**	20 Q	NR/ NR	< 0.83	NR	< 0.83/ < 0.83	NR	< 0.83	NR	< 0.83	NR
Semivolatile Organics - PAHs (8270C-SIM)												
Acenaphthene	--	--	5.8	1.15/ 0.862	0.013 Q	< 0.00967	< 0.0089/ < 0.0086	< 0.00870	< 0.0086	< 0.0101	< 0.0083	< 0.00967
Acenaphthylene	--	--	2.4 Q	0.351/ 0.274	< 0.0083	< 0.0106	< 0.0089/ < 0.0085	< 0.00950	< 0.0085	< 0.0110	< 0.0083	< 0.0106
Anthracene	3,000	600	< 1.3	0.115/ 0.101	0.013 Q	< 0.0189	< 0.013/ < 0.012	< 0.01170 Q	< 0.012	< 0.0198	< 0.012	< 0.0189
Benzo (a) anthracene	--	--	< 1.8	0.0128 J/ 0.0127 J	< 0.016	0.0251 J	< 0.017/ < 0.016	0.0110 J	< 0.016	0.0183 J	< 0.016	0.0251 J
Benzo(b)fluoranthene	0.2	0.02	< 1.8	< 0.0076/ < 0.0076	< 0.016 Z	0.0175 J	< 0.017 Z/ < 0.016 Z	< 0.00760	< 0.016	< 0.00884	< 0.016 Z	0.0175 J
Benzo(k)fluoranthene	--	--	< 2.2 Z	< 0.0077/ < 0.0077	< 0.020 Z	0.0156 J	< 0.021 Z/ < 0.020 Z	< 0.00770	< 0.020	< 0.00895	< 0.020 Z	0.0156 J
Benzo(a)pyrene	0.2	0.02	< 2.1	< 0.0160/ < 0.0160	< 0.019	< 0.0178	< 0.020/ < 0.019	< 0.0160	< 0.019	< 0.0186	< 0.019	< 0.0178
Benzo(g,h,i)perylene	--	--	< 2.2	< 0.00810/ < 0.00810	< 0.020	0.0111 J	< 0.021/ < 0.020	< 0.00810	< 0.020	< 0.00942	< 0.020	0.0111 J
Chrysene	0.2	0.02	< 2.1	< 0.0070/ < 0.0070	< 0.019	0.0168 J	< 0.021/ < 0.020	< 0.00700	< 0.020	0.0108 J	< 0.019	0.0168
Dibenzo(a,h)anthracene	--	--	< 2.1	< 0.0081/ 0.00853 J	< 0.019	0.0161 J	< 0.021/ < 0.020	< 0.00810	< 0.020	< 0.00942	< 0.019	0.0161 J
Fluoranthene	400	80	< 1.7	0.0678 J/ 0.0548 J	< 0.016	0.0128 J	< 0.017/ < 0.016	< 0.00850	< 0.016	< 0.00988	< 0.016	0.028 J
Fluorene	400	80	2.5 Q	0.664/ 0.534	0.020 Q	< 0.0111	< 0.0099/ < 0.0095	< 0.0100	< 0.0095	< 0.0116	< 0.0092	< 0.0111
1-Methylnaphthalene	--	--	630	NR/ NR	0.012 Q	NR	0.018 Q/ 0.012 Q	NR	< 0.011	NR	< 0.010	NR
2-Methylnaphthalene	--	--	870	39.6/ 33.6	0.015 Q	< 0.0344	0.026 Q/ 0.019 Q	< 0.0310	< 0.012	< 0.0360	0.017 Q	< 0.0344
Naphthalene	100	10	640	26.5/ 22.7	0.050	< 0.0322	0.022 Q/ 0.014 Q	< 0.0290	0.013 Q	< 0.0337	< 0.013	< 0.0322
Phenanthrene	--	--	< 1.3	0.271/ 0.226	0.035 Q	0.0174 J	0.024 Q/ 0.015 Q	< 0.0140	0.012 Q	0.0418 J	0.015 Q	0.0174 J
Pyrene	250	50	< 1.6	0.0543 J/ 0.0452 J	< 0.015	< 0.0200	< 0.016/ < 0.015	< 0.0180	< 0.015	< 0.0209	< 0.015	< 0.0200

NOTES:

-- Groundwater Quality Standards not established.

Bold and boxed concentrations exceed Enforcement Standards (ES); bold concentrations exceed Preventive Action Limits (PAL).

(1) = Wisconsin DNR, Groundwater Quality Standards, NR 140, Table 1.

(2) = Sample analyses required a dilution of 10x by the laboratory. Minimum Detection Level (MDL) reported may exceed the ES and/or PAL.

* = Trimethylbenzenes (1,2,4- and 1,3,5- combined).

** = Includes meta-, ortho-, and para-xylenes combined. The PAL has been set at a concentration that is intended to address taste and odor concerns associated with this substance.

J = Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the MDL. Concentrations within this range are estimated.

Ja = Results reported between the MDL and Limit of Quantitation (LOQ) are less certain than results at or above the LOQ.

NR = Not Reported.

Q = Laboratory qualifier: analyte detected between Limit of Detection (LOD) and LOQ; concentration uncertain in this range.

Z = Laboratory qualifier: compound did not meet resolution criteria.

Table 5. Summary of Historical Groundwater Analytical Results
Building 304-Hangar, 128th ARW
Wisconsin ANG, Milwaukee

Analyte (µg/L)	Groundwater Quality Standards ⁽¹⁾		Sample Identification/Location and Sample Date (µg/L)							
			WIS-MW-01				WIS-MW-02			
	ES	PAL	12-27-06	02-20-07	11-17-07 ⁽²⁾	09-03-09/ DUP.	12-27-06	02-20-07	11-17-07	09-03-09
Volatile Organics (8260B)										
Benzene	5.0	0.5	0.54 J	1.96	< 4.1	0.55 Ja/ 0.56 Ja	< 0.47	< 0.47	< 0.41	< 0.20
n-Butylbenzene	--	--	6.0	11.9	< 9.3	< 0.20/ < 0.20	< 1.1	< 0.52	< 0.93	< 0.20
sec-Butylbenzene	--	--	1.94 J	4.3	< 8.9	0.68 Ja/ 0.65 Ja	< 0.76	< 0.36	< 0.89	< 0.20
Chlorobenzene	--	--	NR	NR	< 4.1	0.24 Ja/ 0.25 Ja	NR	NR	< 0.41	< 0.20
Chloromethane	3.0	0.3	NR	NR	< 2.4	< 0.30/ < 0.30	NR	NR	< 0.24	< 0.30
1,2-Dichloropropane	5.0	0.5	1.58	9.7	8.9 Q	2.4/ 2.4	< 0.47	< 0.47	< 0.46	< 0.50
Ethylbenzene	700	140	1.11 J	5.7	< 5.4	0.69 Ja/ 0.62 Ja	< 0.38	< 0.38	< 0.54	< 0.50
Isopropylbenzene	--	--	1.61 J	6.0	< 5.9	0.69/ 0.67	< 0.99	< 0.48	< 0.59	< 0.20
p-Isopropyltoluene	--	--	2.41 J	5.5	9.7 Q	1.1/ 0.73	< 0.81	< 0.35	0.95 Q	< 0.20
Methylene Chloride	5.0	0.5	3.12	15	10 Q	4.6/ 4.8	< 0.69	< 0.69	< 0.43	< 1.0
Naphthalene	100	10	128	520	850	38/ 42	< 2.2	< 1.8	< 0.74	< 0.25
n-Propylbenzene	--	--	3.08	11.1	9.0 Q	1.2 Ja/ 1.2 Ja	< 0.61	< 0.38	< 0.81	< 0.50
Tetrachloroethene	5.0	0.5	NR	NR	< 4.5	1.0 Ja/ 1.1 Ja	NR	NR	< 0.45	< 0.50
Toluene	1,000	200	7.7	51	47	6.6/ 6.5	< 0.59	< 0.46	< 0.67	< 0.50
Trichloroethene	5.0	0.5	NR	NR	< 4.8	0.69/ 0.69	NR	NR	< 0.48	< 0.20
1,2,4-Trimethylbenzene	480*	96*	50.8	166	140	15/ 14	< 1.59	< 1.57	< 0.97	< 0.20
1,3,5-Trimethylbenzene	480*	96*	(3)	(3)	40	14/ 14	(3)	(3)	< 0.83	< 0.20
Xylenes, total	10,000**	1,000**	11.2	54.1	NR	5.7/ 5.6	< 1.42	< 0.99	NR	< 0.50
Xylene, m + p	10,000**	1,000**	NR	NR	22 Q	NR/ NR	NR	NR	< 1.8	NR
Xylene, o	10,000**	1,000**	NR	NR	20 Q	NR/ NR	NR	NR	< 0.83	NR
Semivolatile Organics - PAHs (8270C-SIM)										
Acenaphthene	--	--	0.65	2.15 J	5.8	1.15/ 0.862	0.029 J	< 0.015	0.013 Q	< 0.00967
Acenaphthylene	--	--	0.23 J	< 1.6	2.4 Q	0.351/ 0.274	< 0.012	< 0.016	< 0.0083	< 0.0106
Anthracene	3,000	600	< 0.13	< 1.3	< 1.3	0.115/ 0.101	0.032 J	< 0.013	0.013 Q	< 0.0189
Benzo(a)anthracene	--	--	< 0.12	< 1.5	< 1.8	0.0128 J/ 0.0127 J	0.023 J	0.022 J	< 0.016	0.0251 J
Benzo(b)fluoranthene ⁽⁴⁾	0.2	0.02	< 0.09	< 1.4	< 1.8 Z	< 0.0076/ < 0.0076	0.014 J	< 0.014	< 0.016 Z	0.0175 J
Benzo(k)fluoranthene	--	--	< 0.09	< 2.3	< 2.2 Z	< 0.0077/ < 0.0077	< 0.009	< 0.023	< 0.020 Z	0.0156 J
Benzo(a)pyrene ⁽⁴⁾	0.2	0.02	< 0.08	< 1.5	< 2.1	< 0.0160/ < 0.0160	0.11 J	< 0.015	< 0.019	< 0.0178
Benzo(g,h,i)perylene	--	--	< 0.1	< 1.5	< 2.2	< 0.00810/ < 0.00810	< 0.01	< 0.015	< 0.020	0.0111 J
Chrysene ⁽⁴⁾	0.2	0.02	< 0.11	< 1.6	< 2.1	< 0.0070/ < 0.0070	0.012 J	< 0.016	< 0.019	0.0168 J
Dibenz(a,h)anthracene	--	--	< 0.09	< 1.5	< 2.1	< 0.0081/ 0.00853 J	< 0.009	< 0.015	< 0.019	0.0161 J
Fluoranthrene	400	80	< 0.11	< 1.5	< 1.7	0.0678 J/ 0.0548 J	0.046	0.032 J	< 0.016	0.0128 J
Fluorene	400	80	0.25 J	< 1.9	2.5 Q	0.664/ 0.534	0.025 J	< 0.019	0.020 Q	< 0.0111
1-Methylnaphthalene	--	--	45	155	630	NR/ NR	0.031 J	0.027 J	0.012 Q	NR
2-Methylnaphthalene	--	--	73	272	870	39.6/ 33.6	0.048 J	0.039 J	0.015 Q	< 0.0344
Naphthalene	100	10	57	254	640	26.5/ 22.7	0.058 J	0.065	0.050	< 0.0322
Phenanthrene	--	--	< 0.11	< 1.7	< 1.3	0.271/ 0.226	0.076	0.044 J	0.035 Q	0.0174 J
Pyrene	250	50	< 0.1	< 1.5	< 1.6	0.0543 J/ 0.0452 J	0.038	0.026 J	< 0.015	< 0.0200

NOTES:

- Groundwater Quality Standards not established.
- Bold and boxed concentrations exceed Enforcement Standards (ES); bold concentrations exceed Preventive Action Limits (PAL).
- (1) = Wisconsin DNR, Groundwater Quality Standards, NR 140, Table 1.
- (2) = Sample analyses required a dilution of 10x by the laboratory. Minimum Detection Level (MDL) reported may exceed ES and/or PAL.
- (3) = Value reported is for 1,2,4- and 1,3,5-trimethylbenzene combined.
- (4) = MDL reported may exceed ES and/or PAL.
- * = Trimethylbenzenes (1,2,4- and 1,3,5- combined).
- ** = Includes meta-, ortho-, and para-xylenes combined. The PAL has been set at a concentration intended to address taste and odor concerns associated with this substance.
- NR = Not Reported.
- J = Concentration detected is equal to or greater than the MDL but less than the Reporting Limit (RL).
- Q = Laboratory qualifier: analyte detected between Limit of Detection (LOD) and Limit of Quantitation (LOQ); concentration uncertain in this range.
- Z = Laboratory qualifier: compound did not meet resolution criteria.
- J = Analyte detected at a level less than the RL and greater than or equal to the MDL. Concentrations within this range are estimated.
- Ja = Results reported between the MDL and LOQ are less certain than results at or above the LOQ.