

Source Property Information

BRRTS #:	<input type="text" value="02-42-279977"/>	CLOSURE DATE:	<input type="text" value="06/03/2016"/>
ACTIVITY NAME:	<input type="text" value="Fort McCoy LF #2"/>	FID #:	<input type="text" value="642024900"/>
PROPERTY ADDRESS:	<input type="text" value="Fort McCoy"/>	DATCP #:	<input type="text"/>
MUNICIPALITY:	<input type="text" value="Sparta"/>	PECFA#:	<input type="text"/>
PARCEL ID #:	<input type="text" value="018-00241-0000"/>		

***WTM COORDINATES:**

X: Y:

** 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)

CONTINUING OBLIGATIONS

Contaminated Media for Residual Contamination:

- | | |
|---|--|
| <input checked="" type="checkbox"/> <u>Groundwater</u> Contamination > ES (236) | <input type="checkbox"/> <u>Soil</u> Contamination > *RCL or **SSRCL (232) |
| <input type="checkbox"/> Contamination in ROW | <input type="checkbox"/> Contamination in ROW |
| <input type="checkbox"/> Off-Site Contamination | <input type="checkbox"/> Off-Site Contamination |

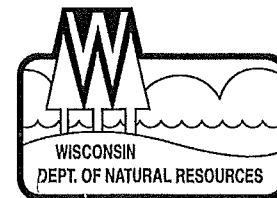
Site Specific Obligations:

- | | |
|--|---|
| <input type="checkbox"/> Soil: maintain industrial zoning (220)
<i>(note: soil contamination concentrations
between non-industrial and industrial levels)</i> | <input checked="" type="checkbox"/> Cover or Barrier (222) |
| <input type="checkbox"/> Structural Impediment (224) | <input checked="" type="checkbox"/> Direct Contact |
| <input type="checkbox"/> Site Specific Condition (228) | <input type="checkbox"/> Soil to GW Pathway |
| | <input type="checkbox"/> Vapor Mitigation (226) |
| | <input type="checkbox"/> Maintain Liability Exemption (230)
<i>(note: local government unit or economic
development corporation was directed to
take a response action)</i> |

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

- Yes No N/A

* Residual Contaminant Level
**Site Specific Residual Contaminant Level



June 3, 2016

Mr. James R. Hessil
Environmental Division Chief
U. S. Army - Fort McCoy
2171 South 8th Avenue
Fort McCoy, WI 54656-5136

KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS

SUBJECT: Final Case Closure with Continuing Obligations
Fort McCoy LF #2, Fort McCoy, Sparta, WI
DNR BRRTS Activity #: 02-42-279977
FID #: 642024900

Dear Mr. Hessil:

The Department of Natural Resources (DNR) considers the Fort McCoy LF (Landfill) #2 site closed, with continuing obligations. No further investigation or remediation is required at this time. However, you, future property owners, and occupants of the property must comply with the continuing obligations as explained in the conditions of closure in this letter. Please read over this letter closely to ensure that you comply with all conditions and other on-going requirements. Provide this letter and any attachments listed at the end of this letter to anyone who purchases, rents or leases this property from you.

This final closure decision is based on the correspondence and data provided, and is issued under chs. NR 726 and 727, Wis. Adm. Code. The DNR West Central Regional (WCR) Closure Committee reviewed the request for closure on March 3, 2016. The DNR WCR Closure Committee reviewed this environmental remediation case for compliance with state laws and standards to maintain consistency in the closure of these cases. A request for remaining actions needed was issued by the DNR on March 29, 2016, and documentation that the conditions in that letter were met was received on June 2, 2016.

This former landfill has waste in place and groundwater contaminated with metals. Responses included placement of a cap, consisting primarily of sand and prairie vegetation south of Treatment Drive. Landfill side slopes were capped with select fill, a geotextile membrane, riprap and sand. A separate soil cover was also placed over a small area north of Treatment Drive. The conditions of closure and continuing obligations required were based on the property being used for "training" (equivalent to industrial) purposes.

Continuing Obligations

The continuing obligations for this site are summarized below. Further details on actions required are found in the section Closure Conditions.

- Groundwater contamination is present at or above ch. NR 140, Wis. Adm. Code enforcement standards.
- Engineered covers south of Treatment Drive and a soil cover north of Treatment Drive must be maintained over waste, and the DNR must be notified and approve any changes to these barriers.

The DNR fact sheet “Continuing Obligations for Environmental Protection,” RR-819, helps to explain a property owner’s responsibility for continuing obligations on their property. The fact sheet may be obtained at <http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf>.

GIS Registry

This site will be included on the Bureau for Remediation and Redevelopment Tracking System (BRRTS on the Web) at <http://dnr.wi.gov/topic/Brownfields/clean.html>, to provide public notice of residual contamination and of any continuing obligations. The site can also be viewed on the Remediation and Redevelopment Sites Map (RRSM), a map view, under the Geographic Information System (GIS) Registry layer, at the same web address.

DNR approval prior to well construction or reconstruction is required for all sites shown on the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. To obtain approval, complete and submit Form 3300-254 to the DNR Drinking and Groundwater program’s regional water supply specialist. This form can be obtained on-line at <http://dnr.wi.gov/topic/wells/documents/3300254.pdf>.

All site information is also on file at the West Central Regional DNR office, at 1300 West Clairemont Avenue, Eau Claire, WI 54701. This letter and information that was submitted with your closure request application, including any maintenance plan and maps, can be found as a Portable Document Format (PDF) in BRRTS on the Web.

Prohibited Activities

Certain activities are prohibited at this closed site because maintenance of a barrier is intended to prevent contact with residual waste. When a barrier is required, the condition of closure requires notification of the DNR before making a change, in order to determine whether or not further action is needed to maintain the protectiveness of the remedy employed. The following activities are prohibited on any portion of the property where an engineered cover, soil cover, or other barrier is required, as shown on the **attached maps** entitled, “Location Map,” Attachment D.2, and “Capped Areas,” Attachment D.2.a, dated December, 2015, unless prior written approval has been obtained from the DNR:

- removal of the existing barrier or cover;
- replacement with another barrier or cover;
- excavating or grading of the land surface;
- filling on covered or paved areas;
- plowing for agricultural cultivation;
- construction or placement of a building or other structure;
- changing the use or occupancy of the property to a residential exposure setting, which may include certain uses, such as single or multiple family residences, a school, day care, senior center, hospital, or similar residential exposure settings.

Closure Conditions

Compliance with the requirements of this letter is a responsibility to which you and any subsequent property owners must adhere. DNR staff will conduct periodic prearranged inspections to ensure that the conditions included in this letter and the attached maintenance plan are met. If these requirements are not followed, the DNR may take enforcement action under s. 292.11, Wis. Stats. to ensure compliance with the specified requirements, limitations or other conditions related to the property.

Please send written notifications in accordance with the following requirements to:
Department of Natural Resources
Attn: Remediation and Redevelopment Program Environmental Program Associate
1300 West Clairemont Avenue
Eau Claire, WI 54701

Residual Groundwater Contamination (ch. NR 140, 812, Wis. Adm. Code)

Groundwater contamination greater than enforcement standards is present on this contaminated property, as shown on the **attached map** entitled “Groundwater Isoconcentration Map,” Attachment B.3.b, dated December 2015. If you intend to construct a new well, or reconstruct an existing well, you’ll need prior DNR approval.

Cover or Barrier (s. 292.12 (2) (a), Wis. Stats., s. NR 726.15, s. NR 727.07 Wis. Adm. Code)

The engineered cover (south of Treatment Drive) and soil cover (north of Treatment Drive) which exist in the locations shown on the **attached maps** entitled, “Location Map,” Attachment D.2, and “Capped Areas,” Attachment D.2.a, dated December, 2015 shall be maintained in compliance with **the attached maintenance plan** in order to prevent direct contact with residual waste that might otherwise pose a threat to human health.

The cover approved for this closure was designed to be protective for a commercial or industrial use setting. Before using the property for residential purposes, you must notify the DNR at least 45 days before taking an action, to determine if additional response actions are warranted.

A request may be made to modify or replace a cover or barrier. Before removing or replacing the cover, you must notify the DNR at least 45 days before taking an action. The replacement or modified cover or barrier must be protective of the revised use of the property, and must be approved in writing by the DNR prior to implementation. A cover or barrier for industrial land uses, or certain types of commercial land uses may not be protective if the use of the property were to change such that a residential exposure would apply. This may include, but is not limited to single or multiple family residences, a school, day care, senior center, hospital or similar settings. In addition, a cover or barrier for multi-family residential housing use may not be appropriate for use at a single family residence.

The **attached maintenance plan and inspection log (DNR form 4400-305)** are to be kept up-to-date and on-site at the Fort McCoy Directorate of Public Works Office. Inspections shall be conducted annually, in accordance with the attached maintenance plan. Submit the inspection log to the DNR only upon request.

In Closing

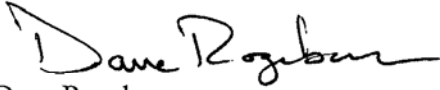
Please be aware that the case may be reopened pursuant to s. NR 727.13, Wis. Adm. Code, for any of the following situations:

- 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,
- if the property owner does not comply with the conditions of closure, with any deed restrictions applied to the property, or with a certificate of completion issued under s. 292.15, Wis. Stats., or
- a property owner fails to maintain or comply with a continuing obligation (imposed under this closure approval letter).

Mr. James R. Hessel
U.S. Army – Fort McCoy
June 3, 2016
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The DNR 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 Mae Willkom at 715-839-3748, or at mae.willkom@wisconsin.gov.

Sincerely,



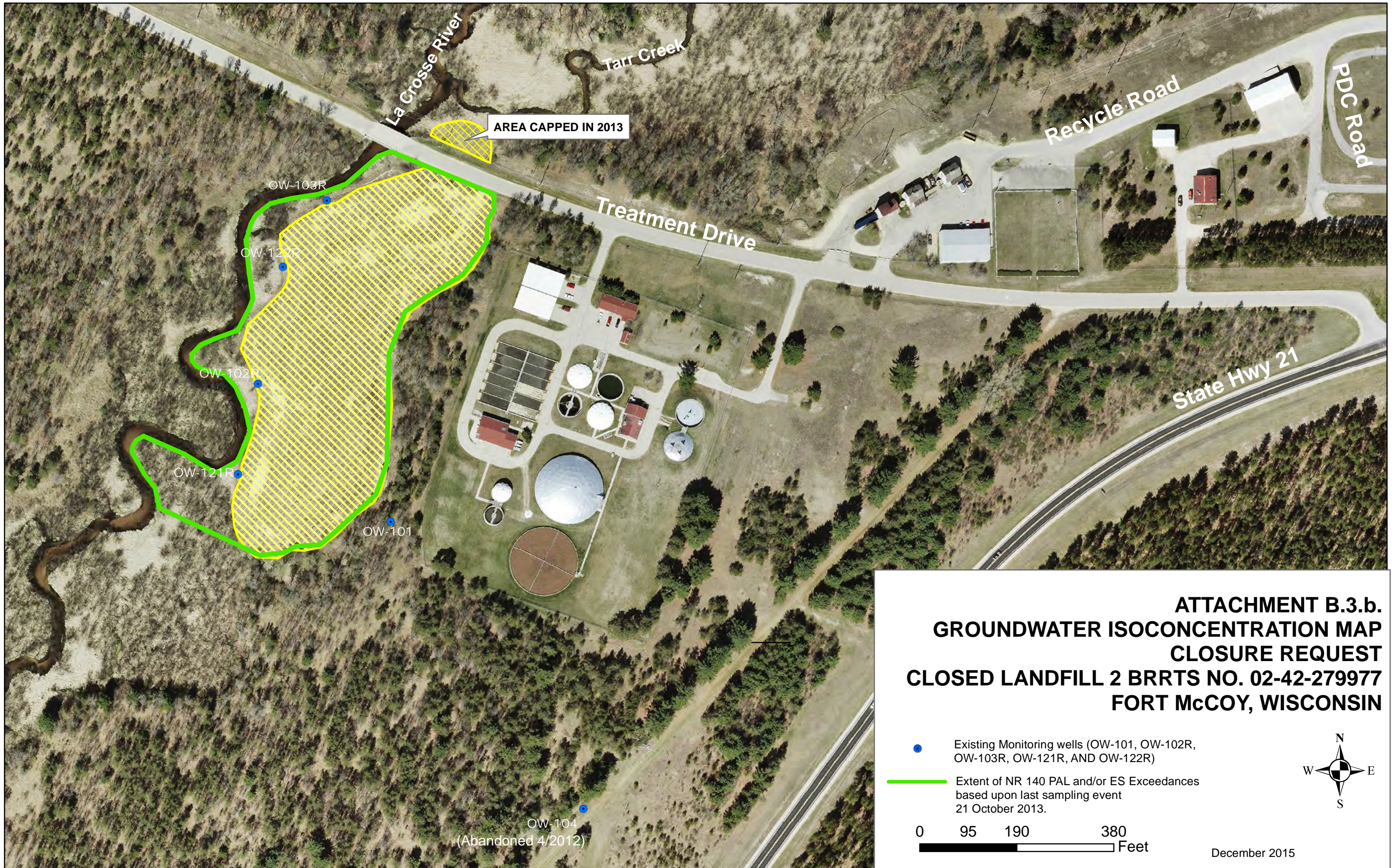
Dave Rozeboom
West Central Region Team Supervisor
Remediation & Redevelopment Program

Attachments:

- Groundwater Isoconcentration Map, Attachment B.3.b, dated December 2015
- Maintenance Plan, Attachment D, dated February, 2016 w/selected attachments,
Location Map, Attachment D.2., dated December, 2015
Capped Areas, Attachment D.2.a, dated December, 2015
Continuing Obligations Inspection and Maintenance Log, DNR Form 4400-305

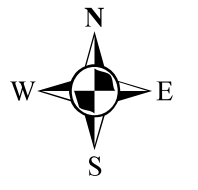
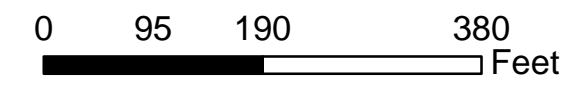
*The maintenance plan may
be seen in Attachment D.

cc: Craig Bartholomew, Fort McCoy, 2171 South 8th Avenue, Fort McCoy, WI 54656

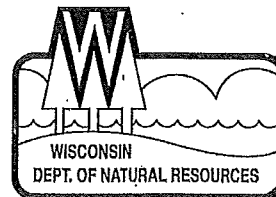


**ATTACHMENT B.3.b.
GROUNDWATER ISOCONCENTRATION MAP
CLOSURE REQUEST
CLOSED LANDFILL 2 BRRTS NO. 02-42-279977
FORT McCOY, WISCONSIN**

- Existing Monitoring wells (OW-101, OW-102R, OW-103R, OW-121R, AND OW-122R)
- Extent of NR 140 PAL and/or ES Exceedances based upon last sampling event 21 October 2013.



December 2015



March 29, 2016

Mr. James R. Hessil
Environmental Division Chief
U. S. Army - Fort McCoy
2171 South 8th Avenue
Fort McCoy, WI 54656-5136

Subject: Remaining Actions Needed
Fort McCoy LF (Landfill) #2, Fort McCoy, Sparta, Wisconsin
DNR BRRTS Activity # 02-42-279977

Dear Mr. Hessil:

On March 3, 2016, the West Central Regional (WCR) Closure Committee reviewed your request for closure of the case described above. The Regional Closure Committee reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases. The following actions are needed to complete our review of your request. Upon completion of these actions, closure approval will be provided.

Remaining Actions Needed

Monitoring Well or Remedial System Piping Abandonment

The monitoring wells at the site must be properly abandoned in accordance with ch. NR 141, Wis. Adm. Code. Documentation of well abandonment for all wells must be submitted to Mae Willkom on Form 3300-005, found at <http://dnr.wi.gov/topic/groundwater/forms.html>.

Purge Water, Waste and Soil Pile Removal

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 the applicable 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.

Documentation

When the required actions have been completed, submit the appropriate documentation within 120 days of the date of this letter, to verify their completion. At that point, your closure request can be approved and your case can be closed.

Submit all changes to the original closure request in one final, complete compact disk. For the paper copy, only revisions or updates need to be submitted. The submittal of both an electronic and paper copy are required in accordance with s. NR 726.09 (1), Wis. Adm. Code.

Mr. James R. Hessel
U.S. Army - Fort McCoy
March 29, 2016
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GIS Registry

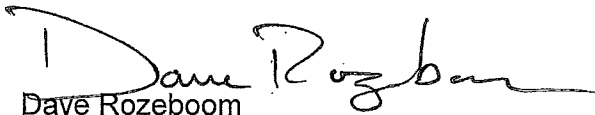
Your site will be listed on the DNR Remediation and Redevelopment Program's GIS Registry, to provide public notice of remaining contamination and continuing obligations. The continuing obligations will be specified in the final closure approval. Information that was submitted with your closure request application will be included on the Bureau for Remediation and Redevelopment Tracking System (BRRTS on the Web), at <http://dnr.wi.gov/topic/Brownfields/rrsm.html>.

In Conclusion

We appreciate your efforts to restore the environment at this site. This remedial action project is nearing completion. I look forward to working with you to complete all remaining actions that are necessary to achieve closure.

If you have any questions regarding this letter, please contact the project manager at 715-839-3748, or by email at mae.willkom@wisconsin.gov.

Sincerely,



Dave Rozeboom
West Central Region Team Supervisor
Remediation & Redevelopment Program

cc: Craig Bartholomew, Fort McCoy, 2171 South 8th Avenue, Fort McCoy, WI 54656

SUBMIT AS UNBOUND PACKAGE IN THE ORDER SHOWN

Notice: Pursuant to ch. 292, Wis. Stats., and chs. NR 726 and 746, Wis. Adm. Code, this form is required to be completed for case closure requests. The closure of a case means that the Department of Natural Resources (DNR) has determined that no further response is required at that time based on the information that has been submitted to the DNR. All sections of this form must be completed unless otherwise directed by the Department. DNR will consider your request administratively complete when the form and all sections are completed, all attachments are included, and the applicable fees required under ch. NR 749, Wis. Adm. Code, are included, and sent to the proper destinations. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.). Incomplete forms will be considered "administratively incomplete" and processing of the request will stop until required information is provided.

Site Information			
BRRTS No. 02-42-279977	VPLE No.		
Parcel ID No. 018-00241-0000			
FID No. 642024900	WTM Coordinates		
	X 462511.6	Y 392950.2	
BRRTS Activity (Site) Name Fort McCoy LF #2	WTM Coordinates Represent: <input checked="" type="checkbox"/> Source Area <input type="checkbox"/> Parcel Center		
Site Address Just West of 2210 Treatment Drive Acres Ready For Use	City Fort McCoy	State WI	ZIP Code 54656
	100		

Responsible Party (RP) Name US Army: Army Contact-Craig Bartholomew Company Name
--

Mailing Address US Army - Fort McCoy	City Fort McCoy	State WI	ZIP Code 54656
Phone Number (608) 388-8453	Email craig.o.bartholomew2.civ@mail.mil		

Check here if the RP is the owner of the source property.

Environmental Consultant Name

Consulting Firm

Mailing Address	City	State	ZIP Code
Phone Number	Email		

Fees and Mailing of Closure Request

- Send a copy of page one of this form and the applicable ch. NR 749, Wis. Adm. Code, fee(s) to the DNR Regional EPA (Environmental Program Associate) at <http://dnr.wi.gov/topic/Brownfields/Contact.html>. Check all fees that apply:

<input checked="" type="checkbox"/> \$1,050 Closure Fee	<input checked="" type="checkbox"/> \$300 Database Fee for Soil
<input checked="" type="checkbox"/> \$350 Database Fee for Groundwater or Monitoring Wells (Not Abandoned)	Total Amount of Payment \$ <u>\$1,700.00</u>
	<input type="checkbox"/> Resubmittal, Fees Previously Paid
- Send one paper copy and one e-copy on compact disk of the entire closure package to the Regional Project Manager assigned to your site. Submit as *unbound, separate documents* in the order and with the titles prescribed by this form. For electronic document submittal requirements, see <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>.

Site Summary

If any portion of the Site Summary Section is not relevant to the case closure request, you must fully explain the reasons why in the relevant section of the form. All information submitted shall be legible. Providing illegible information will result in a submittal being considered incomplete until corrected.

1. General Site Information and Site History

- A. **Site Location:** Describe the physical location of the site, both generally and specific to its immediate surroundings.
 Closed Landfill 2 (CLF2) is located southwest of the cantonment area. The waste water treatment plant is located east of the landfill. The western boundary of the landfill is adjacent to the La Crosse River. Forested land is present just south of the site, and Treatment Drive borders the landfill to the north. Installation property between the La Crosse River and the western boundary of Fort McCoy is utilized as training lands. No residences or office buildings are located in this area (Attachments B.1.a. and B.1.b.). There are no wells present between the downgradient CLF2 monitoring wells, located between the landfill and river, and the western installation boundary located 0.65 miles from the landfill (Attachment B.1.b. Detailed Site Map). The nearest upgradient potable well is located over 3 miles northeast of CLF2.

The deed for the property, signed deed statement, verification of zoning, and explanation of why there is not a certified survey map are all included in Attachments F.1. through F.4.

- B. **Prior and current site usage:** Specifically describe the current and historic occupancy and types of **use**.
 Prior to being used as a landfill, the CLF2 site was undeveloped land next to the La Crosse River. The site is located just outside the cantonment area next to the La Crosse River, 0.65 miles from the western property boundary of Fort McCoy (Attachment B.1.b.). CLF2 was reportedly used between 1942 and 1945 (during World War II; CET Environmental Services, Inc., 2000. Final Construction Report, Capping of Closed Landfill #2, Fort McCoy, Wisconsin, April 2000).
- C. **Current zoning** (e.g., industrial, commercial, residential) for the site and for neighboring properties, and how verified (Provide documentation in Attachment G).
 CLF2 is located on property designated (zoned) for training purposes (Attachment F.3. Verification of Zoning).
- D. **Describe how and when site contamination was discovered.**
 The landfill was evaluated during a 1979 RCRA Pollution Abatement Survey (CET Environmental Services, Inc., 2000. Final Construction Report, Capping of Closed Landfill #2, Fort McCoy, Wisconsin, April 2000), during the 1987 RCRA Facilities Assessment (RFA; Wisconsin Department of Natural Resources (WDNR), 1987. RCRA Facility Assessment (RFA). Fort McCoy, Wisconsin. prepared by; Bill Evans, Hazardous Waste Specialist, Wisconsin Department of Natural Resources. October 1987), and during the 1992 and 1993 RCRA Facilities Investigation (RFI). The RCRA Facilities Investigation included actual sample collection (SEC Donohue, 1994. RCRA Facility Investigation, Fort McCoy Military Reservation, Monroe County, Wisconsin. November 1994).
- E. **Describe the type(s) and source(s) or suspected source(s) of contamination.**
 Between World War II and the 1960s three incinerators were utilized for disposal of the wastes generated on the installation. The landfill was used for disposal of the incinerator ash, some demolition wastes, and other non-recyclable materials (CET Environmental Services, Inc., 2000. Final Construction Report, Capping of Closed Landfill #2, Fort McCoy, Wisconsin, April 2000). However, no records were kept of specific materials or volumes disposed (SEC Donohue, 1994. RCRA Facility Investigation, Fort McCoy Military Reservation, Monroe County, Wisconsin. November 1994). Reports indicate that the landfill was closed in 1949.

A pile of concrete rubble was discovered on top of the landfill sometime between 1958 and 1965. In addition, a 1979 U.S. Army Corps of Engineers survey reported cans, bottles, empty lubricant oil drums, and an empty solvent can on the east and southeast sides of the landfill. The survey also reported observing an oily looking leachate (CET Environmental Services, 2000. Final Construction Report, Capping of Closed Landfill #2, Fort McCoy, Wisconsin. April 2000).

The vast majority of waste material was apparently composed of incinerator ash. Incineration processes would likely have removed virtually all volatile organic compounds (VOCs) and most, if not all, of the semi-volatile organic compounds (SVOCs). These processes would have resulted in waste containing mainly metals and inert debris. Therefore, even if small volumes of other materials were placed in the landfill, VOCs were not likely major constituents of the waste.

- F. **Other relevant site description information** (or enter Not Applicable).
 The waste material remained uncapped and exposed to direct volatilization, along with direct contact with precipitation at the surface for approximately 50 years. Removal of waste from along the river's edge, placing it on top of the landfill, and regrading it, during cap construction, promoted additional volatilization of some of the waste materials.

Prior to and following capping, all of the waste has been exposed to leaching by vertical infiltration of precipitation or horizontal flow of groundwater for more than 60 years. All of these processes would likely remove any VOC constituents that may have been present.

- G. **List BRRTS activity/site name and number for BRRTS activities at this source property, including closed cases.**
 Not Applicable.

- H. List BRRTS activity/site name(s) and number(s) for all properties immediately adjacent to (abutting) this source property. Fort McCoy Landfill #3 and Grit Arca (BRRTS No. 02-42-279983) are located southeast and east (upgradient) of CLF2 (Attachment B.1.c., RR Sites Map).

2. General Site Conditions

A. Soil/Geology

- i. Describe soil type(s) and relevant physical properties, thickness of soil column across the site, vertical and lateral variations in soil types.
Subsurface investigation beneath the site extended to 26 feet below ground surface (bgs) at well OW-101 (Attachment B.1.b., Detailed Site Map). The only geologic unit encountered during the study is Quaternary alluvium. This unit is composed of medium grained, well sorted sand (SP). Bedrock was not encountered. The site conceptual model prepared during the RFI is included as Attachment B.3.a. (SEC Donohue, 1994. RCRA Facility Investigation, Fort McCoy Military Reservation, Monroe County, Wisconsin. November 1994).
- ii. Describe the composition, location and lateral extent, and depth of fill or waste deposits on the site.
Attachment B.1.b. shows that the lateral extent of capped ash covers an area south of Treatment Drive of approximately five acres. There is also an additional 0.16 acres of capped ash located north of Treatment Drive adjacent to the former landfill. The investigation did not evaluate the thickness of the ash material. However, as shown on Attachment B.3.a., the landfill was created by filling the wetland located adjacent to the La Crosse River, as was common prior to the implementation of laws to protect wetland areas. Therefore, a portion of the ash extends below the shallow water table, for as much as several feet.
- iii. Describe the depth to bedrock, bedrock type, competency and whether or not it was encountered during the investigation.
Bedrock is present at greater than 26 feet (total depth of investigation) beneath land surface at the site, and was not encountered during the investigation (Attachment B.3.a., Site Conceptual Model). Bedrock beneath Fort McCoy is mainly composed of Cambrian Sandstone, which ranges from very soft (weathered) to very hard. This unit is several hundred feet thick, and is composed mainly of sand with some silt and shale zones. It serves as the principal aquifer for this region of the state.
- iv. Describe the nature and locations of current surface cover(s) across the site (e.g., natural vegetation, landscaped areas, gravel, hard surfaces, and buildings).
Typically clay capping is utilized to minimize leaching of contaminants caused by precipitation flowing through the waste materials as it migrates to the water table. Clay capping also prevents erosion and direct contact with the waste. However, at CLF2, a portion of the waste is present beneath the water table. Therefore, a clay cap would not significantly reduce the potential for groundwater to leach contaminants from the waste materials. The "objectives of a cover at CLF2 [were] to prevent direct contact with the waste and minimize erosion of waste material." Thus, the 1996 Corrective Measures Study Report (CMSR) determined that the added expense of an NR 504 clay cap was not justified (Rust Environmental & Infrastructure, 1996. Draft Corrective Measures Study Report. Fort McCoy, Wisconsin. February 1996).

The CMSR recommended installation of a soil (sand) cap. In 1997 the United States Environmental Protection Agency (USEPA) issued the Final Modification to the Fort McCoy RCRA permit. In this modification the USEPA required Fort McCoy to install the soil cap recommended in the CMSR (USEPA, 1997. Response to Comments, Final Permit Modification, U.S. Army Garrison-Fort McCoy, Fort McCoy, Wisconsin, WI3 210 020 563. Norman R. Niedergang, Division Director, Waste, Pesticides and Toxics Division. September 1997). Installation of the required soil cap occurred during 1998. The Final Construction Report was submitted in April 2000 (CET Environmental Services, 2000. Final Construction Report, Capping of Closed Landfill #2, Fort McCoy, Wisconsin. April 2000).

Prior to installing the cap, waste was removed from along the edge of the river and placed on top of the landfill. Due to the physical properties of ash, this material was utilized as the grading layer. The surface was graded to direct the majority of surface water runoff away from the river. The cap over the western slope along the river is constructed of 12-inches of select fill placed on top of the subgrade surface. A geotextile fabric was secured on top of this fill. Riprap armoring (18-24 inch stone) extending down the bank into the river, was placed on top of the geotextile, and a 2-4 inch layer of sand was placed over the riprap and graded.

Capping over the main portion of the landfill consists of a minimum of 18 inches of clean sand, while most areas have 22 to 32 inches of clean sand cover (CET Environmental Services, 2000. Final Construction Report, Capping of Closed Landfill #2, Fort McCoy, Wisconsin. April 2000). The cap has been vegetated with native prairie grasses. Annual cap inspections have shown that erosion is not a significant problem, as essentially all precipitation infiltrates directly into the sand cap. This nearly eliminates runoff that would create erosion gullies. There are no paved areas or buildings at CLF2.

Installing the soil cap accomplished the remediation required by the 1997 RCRA permit modification; waste materials have been consolidated and stabilized. Risks associated with direct contact and potential erosion of waste material by surface water run-off have been eliminated.

Following investigation work in 2010 that discovered a small amount of transite mixed with ash just north of Treatment Drive, adjacent to CLF2 (Nationview, 2010. Corrective Action Implementation Report. August 2010), the transite and ash were capped with four inches of top soil. Additional investigation was conducted to determine if the ash, and other material, extended beneath Treatment Drive and was connected to CLF2. Results of that investigation revealed no evidence that any waste extends beneath Treatment Drive (Endpoint Solutions, 2011, Report of Results, Incinerator Waste-Characterization of Nature and Extent, Incinerator Areas and Landfill 2, Fort McCoy, Wisconsin).

On 8 February 2013, Mae Willkom of the WDNR requested that Fort McCoy place a two foot soil cap over the top of the transite materials located north of treatment drive. In accordance with the request, Fort McCoy placed 171 tons of sandy soil, and 150 tons of top soil on top of the ash and transite material located north of Treatment Drive and established grass on the top soil (Attachment B.1.b.). This provided a full two foot cap over the waste materials. A photo of this cap is included in Attachment D.3.

B. Groundwater

- i. Discuss depth to groundwater and piezometric elevations. Describe and explain depth variations, including high and low water table elevation and whether free product affects measurement of water table elevation. Describe the stratigraphic unit(s) where water table was found or which were measured for piezometric levels.

The water table beneath the site varies from approximately 18 feet below ground surface at upgradient well OW-101 to just below land surface near the river. No piezometers were installed during the investigation. During flood stage, the water table is above land surface immediately adjacent to the river (Attachment B.1.b.).

- ii. Discuss groundwater flow direction(s), shallow and deep. Describe and explain flow variations, including fracture flow if present.

As expected, groundwater flows from east to west toward the river (Attachments A.6., B.3.c., and B.3.d.). Based upon the shallow depth of groundwater, the site conceptual model (Attachment B.3.a.) included in the RFI, shows the water table intersecting the waste within CLF2 (SEC Donohue, 1994. RCRA Facility Investigation, Fort McCoy Military Reservation, Monroe County, Wisconsin. November 1994). Thus, shallow groundwater flows through the waste material prior to discharging into the La Crosse River. An upward vertical flow gradient is expected to be present near the river. Therefore, virtually all of the groundwater flowing through the waste is discharging to the river.

- iii. Discuss groundwater flow characteristics: hydraulic conductivity, flow rate and permeability, or state why this information was not obtained.

Horizontal flow gradients calculated during the RCRA Facilities Investigation (RFI) were 0.011 feet/foot (ft./ft.) during Phase 1 and 0.008 ft./ft. during Phase 2. In-situ hydraulic conductivity measured during the RFI ranged from 0.0033 centimeters/second (cm/sec) to 0.045 cm/sec. The average linear flow velocity was estimated at between 0.31 feet/day (ft/day) and 0.68 ft/day (SEC Donohue, 1994. RCRA Facility Investigation, Fort McCoy Military Reservation, Monroe County, Wisconsin. November 1994). This translates to between 113 and 248 feet/year.

- iv. Identify and describe locations/distance of potable and/or municipal wells within 1200 feet of the site. Include general summary of well construction (geology, depth of casing, depth of screened or open interval).

There are no wells present between the downgradient CLF2 monitoring wells, located between the landfill and river, and the western installation boundary located 0.65 miles from the landfill (Attachment B.1.b., Detailed Site Map). The nearest upgradient potable well is located over 3 miles northeast of CLF2.

3. Site Investigation Summary

A. General

- i. Provide a brief summary of the site investigation history. Reference previous submittals by name and date. Describe site investigation activities undertaken since the last submittal for this project and attach the appropriate documentation in Attachment C, if not previously provided.

The landfill was evaluated during a 1979 RCRA Pollution Abatement Survey (CET Environmental Services, 2000. Final Construction Report, Capping of Closed Landfill #2, Fort McCoy, Wisconsin. April 2000), the 1987 RCRA Facilities Assessment (WDNR, 1987. RCRA Facility Assessment (RFA). Fort McCoy, Wisconsin. Prepared by; Bill Evans, Hazardous Waste Specialist, Wisconsin Department of Natural Resources. October 1987.), and during the 1992 and 1993 RCRA Facilities Investigation (RFI). The RFI included actual sample collection (SEC Donohue, 1994. RCRA Facility Investigation, Fort McCoy Military Reservation, Monroe County, Wisconsin. November 1994). The site was included in the Fort McCoy RCRA Treatment, Storage, Disposal Permit No. WI3 210 020 563. Interim groundwater monitoring for volatile organic compounds (VOCs only) resulted in no constituents being reported above the Wisconsin Administrative Code NR 140 Preventive Action Limits (PALs) in July 1994 (Rust Environmental & Infrastructure, 1996. Draft Corrective Measures Study Report. Fort McCoy, Wisconsin. February 1996; analytical reports for the interim groundwater monitoring could not be located, and that data was not included in Attachment A.1.). Semi-annual monitoring apparently began in 1998 following design, regulatory approval, and installation of the cap. Semi-annual monitoring continued until October 2013 (Attachment A.1.a. through A.1.u.).

The RFI was conducted in three phases and included a geophysical survey, characterization of soil/waste materials, along with sampling of surface water, sediment, leachate, and groundwater. RFI Phase 1 was conducted during May and June 1992. RFI Phase 2 was conducted in October and November 1992. RFI Phase 3 was conducted between May and July 1993. The RFI provided information needed for designing the landfill cap (SEC Donohue, 1994. RCRA Facility

Investigation, Fort McCoy Military Reservation, Monroe County, Wisconsin. November 1994).

Attachments A.7.a. and A.7.b. summarize the analytical results from soil/waste samples collected from borings and test pits. Attachment B.4.b. shows the locations of the borings and test pits where the samples were obtained (SEC Donohue, 1994. RCRA Facility Investigation, Fort McCoy Military Reservation, Monroe County, Wisconsin. November 1994). As shown on Attachment A.7.a. and A.7.b. arsenic, iron, and lead concentrations in waste exceeded the NR 720 RCLs at several locations. Benzo(a)pyrene, and benzo(b)fluoranthene at TP-01-02 were also reported at levels above the NR 720 RCLs. All of this material has been capped (Attachment B.4.b.).

Attachment A.7.c. outlines the results of the leachate samples collected from two locations during the Phase 1 RFI. Leachate samples were collected by excavating two small pits (approximately 2 feet deep by 2 feet wide and 3 feet long) at the two areas where seeps were observed (Attachment B.4.b.). Samples were collected using a peristaltic pump. Three samples were collected at L01, and one sample from L02. Concentrations of aluminum, antimony, iron, lead, manganese, and vanadium were reported above the NR 140 PAL or ES (Attachment A.7.c.). As the waste has been capped, seeps are no longer present at CLF2.

Phase 1 of the RFI included installation of one upgradient (OW-101) and two downgradient (OW-102 and OW-103) monitoring wells. Phase 2 of the RFI included installation of two additional downgradient monitoring wells (OW-121 and OW-122; Attachment B.4.b.). No additional wells were installed during RFI Phase 3, which only included groundwater sampling.

Due to access considerations and the water table being present just below land surface near the edge of the river, downgradient monitoring wells OW-102, OW-103, OW-121, and OW-122 were originally installed as drive point piezometers. These wells were replaced with Wisconsin Administrative Code NR 141-compliant wells during September 2010. The replacement wells are referred to as OW-102R, OW-103R, OW-121R, and OW-122R, and are located between seven (OW-121R) and 40 feet (OW-103R) from the original wells (Attachment B.4.b.). To allow for installation of a surface seal and to increase accessibility, the replacement wells were located closer to the top of the slope adjacent to the river. As the replacement wells are located near the original wells, discussion of results presented in this Closure Request, treats all data from each original and replacement well as coming from the same well.

Both surface water and sediment samples were collected from four locations along the La Crosse River during RFI Phase 1. Two additional surface water and sediment samples were collected from the river during RFI Phase 2 (Attachment B.4.b.). It is important to note that the upstream sample (SW04/SD04) was collected adjacent to the incinerator ash that is present just north of Treatment Drive, near the confluence of Tarr Creek and the La Crosse River (Attachment B.4.b.). Apparently this material was not noticed during the RFI. This was likely due to the thick vegetation present along Tarr Creek and the La Crosse River.

In January 2014, Fort McCoy submitted a request to the USEPA for a Class II Permit modification to discontinue groundwater monitoring at the site (Fort McCoy, 2014. Request for Permit (W13 210 020 563) Modification to specify that groundwater monitoring is complete at Closed Landfill #2 and Fire Training Burn Pit #1) that outlined the residual risks at the site. In December 2014, the USEPA sent a letter agreeing that groundwater monitoring could cease. In August 2015, the USEPA sent a letter suggesting that, based upon the fact that Fort McCoy appears to have met all of the requirements for all of the sites included the permit, a Class III Modification would be more appropriate. The Class III Modification would provide a corrective action completion determination from the USEPA for the entire Fort McCoy facility. Fort McCoy agreed and has requested a Class III Modification to the permit, and the USEPA is preparing the Statement of Basis and moving forward with the modification. In addition, the USEPA has requested that Fort McCoy and the WDNR move forward with the site closure process.

- ii. Identify whether contamination extends beyond the source property boundary, and if so describe the media affected (e.g., soil, groundwater, vapors and/or sediment, etc.), and the vertical and horizontal extent of impacts.
No contamination extends beyond the source property boundary (Attachment B.3.b. and Attachment G.).
- iii. Identify any structural impediments to the completion of site investigation and/or remediation and whether these impediments are on the source property or off the source property. Identify the type and location of any structural impediment (e.g., structure) that also serves as the performance standard barrier for protection of the direct contact or the groundwater pathway.

Not Applicable. There are no structural impediments present that interfered with the site investigation or remedial activities (Attachment B.5.).

B. Soil

- i. Describe degree and extent of soil contamination. Relate this to known or suspected sources and known or potential receptors/migration pathways.

Not Applicable (Attachment A.2., Soil Analytical Results). This is a closed ash monofill. While there is some soil mixed with the waste, investigative samples were of mixed soil and waste and no soil contamination extends beyond the capped areas.

- ii. Describe the concentration(s) and types of soil contaminants found in the upper four feet of the soil column.
Not Applicable. This is a closed ash monofill. While there is some soil mixed with the waste, no soil contamination extends beyond the capped areas (see Attachment B.3.b.).
- iii. Identify the ch. NR 720, Wis. Adm. Code, method used to establish the soil cleanup standards for this site. This includes a soil performance standard established in accordance with s. NR 720.08, a Residual Contaminant Level (RCL) established in accordance with s. NR 720.10 that is protective of groundwater quality, or an RCL established in accordance with s. NR 720.12 that is protective of human health from direct contact with contaminated soil. Identify the land use classification that was used to establish cleanup standards. Provide a copy of the supporting calculations/information in Attachment C.
Not Applicable. This is a closed landfill. Except for the soil mixed with the waste material, no soil contamination is present at the site, and no soil contamination extends beyond the capped areas (see Attachment B.3.b.).

C. Groundwater

- i. Describe degree and extent of groundwater contamination. Relate this to known or suspected sources and known or potential receptors/migration pathways. Specifically address any potential or existing impacts to water supply wells or interception with building foundation drain systems.

As discussed in the Current Conditions Report (DPW Environmental Compliance Branch, 2012. Closed Landfill 2, Current Conditions Report. Fort McCoy, Wisconsin. October 2012), concentration fluctuations of several orders of magnitude shown in the monitoring record (Attachment A.1.a. through A.1.u.) for the downgradient wells were likely caused by entrainment of silt in the samples, or sampling and/or laboratory error. The composition and nature of traditional municipal waste provides the potential for large fluctuations in concentrations of constituents of concern (COCs). However, the stable and more uniform nature of an ash monofill would be expected to leach COCs at relatively consistent rates without large fluctuations in COC concentrations. A complete data review indicates that most, if not all, of the elevated concentrations appear to be due to entrainment of sediment in the samples. It is important to keep in mind that background concentrations for iron and manganese at Fort McCoy (for which the RCRA permit does not list media cleanup standards) are often above regulatory standards.

Section 6.0 of the Current Conditions Report (DPW Environmental Compliance Branch, 2012. Closed Landfill 2, Current Conditions Report. Fort McCoy, Wisconsin. October 2012) provides the data to show that only antimony, cadmium, iron, lead, and manganese may be leaching from the waste, and that increased sulfate concentrations have likely been caused by this leaching. As outlined in Section 7.0 of that report, Fort McCoy has collected data on dissolved concentrations for antimony, cadmium, iron, lead, and manganese since issuing the report in 2012. Attachments A.1.a., A.1.f., A.1.i., and A.1.k. show concentrations of each of these parameters that may be leaching from the waste (except lead), are essentially stable to decreasing over the last few years. No NR 140 Preventive Action Limit (PAL) or Enforcement Standard (ES) exceedances for lead were reported during the last three groundwater monitoring events where the samples were filtered. Therefore, it appears that the elevated total lead concentrations reported during past sampling rounds were due to sediment entrainment in the samples and not due to lead leaching from the waste (Attachment A.1.j.). The presence of elevated concentrations of antimony, cadmium, iron, and manganese that are associated with the waste, have resulted in concentrations of sulfate that occasionally exceed the NR 140 standards. During the October 2013 sampling event, sulfate was reported above the PAL at wells OW-102R and OW-121R.

The last groundwater monitoring round conducted in October 2013 showed arsenic at a concentration of 21.6 µg/L at well OW-102R. This is more than twice the Enforcement Standard. The sampling record for this well shows that arsenic had been reported during five sampling rounds at concentrations above the Preventive Action Limit (PAL; 1.0 µg/L), but that no Enforcement Standard (ES) exceedances had been reported previously. Field notes for the October 2013 sampling event state that the sample from well OW-102 had an orange tint. The October 2013 sample, along with all previous samples were for total arsenic and were not filtered (Attachment A.1.b.).

In November 2015, Fort McCoy personnel re-sampled well OW-102R for dissolved arsenic (Attachment C.1.a.). The sample was perfectly clear and had no color. Arsenic was not found above the limit of detection (0.50 µg/L; Attachment A.1.b.). This, along with the historical sampling record showing no ES exceedances for arsenic, suggests that the October 2013 sampling result was due to the entrainment of silt in the sample and not the actual presence of dissolved arsenic moving in groundwater. As discussed in the Current Conditions Report (DPW Environmental Compliance Branch, 2012. Closed Landfill 2, Current Conditions Report. Fort McCoy, Wisconsin. October 2012), it appears that arsenic is not leaching from the waste material.

- ii. Describe the presence of free product at the site, including the thickness, depth, and locations. Identify the depth and location of the smear zone.
Not Applicable. The contaminants of concern at this site are metals, and free product is not present.

D. Vapor

- i. Describe how the vapor migration pathway was assessed, including locations where vapor, soil gas, or indoor air samples were collected. If the vapor pathway was not assessed, explain reasons why.
Not Applicable. The contaminants of concern are metals, no vapors are present (Attachment A.4., Vapor Analytical Tables and Attachment B.4.a.).
- ii. Identify the applicable DNR action levels and the land use classification used to establish them. Describe where the DNR action levels were reached or exceeded (e.g., sub slab, indoor air or both).
Not Applicable. The contaminants of concern are metals, no vapors are present.

E. Surface Water and Sediment

- i. Identify whether surface water and/or sediment was assessed and describe the impacts found. If this pathway was not assessed, explain why.

SEDIMENT:

Attachment A.5.a. outlines the parameters detected in sediment samples collected adjacent, upstream, and downstream of CLF2 during the RFI (Attachment B.4.b.). The low levels of detected VOCs (acetone, methylene chloride), and the SVOCs- di-n-butylphthalate and bis-2-ethylhexyl phthalate (BEHP) may represent laboratory contamination and not actual conditions present in the sediment. Reported sediment concentrations are compared to the Threshold Effect Concentration (TEC) from the "Consensus-Based Sediment Quality Guidelines" (WDNR Publication WT-732 2003). The TEC is used to predict the "presence or absence of toxicity" to benthic dwelling species. Attachment A.5.a. shows that the concentrations of the COCs present in the sediment, adjacent to and downgradient of CLF2 are well below the thresholds that would likely cause detrimental impacts to the benthic organisms. Therefore, there is no reason to believe that CLF2 has degraded the sediment in the La Crosse River.

SURFACE WATER:

Attachment A.5.b. summarizes the parameters detected in surface water samples. The detected concentrations are compared to the Wisconsin Administrative Code NR 105 for surface water quality criteria for toxic substances. The comparisons are made to NR 105 Tables 5 and 6 chronic toxicity values for cold water organisms, and to NR 105 Table 8 human threshold values for non-public water supply. Even though the La Crosse River is not used as a drinking water source, Attachment A.5.b. also compares the detected concentrations to the NR 140 ES.

As shown on Attachment A.5.b., only selenium was reported, downstream of CLF2 at a concentration that slightly exceeded the NR 105 chronic toxicity level for aquatic organisms. A review of Attachment A.1.o. provides no indication that selenium is leaching from CLF2. Attachment A.5.b. also shows that none of the detected concentrations exceeded the NR 105 Table 8 human threshold values.

If a comparison is made to the NR 140 ESs, one location reported an ES exceedance for methylene chloride (a common lab contaminant) and three locations reported ES exceedances for BEHP. BEHP is a plasticizer that would not be associated with an ash monofill, however, it is often found as a sampling contaminant that can leach from plastic sampling equipment (especially tubing). Groundwater data does not show that these parameters are leaching from CLF2 waste. If these concentrations are actually representative of conditions in the river, the CLF2 monitoring data does not provide evidence to show that these constituents are leaching from the landfill. These detections likely represent sampling or laboratory contamination and not actual conditions in the river.

Antimony (SW01A) and zinc (SW01A, SW02, and SW02A) were also reported above the ES, and likely represent actual concentrations at those locations during the sampling event (Attachments A.5.b. and B.4.b.). ES exceedances in surface water samples for naturally occurring metals parameters are certainly not a surprise. Filtering was not performed on the surface water samples collected during the RFI (SEC Donohue, 1994. RCRA Facility Investigation, Fort McCoy Military Reservation, Monroe County, Wisconsin, November 1994). Rivers carry significant volumes of suspended sediment and the samples collected would have included sediment.

The surface water data indicate that water quality in the La Crosse River is good, and provide no evidence that CLF2 has degraded surface water quality.

IMPACTS TO AQUATIC BIOTA:

The La Crosse River adjacent to CLF2 is currently classified by the WDNR as a Class 2 trout stream. Wisconsin Administrative Code NR 820 defines a Class 2 trout stream as one that is not fully self sustaining and requires restocking. However, the condition of this portion of the river has apparently improved since it was initially classified.

Fort McCoy employs a full time fisheries biologist with contracted support to manage the aquatic resources at the installation. According to the Fort McCoy fisheries biologist (Mr. John D. Noble) the La Crosse River reach adjacent to, as well as upstream and downstream of CLF2 is fully self sustaining and needs to be reclassified as a Class 1 trout stream. One of the duties of the fisheries group is to evaluate and monitor the quality of the aquatic environments at the installation and determine if installation activities are impairing these resources. As part of these activities, ongoing studies have been conducted in the La Crosse River. Sampling and observations have been made upstream, slightly upstream, and downstream of CLF2 (Attachment B.4.c.). Mr. Noble has utilized the data collected from the La Crosse

River to specifically evaluate the impacts of CLF2 on aquatic biota. The memo summarizing these studies and conclusions of the biologist is included in Attachment A.5.c.

Studies conducted have included samples collected from six sites during 1994, 1995, and 2007, along with trout density surveys. Stream quality ratings were based on the Family Biotic Index (FBI), the Mean Tolerance Value (MTolVal), and the Index of Biotic Integrity (IBI). The FBI evaluates stream quality by observing the types of organisms present. Mean Tolerance Value measures the sensitivity of aquatic organisms to anthropogenic disturbance. The IBI evaluates the consequences (impacts) of human activities on the macroinvertebrates.

Sampling locations 0401 through 0405 are located upstream, and sampling location 0406 is located downstream of CLF2 (Attachments A.5.c. and B.4.c.). Results of all three indices have been good, very good, or excellent at locations sampled upstream and downstream of CLF2. Based upon the data collected, Mr. Noble has concluded that CLF2 "...is not having any adverse impact to the La Crosse River fishery" (Attachment A.5.c.). Mr. Kurt Rasmussen (formerly) of the WDNR, has reviewed that data and agreed with this conclusion (Attachment A.5.d.).

- ii. Identify any surface water and/or sediment action levels used to assess the impacts for this pathway and how these were derived. Describe where the DNR action levels were reached or exceeded.

Concentrations in sediment were compared to the TEC from the "Consensus-Based Sediment Quality Guidelines" (WDNR Publication WT-732 2003). Attachment A.5.a. shows that the concentrations of the COCs present in the sediment, adjacent to and downgradient of CLF2 are well below the thresholds that would likely cause detrimental impacts to the benthic organisms. Therefore, there is no reason to believe that CLF2 has degraded the sediment in the La Crosse River.

For surface water, comparisons were made to NR 105 Tables 5 and 6 chronic toxicity values for cold water organisms, to NR 105 Table 8 human threshold values for non-public water supply, and to the NR 140 ES values. Selenium was reported, downstream of CLF2 at a concentration that slightly exceeded the NR 105 chronic toxicity level for aquatic organisms (Attachment A.5.b.). Monitoring well data provides no indication that selenium is leaching came from CLF2 waste (Attachment A.1.o.). None of the detected concentrations exceeded the NR 105 Table 8 human threshold values. Methylene chloride and BEHP were found at concentrations exceeding the ES. As mentioned above, BEHP is a common sampling contaminant and methylene chloride is a common lab contaminant. If these concentrations were actually representative of conditions in the river, monitoring data does not provide evidence to show that they came from the landfill. Total concentrations of antimony and zinc were also reported in surface water at concentrations above the ES. These concentrations were likely caused by sediment entrainment in these unfiltered samples.

As discussed above, impacts to aquatic biota were evaluated utilizing the Family Biotic Index (FBI), the Mean Tolerance Value (MTolVal), and the Index of Biotic Integrity (IBI). The evaluations indicate that CLF2 is not having any adverse impacts on the La Crosse River fishery (Attachments A.5.c. and A.5.d.).

4. Remedial Actions Implemented and Residual Levels at Closure

- A. General: Provide a brief summary of the remedial action history. List previous remedial action report submittals by name and date. Identify remedial actions undertaken since the last submittal for this project and provide the appropriate documentation in Attachment C.

Attachment C.1. lists the investigative reports that have been previously submitted. Attachment C.2. discusses why there were no investigative wastes. Construction documentation reports are summarized in Attachment C.4., and Attachment C.5. explains why there were no remedial systems to be decommissioned.

Rust Environmental & Infrastructure, 1996. Draft Corrective Measures Study Report, Fort McCoy, Wisconsin. March 1996. Recommended installation of the soil cap.

U.S. Environmental Protection Agency, 1997. Response to Comments, Final Permit Modification, U.S. Army Garrison-Fort McCoy, Fort McCoy, Wisconsin, WI 3 210 020 563. Norman R. Niedergang, Division Director, Waste, Pesticides and Toxics Division. September 1997. Required installation of the soil cap.

CET Environmental Services, Inc., 2000. Final Construction Report, Capping of Closed Landfill #2, Fort McCoy, Wisconsin. April 2000. Documents cap installation on the south side of Treatment Drive.

NationView, 2010. Corrective Action Implementation Report, Remedial Action Excavation, Fort McCoy. August 2010. Documents placement of a four inch soil cap on material north of Treatment Drive.

Endpoint Solutions, 2011. Letter Report of Results, Incinerator Waste-Characterization of Nature and Extent, Incinerator Areas and Landfill 2, Fort McCoy Wisconsin. Kirk L. Kapfhammer and Robert A. Cigale. September 14, 2011. Provides documentation showing that the waste materials north of Treatment Drive do not extend beneath the roadway and connect to the waste material on the south side of the road.

On 8 February 2013, Mac Willkom of the WDNR requested that Fort McCoy place a two foot soil cap over the top of the transite materials located north of Treatment Drive. In accordance with the request, Fort McCoy placed 171 tons of sandy

soil, and 150 tons of top soil on top of the ash and transite material located north of Treatment Drive and established grass on the top soil (Attachment B.1.b.). This provided a full two foot cap over the waste materials north of Treatment Drive. A photo of this cap is included in Attachment D.3.

- B. Describe any immediate or interim actions taken at the site under ch NR 708, Wis. Adm. Code.
Not Applicable. No immediate or interim actions were taken at the site.
- C. Describe the active remedial actions taken at the source property, including: type of remedial system(s) used for each media affected; the size and location of any excavation or in-situ treatment; the effectiveness of the systems to address the contaminated media and substances; operational history of the systems; and summarize the performance of the active remedial actions. Provide any system performance documentation in Attachment A.7.
Not Applicable. No active remediation was conducted at the site. The only excavation conducted was completed as part of waste consolidation prior to cap installation. No waste was removed from the site (CET Environmental Services, Inc., 2000. Final Construction Report, Capping of Closed Landfill #2, Fort McCoy, Wisconsin. April 2000).
- D. Describe the alternatives considered during the Green and Sustainable Remediation evaluation in accordance with NR 722.09 and any practices implemented as a result of the evaluation.
Site remediation pre-dated the green and sustainable requirements outlined in NR 722.09.
- E. Describe the nature, degree and extent of residual contamination that will remain at the source property or on other affected properties after case closure.
Antimony, cadmium, iron, manganese, and sulfate concentrations remain above the NR 140 PALs or ESs at downgradient wells (Attachments A.1.a, A.1.f., A.1.i., A.1.k., and A.1.p.).
Attachment A.1.a. shows that dissolved concentrations of antimony at downgradient wells are essentially stable. Antimony concentrations at well OW-102 continue to exceed the ES, and slight PAL exceedances were reported during the last monitoring event at wells OW-103 and OW-122.
Since April 2011, PAL exceedances for cadmium have been restricted to well OW-102. No ES exceedances for cadmium have been reported at any well since 2007 (Attachment A.1.f.).
Iron concentrations continue to exceed the ES at well OW-102, and occasionally exceed the ES at well OW-121 (Attachment A.1.i.). The other wells show no PAL or ES exceedances for iron since April 2012.
Manganese continues to show PAL and ES exceedances at well OW-102 and PAL exceedances have been common at well OW-121. No PAL or ES exceedances for manganese have been reported at the other wells since October 2010 (Attachment A.1.k.).
PAL exceedances for sulfate were present at both well OW-102 and OW-121 during the last sampling event. The data suggest that elevated sulfate concentrations at downgradient wells are likely associated with leaching of the above metals constituents from the CLF2 waste materials (Attachment A.1.p.).
Attachment B.3.b. shows the extent of contamination that will remain at the site after closure. Shallow groundwater flows through the waste material prior to discharging into the La Crosse River. Virtually all of the groundwater flowing through the waste is discharging to the river. No contamination extends beyond the river. No contamination extends off of Fort McCoy property (Attachments B.1.b. and G.).
- F. Describe the residual soil contamination within four feet of ground surface (direct contact zone) that attains or exceeds RCLs established under s. NR 720.12, Wis. Adm. Code, for protection of human health from direct contact.
Not Applicable. This is a closed ash monofill. While there is some soil mixed with the waste (ash materials), no soil contamination extends beyond the capped areas (see Attachments A.3., B.1.b., B.2.a., B.2.b., and C.3.).
- G. Describe the residual soil contamination that is above the observed low water table that attains or exceeds the soil standard(s) for the groundwater pathway.
Not Applicable. This is a closed ash monofill. While there is some soil mixed with the waste (ash materials), no soil contamination extends beyond the capped areas (see Attachment B.1.b.).
- H. Describe how the residual contamination will be addressed, including but not limited to details concerning: covers, engineering controls or other barrier features; use of natural attenuation of groundwater; and vapor mitigation systems or measures.
The waste (ash) has been capped with soil. The soil cap will be maintained as outlined in Attachment D.
- I. If using natural attenuation as a groundwater remedy, describe how the data collected supports the conclusion that natural attenuation is effective in reducing contaminant mass and concentration (e.g., stable or receding groundwater plume).
Not Applicable. The contaminants of concern are metals.

- J. Identify how all exposure pathways (soil, groundwater, vapor) were removed and/or adequately addressed by immediate, interim and/or remedial action(s).
Capping of the landfill has removed the potential for direct contact with the waste, and has eliminated the potential for flowing water to erode the waste and move it downstream. In addition, evaluations of aquatic biota have shown that the landfill has not and is not creating detrimental impacts to the La Crosse River, which is functioning as a Class 1 trout stream upstream, downstream, and adjacent to CLF2. Maintenance of the landfill cap will ensure that detrimental impacts from the landfill will not occur in the future. Finally, as a condition of closure, potable wells will not be installed near the landfill without prior approval from the WDNR.
- K. Identify any system hardware anticipated to be left in place after site closure, and explain the reasons why it will remain.
Not Applicable. No remedial systems were installed at this site, and all monitoring wells will be abandoned (Attachment E.).
- L. Identify the need for a ch. NR 140, Wis. Adm. Code, groundwater Preventive Action Limit (PAL) or Enforcement Standard (ES) exemption, and identify the affected monitoring points and applicable substances.
Not Applicable.
- M. If a DNR action level for vapor intrusion was exceeded (for indoor air, sub slab, or both) describe where it was exceeded and how the pathway was addressed.
Not Applicable. The contaminants at this site are metals.
- N. Describe the surface water and/or sediment contaminant concentrations and areas after remediation. If a DNR action level was exceeded, describe where it was exceeded and how the pathway was addressed.
As shown on Attachment A.5.b., only selenium was reported in surface water at SW01, located downstream of CLF2 (Attachment A.4.b.) at a concentration that slightly exceeded the NR 105 chronic toxicity level for aquatic organisms. A review of Attachment A.1.o. provides no indication that selenium is leaching from CLF2. Attachment A.5.b. also shows that none of the detected concentrations exceeded the NR 105 Table 8 human threshold values.

If a comparison is made of surface water samples to the NR 140 ESs, one location reported an ES exceedance for methylene chloride (a common lab contaminant) and three locations reported ES exceedances for BEHP. BEHP is a plasticizer that would not be associated with an ash monofill, however, it is often found as a sampling contaminant that can leach from plastic sampling equipment (especially tubing). Groundwater data does not show that these parameters are leaching from CLF2 waste. If these concentrations are actually representative of conditions in the river, the CLF2 monitoring data does not provide evidence to show that they came from the landfill. These detections likely represent sampling or laboratory contamination and not actual conditions in the river.

Antimony (SW01A) and zinc (SW01A, SW02, and SW02A) were also reported above the ES in surface water samples, and likely represent actual concentrations at those locations during the sampling event (Attachment A.5.b.). ES exceedances in surface water samples for naturally occurring metals parameters are certainly not a surprise. Filtering was not performed on the surface water samples collected during the RF1 (SEC Donohue, 1994. RCRA Facility Investigation, Fort McCoy Military Reservation, Monroe County, Wisconsin. November 1994). Rivers carry significant volumes of suspended sediment and the samples collected would have included sediment.

Attachment A.5.a. outlines the parameters detected in sediment samples collected adjacent, upstream, and downstream of CLF2 during the RF1 (Attachment B.4.b.). The low levels of detected VOCs (acetone, methylene chloride), and the SVOCs-di-n-butylphthalate and bis-2-ethylhexyl phthalate (BEHP) may represent laboratory contamination and not actual conditions present in the sediment. Reported sediment concentrations are compared to the Threshold Effect Concentration (TEC) from the "Consensus-Based Sediment Quality Guidelines" (WDNR Publication WT-732 2003). The TEC is used to predict the "presence or absence of toxicity" to benthic dwelling species. Attachment A.5.a. shows that the concentrations of the COCs present in the sediment, adjacent to and downgradient of CLF2 are well below the thresholds that would likely cause detrimental impacts to the benthic organisms. Therefore, there is no reason to believe that CLF2 has degraded the sediment in the La Crosse River.

The surface water and sediment data indicate that water and sediment quality in the La Crosse River are good, and provide no evidence that CLF2 has degraded surface water or sediment.

As discussed above, impacts to aquatic biota were evaluated utilizing the Family Biotic Index (FBI), the Mean Tolerance Value (MTolVal), and the Index of Biotic Integrity (IBI). The evaluations indicate that CLF2 is not having any adverse impacts on the La Crosse River fishery (Attachments A.5.c. and A.5.d.).

5. Continuing Obligations: Situations where sites, including all affected properties and rights-of-way (ROWs), are included on the DNR's GIS Registry. In certain situations, maintenance plans are also required, and must be included in Attachment D.

Directions: For each of the 3 property types below, check all situations that apply to this closure request.

(NOTE: Monitoring wells to be transferred to another site are addressed in Attachment E.)

This situation applies to the following property or Right of Way (ROW):			Case Closure Situation - Continuing Obligation Inclusion on the GIS Registry is Required (ii. - xiv.)	Maintenance Plan Required	
Property Type:					
Source Property	Affected Property (Off-Source)	ROW			
i.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	None of the following situations apply to this case closure request.	NA
ii.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual groundwater contamination exceeds ch. NR 140 ESs.	NA
iii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual soil contamination exceeds ch. NR 720 RCLs.	NA
iv.				Monitoring Wells Remain:	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	• Not Abandoned (filled and sealed)	NA
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	• Continued Monitoring (requested or required)	Yes
v.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cover/Barrier/Engineered Cover or Control for (soil) direct contact pathways (includes vapor barriers)	Yes
vi.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cover/Barrier/Engineered Cover or Control for (soil) groundwater infiltration pathway	Yes
vii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Structural Impediment: impedes completion of investigation or remedial action (not as a performance standard cover)	NA
viii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual soil contamination meets NR 720 industrial soil RCLs, land use is classified as industrial	NA
ix.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor Mitigation System (VMS) required due to exceedances of vapor risk screening levels or other health based concern	Yes
x.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Dewatering System needed for VMS to work effectively	Yes
xi.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Compounds of Concern in use: full vapor assessment could not be completed	NA
xii.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Commercial/industrial exposure assumptions used.	NA
xiii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vapor: Residual volatile contamination poses future risk of vapor intrusion	NA
xiv.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site-specific situation: (e. g., fencing, methane monitoring, other) (<i>discuss with project manager before submitting the closure request</i>)	Site specific

6. Underground Storage Tanks

- A. Were any tanks, piping or other associated tank system components removed as part of the investigation or remedial action? Yes No
- B. Do any upgraded tanks meeting the requirements of ch. ATCP 93, Wis. Adm. Code, exist on the property? Yes No
- C. If the answer to question 6.B. is yes, is the leak detection system currently being monitored? Yes No

General Instructions

All information shall be legible. Providing illegible information will result in a submittal being considered incomplete until corrected. For each attachment (A-G), provide a Table of Contents page, listing all 'applicable' and 'not applicable' items by Closure Form titles (e.g., A.1. Groundwater Analytical Table, A.2. Soil Analytical Results Table, etc.). If any item is 'not applicable' to the case closure request, you must fully explain the reasons why.

Data Tables (Attachment A)

Directions for Data Tables:

- Use **bold** and italics font for information of importance on tables and figures. Use **bold** font for ch. NR 140, Wis. Adm. Code ES attainments or exceedances, and *italicized font* for ch. NR 140, Wis. Adm. Code, PAL attainments or exceedances.
- Use **bold** font to identify individual ch. NR 720 Wis. Adm. Code RCL exceedances. Tables should also include the corresponding groundwater pathway and direct contact pathway RCLs for comparison purposes. Cumulative hazard index and cumulative cancer risk exceedances should also be tabulated and identified on Tables A.2 and A.3.
- Do not use shading or highlighting on the analytical tables.
- Include on Data Tables the level of detection for results which are below the detection level (i.e., do not just list as no detect (ND)).
- Include the units on data tables.
- Summaries of all data must include information collected by previous consultants.
- Do not submit lab data sheets unless these have not been submitted in a previous report. Tabulate all data required in s. NR 716.15(3)(c), Wis. Adm. Code, in the format required in s. NR 716.15(4)(e), Wis. Adm. Code.
- Include in Attachment A all of the following tables, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: A.1. Groundwater Analytical Table; A.2. Soil Analytical Results Table, etc.).
- For required documents, each table (e.g., A.1., A.2., etc.) should be a separate Portable Document Format (PDF).

A. Data Tables

- Groundwater Analytical Table(s):** Table(s) showing the analytical results and collection dates for all groundwater sampling points (e.g., monitoring wells, temporary wells, sumps, extraction wells, potable wells) for which samples have been collected.
- Soil Analytical Results Table(s):** Table(s) showing **all** soil analytical results and collection dates. Indicate if sample was collected above or below the observed low water table (unsaturated versus saturated).
- Residual Soil Contamination Table(s):** Table(s) showing the analytical results of only the residual soil contamination at the time of closure. This table shall be a subset of table A.2 and should include only the soil sample locations that exceed an RCL. Indicate if sample was collected above or below the observed low water table (unsaturated versus saturated). Table A.3 is optional only if a total of fewer than 15 soil samples have been collected at the site.
- Vapor Analytical Table(s):** Table(s) showing type(s) of samples, sample collection methods, analytical method, sample results, date of sample collection, time period for sample collection, method and results of leak detection, and date, method and results of communication testing.
- Other Media of Concern (e.g., sediment or surface water):** Table(s) showing type(s) of sample, sample collection method, analytical method, sample results, date of sample collection, and time period for sample collection.
- Water Level Elevations:** Table(s) showing all water level elevation measurements and dates from all monitoring wells. If present, free product should be noted on the table.
- Other:** This attachment should include: 1) any available tabulated natural attenuation data; 2) data tables pertaining to engineered remedial systems that document operational history, demonstrate system performance and effectiveness, and display emissions data; and (3) any other data tables relevant to case closure not otherwise noted above. If this section is not applicable, please explain the reasons why.

Maps, Figures and Photos (Attachment B)

Directions for Maps, Figures and Photos:

- Provide on paper no larger than 11 x 17 inches, unless otherwise directed by the Department. Maps and figures may be submitted in a larger electronic size than 11 x 17 inches, in a PDF readable by the Adobe Acrobat Reader. However, those larger-size documents must be legible when printed.
- Prepare visual aids, including maps, plans, drawings, fence diagrams, tables and photographs according to the applicable portions of ss. NR 716.15(4), 726.09(2) and 726.11(3), (5) and (6), Wis. Adm. Code.
- Include all sample locations.
- Contour lines should be clearly labeled and defined.
- Include in Attachment B all of the following maps and figures, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: B.1. Location Map; B.2. Detailed Site Map, etc.).
- For the electronic copies that are required, each map (e.g., B.1.a., B.2.a, etc.) should be a separate PDF.
- Maps, figures and photos should be dated to reflect the most recent revision.

B.1. Location Maps

- B.1.a. Location Map:** A map outlining all properties within the contaminated site boundaries on a United States Geological Survey (U.S.G.S.) topographic map or plat map in sufficient detail to permit easy location of all affected and/or adjacent parcels. If groundwater standards are exceeded, include the location of all potable wells, including municipal wells, within 1200 feet of the area of contamination.
- B.1.b. Detailed Site Map:** A map that shows all relevant features (buildings, roads, current ground surface cover, individual property boundaries for all affected properties, 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 attaining or exceeding a ch. NR 140 ES, and/or in relation to the boundaries of soil contamination attaining or exceeding a RCL. Provide parcel identification numbers for all affected properties.
- B.1.c. RR Sites Map:** From RR Sites Map ([http://dnrmaps.wi.gov/sl/?Viewer=RR Sites](http://dnrmaps.wi.gov/sl/?Viewer=RR%20Sites)) attach a map depicting the source property, and all open and closed BRRTS sites within a half-mile radius or less of the property.

B.2. Soil Figures

- B.2.a. **Soil Contamination:** Figure(s) showing the location of **all** identified unsaturated soil contamination. Use a single contour to show the horizontal extent of each area of contiguous soil contamination that exceeds a soil to groundwater pathway RCL as determined under ch. NR 720 Wis. Adm. Code. A separate contour line should be used to indicate the horizontal extent of each area of contiguous soil contamination that exceeds a direct contact RCL exceedances (0-4 foot depth).
- B.2.b. **Residual Soil Contamination:** Figure(s) showing only the locations of soil samples where unsaturated soil contamination remains at the time of closure (locations represented in Table A.3). Use a single contour to show the horizontal extent of each area of contiguous soil contamination that exceeds a soil to groundwater pathway RCL as determined under ch. NR 720 Wis. Adm. Code. A separate contour line should be used to indicate the horizontal extent of each area of contiguous soil contamination that exceeds a direct contact RCL exceedance (0-4 foot depth).

B.3. Groundwater Figures

- B.3.a. **Geologic Cross-Section Figure(s):** One or more cross-section diagrams showing soil types and correlations across the site, water table and piezometric elevations, and locations and elevations of geologic rock units, if encountered. Display on one or more figures all of the following:
- Source location(s) and vertical extent of residual soil contamination exceeding an RCL. Distinguish between direct contact and the groundwater pathway RCLs.
 - Source location(s) and lateral and vertical extent if groundwater contamination exceeds ch. NR 140 ES.
 - Surface features, including buildings and basements, and show surface elevation changes.
 - Any areas of active remediation within the cross section path, such as excavations or treatment zones.
 - Include a map displaying the cross-section location(s), if they are not displayed on the Detailed Site Map (Map B.1.b.)
- B.3.b. **Groundwater Isoconcentration:** Figure(s) showing the horizontal extent of the post-remedial groundwater contamination exceeding a ch. NR 140, Wis. Adm. Code, PAL and/or an ES. Indicate the date and direction of groundwater flow based on the most recent sampling data.
- B.3.c. **Groundwater Flow Direction:** Figure(s) representing groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, submit two groundwater flow maps showing the maximum variation in flow direction.
- B.3.d. **Monitoring Wells:** Figure(s) showing all monitoring wells, with well identification number. Clearly designate any wells that: (1) are proposed to be abandoned; (2) cannot be located; (3) are being transferred; (4) will be retained for further sampling, or (5) have been abandoned.

B.4. Vapor Maps and Other Media

- B.4.a. **Vapor Intrusion Map:** Map(s) showing all locations and results for samples taken to investigate the vapor intrusion pathway in relation to residual soil and groundwater contamination, including sub-slab, indoor air, soil vapor, soil gas, ambient air, and communication testing. Show locations and footprints of affected structures and utility corridors, and/or where residual contamination poses a future risk of vapor intrusion.
- B.4.b. **Other media of concern (e.g., sediment or surface water):** Map(s) showing all sampling locations and results for other media investigation. Include the date of sample collection and identify where any standards are exceeded.
- B.4.c. **Other:** Include any other relevant maps and figures not otherwise noted above. (This section may remain blank).

- B.5. Structural Impediment Photos:** One or more photographs documenting the structural impediment feature(s) which precluded a complete site investigation or remediation at the time of the closure request. The photographs should document the area that could not be investigated or remediated due to a structural impediment. The structural impediment should be indicated on Figures B.2.a and B.2.b.

Documentation of Remedial Action (Attachment C)**Directions for Documentation of Remedial Action:**

- Include in Attachment C all of the following documentation, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: C.1. Site Investigation Documentation; C.2. Investigative Waste, etc.).
- If the documentation requested below has already been submitted to the DNR, please note the title and date of the report for that particular document requested.
 - C.1. **Site investigation documentation**, that has not otherwise been submitted with the Site Investigation Report.
 - C.2. **Investigative waste disposal documentation.**
 - C.3. Provide a **description of the methodology** used along with all supporting documentation if the RCLs are different than those contained in the Department's RCL Spreadsheet available at: <http://dnr.wi.gov/topic/Brownfields/Professionals.html>.
 - C.4. **Construction documentation** or as-built report for any constructed remedial action or portion of, or interim action specified in s. NR 724.02(1), Wis. Adm. Code.
 - C.5. **Decommissioning of Remedial Systems.** Include plans to properly abandon any systems or equipment.
 - C.6. **Other.** Include any other relevant documentation not otherwise noted above (This section may remain blank).

Maintenance Plan(s) and Photographs (Attachment D)**Directions for Maintenance Plans and Photographs:**

Attach a maintenance plan for each affected property (source property, each off-source affected property) with continuing obligations requiring future maintenance (e.g., direct contact, groundwater protection, vapor intrusion). See Site Summary section 5 for all affected property(s) requiring a maintenance plan. Maintenance plan guidance and/or templates for: 1) Cover/barrier systems; 2) Vapor intrusion; and 3) Monitoring wells, can be found at: <http://dnr.wi.gov/topic/Brownfields/Professionals.html#tabx3>

- D.1. Descriptions of maintenance action(s) required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required:**
- Provide brief descriptions of the type, depth and location of residual contamination.

- Provide a description of the system/cover/barrier/monitoring well(s) to be maintained.
 - Provide a description of the maintenance actions required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required.
 - Provide contact information, including the name, address and phone number of the individual or facility who will be conducting the maintenance.
- D.2. **Location map(s) which show(s):** (1) the feature that requires maintenance; (2) the location of the feature(s) that require(s) maintenance - on and off the source property; (3) the extent of the structure or feature(s) to be maintained, in relation to other structures or features on the site; (4) the extent and type of residual contamination; and (5) all property boundaries.
- D.3. **Photographs** for site or facilities with a cover or other performance standard, a structural impediment or a vapor mitigation system, include one or more photographs documenting the condition and extent of the feature at the time of the closure request. Pertinent features shall be visible and discernible. Photographs shall be submitted with a title related to the site name and location, and the date on which it was taken.
- D.4. **Inspection log**, to be maintained on site, or at a location specified in the maintenance plan or approval letter. The inspection and maintenance log is found at: <http://dnr.wi.gov/files/PDF/forms/4400/4400-305.pdf>.

Monitoring Well Information (Attachment E)

Directions for Monitoring Well Information:

For all wells that will remain in use, be transferred to another party, or that could not be located; attach monitoring well construction and development forms (DNR Form 4400-113 A and B: http://dnr.wi.gov/topic/groundwater/documents/forms/4400_113_1_2.pdf)

Select One:

- No monitoring wells were installed as part of this response action.
- All monitoring wells have been located and will be properly abandoned upon the DNR granting conditional closure to the site
- Select One or More:**
- Not all monitoring wells can be located, despite good faith efforts. Attachment E must include a description of efforts made to locate the wells.
- One or more wells will remain in use at the site after this closure. Attachment E must include documentation as to the reason (s) the well(s) will remain in use. When one or more monitoring wells will remain in use this is considered a continuing obligation and a maintenance plan will be required and must be included in Attachment D.
- One or more monitoring wells will be transferred to another owner upon case closure being granted. Attachment E should include documentation identifying the name, address and email for the new owner(s). Provide documentation from the party accepting future responsibility for monitoring well(s).

Source Legal Documents (Attachment F)

Directions for Source Legal Documents:

Label documents with the specific closure form titles (e.g., F.1. Deed, F.2. Certified Survey Map, etc.). Include all of the following documents, in the order listed:

- F.1. **Deed:** The most recent deed with legal description clearly listed.
- 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.*
- F.2. **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. In cases where the certified survey map or recorded plat map are not legible or are unavailable, a copy of a parcel map from a county land information office may be substituted. A copy of a parcel map from a county land information office shall be legible, and the parcels identified in the legal description shall be clearly identified and labeled with the applicable parcel identification number.
- F.3. **Verification of Zoning:** Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- F.4. **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description(s) accurately describe(s) the correct contaminated property or properties. This section applies to the source property only. Signed statements for Other Affected Properties should be included in Attachment G.

Notifications to Owners of Affected Properties (Attachment G)**Directions for Notifications to Owners of Affected Properties:**

Complete the table on the following page for sites which require notification to owners of affected properties pursuant to ch. 292, Wis. Stats. and ch. NR 725 and 726, Wis. Adm. Code. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31- 19.39, Wis. Stats.]. The DNR's "Guidance on Case Closure and the Requirements for Managing Continuing Obligations" (PUB-RR-606) lists specific notification requirements <http://dnr.wi.gov/files/PDF/pubs/rr/RR606.pdf>.

State law requires that the responsible party provide a 30-day, written advance notification to certain persons prior to applying for case closure. This requirement applies if: (1) the person conducting the response action does not own the source property; (2) the contamination has migrated onto another property; and/or (3) one or more monitoring wells will not be abandoned. Use form 4400-286, Notification of Continuing Obligations and Residual Contamination, at <http://dnr.wi.gov/files/PDF/forms/4400/4400-286.pdf>

Include a copy of each notification sent and accompanying proof of delivery, i.e., return receipt or signature confirmation. (These items will not be placed on the GIS Registry.)

Include the following documents for each property, keeping each property's documents grouped together and labeled with the letter G and the corresponding ID number from the table on the following page. (Source Property documents should only be included in Attachment F):

- **Deed:** The most recent deed with legal descriptions clearly listed for all affected properties.
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. In cases where the certified survey map or recorded plat map are not legible or are unavailable, a copy of a parcel map from a county land information office may be substituted. A copy of a parcel map from a county land information office shall be legible, and the parcels identified in the legal description shall be clearly identified and labeled with the applicable parcel identification number.
- **Verification of Zoning:** Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes the attached legal description(s) accurately describe(s) the correct contaminated property or properties.

Signatures and Findings for Closure Determination

Check the correct box for this case closure request, and have either a professional engineer or a hydrogeologist, as defined in ch. NR 712, Wis. Adm. Code, sign this document.

- Input boxes for response actions: A response action(s) for this site addresses groundwater contamination... The response action(s) for this site addresses media other than groundwater.

Engineering Certification

I hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this case closure request has been prepared by me or prepared under my supervision in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this case closure request is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code. Specifically, with respect to compliance with the rules, in my professional opinion a site investigation has been conducted in accordance with ch. NR 716, Wis. Adm. Code, and all necessary remedial actions have been completed in accordance with chs. NR 140, NR 718, NR 720, NR 722, NR 724 and NR 726, Wis. Adm. Codes."

Signature lines for Engineering Certification with labels: Printed Name, Title, Signature, Date, P.E. Stamp and Number

Hydrogeologist Certification

I Craig O. Bartholomew hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this case closure request is correct and the document was prepared by me or prepared by me or prepared under my supervision and, in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code. Specifically, with respect to compliance with the rules, in my professional opinion a site investigation has been conducted in accordance with ch. NR 716, Wis. Adm. Code, and all necessary remedial actions have been completed in accordance with chs. NR 140, NR 718, NR 720, NR 722, NR 724 and NR 726, Wis. Adm. Codes."

Signature lines for Hydrogeologist Certification with labels: Printed Name, Title

Handwritten signature of Craig O. Bartholomew and date 1 Feb 2016

TABLE OF CONTENTS - ATTACHMENT A: DATA TABLES

APPLICABLE		NOT APPLICABLE	
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			A.2. Soil Analytical Results
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			A.3. Residual Soil Contamination
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			A.4. Vapor Analytical Table(s)
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	A.5.c. Summary of La Crosse River - Landfill 2 Affects on Aquatic Biota		
	A.5.d. Email from Kurt Rasmussen (WDNR) Summarizing his conclusions based upon review of the La Crosse River - Landfill 2 Affects on Aquatic Biota		
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	A.6. Groundwater Elevations		
A.7. OTHER			
	A.7.a. Analytical Results for Mixed Soil and Waste Samples		
	A.7.b. Analytical Results for Test Pits		
	A.7.c. Analytical Results for Leachate Samples		

ATTACHMENT A.1.a.
Summary of Analytical Results for Antimony
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
*ANTIMONY (Sb), TOTAL	1.2	6	ug/L							
				RFI-Phase 1	125	<40	<40	NI	NI	NS
				RFI-Phase 2	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0
				RFI-Phase 3	<50	<50	<50	<50	<50	<50
				12/2/1998	NS	NS	<2.8	<2.8	<2.8	NS
				5/3/1999	NS	NS	<2.6	<2.6	<2.6	<2.6
				11/1-4/1999	NS	NS	<2.6	<2.6	<2.6	<2.6
				4/27-5/1/2000	NS	NS	<2.6	<2.6	<2.6	<2.6
				11/6-7/2000	NS	NS	<3.3	<3.3	<3.3	<3.3
				4/26/2001	NS	NS	<3.3	<3.3	<3.3	<3.3
				11/1/2001	NS	NS	<3.3	<3.3	<3.3	<3.3
				4/30/2002	NS	NS	<3.3	<3.3	<3.3	<3.3
				10/29/2002	NS	NS	<1	<1	<1	<1
				4/24/2003	NS	NS	<0.9	<0.9	<0.9	<0.9
				1/14/2004 ¹	<1.20	NS	Frozen	<1.20	<1.20	<1.20
				3/1-3/2004	<2.1	NS	Frozen	<2.1	<2.1	<2.1
				5/20/2004	<0.2	NS	0.4	0.2	<0.2	<0.2
				10/14-15/2004	0.713	NS	139	1.37	<0.500	<0.500
				4/25-26/2005	3.1	NS	4.86	<0.500	4.5	<0.500
				11/14-15/2005	5.05	NS	0.604	1.05	0.428	0.617
				4/24-25/2006	1.97	NS	1.51	1.48	2.26	0.404
				11/15-16/2006	0.408	NS	0.461	6.85	3.71	<0.250
				4/25-27/2007	0.806	NS	0.306	1.15	2.44	NS
				10/29/2007	1.41	NS	1.29	0.935	1.7	<0.250
				4/9/2008	<0.250	NS	<0.250	1.37	2.44	<0.250
				10/14/2008	1.82	NS	2.02	3.9	<1.25	1.26
				4/27/2009	1.75	NS	1.2	<0.250	1.81	<0.250
				10/30/2009	<0.61	<0.61	<0.61	0.76	<0.61	<0.61
				4/13-14/2010	<0.61	<0.61	<0.61	1.2	<0.61	<0.61
				11/18/2010	<0.61	6	<0.61	0.65	1.7	NS
				4/12/2011	0.22	24.1	0.7	1.2	1.6	NS
				10/17/2011	1.5	22.6	0.17	0.55	1.2	NS
				4/11/2012	0.19J	1.7	0.28J	0.59J	1.1	NS
				10/15/2012 ²	0.16J	6.2	0.21J	1.4	1.2	NS
				4/8/2013 ²	0.17J	9.2	0.89J	0.84J	0.88J	NS
				10/21/2013 ²	0.23J	9.5	1.6	0.52J	1.4	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

²Dissolved Concentrations.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relined in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.b.
Summary of Analytical Results for Arsenic
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR 140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					
					OW-101	OW-102	OW-103	OW-121	OW-122	OW-104 (UPGRADIENT)
ARSENIC (As), TOTAL	1	10	ug/L							
				RFI-Phase 1	<1.0	1.4	1.1	NI	NI	NS
				RFI-Phase 2	<1.0	<1.0	<1.0	<1.0	3	<1.0
				RFI-Phase 3	<10	<10	<10	<10	<10	<10
				12/2/1998	NS	NS	<18	<1.8	<0.18	NS
				5/3/1999	NS	NS	<1.3	<1.3	<1.3	<1.3
				11/1-4/1999	NS	NS	<2.8	<2.8	<2.8	<2.8
				4/27-5/1/2000	NS	NS	<1.7	<1.7	<1.7	<1.7
				11/6-7/2000	NS	NS	<2.4	<2.4	<2.4	<2.4
				4/26/2001	NS	NS	<2.4	<2.4	<2.4	<2.4
				11/1/2001	NS	NS	6.6	5.2	12.4	<2.1
				4/30/2002	NS	NS	<2.4	<2.4	<2.4	<2.4
				10/29/2002	NS	NS	0.4	<0.4	2.5	0.6
				4/24/2003	NS	NS	<1.1	<1.1	2.7	<1.1
				1/14/2004 ¹	<1.14	NS	Frozen	<1.14	2.2	<1.14
				3/1-3/2004	13.6	NS	Frozen	<1.14	6	1.3
				5/20/2004	13.6	NS	1.1	<0.77	0.97	<0.77
				10/14-15/2004	10.3	NS	171	2.19	9.59	<2.00
				4/25-26/2005	29.5	NS	22.7	<0.500	26.2	<0.500
				11/14-15/2005	30	NS	0.741	0.547	6.3	2.2
				4/24-25/2006	31.1	NS	18.9	0.911	37.2	0.724
				11/15-16/2006	2.69	NS	1.7	57.6	47.4	1.26
				4/25/2007	3.4	NS	0.891	0.599	41.5	NS
				10/29/2007	2.01	NS	21.1	0.509	42	1.26
				4/9/2008	1.62	NS	0.997	0.616	70.6	0.66
				10/14&17/2008	50.8	NS	65.5	47.3	83.3	46.5
				4/27/2009	80.2	NS	55.5	0.261	91.1	0.6
				10/30/2009	<0.61	1.2	1.3	<0.61	83.3	1.6
				4/13-14/2010	<0.61	<0.61	1.5	<0.61	1.4	<0.61
				11/18/2010	7.3	1	<0.61	<0.61	1.1	NS
				4/12/2011	1.4	0.61	0.31	0.36	1.1	NS
				10/17/2011	0.94	3.5	0.76	0.51	0.91	NS
				4/11/2012	0.46J	0.66J	5.2	0.52J	0.95J	NS
				10/15/2012	0.47J	3.2	0.34J	0.42J	0.79J	NS
				4/8/2013	0.59J	0.82J	0.67J	0.41J	0.68J	NS
				10/21/2013	0.52J	21.6²	0.96J	1.3	0.90J	NS
				11/10/2015 ³	NS	<0.50	NS	NS	NS	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

²Sample had orange tint. It was unfiltered.

³Dissolved constituent.

Notes:

- 1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.
- 2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.
- 3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.c.
Summary of Analytical Results for Benzene
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
*BENZENE	0.5	5	ug/L							
				RFI-Phase 1	<5	2	<5	NI	NI	NS
				RFI-Phase 2	<5	<5	<5	<5	<5	<5
				RFI-Phase 3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
				12/2/1998	NS	NS	<0.2	<0.2	<0.2	NS
				5/3/1999	NS	NS	<0.2	<0.2	<0.2	<0.2
				11/1-4/1999	NS	NS	<0.1	<0.1	<0.1	<0.1
				4/27-5/1/2000	NS	NS	<0.07	<0.07	<0.07	0.6
				11/6-7/2000	NS	NS	<0.07	<0.07	<0.07	<0.7
				4/26/2001	NS	NS	<0.12	<0.12	<0.12	<0.12
				11/1/2001	NS	NS	<0.12	<0.12	<0.12	<0.12
				4/30/2002	NS	NS	<0.12	<0.12	<0.12	<0.12
				1/14/2004 ¹	<0.29	NS	Frozen	<0.29	<0.29	<0.29
				3/1-3/2004	<0.40	NS	Frozen	<0.40	<0.40	<0.40
				5/20/2004	<0.40	NS	<0.40	<0.40	<0.40	<0.40
				10/14-15/2004	<0.125	NS	20.6	<0.125	<0.125	<0.125
				4/25-26/2005	<0.125	NS	<0.125	<0.125	<0.125	<0.125
				11/14-15/2005	<0.125	NS	<0.125	<0.125	<0.125	<0.125
				4/24-25/2006	<0.125	NS	<0.125	<0.125	<0.125	<0.125
				11/15-16/2006	<0.125	NS	<0.125	<0.125	<0.125	<0.125
				4/25/2007	<0.125	NS	<0.125	<0.125	<0.125	NS
				10/29/2007	<0.125	NS	<0.125	<0.125	<0.125	<0.125
				4/9/2008	<0.125	NS	<0.125	<0.125	<0.125	<0.125
				10/14/2008	<0.125	NS	<0.125	<0.125	<0.125	<0.125
				4/27/2009	<0.125	NS	<0.125	<0.125	<0.125	<0.125
				10/30/2009	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
				4/13-14/2010	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
				11/18/2010	<0.20	<0.20	<0.20	<0.20	<0.20	NS
				4/12/2011	<0.41	<0.41	<0.41	<0.41	<0.41	NS
				10/17/2011	<0.41	<0.41	<0.41	<0.41	<0.41	NS
				4/11/2012	<0.41	<0.41	<0.41	<0.41	<0.41	NS
				10/15/2012	<0.41	<0.41	<0.41	<0.41	<0.41	NS
				4/8/2013	<0.41	<0.41	<0.41	<0.41	<0.41	NS
				10/21/2013	<0.50	<1.0	<0.50	<0.50	<0.50	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relined in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

**ATTACHMENT A.1.d.
Summary of Analytical Results for Beryllium
Closed Landfill 2, Fort McCoy, WI**

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
BERYLLIUM (Be), TOTAL	0.4	4	ug/L							
				RFI-Phase 1	<2.0	<2.0	<2	NI	NI	NS
				RFI-Phase 2	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
				RFI-Phase 3	<5	<5	<5	<5	<5	<5
				12/2/1998	NS	NS	7.4	<0.6	3.7	NS
				5/3/1999	NS	NS	2.4	<0.4	1.9	0.5
				11/1-4/1999	NS	NS	<0.1	<0.1	0.1	<0.1
				4/27-5/1/2000	NS	NS	<0.2	<0.2	<0.2	<0.2
				11/6-7/2000	NS	NS	<0.2	<0.2	<0.2	<0.2
				4/26/2001	NS	NS	<0.2	<0.2	<0.2	<0.2
				11/1/2001	NS	NS	<0.2	<0.2	<0.2	<0.2
				4/30/2002	NS	NS	<0.2	<0.2	<0.2	<0.2
				10/29/2002	NS	NS	<0.03	<0.03	0.07	<0.03
				4/24/2003	NS	NS	<0.03	<0.03	<0.03	<0.03
				1/14/2004 ¹	<0.16	NS	Frozen	<0.16	<0.16	<0.16
				3/1-3/2004	0.55	NS	Frozen	0.31	0.79	<0.26
				5/20/2004	0.44	NS	0.47	0.46	<0.26	0.44
				10/14-15/2004	<0.250	NS	23.9	<0.250	<0.250	<0.250
				4/25-26/2005	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				11/14-15/2005	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				4/24-25/2006	0.563	NS	0.284	0.312	0.392	<0.250
				11/15-16/2006	<0.500	NS	<0.500	<0.500	<0.500	<0.500
				4/25/2007	<0.500	NS	<0.500	<0.500	0.988	NS
				10/29/2007	<0.500	NS	<0.500	<0.500	<0.500	<0.500
				4/9/2008	<0.500	NS	<0.500	<0.500	0.61	<0.500
				10/14&17/2008	<0.500	NS	<0.500	<0.500	1.71	<0.500
				4/27/2009	<0.500	NS	<0.500	<0.500	<0.500	<0.500
				10/30/2009	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
				4/13-14/2010	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
				11/18/2010	0.2	<0.12	<0.12	<0.12	<0.12	NS
				4/12/2011	<0.29	<0.29	<0.29	<0.29	<0.29	NS
				10/17/2011	<0.25	<0.25	<0.25	<0.25	<0.25	NS
				4/11/2012	<0.25	<0.25	<0.25	<0.25	<0.25	NS
				10/15/2012	<0.25	<0.25	<0.25	<0.25	<0.25	NS
				4/8/2013	<0.25	<0.25	<0.25	<0.25	<0.25	NS
				10/21/2013	<0.15	<0.31	<0.15	<0.15	<0.15	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relined in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.e.
Summary of Analytical Results for Bis(2-ethylhexyl)phthalate
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
*BIS(2-ETHYLHEXYL)PHTHALATE	0.3	6	ug/L							
				RFI-Phase 1	<2	<10	<10	NI	NI	NS
				RFI-Phase 2	<10	8	<10	<5	<2	<10
				RFI-Phase 3	<5.0	<5	<5	<5.0	<5.0	<5.0
				12/2/1998	NS	NS	<3.7	<3.7	<3.7	NS
				5/3/1999	NS	NS	<3.7	<3.7	<3.7	<3.7
				11/1-4/1999	NS	NS	<0.6	<0.6	<0.6	1.6
				4/27-5/1/2000	NS	NS	<0.6	<0.6	<0.6	<0.6
				11/6-7/2000	NS	NS	<0.8	<0.8	<0.8	<0.8
				4/26/2001	NS	NS	4.2	1.2	3.6	1.3
				11/1/2001	NS	NS	<1	<1	<1	660
				4/30/2002	NS	NS	<0.8	1.2	<0.8	<0.8
				10/29-30/2002	NS	NS	<0.8	<0.8	<0.8	21.5
				4/24/2003	NS	NS	<0.6	<0.6	<0.6	<0.6
				1/14/2004	0.5	NS	Frozen	1.7	0.98	0.57
				3/3/2004	<0.34	NS	Frozen	<0.34	<0.34	2.1
				5/20/2004	<0.35	NS	0.4	0.9	1.2	<0.34
				10/14-15/2004	<2.50	NS	53.8	<2.50	<2.50	<2.60
				4/25-26/2005	<2.53	NS	<2.50	<2.59	<2.55	<2.50
				11/14-15/2005	<2.50	NS	<2.55	<2.50	<2.50	6.79
				4/24-25/2006	<2.55	NS	<2.55	<2.55	<2.55	<2.55
				11/15-16/2006	<2.50	NS	<2.50	<2.50	<2.50	<2.50
				4/24-25/2007	<2.50	NS	<2.50	<2.50	<2.55	NS
				10/29/2007	<2.50	NS	<5.00	<2.50	<5.00	<2.50
				4/9/2008	<2.50	NS	<2.50	<2.50	<2.50	<2.50
				10/14/2008	<2.50	NS	<2.50	2.73	<2.50	<2.50
				4/27-30/2009	<2.50	NS	<12.5	<2.50	<2.55	<2.50
				10/30/2009	<1.4	<1.4	<1.4	<1.3	<1.4	<1.4
				4/13-14/2010	<1.4	<1.4	<1.4	<1.3	<1.4	<1.4
				11/18/2010	<1.3	<1.4	<1.3	<1.3	<1.4	NS
				4/27/2011	<2.4	<2.4	<2.4	<2.4	<2.4	NS
				10/17/2011	<2.4	<2.4	<2.5	<2.4	<2.5	NS
				4/11/2012	<2.4	<2.4	<2.6	<2.4	<2.4	NS
				10/15/2012	<2.5	<2.5	<2.4	<2.4	<2.5	NS
				4/12/2013	<2.5	<2.4	<2.4	<2.5	<2.4	NS
				4/21/2013	<2.5	<2.5	<2.4	<2.5	<2.4	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.f.
Summary of Analytical Results for Cadmium
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
*CADMIUM (Cd), TOTAL	0.5	5	ug/L							
				RFI-Phase 1	<10	<10	<10	NI	NI	NS
				RFI-Phase 2	<5.0	<5.0	<5.0	5	<5.0	<5.0
				RFI-Phase 3	<5	<5	<5	<5	<5	<5
				10/2/1998	NS	NS	25	6.6	39	NS
				5/3/1999	NS	NS	9.1	4.3	7.8	0.2
				11/1-4/1999	NS	NS	<i>0.5</i>	<i>0.8</i>	7.5	<i>0.5</i>
				4/27-5/1/2000	NS	NS	4.5	19	1.3	<0.1
				11/6-77/2000	NS	NS	1.5	0.8	11	<0.1
				4/26/2001	NS	NS	<i>1.45</i>	<0.05	4.07	<0.05
				11/1/2001	NS	NS	2.03	0.23	13.7	<0.17
				4/30/2002	NS	NS	1.09	0.23	11.1	<0.1
				10/29/2002	NS	NS	2.74	1.14	24	<0.2
				4/24/2003	NS	NS	3.78	0.91	14.8	<0.2
				1/14/2004 ¹	<0.39	NS	Frozen	<0.39	<0.39	<0.16
				3/1-3/2004	<0.48	NS	Frozen	<0.48	2.3	<0.48
				5/20/2004	<0.48	NS	1.7	<0.48	<0.48	<0.48
				10/14-15/2004	<2.50	NS	22.9	<2.50	<2.50	<2.50
				4/25-26/2005	<0.250	NS	2.88	<0.250	3.46	<0.250
				11/14-15/2005	0.659	NS	<0.250	0.27	2.49	<0.250
				4/24-25/2006	0.573	NS	0.694	1.05	1.93	<0.250
				11/15-16/2006	0.64	NS	0.987	0.56	3.46	<0.250
				4/25/2007	<2.50	NS	<2.50	<2.50	5.86	NS
				10/29/2007	<2.50	NS	<2.50	<2.50	3.86	<2.50
				4/9/2008	<2.50	NS	<2.50	<2.50	3.44	<2.50
				10/14/2008	<2.50	NS	<2.50	<2.50	4.28	<2.50
				4/27/2009	<2.50	NS	<2.50	<2.50	<2.50	<2.50
				10/30/2009	<0.61	2.2	<0.61	<0.61	<0.61	<0.61
				4/13-14/2010	<0.61	<0.61	<0.61	<0.61	<0.61	NS
				11/18/2010	0.16	0.39	0.89	0.15	0.62	NS
				4/12/2011	<0.17	0.81	0.39	<0.17	0.24	NS
				10/17/2011	0.24	2.4	0.2	<0.13	0.3	NS
				4/11/2012	<0.13	0.17J	0.47J	<0.13	0.42J	NS
				10/15/2012 ²	<0.13	0.57J	0.17J	<0.13	0.20J	NS
				4/8/2013 ²	<0.13	0.18J	<0.13	<0.13	<0.13	NS
				10/21/2013 ²	0.23J	1.1	0.26J	0.15J	0.073J	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

²Dissolved Concentrations.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.g.
Summary of Analytical Results for Chromium
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
*CHROMIUM (Cr), TOTAL	10	100	ug/L							
				RFI-Phase 1	<20.0	123	22	NI	NI	NS
				RFI-Phase 2	<6.0	<6.0	<6	<6.0	<6.0	<6.0
				RFI-Phase 3	<10	<10	<10	<10	<10	<10
				12/2/1998	NS	NS	8	<6.1	<6.1	NS
				5/3/1999	NS	NS	12	9.2	10.9	<4.5
				11/1-4/1999	NS	NS	<0.9	<0.9	1.8	<0.9
				4/27-5/1/2000	NS	NS	12	12	<7.9	<7.9
				11/6-7/2000	NS	NS	2.2	<0.7	2.6	0.9
				4/26/2001	NS	NS	<8.2	<8.2	<8.2	<8.2
				11/1/2001	NS	NS	<9.9	<9.9	<9.9	15.5
				4/30/2002	NS	NS	<3.8	<3.8	<3.8	<3.8
				10/29/2002	NS	NS	<6	<6	7.6	<6
				4/24/2003	NS	NS	<6	<6	<6	<6
				1/14/2004 ¹	<0.99	NS	Frozen	<0.99	<0.99	<0.99
				3/1-3/2004	14.2	NS	Frozen	<2.7	11.3	<2.7
				5/20/2004	3.3	NS	9.4	<2.7	3.9	<2.7
				10/14-15/2004	7.44	NS	227	<2.50	3.69	<2.50
				4/25-26/2005	<2.50	NS	<2.50	<2.50	<2.50	<2.50
				11/14-16/2005	21	NS	3.71	2.52	14	<2.50
				4/24-25/2006	9.46	NS	4.42	<2.50	13	<2.50
				11/15-16/2006	6.07	NS	10.6	4.17	37.2	<2.50
				4/25/2007	3.97	NS	<2.50	<2.50	42.5	NS
				10/29/2007	<2.50	NS	3.37	<2.50	32	<2.50
				4/9/2008	<2.50	NS	2.93	<2.50	20.4	<2.50
				10/14/2008	<2.50	NS	13.2	<2.50	49.4	<2.50
				4/27/2009	4.97	NS	9.24	3.26	4.58	3.75
				10/30/2009	<0.61	1.8	0.87	<0.61	0.87	0.77
				4/13-14/2010	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61
				11/18/2010	7.8	<0.61	<0.61	<0.61	0.73	NS
				4/12/2011	1.6	0.73	0.42	0.51	0.41	NS
				10/17/2011	0.89	0.74	0.14	0.29	0.18	NS
				4/11/2012	0.85J	0.26J	0.31J	0.24J	0.36J	NS
				10/15/2012	0.49J	0.55J	<0.12	0.17J	0.13J	NS
				4/8/2013	0.66J	0.38J	0.78J	0.29J	0.24J	NS
				10/21/2013	0.31J	6.8	<0.24	0.30J	<0.24	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.h.
Summary of Analytical Results for Cobalt
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
COBALT (Co), TOTAL	8	40	ug/L							
				RFI-Phase 1	<15	<15	<15	NI	NI	NS
				RFI-Phase 2	<11.0	<11	<11	<11	<11	<11
				RFI-Phase 3	<50	<50	<50	<50	<50	<50
				12/2/1998	NS	NS	4.2	<4.1	6.4	NS
				5/3/1999	NS	NS	9.9	<6.9	<6.9	<6.9
				11/1-4/1999	NS	NS	<5.3	<5.3	<5.3	9.8
				4/27-5/1/2000	NS	NS	10.9	7.6	<7.3	<7.3
				11/6-7/2000	NS	NS	<8.4	<8.4	<8.4	<8.4
				4/26/2001	NS	NS	<5.5	<5.5	<5.5	<5.5
				11/1/2001	NS	NS	<4.8	<4.8	<4.8	<4.8
				4/30/2002	NS	NS	<6.8	<6.8	<6.8	<6.8
				10/29/2002	NS	NS	7.6	<6	9.6	<6
				4/24/2003	NS	NS	12.1	6.7	23.6	<6
				1/14/2004 ¹	<4.3	NS	Frozen	<4.3	<4.3	<4.3
				3/1-3/2004	<6.6	NS	Frozen	<6.6	<6.6	<6.6
				5/20/2004	<6.6	NS	6.7	<6.6	<6.6	<6.6
				10/14-15/2004	<2.50	NS	83.4	<2.50	6.94	<2.50
				4/25-26/2005	<2.50	NS	<2.50	<2.50	<2.50	<2.50
				11/14-15/2005	2.7	NS	<2.50	<2.50	5.16	<2.50
				4/24-25/2006	2.84	NS	3.09	<2.50	4.55	<2.50
				11/15-16/2006	<2.50	NS	4.93	<2.50	7.8	<2.50
				4/25/2007	<2.50	NS	<2.50	<2.50	18.1	NS
				10/29/2007	<2.50	NS	<2.50	<2.50	10.7	<2.50
				4/9/2008	<2.50	NS	3.04	<2.50	7.59	<2.50
				10/14&17/2008	<2.50	NS	6.13	<2.50	15.2	<2.50
				4/27/2009	<2.50	NS	4.1	<2.50	<2.50	<2.50
				10/30/2009	<0.61	1.2	2.5	<0.61	0.93	<0.61
				4/13-14/2010	<0.61	0.61	2	<0.61	0.61	<0.61
				11/18/2010	2.6	<0.61	<0.61	<0.61	<0.61	NS
				4/12/2011	0.62	0.15	0.42	<0.14	<0.14	NS
				10/17/2011	0.56	1	0.14	0.34	0.067	NS
				4/11/2012	0.36J	0.091J	0.80J	0.51J	0.062J	NS
				10/15/2012	0.44J	0.41J	0.092J	0.098J	<0.061	NS
				4/8/2013	0.50J	0.36J	0.069J	0.062J	<0.061	NS
				10/21/2013	0.93J	1.9J	0.074J	0.40J	0.061J	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.i.
Summary of Analytical Results for Iron
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
IRON (FE), TOTAL	0.15	0.3	mg/L							
				RFI-Phase 1	0.147	4.140	0.842	NI	NI	NS
				RFI-Phase 2	0.389	3.210	<0.122	0.915	2.120	0.331
				RFI-Phase 3	1.800	0.800	0.600	1.100	0.900	0.200
				12/2/1998	NS	NS	79.9	8.53	46.6	NS
				5/3/1999	NS	NS	9.3	16.3	6.55	0.104
				11/1-4/1999	NS	NS	3.93	9.15	22	0.349
				4/27-5/1/2000	NS	NS	20.4	42.6	8.75	0.123
				11/6-7/2000	NS	NS	7.1	11.6	33.2	0.671
				4/26/2001	NS	NS	14.1	3.73	26.6	0.072
				11/1/2001	NS	NS	9.77	4.2	36.7	0.173
				4/30/2002	NS	NS	10.7	4.07	32.5	0.027
				10/29/2002	NS	NS	12.8	5.22	53.3	1.55
				4/24/2003	NS	NS	29.6	8.68	63.8	0.408
				1/14/2004 ¹	0.0493	NS	Frozen	2.52	22.4	0.178
				3/1-3/2004	13.3	NS	Frozen	13.4	48.4	0.614
				5/20/2004	3.65	NS	37.3	5.42	32.2	2.66
				10/14-15/2004	4.62	NS	17	3.1	27.7	0.551
				4/25-26/2005	19.1	NS	27.7	8.52	44.1	0.214
				11/14-15/2005	10.3	NS	18.2	12.7	35.3	0.528
				4/24-25/2006	7.3	NS	19.7	17.6	34.8	2.37
				11/15-16/2006	2.73	NS	22.8	8.53	65.9	2.77
				4/25/2007	3.44	NS	18.9	7.84	92.2	NS
				10/29/2007	1.45	NS	14.9	5.57	57.3	0.68
				4/9/2008	1.4	NS	17.1	19	48.9	1.3
				10/14&17/2008	1.35	NS	35	9.26	83	2.21
				4/27/2009	1.07	NS	10.6	4.94	13.7	0.114
				10/30/2009	<0.15	7.5	15	6.3	12	0.39
				4/13-14/2010	<0.15	3.9	17	2.8	7	0.53
				11/18/2010	7900	17000	530	3200	370	NS
				4/12/2011	0.954	2.1	0.391	0.278	<0.0078	NS
				10/17/2011	2.95	39.4	6.69	1.61	<0.0104	NS
				4/11/2012	<i>0.213J</i>	17.4	21.3	4.93	0.0617	NS
				10/15/2012 ²	0.0302J	12.5	0.0426J	<0.0104	0.0314	NS
				4/8/2013 ²	0.0516	3.52	0.0666J	0.0221	0.0244J	NS
				10/21/2013 ²	<0.0362	0.564	0.0391J	1.86	0.0442J	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

²Dissolved Concentrations.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.j
Summary of Analytical Results for Lead
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
*LEAD (PB), TOTAL	1.5	15	ug/L							
				RFI-Phase 1	<4.0	<4.0	<4.0	NI	NI	NS
				RFI-Phase 2	1.30	1.9	<1.0	61.0	<1.6	1.4
				RFI-Phase 3	<3	<3	10	29	<3	<3
				12/2/1998	NS	NS	218	20	242	NS
				5/3/1999	NS	NS	143	35	103	<1.9
				11/1-4/1999	NS	NS	25	32	156	3.4
				4/27-5/1/2000	NS	NS	57	171	4.2	<1.9
				11/6-7/2000	NS	NS	23	53	87	<1.1
				4/26/2001	NS	NS	14.1	<1.1	23.5	2.6
				11/1/2001	NS	NS	21.2	<1.1	44.9	<1.1
				4/30/2002	NS	NS	5.7	<1.1	88.6	<1.1
				10/29/2002	NS	NS	23.1	1	101	<0.6
				4/24/2003	NS	NS	27.7	1.1	93.7	<0.7
				1/14/2004 ¹	<2.8	NS	Frozen	<2.8	9.2	<2.8
				3/1-3/2004	9.8	NS	Frozen	22.8	77	<1.6
				5/20/2004	4.5	NS	54.8	8.2	12.7	<1.6
				10/14-15/2004	5.17	NS	232	5.91	35.1	<2.50
				4/25-26/2005	18.8	NS	56.3	8.03	91.3	<0.500
				11/14-16/2005	18.8	NS	3.98	6	49.7	0.904
				4/24-25/2006	8.5	NS	10.9	20	43.9	0.544
				11/15-16/2006	1.8	NS	9.61	16.4	56.4	0.878
				4/25/2007	2.12	NS	5.98	4.3	124	NS
				10/29/2007	6.36	NS	12.2	2.48	109	0.484
				4/9/2008	1.31	NS	4.46	4.06	78.1	0.483
				10/14/2008	3.43	NS	19.8	11.1	67.9	3.34
				4/27/2009	2.33	NS	6.18	<0.250	6.34	<0.250
				10/30/2009	<0.61	23	1.9	1.1	2.3	<0.61
				4/13-14/2010	<0.61	1.3	<0.61	<0.61	<0.61	<0.61
				11/18/2010	6.9	400	1	<0.61	<0.61	NS
				4/12/2011	0.69	56.7	0.37	<0.29	<0.29	NS
				10/17/2011	78.8	766	0.48	0.16	0.097	NS
				4/11/2012	0.32J	7.9	1.0	0.19J	0.15J	NS
				10/15/2012 ²	0.19J	1.1	<0.061	<0.061	0.096J	NS
				4/8/2013 ²	<0.061	0.78J	<0.061	<0.061	<0.061	NS
				10/21/2013 ²	<0.064	0.84J	0.12J	<0.064	<0.064	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

²Dissolved Concentrations.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.k.
Summary of Analytical Results for Manganese
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
MANGANESE (MN), TOTAL	60 ¹	300 ¹	ug/L							
				RFI-Phase 1	20	<i>125</i>	375	NI	NI	NS
				RFI-Phase 2	14	<i>129</i>	231	57	227	7.0
				RFI-Phase 3	30	20	<i>190</i>	20	<i>80</i>	<10
				12/2/1998	NS	NS	<i>707</i>	<i>227</i>	<i>392</i>	NS
				5/3/1999	NS	NS	785	233	380	<2.3
				11/1-4/1999	NS	NS	906	195	291	<2.8
				4/27-5/1/2000	NS	NS	460	386	157	<4
				11/6-7/2000	NS	NS	688	281	476	6.7
				4/26/2001	NS	NS	1030	66	1180	3.9
				11/1/2001	NS	NS	792	75.1	878	<2.3
				4/30/2002	NS	NS	1060	278	1390	<1.5
				10/29/2002	NS	NS	1060	106	1320	5.2
				4/24/2003	NS	NS	707	556	1540	4.2
				1/14/2004 ²	11.4	NS	Frozen	49.2	1390	4.1
				3/1-3/2004	<i>154</i>	NS	Frozen	65	132	20.3
				5/20/2004	<i>82.1</i>	NS	517	<i>257</i>	1280	22.8
				10/14-15/2004	<i>97.1</i>	NS	1060	28.3	1940	<1.00
				4/25-26/2005	<i>240</i>	NS	1060	248	1440	<1.00
				11/14-15/2005	<i>133</i>	NS	1140	89.2	1450	2.61
				4/24-25/2006	<i>118</i>	NS	1330	130	1270	17.3
				11/15-16/2006	41.1	NS	1070	118	1520	14.4
				4/25/2007	46.7	NS	706	89.5	1240	NS
				10/29/2007	20.2	NS	601	57.4	1160	<5.00
				4/9/2008	25.1	NS	979	2.8	1000	8.88
				10/14&17/2008	21	NS	931	61	2040	13.3
				4/27/2009	19.1	NS	446	505	1080	<10.0
				10/30/2009	4.7	<i>230</i>	780	<i>230</i>	1600	2
				4/13-14/2010	2.8	<i>150</i>	970	<i>150</i>	980	3.4
				11/18/2010	<i>120</i>	<i>290</i>	66	250	6.2	NS
				4/12/2011	13.2	13	7.1	20.4	1.7	NS
				10/17/2011	11.3	364	490	161	0.32	NS
				4/11/2012	4.2	<i>164</i>	372	212	3.0	NS
				10/15/2012 ³	3.5	<i>194</i>	35.7	2.8	6.5	NS
				4/8/2013 ³	2.7	<i>70.3</i>	1.8	0.58J	1.3	NS
				10/21/2013 ³	6.1	343	4.7	<i>163</i>	7.1	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.
 NS=Not Sampled.

¹Public Health NR 140 Preventive Action Limit (PAL) for manganese = 60 µg/l, Enforcement Standard (ES) = 300 µg/l; Public Welfare NR 140 PAL = 25 µg/l, and ES = 50 µg/l.

²Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

³Dissolved Concentrations.

Notes:

- 1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.
- 2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.
- 3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.I.
Summary of Analytical Results for Mercury
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
MERCURY (MN), TOTAL	0.2	2	ug/L							
				RFI-Phase 1	<0.2	<0.2	<0.2	NI	NI	NS
				RFI-Phase 2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
				RFI-Phase 3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
				12/2/1998	NS	NS	<0.2	<0.2	<0.2	NS
				5/3/1999	NS	NS	<0.2	<0.2	<0.2	<0.2
				11/1-4/1999	NS	NS	<0.09	<0.09	<0.09	<0.09
				4/27-5/1/2000	NS	NS	<0.09	<0.09	<0.09	<0.09
				11/6-7/2000	NS	NS	<0.09	<0.09	<0.09	<0.09
				4/26/2001	NS	NS	<0.1	<0.1	<0.1	<0.1
				11/1/2001	NS	NS	<0.08	<0.08	<0.08	<0.08
				4/30/2002	NS	NS	<0.08	<0.08	<0.08	<0.08
				10/29/2002	NS	NS	<0.05	<0.05	<0.05	<0.05
				4/24/2003	NS	NS	<0.07	<0.07	<0.07	<0.07
				1/14/2004 ¹	<0.11	NS	Frozen	<0.11	<0.11	<0.11
				3/1-3/2004	<0.11	NS	Frozen	<0.11	<0.11	<0.11
				5/20/2004	<0.11	NS	<0.11	<0.11	<0.11	<0.11
				10/14-15/2004	<0.100	NS	4.63	<0.100	<0.100	<0.100
				4/25-26/2005	<0.100	NS	<0.100	<0.100	<0.100	<0.100
				11/14-15/2005	<0.100	NS	<0.100	<0.100	<0.100	<0.100
				4/24-25/2006	<0.100	NS	<0.100	0.135J	<0.100	<0.100
				11/15-16/2006	<0.100	NS	<0.100	<0.100	<0.100	<0.100
				4/25/2007	<0.100	NS	<0.100	<0.100	<0.100	<0.100
				10/29/2007	<0.100	NS	<0.100	<0.100	<0.100	<0.100
				4/9/2008	<0.100	NS	<0.100	<0.100	<0.100	<0.100
				10/14&17/2008	<0.100	NS	<0.100	<0.100	<0.100	<0.100
				4/27/2009	<0.200	NS	<0.200	<0.200	<0.200	<0.200
				10/30/2009	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065
				4/13-14/2010	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065
				11/18/2010	<0.23	<0.23	<0.23	<0.23	<0.23	NS
				4/12/2011	<0.1	<0.1	<0.1	<0.1	<0.1	NS
				10/17/2011	<0.1	<0.1	<0.1	<0.1	<0.1	NS
				4/11/2012	<0.1	<0.1	<0.1	<0.1	<0.1	NS
				10/15/2012	1.3	<0.1	<0.1	<0.1	<0.1	NS
				4/8/2013	<0.1	<0.1	<0.1	<0.1	<0.1	NS
				10/21/2013	<0.1	<0.1	<0.1	<0.1	<0.1	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

Notes:

- 1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.
- 2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.
- 3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.m.
Summary of Analytical Results for Nickel
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
NICKEL (Ni), TOTAL	20	100	ug/L							
				RFI-Phase 1	29	35	27	NI	NI	NS
				RFI-Phase 2	<11.0	61	<11.0	13	11	<11
				RFI-Phase 3	<40	11	<40	<40	<40	<40
				12/2/1998	NS	NS	<9.1	12	<9.1	NS
				5/3/1999	NS	NS	<9.4	<9.4	<9.4	<9.4
				11/1-4/1999	NS	NS	<14	<14	<14	<14
				4/27-5/1/2000	NS	NS	<12	<12	<12	<12
				11/6-7/2000	NS	NS	<8.1	<8.1	<8.1	<8.1
				4/26/2001	NS	NS	<19	<19	<19	<19
				11/1/2001	NS	NS	<14	<14	<14	<14
				4/30/2002	NS	NS	<19	<19	<19	<12
				10/29/2002	NS	NS	22.4	<17	<17	<19
				4/24/2003	NS	NS	<17	<19	<17	<17
				1/14/2004 ¹	<5.3	NS	Frozen	<5.3	<5.3	<5.3
				3/1-3/2004	<19	NS	Frozen	<19	<19	<19
				5/20/2004	<19	NS	<19	<19	<19	<19
				10/14-15/2004	<5.00	NS	224	<5.00	7	<5.0
				4/25-26/2005	<5.00	NS	<5.00	<5.00	<5.00	<5.0
				11/14-15/2005	10.6	NS	<5.00	<5.00	12	<5.0
				4/24-25/2006	<5.00	NS	<5.00	<5.00	11.8	<5.0
				11/15-16/2006	<5.00	NS	7.37	<5.00	22.3	<5.0
				4/25/2007	<5.00	NS	<5.00	<5.00	43.9	NS
				10/29/2007	<5.00	NS	<5.00	<5.00	29.7	<5.0
				4/9/2008	<5.00	NS	<5.00	<5.00	19.4	<5.0
				10/14&17/2008	<5.00	NS	12.3	<5.00	43.4	<5.0
				4/27/2009	<5.00	NS	8.70	<5.00	<5.00	<5.00
				10/30/2009	<0.61	1.2	1.5	2	<0.61	<0.61
				4/13-14/2010	0.93	4.1	6.3	2.8	11	0.7
				11/18/2010	3.3	<0.61	<0.61	<0.61	2.2	NS
				4/12/2011	1.3	5.1	2.6	0.7	5	NS
				10/17/2011	1.1	5.6	1.9	1.1	5.8	NS
				4/11/2012	0.61J	0.74J	3.3	1.1	3.8	NS
				10/15/2012	2.3	6.9	1.5	0.77J	4.8	NS
				4/8/2013	0.88J	1.5	1.9	0.59J	1.8	NS
				10/21/2013	1.3	13.6	4.8	1.9	5.1	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.n.
Summary of Analytical Results for Nitrogen
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
*NITRATE NITROGEN, TOTAL¹	2	10	mg/L							
				RFI-Phase 1	1.07	2.52	7.57	NI	NI	NS
				RFI-Phase 2	1.74	4.35	4.51	0.54	2.94	0.52
				RFI-Phase 3	NA	NA	NA	NA	NA	NA
				12/2/1998	NS	NS	4.1	0.45	<0.029	NS
				5/3/1999	NS	NS	3.81	0.36	<0.029	3.19
				11/1-4/1999	NS	NS	2.3	<1	<1.0	2.4
				4/27-5/1/2000	NS	NS	1.4	<1	<1.0	1
				11/6-7/2000	NS	NS	3.29	<1	1.14	1.08
				4/26/2001	NS	NS	1.42	<1	<1	<1
				11/1/2001	NS	NS	3.78	<1	<1	<1
				4/30/2002	NS	NS	1.38	<1	<1	1.3
				10/29/2002	NS	NS	2.42	<1	<1	1.15
				4/24/2003	NS	NS	1.18	0.59	<0.5	0.78
				1/14/2004	1.3	NS	Frozen	0.58	<0.13	1.3
				3/1-3/2004	0.86	NS	Frozen	0.36	<0.13	1.3
				5/20/2004	2.1	NS	<0.13	1.14	<0.13	2.33
				10/14-15/2004	5.45	NS	1.54	0.517	<0.025	1.44
				4/25-26/2005	1.58	NS	0.908	1.78	<0.025	0.746
				11/14-16/2005	1.16	NS	0.917	0.295	<0.025	0.956
				4/24-25/2006	3.49	NS	0.352	0.706	<0.025	0.943
				11/15-16/2006	2.21	NS	0.198	0.422	0.028	1.82
				4/25/2007	1.86	NS	0.396	0.971	<0.025	NS
				10/29/2007	2.53	NS	0.113	0.457	<0.025	1.42
				4/9/2008	3.78	NS	0.28	1.07	0.04	1.27
				10/14/2008	2.99	NS	0.994	1.28	<0.0-25	0.996
				4/27/2009	0.951	NS	0.214	0.114	0.093	1.08
				10/30/2009	2.9	0.35	<0.1	0.33	<0.1	0.4
				4/13-14/2010	2.9	0.1	0.34	1.3	<0.024	1
				11/18/2010	1	0.13	0.081	0.29	3.3	NS
				4/12/2011	1.6	4	2.5	1.3	5	NS
				10/17/2011	2.2	<0.12	<0.12	0.59	0.78	NS
				4/25/2012	1.0	0.77	2.0	0.68	4.0	NS
				10/15/2012	3.1	<0.12	0.56	5.1	<0.12	NS
				4/8/2013	1.6	0.22J	0.18J	1.3	0.19J	NS
				10/21/2013	4.4	0.83	0.99	0.51	1.0	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Results are either for total Nitrate, NO₂ + NO₃, or for NO₃, depending upon what was analyzed. In this setting NO₃ is the species being detected. The current PAL for Nitrates is 2 mg/L.

Notes:

- 1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.
- 2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.
- 3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.o.
Summary of Analytical Results for Selenium
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
*SELENIUM (Se), Total	10	50	ug/L							
				RFI-Phase 1	6.4	11	11	NI	NI	NS
				RFI-Phase 2	<2.0	<2.0	<2.0	<2	<2.0	<2
				RFI-Phase 3	<5	<5	<5	<5	<500	<5
				12/2/1998	NS	NS	<4.2	<4.2	<4.2	NS
				5/3/1999	NS	NS	<2.6	<2.6	<2.6	<2.6
				11/1-4/1999	NS	NS	<2.6	<2.6	<2.6	<2.6
				4/27-5/1/2000	NS	NS	<2.7	<2.7	<2.7	<2.7
				11/6-7/2000	NS	NS	<4	<4	<4	<4
				4/26/2001	NS	NS	<4	<4	<4	<4
				11/1/2001	NS	NS	<4	<4	<4	<4
				4/30/2002	NS	NS	<1.9	<1.9	<1.9	<1.9
				10/29/2002	NS	NS	2.4	2.1	2.2	2.1
				4/24/2003	NS	NS	<2.2	<2.2	<2.2	<2.2
				1/14/2004 ¹	5.8	NS	Frozen	6.8	57.9	<5.4
				3/1-3/2004	<2.7	NS	Frozen	3.8	<2.7	<2.7
				5/20/2004	<2.7	NS	2.9	<2.7	<2.7	<2.7
				10/14-15/2004	0.671	NS	125	0.666	<0.500	0.644
				4/25-26/2005	<0.500	NS	1.25	<0.500	1.39	<0.500
				11/14-16/2005	0.787	NS	0.526	0.856	0.985	0.641
				4/24-25/2006	0.634	NS	0.853	1.36	1.03	0.86
				11/15-16/2006	<0.500	NS	2.38	1.5	2.63	0.556
				4/25/2007	0.766	NS	0.704	1.62	3.61	NS
				10/29/2007	0.812	NS	0.672	1.62	2.76	0.594
				4/9/2008	<0.500	NS	0.601	2.11	2.4	<0.500
				10/14/2008	0.982	NS	1.1	1.88	6.79	0.691
				4/27/2009	0.508	NS	<0.500	<0.500	<0.500	<0.500
				10/30/2009	<0.61	1.3	<0.61	1.1	1.5	0.62
				4/13-14/2010	<0.61	0.67	0.73	0.96	<0.61	<0.61
				11/18/2010	<0.61	0.86	1.4	1.3	1.7	NS
				4/12/2011	0.58	3.6	4.7	0.97	6.8	NS
				10/17/2011	0.59	0.75	0.41	0.61	4.1	NS
				4/11/2012	0.55J	0.76J	1.8	0.60J	5.9	NS
				10/15/2012	0.69J	0.93J	2.4	3.1	7.4	NS
				4/8/2013	0.59J	1.6	3.7	0.91J	3.7	NS
				10/21/2013	0.72J	3.5	5.2	1.1	5.5	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relined in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.p.
Summary of Analytical Results for Sulfate
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
SULFATE	125	250	mg/L							
				RFI-Phase 1	11.900	12.200	<i>129.000</i>	NI	NI	NS
				RFI-Phase 2	14.700	8.510	88.000	<i>132.000</i>	60.100	8.690
				RFI-Phase 3	NA	NA	NA	NA	NA	NA
				12/2/1998	NS	NS	200	250	101	NS
				5/3/1999	NS	NS	252	258	35	6.23
				11/1-4/1999	NS	NS	320	260	23.6	7.2
				4/27-5/1/2000	NS	NS	<i>160</i>	<i>227</i>	75.6	8.8
				11/6-7/2000	NS	NS	105	304	40.6	<10
				4/26/2001	NS	NS	<i>237</i>	<i>148</i>	96.2	<10
				11/1/2001	NS	NS	<i>146</i>	<i>194</i>	34.8	<10
				4/30/2002	NS	NS	<i>191</i>	<i>168</i>	44.3	7.37
				10/29/2002	NS	NS	<i>167</i>	<i>206</i>	41.3	6.65
				4/24/2003	NS	NS	<i>142</i>	80.4	<i>135</i>	7.15
				1/14/2004	9.9	NS	Frozen	100	<i>150</i>	8.8
				3/1-3/2004	8.6	NS	Frozen	81	<i>140</i>	6.6
				5/20/2004	7.95	NS	<i>138</i>	83.6	97	5.96
				10/14-15/2004	9.7	NS	<i>246</i>	56.5	99.8	8.16
				4/25-26/2005	8	NS	<i>179</i>	114	101	8.3
				11/14-15/2005	14.5	NS	<i>232</i>	<i>127</i>	<i>155</i>	2.74
				4/24-25/2006	8.05	NS	<i>213</i>	58.6	<i>110</i>	8.09
				11/15-16/2006	9.27	NS	<i>179</i>	92.5	<i>127</i>	10.5
				4/25/2007	11.1	NS	<i>131</i>	82.2	75.8	NS
				10/29/2007	14	NS	<i>158</i>	99.3	48.4	8.88
				4/9/2008	6.91	NS	111	58.7	82.2	6.87
				10/14&17/2008	5.54	NS	100	48	108	3.33
				4/27/2009	6.8	NS	<i>153</i>	61.7	76.5	6.96
				10/30/2009	6.4	43	<i>130</i>	94	42	3.5
				4/13-14/2010	5	51	88	57	44	3.6
				11/18/2010	6.4	<i>200</i>	330	100	<i>130</i>	NS
				4/12/2011	6.5	97.2	<i>181</i>	10.3	92.6	NS
				10/17/2011	7.4	127	<i>238</i>	72.1	106	NS
				4/11/2012	6.6	98.0	<i>215</i>	60.6	72.2	NS
				10/15/2012	6.5	117	<i>188</i>	49.0	124	NS
				4/8/2013	7.0	89.9	37.7	9.1	37.5	NS
				10/21/2013	7.9	<i>152</i>	111	<i>148</i>	110	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.q.
Summary of Analytical Results for Tetrachloroethene (PCE)
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
*TETRACHLOROETHENE (PCE)	0.5	5	ug/L							
				RFI-Phase 1	2	<5	<5	NI	NI	NS
				RFI-Phase 2	<5	12	<5	<5	<5	2
				RFI-Phase 3	<0.5	0.8	<0.5	<0.5	<0.5	<0.5
				12/2/1998	NS	NS	<0.6	<0.6	<0.6	NS
				5/3/1999	NS	NS	<0.6	<0.6	<0.6	<0.6
				11/1-4/1999	NS	NS	<0.07	<0.07	<0.07	<0.07
				4/27-5/1/2000	NS	NS	<0.2	<0.2	<0.2	<0.2
				11/6-7/2000	NS	NS	<0.2	<0.2	<0.2	<0.2
				4/26/2001	NS	NS	<0.17	<0.17	<0.17	<0.17
				11/1/2001	NS	NS	<0.17	<0.17	<0.17	<0.17
				4/30/2002	NS	NS	<0.17	<0.17	<0.17	<0.17
				10/29/2002	NS	NS	NA	NA	NA	NA
				4/24/2003	NS	NS	NA	NA	NA	NA
				1/14/2004	<0.40	NS	Frozen	<0.40	<0.40	<0.40
				3/1-3/2004	<0.40	NS	Frozen	<0.40	<0.40	<0.40
				5/20/2004	<0.40	NS	<0.40	<0.40	<0.40	<0.40
				10/14-15/2004	<0.250	NS	19.4	<0.250	<0.250	<0.250
				4/25-26/2005	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				11/14-16/2005	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				4/24-25/2006	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				11/15-16/2006	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				4/25/2007	<0.250	NS	<0.250	<0.250	<0.250	NS
				10/29/2007	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				4/9/2008	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				10/14/2008	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				4/27/2009	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				10/30/2009	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
				4/13-14/2010	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
				11/18/2010	<0.50	<0.50	<0.50	<0.50	<0.50	NS
				4/12/2011	<0.45	<0.45	<0.45	<0.45	<0.45	NS
				10/17/2011	<0.45	<0.45	<0.45	<0.45	<0.45	NS
				4/11/2012	<0.45	<0.45	<0.45	<0.45	<0.45	NS
				10/15/2012	<0.45	<0.45	<0.45	<0.45	<0.45	NS
				4/8/2013	<0.45	<0.45	<0.45	<0.45	<0.45	NS
				10/21/2013	<0.47	<0.94	<0.47	<0.47	<0.47	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

Notes:

- 1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.
- 2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.
- 3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.r.
Summary of Analytical Results for Trichloroethene (TCE)
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
*TRICHLOROETHENE (TCE)	0.5	5	ug/L							
				RFI-Phase 1	<5	<5	<5	NI	NI	NS
				RFI-Phase 2	<5	1	<5	<5	<5	<5
				RFI-Phase 3	<0.5	<1.6	<0.5	<0.5	<1.2	1.8
				12/2/1998	NS	NS	<0.2	<0.2	<0.2	NS
				5/3/1999	NS	NS	<0.2	0.3	<0.2	<0.2
				11/1-4/1999	NS	NS	<0.2	<0.2	<0.2	<0.2
				4/27-5/1/2000	NS	NS	<0.2	<0.2	<0.2	<0.2
				11/6-7/2000	NS	NS	<0.2	<0.2	<0.2	<0.2
				4/26/2001	NS	NS	<0.2	<0.2	<0.2	<0.2
				11/1/2001	NS	NS	<0.2	<0.2	<0.2	<0.2
				4/30/2002	NS	NS	<0.2	<0.2	<0.2	<0.2
				10/29/2002	NS	NS	NA	NA	NA	NA
				4/24/2003	NS	NS	NA	NA	NA	NA
				1/14/2004	<0.40	NS	Frozen	<0.40	<0.40	<0.40
				3/1-3/2004	<0.30	NS	Frozen	<0.30	<0.30	<0.30
				5/20/2004	<0.15	NS	<0.15	<0.15	<0.15	0.15
				10/14-15/2004	<0.250	NS	20.5	<0.250	<0.250	<0.250
				4/25-26/2005	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				11/14-16/2005	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				4/24-25/2006	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				11/15-16/2006	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				4/25/2007	<0.250	NS	<0.250	<0.250	<0.250	NS
				10/29/2007	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				4/9/2008	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				10/14/2008	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				4/27/2009	<0.250	NS	<0.250	<0.250	<0.250	<0.250
				10/30/2009	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
				4/13-14/2010	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
				11/18/2010	<0.20	<0.20	<0.20	<0.20	<0.20	NS
				4/12/2011	<0.48	<0.48	<0.48	<0.48	<0.48	NS
				10/17/2011	<0.48	<0.48	<0.48	<0.48	0.61	NS
				4/11/2012	<0.48	<0.48	<0.48	<0.48	<0.48	NS
				10/15/2012	<0.48	<0.48	<0.48	<0.48	<0.48	NS
				4/8/2013	<0.48	<0.48	<0.48	<0.48	<0.48	NS
				10/21/2013	<0.36	<0.73	0.71J	<0.36	0.64J	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.s.
Summary of Analytical Results for Thallium
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
THALLIUM (TL), TOTAL	0.4	2	ug/L							
				RFI-Phase 1	<10	<10	<10	NI	NI	NS
				RFI-Phase 2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
				RFI-Phase 3	<10	<10	<10	<10	<10	<10
				12/2/1998	NS	NS	<0.9	<0.9	<0.9	NS
				5/3/1999	NS	NS	2.1	1.3	<0.9	<0.9
				11/1-4/1999	NS	NS	1.3	<0.9	<0.9	<0.9
				4/27-5/1/2000	NS	NS	<0.9	<0.9	<0.9	<0.9
				11/6-7/2000	NS	NS	<1.2	<1.2	<1.2	<1.2
				4/26/2001	NS	NS	<1.2	<1.2	<1.2	<1.2
				11/1/2001	NS	NS	<1.2	<1.2	<1.2	<1.2
				4/30/2002	NS	NS	<0.7	<0.7	<0.7	<0.7
				10/29/2002	NS	NS	0.5	0.4	<0.4	<0.4
				4/24/2003	NS	NS	<0.6	<0.6	<0.6	<0.6
				1/14/2004 ¹	<1.5	NS	Frozen	<1.5	<1.5	<1.5
				3/1-3/2004	<1.7	NS	Frozen	<1.7	<1.7	<1.7
				5/20/2004	<1.7	NS	<1.7	<1.7	<1.7	<1.7
				10/14-15/2004	0.299	NS	135	0.31	0.361	0.192
				4/25-26/2005	0.517	NS	2.24	<0.100	0.524	3.33
				11/14-15/2005	0.24	NS	0.113	<0.050	0.186	<0.050
				4/24-25/2006	0.113	NS	0.223	0.0803	0.115	0.116
				11/15-16/2006	<0.050	NS	0.247	<0.050	0.372	<0.050
				4/25/2007	0.596	NS	0.079	0.0565	0.719	NS
				10/29/2007	<0.050	NS	0.145	<0.050	0.671	<0.050
				4/9/2008	0.159	NS	0.228	0.132	0.695	0.0865
				10/14&17/2008	<0.050	NS	0.535	0.169	0.644	<0.050
				4/27/2009	<0.0500	NS	0.109	<0.0500	<0.0500	<0.0500
				10/30/2009	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61
				4/13-14/2010	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61
				11/18/2010	0.19	<0.12	0.34	<0.12	<0.12	NS
				4/12/2011	<0.39	<0.39	<0.39	<0.39	<0.39	NS
				10/17/2011	<0.37	<0.37	0.37J	0.65	<0.37	NS
				4/11/2012	<0.37	<0.37	<0.37	<0.37	<0.37	NS
				10/15/2012	0.87J	0.41J	<0.37	<0.37	<0.37	NS
				4/8/2013	0.82J	1.2	<0.37	<0.37	<0.37	NS
				10/21/2013	0.61J	0.74J	0.091J	0.12J	0.098J	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.t.
Summary of Analytical Results for Vanadium
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
VANADIUM (V), TOTAL	6	30	ug/L							
				RFI-Phase 1	<5.0	16	34.9	NI	NI	NS
				RFI-Phase 2	<15.0	<15.0	<15.0	<15.0	16	<15.0
				RFI-Phase 3	<50	<50	<50	<50	<50	<50
				12/2/1998	NS	NS	12	9.9	14	NS
				5/3/1999	NS	NS	7.9	8	<4.5	6.3
				11/1-4/1999	NS	NS	<1.9	<1.9	<1.9	<1.9
				4/27-5/1/2000	NS	NS	16	<6.2	9.3	<6.2
				11/6-7/2000	NS	NS	<5.8	<5.8	<5.8	9.3
				4/26/2001	NS	NS	<6.6	<6.6	<6.6	<6.6
				11/1/2001	NS	NS	<6.7	<6.7	<6.7	<6.7
				4/30/2002	NS	NS	<6.7	12	7.8	8
				10/29/2002	NS	NS	17	8.1	6.1	<5.6
				4/24/2003	NS	NS	<5.6	<5.6	<5.6	<5.6
				1/14/2004 ¹	<2.9	NS	Frozen	<2.9	<2.9	3.2
				3/1-3/2004	14.7	NS	Frozen	<4.9	<4.9	5.3
				5/20/2004	7	NS	<4.9	<4.9	<4.9	<4.9
				10/14-15/2004	15.9	NS	467	<5.00	6.92	<5.00
				4/25-26/2005	34.7	NS	10.2	<5.00	<5.00	<5.00
				11/14-15/2005	23.6	NS	9.04	7.33	11.9	5.76
				4/24-25/2006	17.1	NS	8	5.36	12.3	<5.00
				11/15-16/2006	7.49	NS	13.1	6.49	20.8	<5.00
				4/25/2007	5.23	NS	<5.00	<5.00	15	NS
				10/29/2007	<5.00	NS	<5.00	<5.00	18.6	<5.00
				4/9/2008	<5.00	NS	<5.00	<5.00	13.8	<5.00
				10/14&17/2008	<5.00	NS	<5.00	<5.00	28.7	<5.00
				4/27/2009	8.26	NS	8.15	<5.00	<5.00	6.98
				10/30/2009	<0.61	1.3	<0.61	<0.61	<0.61	2.9
				4/13-14/2010	<0.61	<0.61	<0.61	<0.61	<0.61	0.78
				11/18/2010	14	<0.61	<0.61	0.9	2	NS
				4/12/2011	1.9	<0.38	<0.38	0.64	1.8	NS
				10/17/2011	0.92	<0.31	<0.31	0.52	1.4	NS
				4/11/2012	0.78J	<0.31	0.39J	0.47J	0.89J	NS
				10/15/2012	0.53J	0.99J	<0.31	0.81J	1.0	NS
				4/8/2013	0.57J	<0.31	1.0	0.64J	0.89J	NS
				10/21/2013	<0.37	16.7	1.2	2.0	1.2	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.1.u.
Summary of Analytical Results for Zinc
Closed Landfill 2, Fort McCoy, WI

PARAMETER NAME	RCRA MCS/NR140 PAL	NR140 Enf Std	Result Units	Sample Date	WELL ID					OW-104 (UPGRADIENT)
					OW-101	OW-102	OW-103	OW-121	OW-122	
ZINC (Zn), TOTAL	2500	5000	ug/L							
				RFI-Phase 1	15	467	231	NI	NI	NS
				RFI-Phase 2	<15.0	1040	926	211	542	30
				RFI-Phase 3	50	520	2300	3000	670	<20
				12/2/1998	NS	NS	9250	1900	26200	NS
				5/3/1999	NS	NS	3560	4680	13300	<2
				11/1-4/1999	NS	NS	566	1500	13400	11
				4/27-5/1/2000	NS	NS	1280	13100	1120	3.7
				11/6-7/2000	NS	NS	1705	688	16900	<6.8
				4/26/2001	NS	NS	947	211	3120	2.8
				11/1/2001	NS	NS	1400	258	9080	<3.4
				4/30/2002	NS	NS	433	122	9330	<3.8
				10/29/2002	NS	NS	854	414	13500	15.2
				4/24/2003	NS	NS	1580	335	12800	56
				1/14/2004 ¹	8.8	NS	Frozen	45.9	1600	2.3
				3/1-3/2004	39.6	NS	Frozen	2630	12900	4.7
				5/20/2004	50.8	NS	2870	1000	6630	4.5
				10/14-15/2004	30.4	NS	610	418	5550	<5.00
				4/25-26/2005	50.4	NS	2980	460	8790	<5.00
				11/14-15/2005	47.2	NS	359	666	9380	<5.00
				4/24-25/2006	41.1	NS	803	2950	7020	9.4
				11/15-16/2006	22.8	NS	1050	977	9300	<5.00
				4/25/2007	20.5	NS	427	988	25900	NS
				10/29/2007	9.84	NS	588	568	14300	<5.00
				4/9/2008	16.8	NS	434	829	11800	<5.00
				10/14&17/2008	18	NS	2460	1950	23100	<5.00
				4/27/2009	28.7	NS	510	144	907	9.88
				10/30/2009	6.6	940	310	470	550	<6
				4/13-14/2010	6.7	96	67	130	110	<6
				11/18/2010	28	180	420	360	380	NS
				4/12/2011	77.4	493	388	48.7	306	NS
				10/17/2011	27.4	508	73.1	76.1	276	NS
				4/11/2014	5.0J	56.6	243	97.1	232	NS
				10/15/2012	6.9J	414	92.9	49.6	192	NS
				4/8/2013	13.7	75.3	90.8	31.9	91.6	NS
				10/21/2013	14.7	2430	229	156	223	NS

During the last four rounds of monitoring a duplicate was collected at well OW-121. For these last four rounds, the highest concentration between the OW-121 sample and the duplicate has been included on the table.

* Denotes RCRA permit Contaminant of Concern.

NS=Not Sampled.

¹Except for Thallium, metals analyzed from 1/14/04 were from a filtered sample.

Notes:

1) Wells OW-102, OW-103, OW-121, and OW-122, which were installed as drive-point piezometer, were relaced in September 2010. The replacement wells were installed within a few feet of the original wells, and are constructed in accordance with NR 141. Therefore, all samples, beginning in November 2010 were obtained from the new wells. The new wells are designated as OW-102R, OW-103R, OW-121R, OW-122R.

2) RFI Phase 1 sampling occurred in May and June 1992, RFI Phase 2 sampling occurred in October and November 1992, and RFI Phase 3 sampling occurred in May through August 1993.

3) This table does not include results for the interim monitoring conducted in July 1994, as the analytical reports were not found. However, the 1996 Corrective Measure Study Report indicates that all constituents of concern were detected at levels below the NR 140 Preventive Action Limit during that event.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.2. Soil Analytical Results Tables:

Not Applicable. This is a closed ash monofill. While there is some soil mixed with the waste (ash materials), all investigative samples were of waste/soil and no soil contamination extends beyond the waste boundaries.

ATTACHMENT A.3. Residual Soil Contamination Tables:

Not Applicable. This is a closed ash monofill. While is some soil mixed with the waste (ash materials), there is no soil contamination extending beyond the two areas that have been capped (see Attachment B.3.a.).

ATTACHMENT A.4. Vapor Analytical Table(s)

Not Applicable. The contaminants of concern are metals and vapor is not a concern at this site.

ATTACHMENT A.5.a
Summary of Parameters Detected in Sediment Samples
Closed Landfill 2
Fort McCoy, WI
(mg/kg)

PARAMETER	SD01	SD01A	SD02	SD02A	SD03	SD04 (upgradient)	TEC ¹
	4/30/1992	10/13/1992	4/30/1992	10/13/1992	4/30/1992	4/30/1992	
Acetone	NA	0.007	NA	0.020	NA	0.007	NS
Methylene Chloride	NA	0.002	NA	0.002	0.190	NA	NS
Di-n-butylphthalate	0.083	<0.410	0.33	0.044	0.190	0.260	NS
bis(2-Ethylhexyl)phthalate	0.140	<0.410	0.110	0.170	0.200	0.110	NS
Chrysene	<0.450	NR	<0.460	0.089	<0.410	<0.430	0.166
Fluoranthene	<0.450	<0.410	<0.460	0.089	<0.410	<0.430	0.423
Pyrene	<0.450	<0.410	<0.460	0.087	<0.410	<0.430	0.195
Aluminum	791	460	768	853	400	941	NS
Antimony	<0.511	<1.700	<0.495	<1.800	<0.484	<1.900	2
Arsenic	0.648	<0.500	0.565	0.570	0.442	1.400	9.8
Barium	9.380	4.500	12.5	10.0	5.480	9.480	NS
Beryllium	0.120	<0.990	0.136	<1.000	0.182	0.241	NS
Cadmium	<0.128	<1.200	0.138	<1.300	<0.122	<0.181	0.99
Calcium	342	265	536	879	115	468	NS
Chromium	2.03	2.2	1.67	2.8	0.914	1.970	43
Cobalt	0.744	<2.700	1.000	<2.800	0.521	1.430	NS
Copper	2.03	<4.20	3.38	<4.40	3.40	3.18	32
Iron	1,430	656	1,260	6,940	876	2,150	20,000
Lead	1.440	1.600	2.53	3	1.14	2.67	36
Magnesium	136.0	91.8	149.0	165.0	48.2	173.0	NS
Manganese	20.4	8.9	14.8	31.5	6.2	25.4	460
Nickel	1.270	<2.700	1.750	<2.800	0.747	2.470	23
Potassium	59.8	<15.300	85.8	<15.9	37.3	89.3	NS
Selenium	0.313	<0.250	0.253	<0.260	0.161	0.282	NS
Sodium	18.4	95.3	23.3	111.0	17.9	21.2	NS
Vanadium	1.83	<3.700	1.940	<3.900	0.726	1.92	NS
Zinc	5.41	<3.7	11.8	17.0	4.45	12.40	120

NS=No Consensus Based TEC.

NA=Analytical report for Volatile Organics Analyses was not included in the RFI for the specific sample.

¹ TEC=Threshold Effect Concentration. The level at which there is no, or limited Adverse Effects. Taken from the "Consensus-Based Sediment Quality Guidelines Recommendations for Use & Application Interim Guidance. Developed by the Contaminated Sediment Standing Team. December 2003. WT-732 2003. Wisconsin Department of Natural Resources.

Italic = NR 140 Preventive Action Limit (PAL) Exceedance

Bold/Italic = NR 140 Enforcement Standard (ES) Exceedance

ATTACHMENT A.5.b.
Summary of Parameters Detected in Surface Water Samples
Closed Landfill 2
Fort McCoy, WI
(ug/L)

PARAMETER	SW01	SW01A	SW02	SW02A	SW03	SW04 (upstream)	NR 105 ¹	NR 105	NR 140
	4/29/1992	10/13/1992	4/29/1992	10/13/1992	4/29/1992	4/30/1992	(Cold Water)	Table 8 ²	ES ³
Methylene Chloride	5	<5	<1	1	<2	<2	NS	NS	5
Di-n-octylphthalate	<10	<10	<10	8	<10	<10	NS	NS	NS
bis(2-Ethylhexyl)phthalate	7	7	<10	120	<10	<10	NS	NS	6
Aluminum	427	472.00	589	243	443	406	NS	NS	200
Antimony	<40	7	<40	<7.00	<40.0	<40	NS	373	6
Arsenic	1.3	<2.00	1.1	<2.00	<1.0	<1.0	148	NS	10
Barium	23	42.00	22	28.00	24	22	NS	NS	2000
Calcium	10,500	12,300.00	9,880	11,200	12,300	10,100	NS	NS	NS
Iron	880	1300.00	761	913.00	682	1,250	NS	NS	30
Lead	<4.0	2.70	<4.0	<2.00	<4.0	<4.0	14.33	140	15
Magnesium	3,730	5,600.00	3,540	5,280.00	4,650	3,720	NS	NS	NS
Manganese	79	290.00	76	95.00	58	68	NS	NS	300
Potassium	1,490	1,620.00	996	1,300.00	1,110	831	NS	NS	NS
Selenium	6.9	<1.00	<1.0	<1.00	<1.0	<1.0	5.0	2,600	50
Sodium	2,730	4,320	2,330	2,980.00	5,950	2,240	NS	NS	NS
Vanadium	21	<15.00	<5	<15.00	8	<5	NS	NS	30
Zinc	<15	36.00	21	14.00	<15	<15	65.66	NS	5

NA= Analytical report for Volatile Organics Analyses was not included in the RFI for the specific sample.

NS= No Standard.

¹Values taken from NR 105 Tables 5 and 6 for cold water and hardness of 50 ppm as Fort McCoy surface water is soft.

²Values taken from NR 105 Table 8 for Non-Public Water Supply-Cold Water Communities

³NR 140 Enforcement Standard

BOLD/ITALIC =exceeds NR 105 value.

ATTACHMENT A.5.c.

Summary of La Crosse River - Landfill 2 affects on Aquatic Biota

Landfill 2 Project near the WWTP:

Landfill 2 work was accomplished in 1998 to contain landfill wastes and prevent environmental hazards. Work was conducted specific to the La Crosse River with stream restoration that prescribed armouring the shoreline to prevent stream migration and erosion into the confines of the landfill. Streambank armouring with limestone riprap included the installation of 30 lunger structures in select stream locations. In 1999, stream restoration work was completed on the streambank opposite Landfill 2. The 1998 and 1999 La Crosse River stream restoration resulted in approximately 297 meters of streambank enhancement that include 39 lunger structures.

Macroinvertebrate Study:

The results below were compiled by Drake (1997) for six LaCrosse River sites. Water quality ratings were based on the mean Family Biotic Index (FBI) values and mean Mean Tolerance Values (MTolVal). Five replicate samples were taken at each site for fall 1994 and spring 1995. The seasonal data was combined to calculate overall water quality ratings, ratings are defined by Hilsenhoff (1987). This study was re-assessed for fall of 2007.

Site	FBI (1994)	FBI (2007)	MTolVal (1994)	MTolVal (2007)
0401	Excellent	Fair	V. Good	V. Good
0402	V. Good	V. Good	V. Good	V. Good
0403	Good	Fairly Poor	Good	Fair
0404	Excellent	Excellent	Excellent	Excellent
0405	Excellent	Good	Excellent	V. Good
0406	Excellent	Good	Excellent	V. Good

The macroinvertebrate results for the LaCrosse River and tributaries on Fort McCoy were very good in 1994 and 1995. Site 0404, just below the NIA, had the best water quality rating of all LaCrosse River sites. Site 0402 (near WQ site 3) and 0403 (below Alderwood Lake) had lower water quality ratings. Drake believed these sites were influenced by the effects of impounded water, excluding these sites, water quality remains fairly constant from the headwaters (site 0401) to County Highway BB (site 0406). The 2007 FBI and MTolVal results were significantly lower for sites in the upper La Crosse River watershed. The lower La Crosse River sites had water quality rating (FBI and MTolVal) that were ranged from good to excellent. It appears that there are no significant impacts to La Crosse River water quality ratings as a result of Landfill 2. Further investigation of the upper watershed would be beneficial to determine reasons for water quality decline.

La Crosse River Index of Biotic Integrity (IBI):

The Landfill 2 project site is located between the Wastewater Treatment Plant (WWTP) and the La Crosse River and in proximity to the road crossing the La Crosse River near the confluence of Tarr Creek. The La Crosse River from the confluence of Tarr Creek to CTH BB is comprised most entirely by brown trout. IBI ratings were established as described by Lyons (1996). Fish IBI scores for this area had a rating of "Good" prior to work on Landfill 2. From 1999-2008, there were no changes in the Fish IBI rating for this area near Landfill 2, ratings have been "Good". Trout densities averaged 316 and 92 trout per mile for two sites in proximity to Landfill 2 prior to restoration (1996-1998). Trout densities have averaged 720 and 401 trout per mile respectively from 2000-2008. The La Crosse River has generally responded very well to habitat treatments. It should be noted that trout densities have declined significantly since 2007 for the lower La Crosse River sites. Biomass has declined, however this trend appears to be indicative of mostly an older trout population, with larger trout and fewer recruits (young) observed in 2008.

Summary:

La Crosse River water quality ratings ranged from good to very good when using fish and macroinvertebrates as indicators of biotic integrity post Landfill 2 restoration (2000-2008). Evaluation of the aquatic biota in this area appears to be consistent with the trends observed at other La Crosse River sites near Landfill 2 and therefore concluded that this site is not having any adverse impact to the La Crosse River fishery.

John Noble
Fishery Biologist, NRB-ED
DPW

ATTACHMENT A.5.d.

**EMAIL FROM KURT RASMUSSEN (WDNR) SUMMARIZING HIS
CONCLUSIONS BASED UPON A REVIEW OF THE
SUMMARY OF LA CROSSE RIVER – LANDFILL 2
AFFECTS ON AQUATIC BIOTA**

From: Willkom, Mae - DNR
To: Bartholomew, Craig O CIV (US)
Subject: FW: Biological data maps? (UNCLASSIFIED)
Date: Friday, October 11, 2013 10:04:45 AM
FYI

Mae E. Willkom
Hydrogeologist
Remediation and Redevelopment
Wisconsin Department of Natural Resources
() phone: (715) 839-3748
() fax: (715) 839-6076
() e-mail: mae.willkom@wisconsin.gov

We are committed to service excellence. Click here to evaluate how I did.

-----Original Message-----

From: Rasmussen, Kurt - DNR
Sent: Wednesday, October 09, 2013 2:16 PM
To: Willkom, Mae - DNR
Subject: RE: Biological data maps? (UNCLASSIFIED)

Mae,

I apologize for the delay in my response. Thank you for the map! Based on the sediment and waster chemistry information you provided it is difficult to point the finger at CLF2 and with any certainty say that was the source. That being said, anytime we have parameters that exceed surface water standards there are potential concerns. But in this case, I would agree with the surface water sample and sediment sample narrative written by the consultant.

Also enclosed in the information provided was a summary of aquatic biota information collected on the La Crosse River before and after the improvements made to CLF2 in 1998. The information provided included water quality ratings from macroinvertebrate and fish based biological indices. The water quality ratings from the two upstream sites and one site downstream of CLF2 were all good, very good or excellent both before and after the improvements to CLF2. According to the information provided, it appears that the habitat improvements constructed in conjunction with the repairs to CLF2 have benefitted the brown trout densities in the La Crosse River. Based on the biological information provided, it appears that CLF2 has not adversely impacted the La Crosse River aquatic biota.

Sincerely,

Kurt A. Rasmussen
Water Resources Management Specialist
3550 Mormon Coulee Road
La Crosse, WI 54601
Wisconsin Department of Natural Resources
() phone: (608) 785-9910
() fax: (608) 785-9990
() e-mail: Kurt.Rasmussen@wisconsin.gov

Website: dnr.wi.gov

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**ATTACHMENT A.6
GROUNDWATER ELEVATIONS
CLOSURE REQUEST
CLOSED LANDFILL #2
BRRTS NO. 02-42-278852
FORT MCCOY, WISCONSIN
(SEPTEMBER 2015)**

DATE ¹	OW101	OW102	OW103	OW121	OW122	OW102R	OW103R	OW121R	OW122R
May-92	818.42	815.49	815.86	NI	NI	NI	NI	NI	NI
Jun-92	818.12	815.39	815.76	NI	NI	NI	NI	NI	NI
Nov-92	818.43	815.81	815.85	815.76	816.13	NI	NI	NI	NI
Jul-93	819.51	815.98	816.35	815.91	816.35	NI	NI	NI	NI
Dec-98	NS	NS	814.61	814.87	815.09	NI	NI	NI	NI
May-99	NS	NS	815.77	815.03	815.35	NI	NI	NI	NI
Nov-99	NS	NS	815.61	814.81	815.19	NI	NI	NI	NI
May-00	NS	NS	815.61	814.53	814.93	NI	NI	NI	NI
Nov-00	NS	NS	815.77	814.85	815.23	NI	NI	NI	NI
Apr-01	NS	NS	815.73	814.85	815.25	NI	NI	NI	NI
Nov-01	NS	NS	815.73	814.83	815.21	NI	NI	NI	NI
Apr-02	NS	NS	815.81	814.93	815.29	NI	NI	NI	NI
Oct-02	NS	NS	815.7	814.84	815.18	NI	NI	NI	NI
Apr-03	NS	NS	815.63	814.49	814.65	NI	NI	NI	NI
Jan-04	823.65	NS	WF	814.40	814.53	NI	NI	NI	NI
Mar-04	823.90	NS	WF	814.64	814.60	NI	NI	NI	NI
May-04	824.49	NS	815.93	814.98	815.00	NI	NI	NI	NI
Oct-04	824.00	NS	815.42	814.07	814.40	NI	NI	NI	NI
Apr-05	824.22	NS	815.52	814.27	814.59	NI	NI	NI	NI
Nov-05	823.97	NS	815.52	814.30	814.55	NI	NI	NI	NI
Apr-06	824.28	NS	815.50	814.37	814.53	NI	NI	NI	NI
Oct-06	824.24	NS	815.50	814.37	814.53	NI	NI	NI	NI
Nov-06	823.77	NS	815.60	814.34	814.50	NI	NI	NI	NI
Apr-07	824.51	NS	815.52	814.46	814.59	NI	NI	NI	NI
Oct-07	824.61	814.94	815.90	814.72	814.77	NI	NI	NI	NI
Apr-08	824.32	814.83	815.66	814.39	814.62	NI	NI	NI	NI
Oct-08	824.00	814.55	815.68	814.48	814.53	NI	NI	NI	NI
Oct-09	818.21	815.47	816.25	815.27	815.08	NI	NI	NI	NI
Apr-10	817.93	814.8	815.63	814.56	814.51	NI	NI	NI	NI
Nov-10	818.26	WA	WA	WA	WA	812.77	813.97	813.43	812.33
Apr-11	818.79	WA	WA	WA	WA	813.36	814.62	814.48	812.99
Apr-11	810.21	WA	WA	WA	WA	809.13	794.45 ²	810.2	809.13
Oct-11	817.61	WA	WA	WA	WA	812.6	813.45	812.86	811.7
Oct-11	817.56	WA	WA	WA	WA	812.31	813.35	813.08	812
Apr-12	817.43	WA	WA	WA	WA	812.5	813.62	813.09	812.07
Oct-12	823.97	WA	WA	WA	WA	815.52	815.99	814.12	815.68
Apr-13	824.22	WA	WA	WA	WA	815.67	815.89	816.04	815.88
Oct-13	823.92	WA	WA	WA	WA	815.25	815.51	814.75	815.45

NS = WELL NOT SAMPLED

NI = WELL NOT YET INSTALLED

WF = WELL FROZEN

WA = WELL WAS PREVIOUSLY ABANDONED

¹Groundwater Elevations were obtained from the Wisconsin Gems Database and from Fort McCoy sampling records.

²Elevation in GEMS is in error.

ATTACHMENT A.7.a.
ANALYTICAL RESULTS FOR MIXED SOIL AND WASTE SAMPLES
CLOSURE REQUEST
CLOSED LANDFILL #2
BRRTS NO. 02-42-279977
FORT MCCOY, WISCONSIN
(Samples Collected May 1992)
(mg/kg)

Analyte	SS-01-01	SS-02-01	SS-03-01	SS-04-01	SS-05-01	SS-06-01	SS-07-01	SS-08-01	SS-09-01	SS-10-01	NR 720 Non-Industrial RCLS
	0-2 Feet	0-2 Feet	0-2 Feet	0-2 Feet	0-2 Feet	0-2 Feet	0-2 Feet	0-2 Feet	0-2 Feet	0-2 Feet	
VOLATILE ORGANIC COMPOUNDS											
Tetrachloroethylene	<0.006	<0.006	<0.006	0.100 J	<0.006	<0.007	<0.007	<0.007	<0.006	<0.006	30.7
Toluene	0.003 J	0.032 J	0.019	0.100 J	0.028 J	0.020 J	0.052 J	0.021	<0.006	0.006 J	818
SEMI-VOLATILE ORGANIC COMPOUNDS											
Di-n-butylphthalate	0.150 J	0.140 J	0.061 J	0.200 J	<0.290	<0.460	0.260 J	0.200 J	0.210 J	0.180 J	6,110
Naphthalene	<0.420	<0.430	0.046 J	<0.460	<0.420	<0.460	<0.450	<0.450	<0.400	<0.400	5.15
bis(2-Ethylhexyl) phthalate	0.360 J	0.170 J	0.290 J	0.210 J	0.300 J	<0.460	0.210 J	0.200 J	0.750	0.150 J	34.7
METALS											
Aluminum	1,400	7,480	4,860	7,930	3,200	4,910	7,940	3,620	1,490	3,510	77,500
Antimony	0.964 J	<0.529	2.51 J	0.900	858	4.35	0.738	<0.513	<0.510	1.86	31.3
Arsenic	0.98	47.90	1.42	10.10	33.00	11.40	18.50	0.770	1.62	1.42	8 ¹
Beryllium	0.138	2.06	1.28	2.23	1.33	3.52	2.02	0.090	0.154	0.214	156
Cadmium	<0.136	1.51	0.662	1.01	10.70	1.43	1.04	<0.127	<0.127	1.21	70
Chromium	2.13	11.20	9.79	14.50	226	29.90	21.40	1.67	3.23	8.88	100,000
Iron	1,400	26,000	12,700	15,800	29,800	70,900	21,300	457	1,030	2,520	54,800
Lead	3.89	94.70 J	39.90 J	33.50 J	49,600	64.40 J	84.80 J	2.56	2.62	2.25	400
Manganese	14.40	170	199	68.10	430	656	255	2.55	7.16	47.80	1,830
Mercury	0.0269	0.126	0.037	0.0166	0.0481	1.47	0.186	0.0607	0.0129	0.880	3.13
Nickel	0.785 J	19.90 J	13.40 J	13.60 J	56.60	40.00	10.30	0.676	1.05	2.28	1,550
Selenium	0.441	1.69	0.423	0.836	1.47	0.435	1.01	0.203	0.293	0.240	391
Silver	<0.275	0.740	0.336	0.582	11.70	1.03	0.709	<0.257	<0.255	4.96	391
PESTICIDES											
4,4-DDD	0.013 J	<0.004	<0.004	<0.005	0.044	<0.005	<0.23	<0.004	0.026	<0.004	2.02
4,4-DDE	0.014 J	<0.004	<0.0055	<0.005	0.061	0.047	0.560	<0.004	0.030	0.019	1.84
4,4-DDT	<0.0082	<0.004	0.020	0.023	0.0150	<0.005	2.00	<0.004	0.037	0.026	1.72
ORTHO-PHOSPHORUS PESTICIDES											
Dichlorvos (Vapona)	<0.330	0.170 J	<0.150	<0.190	<0.180	<0.180	<0.180	<0.160	<0.180	<0.160	1.67

NOTES:

J = Estimated value.

Data taken from: SEC Donohue, 1994. RCRA Facility Investigation, Fort McCoy, Wisconsin. Table 6-1. November 1994.

¹WDNR Background threshold value from February 19, 2013 Release News.

Bold=Exceeds NR 729 Non-Industrial RCLs

ATTACHMENT A.7.b.
ANALYTICAL RESULTS FOR TEST PITS
CLOSURE REQUEST
CLOSED LANDFILL #2
BRRTS NO. 02-42-279977
FORT MCCOY, WISCONSIN
(Samples Collected October 1992¹)
(mg/kg)

Analyte	TP-01-0 I	TP-01-02	TP-01-03	TP-02-01	TP-02-02	TP-03-01	TP-03-02	NR 720 Non-Industrial RCLS
	6-8 Feet	4-6 Feet	6-8 Feet	6-8 Feet	9-11 Feet	6-8Feet	9-11 Feet	
VOLATILE ORGANIC COMPOUNDS								
Acetone	<0.015	0.007 J	0.004 J	<0.004	<0.015	<0.0015	<0.014	63,800
Methylene Chloride	0.002 J	0.002 J	0.002 J	0.002 J	<0.003 J	<0.007	0.002 J	60.7
SEMI-VOLATILE ORGANIC COMPOUNDS								
2-Methylnaphthalene	<0.500	0.053 J	<0.480	0.049 J	0.079 J	0.083 J	<0.460	229
Benzo(a)anthracene	<0.500	0.055 J	<0.480	<0.470	<0.490	<0.440	<0.460	0.147
Benzo(a)pyrene	<0.500	0.067 J	<0.480	<0.470	<0.490	<0.440	<0.460	0.015
Benzo(b)fluoranthene	<0.500	0.150 J	<0.480	<0.470	<0.490	0.090 J	0.110 J	0.148
Benzo(g,h,i)perylene	<0.500	0.067 J	<0.480	<0.470	<0.490	0.068 J	0.069 J	NS
Butylbenzylphthalate	<0.500	<0.400	<0.480	<0.470	<0.490	<0.440	0.047 J	256
Chrysene	<0.500	0.065 J	<0.480	<0.470	<0.490	0.057 J	<0.460	14.8
Fluoranthene	<0.500	0.057 J	<0.480	<0.470	0.057 J	0.071 J	<0.460	2,290
Indeno(1,2,3-cd)pyrene	<0.500	0.071 J	<0.480	<0.470	<0.490	0.075 J	0.070 J	0.148
Naphthalene	<0.500	<0.400	<0.480	<0.470	0.230 J	0.081 J	<0.460	5.15
Phenanthrene	<0.500	0.084 J	0.049 J	0.080 J	0.160 J	0.160 J	0.069 J	NS
Pyrene	<0.500	<0.400	<0.480	<0.470	<0.490	0.059 J	<0.460	1,720
bis(2-Ethylhexyl)phthalate	<0.500	<0.400	<0.480	0.073 J	0.070 J	0.088 J	0.077 J	34.7
METALS								
Aluminum	10,400 J	3,840 J	5,220 J	8,410	7,390	5,000	7,590	77,500
Antimony	3.00 J	<1.70	<10.00	<2.00	<2.10	<1.90	310	31.3
Iron	28,100 J	8,930 J	77,900 J	17,800	34,400	20,900	85,600	54,800
Lead	289 J	53.8 J	588 J	108.00	380.00	110.00	297.00	400
Manganese	363 J	110 J	314 J	183	745	410	919	1,830
Mercury	<0.080	<0.060	0.080	<0.070	<0.070	0.330	<0.100	3.13
Nickel	24.50	9.40	35.40	24.70	37.40	13.80	38.00	1,550
Selenium	3.30	<4.80	9.60	<0.570	<0.550	<0.530	0.660 J	391
Silver	17.50 J	<0.480	18.00 J	0.380 J	2.50	<0.260	0.460 J	391

NOTES:

J = Estimated value.

Data taken from: SEC Donohue, 1994. RCRA Facility Investigation, Fort McCoy, Wisconsin. Table 6-2. November 1994.

NS = No 720 Non-Industrial RCL.

Bold=Exceeds NR 729 Non-Industrial RCLs

¹Samples collected from depth intervals within the waste mass, and consisted of soil or soil-like material.

ATTACHMENT A.7.c.
ANALYTICAL RESULTS FOR LEACHATE SAMPLES
CLOSURE REQUEST
CLOSED LANDFILL #2
BRRTS NO. 02-42-279977
FORT MCCOY, WISCONSIN
(Samples Collected in April 1992)
(µg/l)

Analyte	L01-01	L01-02	L01-04	L02-01	NR 140 PAL ¹	NR 140 ES ¹
VOLATILE ORGANIC COMPOUNDS						
Methylene Chloride	2BJ	<5	3BJ	2BJ	0.5	5
SEMI-VOLATILE ORGANIC COMPOUNDS						
bis(2-Ethylhexyl)phthalate	2J	1J	<10	1J	NS	NS
METALS						
Aluminum	358	2,650	269	896	40	200
Antimony	124	<40	<40	57	1.2	6
Arsenic	1.0	4.8	<10	7.2	1	10
Barium	39	82	5.0	49	400	2,000
Calcium	145,000	160,000	3,660	173,000	NS	NS
Copper	27	75	<20	38	130	1,300
Iron	2,360	16,100	75	29,000	150	300
Lead	<4.0	59	<4.0	<4.0	1.5	15
Magnesium	16,800	18,100	225	18,000	NS	NS
Manganese	191	331	<10	807	60	300
Potassium	6,500	6,300	<500	6,130	NS	NS
Selenium	1.8	2.2	<1.0	<1.0	10	50
Sodium	6,180	6,890	844	7,450	NS	NS
Vanadium	19	46	<5	16	6	30
Zinc	497	1,130	<15	213	2,500	5,000

NOTES:

J = Estimated value.

B=Constituent Present in Sample Blank

Data taken from: SEC Donohue, 1994. RCRA Facility Investigation, Fort McCoy, Wisconsin. Table 6-2. November 1994.

NS = No NR 140 Standard.

BOLD/ITALIC=Exceeds NR 140 Enforcement Standard.

ITALIC=Exceeds NR 140 Preventive Action Limit

¹There are no applicable standards for comparison of leachate samples. Therefore, the NR 140 standards have been utilized to provide a reasonable frame of reference.

TABLE OF CONTENTS - ATTACHMENT B: MAPS, FIGURES AND PHOTOS

APPLICABLE	NOT APPLICABLE
B.1. LOCATION MAPS	
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B.1.b. Detailed Site Map	
B.1.c. RR Sites Map	
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B.4.c. Macroinvertebrate Samples	
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	B.5. Structural Impediment Photos



CLOSED LANDFILL 2

HIGHWAY 21

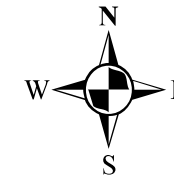
**ATTACHMENT B.1.a.
LOCATION MAP
CLOSURE REQUEST
CLOSED LANDFILL 2
BRRTS NO. 02-42-279977
FORT MCCOY, WISCONSIN**










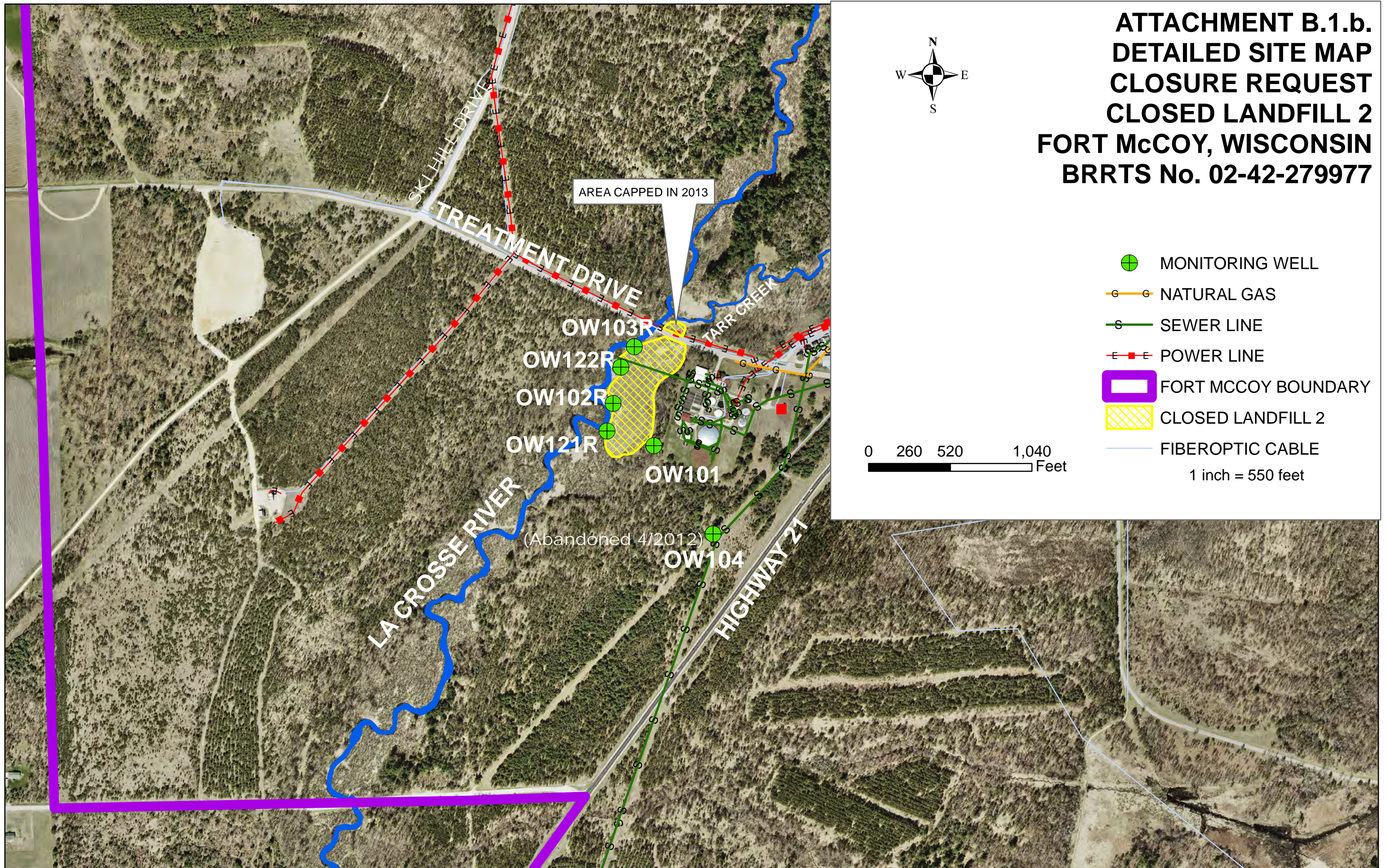
0 750 1,500 3,000
Feet

JULY 2015

**ATTACHMENT B.1.b.
 DETAILED SITE MAP
 CLOSURE REQUEST
 CLOSED LANDFILL 2
 FORT MCCOY, WISCONSIN
 BRRTS No. 02-42-279977**

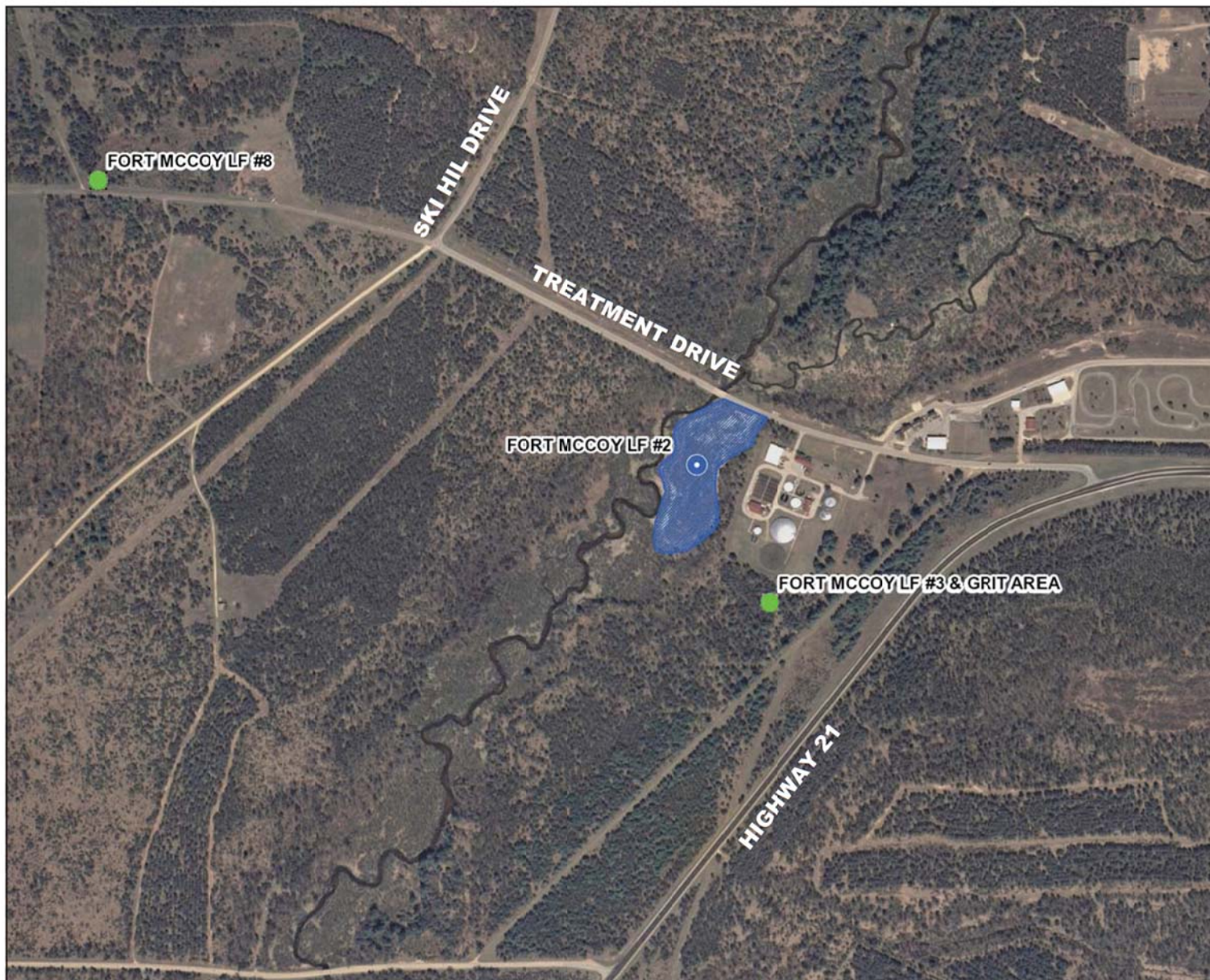


-  MONITORING WELL
 -  NATURAL GAS
 -  SEWER LINE
 -  POWER LINE
 -  FORT MCCOY BOUNDARY
 -  CLOSED LANDFILL 2
 -  FIBEROPTIC CABLE
- 0 260 520 1,040 Feet
 1 inch = 550 feet





B.1.c. RR SITES MAP FORT MCCOY LF #2



Legend

- Open Site (ongoing cleanup)
- Open Site Boundary
- Closed Site (completed cleanup)
- Closed Site Boundary
- Groundwater Contamination
- Soil Contamination
- Groundwater and Soil Contamination
- Contamination From Another Property
- Dryclean Environmental Response Fund (DERF)
- Green Space Grant (2004-2009)
- Ready for Reuse
- Site Assessment Grant (2001-2009)
- State Funded Response
- Sustainable Urban Development Zone (SUDZ)
- General Liability Clarification Letters
- Superfund NPL
- Voluntary Party Liability Exemption

Notes

0.3 0 0.15 0.3 Miles

NAD_1983_HARN_Wisconsin_TM

© Latitude Geographics Group Ltd.

1:9,500



DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: <http://dnr.wi.gov/org/legal/>

Note: Not all sites are mapped.

ATTACHMENT B.2.a. Soil Contamination:

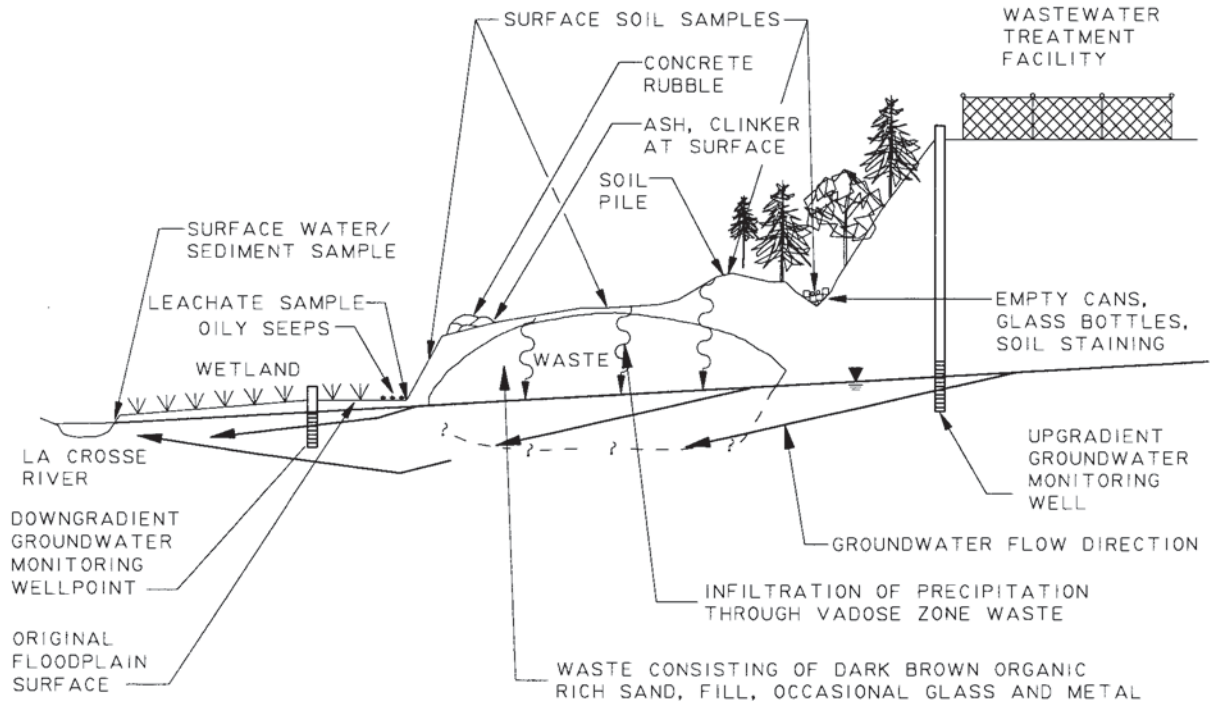
Not Applicable. This is a closed ash monofill. While there is some soil mixed with the waste (ash materials), all investigative samples were of waste/soil and no soil contamination extends beyond the capped areas.

ATTACHMENT B.2.b. Residual Soil Contamination:

Not Applicable. This is a closed ash monofill. While there is some soil mixed with the waste (ash materials), no soil contamination extends beyond the capped areas (see Attachment B.3.b.).

WEST

EAST



SCALE: NTS.

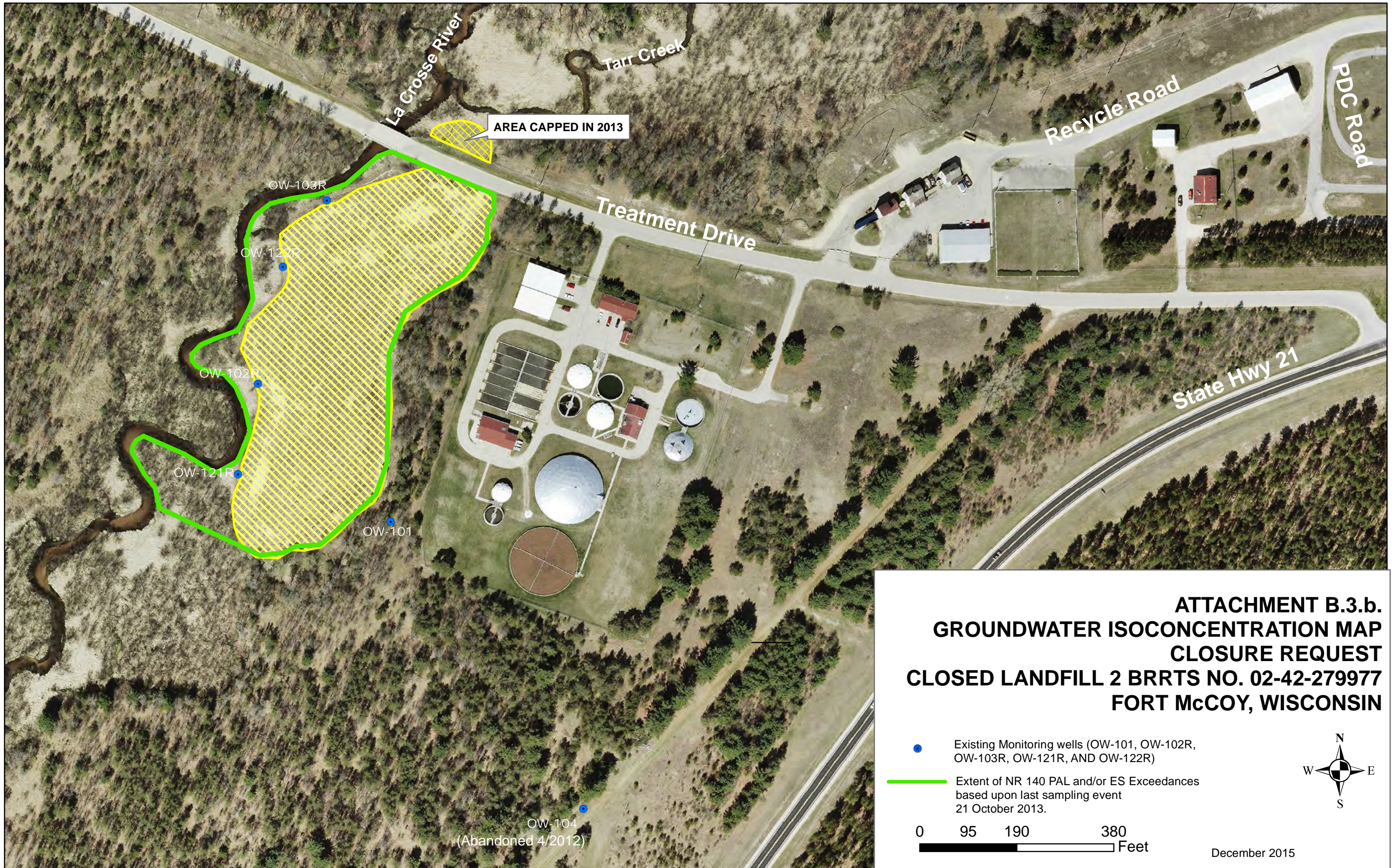
ATTACHMENT B.3.a. GEOLOGIC CROSS SECTION

MAY 1994

18903

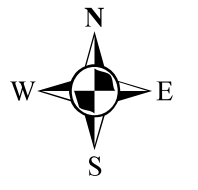
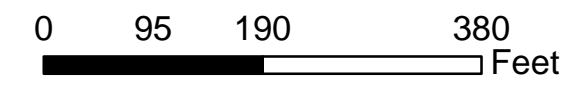


FIGURE 6-3
 CLOSED LANDFILL 2
 SITE CONCEPTUAL MODEL
 FORT McCOY RFI
 MONROE COUNTY, WISCONSIN

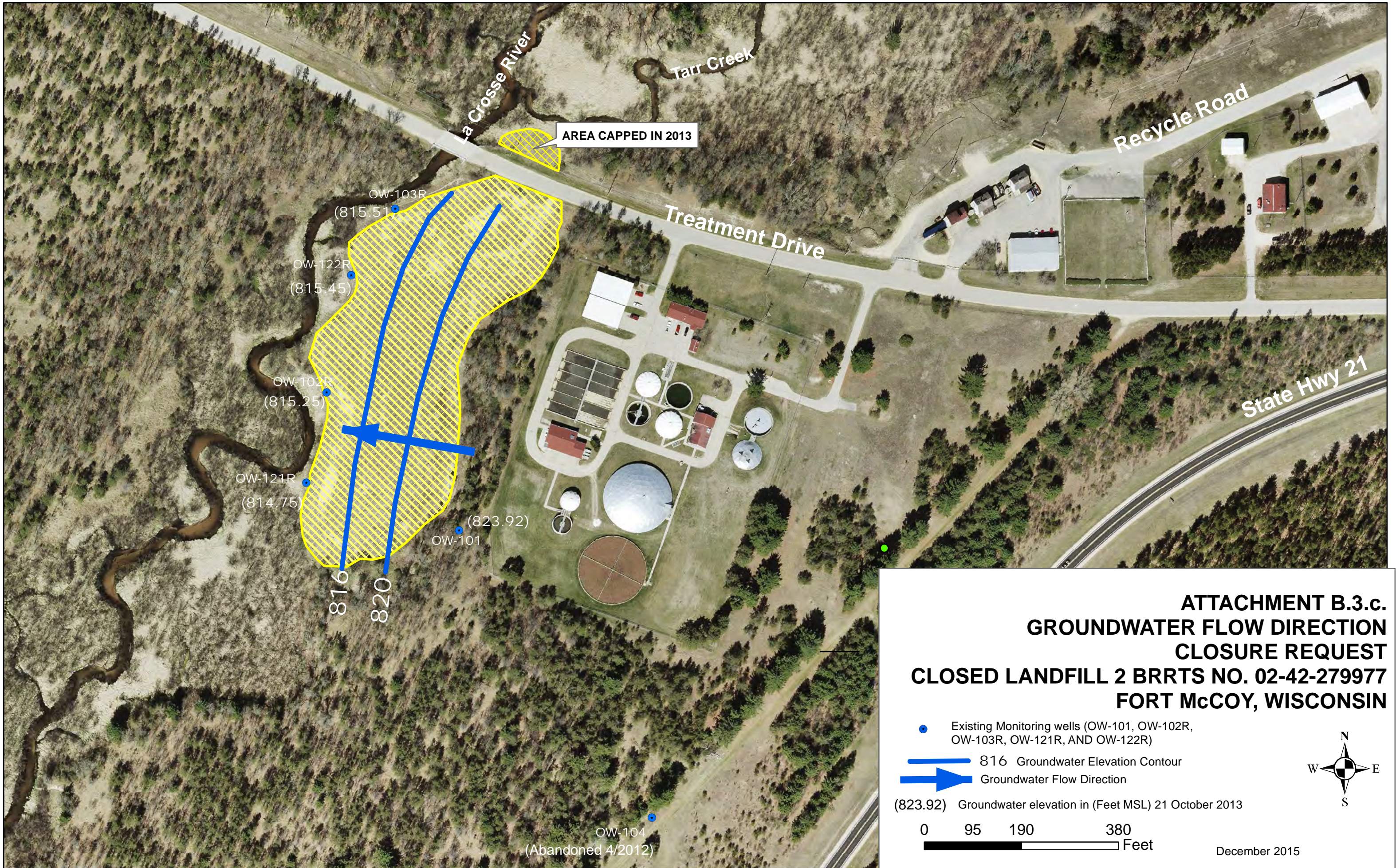


**ATTACHMENT B.3.b.
GROUNDWATER ISOCONCENTRATION MAP
CLOSURE REQUEST
CLOSED LANDFILL 2 BRRTS NO. 02-42-279977
FORT McCOY, WISCONSIN**

- Existing Monitoring wells (OW-101, OW-102R, OW-103R, OW-121R, AND OW-122R)
- Extent of NR 140 PAL and/or ES Exceedances based upon last sampling event 21 October 2013.



December 2015



AREA CAPPED IN 2013

OW-103R
(815.51)

OW-122R
(815.45)

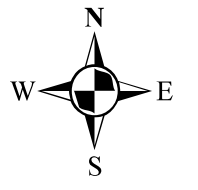
OW-102R
(815.25)

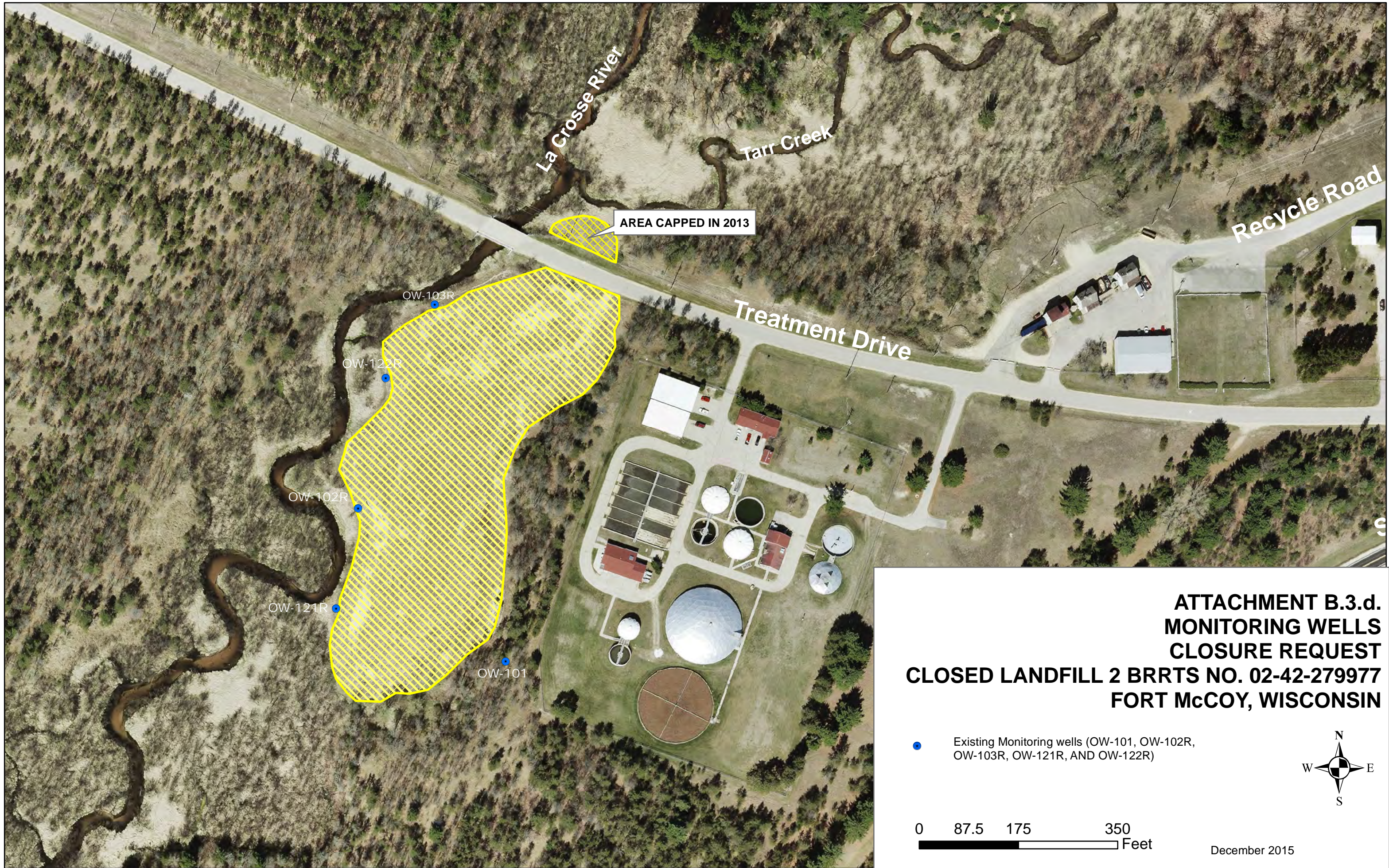
OW-121R
(814.75)

OW-101
(823.92)

816
820

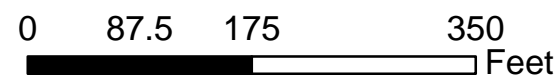
OW-104
(Abandoned 4/2012)





**ATTACHMENT B.3.d.
MONITORING WELLS
CLOSURE REQUEST
CLOSED LANDFILL 2 BRRTS NO. 02-42-279977
FORT McCOY, WISCONSIN**

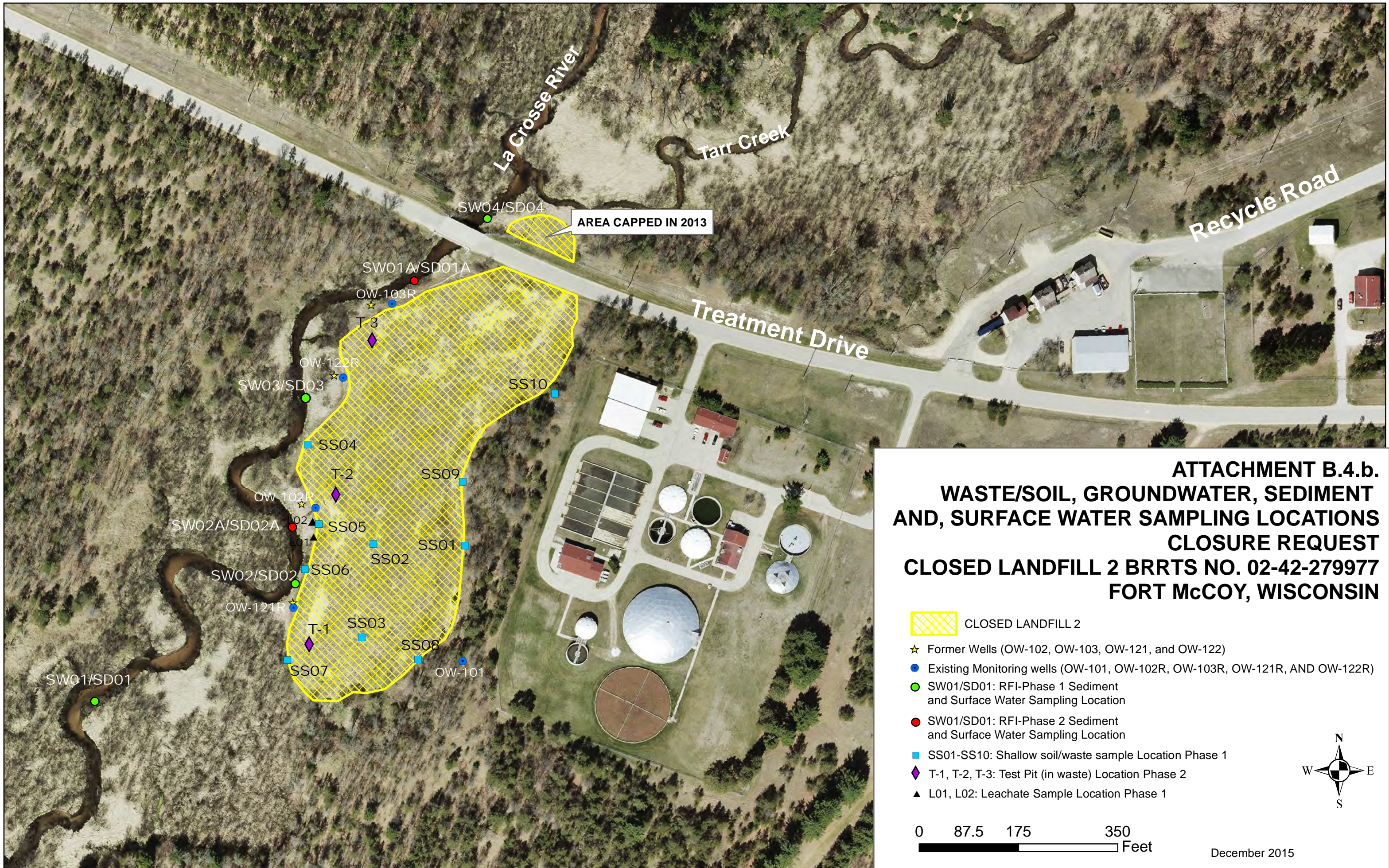
● Existing Monitoring wells (OW-101, OW-102R, OW-103R, OW-121R, AND OW-122R)



December 2015

ATTACHMENT B.4.a. Vapor Intrusion Map:

Not Applicable. The contaminants of Concern are metals and vapor is not a concern at this site.



ATTACHMENT B.4.b.
WASTE/SOIL, GROUNDWATER, SEDIMENT
AND, SURFACE WATER SAMPLING LOCATIONS
CLOSURE REQUEST
CLOSED LANDFILL 2 BRRTS NO. 02-42-279977
FORT McCOY, WISCONSIN

- CLOSED LANDFILL 2
- Former Wells (OW-102, OW-103, OW-121, and OW-122)
- Existing Monitoring wells (OW-101, OW-102R, OW-103R, OW-121R, AND OW-122R)
- SW01/SD01: RFI-Phase 1 Sediment and Surface Water Sampling Location
- SW01/SD01: RFI-Phase 2 Sediment and Surface Water Sampling Location
- SS01-SS10: Shallow soil/waste sample Location Phase 1
- T-1, T-2, T-3: Test Pit (in waste) Location Phase 2
- L01, L02: Leachate Sample Location Phase 1

0 87.5 175 350
 Feet

December 2015

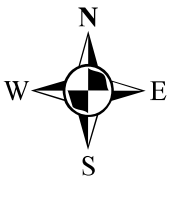
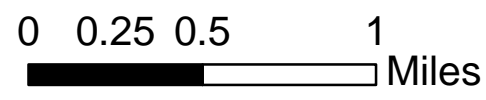
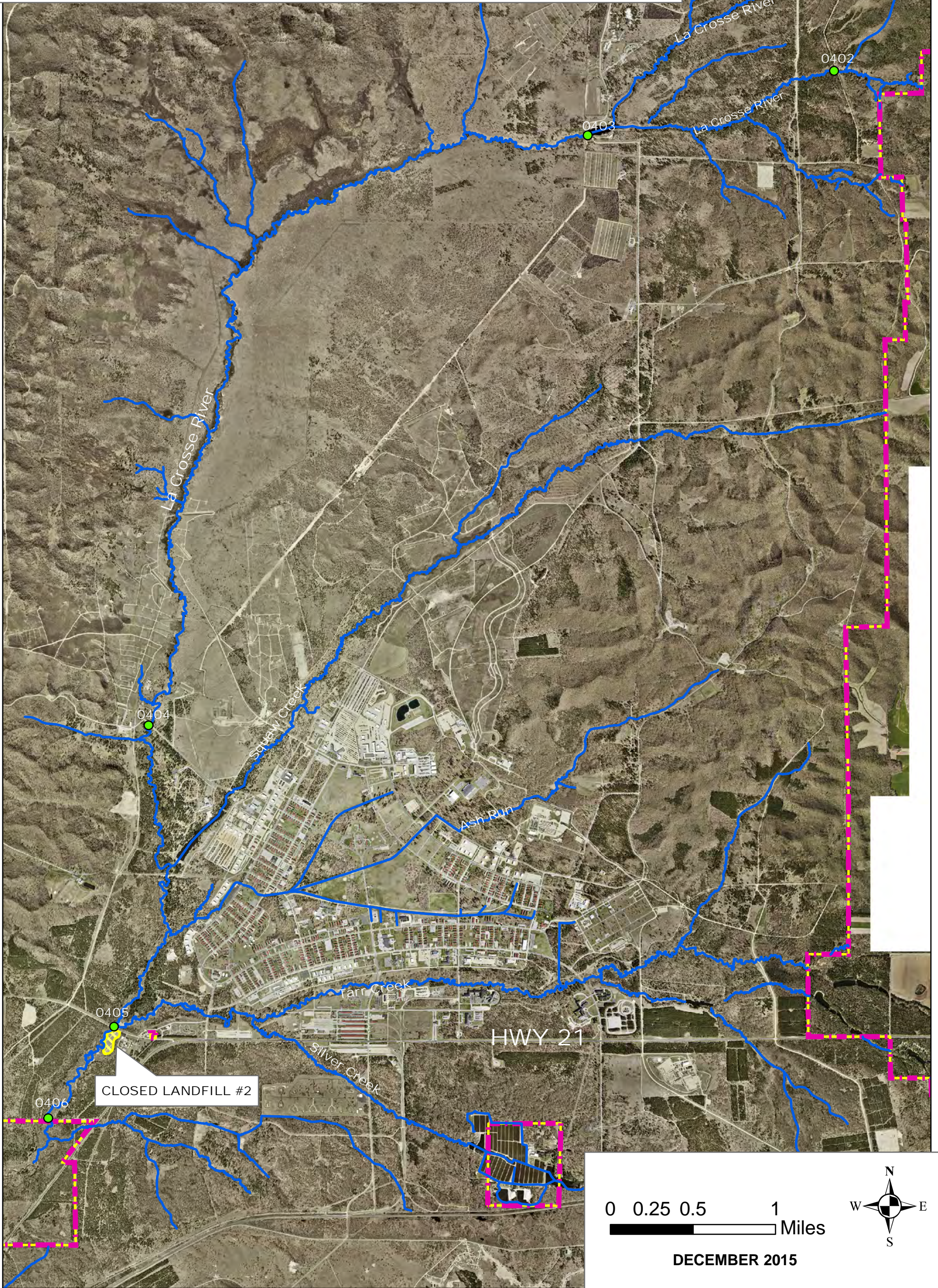
ATTACHEMENT B.4.c. MACROINVERTEBRATE SAMPLES
CLOSURE REQUEST
CLOSED LANDFILL #2 BRRTS NO. 02-42-279977
FORT MCCOY, WISCONSIN



FORT MCCOY BOUNDARY



0401: SAMPLING LOCATIONS



DECEMBER 2015

ATTACHMENT B.5. Structural Impediment Photos:

Not Applicable. There are no structural impediments that precluded investigation activities or installation of the landfill cap.

Documentation of Remedial Action (Attachment C)

DISCLAIMER

Documents contained in Attachment C of the Case Closure – GIS Registry (Form 4400-202) are not included in the electronic version (GIS Registry Packet) available on RR Sites Map to limit file size.

For information on how to obtain a copy or to review the file, please contact the Remediation & Redevelopment (RR) Environmental Program Associate (EPA) at <http://dnr.wi.gov/topic/Brownfields/Contact.html>



Attachment D

Cap Maintenance Plan

Fort McCoy Landfill #2

Just West of 2210 Treatment Drive

Fort McCoy, Wisconsin

WDNR BRRTS # 02-42-279977

FID # 642024900

Prepared by

Department of the Army

U.S. Army Garrison Fort McCoy,
Wisconsin

2171 South 8th Avenue • Fort McCoy, WI 54656 • (608) 388-8453

February 2016

Introduction:

This document is the Maintenance Plan (Plan) for the soil cap at Closed Landfill #2 (BRRTS 02-42-279977), and has been prepared in accordance with the requirements of NR. 724.13(2), Wisconsin Administrative Code (Figures in Attachments D.2. and D.2.a.). The maintenance activities relate to the existing soil cap covering the waste located on both the north and south sides of Treatment Drive.

More site-specific information about this property may be found in:

- The case file in the DNR West Central regional office
- [BRRTS on the Web](#) (DNR's internet based data base of contaminated sites) for the link to a PDF for site-specific information at the time of closure and on continuing obligations;
- [RR Sites Map/GIS Registry layer](#) for a map view of the site, and
- The DNR project manager for Monroe County.

Description of Contamination

Between World War II and the 1960's three incinerators were utilized for disposal of wastes generated at the installation. Closed Landfill #2 was utilized between 1942 and 1945 to dispose of demolition wastes, ash, and other non-recyclable materials. Reports indicate that the landfill was closed in 1949. Investigation results indicate that most of the waste is incinerator ash. The capped area to be maintained is shown on the attached maps (Attachments D.2. and D.2.a.). Antimony, cadmium, iron, manganese, and sulfate concentrations remain slightly above the NR 140 PALs or ESs at downgradient wells.

Description of the Cap to be maintained

Prior to installing the cap on the south side of Treatment Drive, waste was removed from along the edge of the river and placed on top of the landfill. This material was utilized as the grading layer. The surface was graded to direct the majority of surface water runoff away from the river. The cap over the western slope along the river is constructed of 12-inches of select fill placed on top of the subgrade surface. A geotextile fabric was secured on top of this fill. Riprap armoring (18-24 inch stone) extending down the bank into the river, was placed on top of the geotextile, and a 2-4 inch layer of sand was placed over the riprap and graded. Capping over the main portion of the landfill consists of a minimum of 18 inches of clean sand, while most areas have 22 to 32 inches of clean sand cover. The cap has been vegetated with native prairie grasses.

The cap on the north side of Treatment drive is composed of two feet of sandy soil covered by topsoil. This area has been vegetated with grass.

The capped areas to be maintained are shown on Attachment D.2.a., and on the photos in Attachment D.3.

Cover Purpose

The soil cap is to prevent direct contact with the waste and minimize erosion of waste material. This will keep the material out of Tarr Creek and the La Crosse River. Based on the current and future use of the property, the barrier should function as intended unless disturbed (Attachment D.2.a.).

Annual Inspection

The soil overlying the waste as depicted in Attachment D.2.a., Capped Areas, will be inspected once a year, normally in the spring after all snow and ice are gone, for damage, and other potential problems that may cause waste to be exposed or lead to direct contact with the waste. The inspections will be performed by the Fort McCoy staff, or the designated representative of the current property owner, and will evaluate damage due to settling, exposure to the weather, growth of saplings, increasing age and other factors. Any areas that are damaged will be repaired and documented.

A log of the inspections and any repairs will be maintained by the property owner and is included as Attachment D.4., Form 4400-305, Continuing Obligations Inspection and Maintenance Log. The log will include recommendations for necessary repairs if erosion gullies are present, saplings need to be removed, or other damage that is observed. Once repairs are completed, they will be documented in the inspection log. A copy of the maintenance plan and inspection log will be kept at the Fort McCoy Directorate of Public Works, or the address of the current owner, and will be available for submittal or inspection by Wisconsin Department of Natural Resources (WDNR) representatives upon their request, and available to all interested parties.

Maintenance Activities

If problems are noted during the annual inspections or at any other time during the year, repairs will be scheduled as soon as practical. Repairs can include removal of saplings, filling erosion gullies, or re-vegetation. In the event that necessary maintenance activities expose the waste material, the owner shall inform maintenance workers of the direct contact exposure hazard and provide them with appropriate personal protection equipment (PPE). The owner shall also sample any soil that is excavated from the site prior to disposal to ascertain if contamination is present. The soil shall be treated, stored and disposed of by the owner in accordance with applicable local, state and federal law.

In the event the soil cap overlying the waste is removed or replaced, the replacement barrier shall provide the same level of protection with regard to eliminating exposure to the waste and the potential for waste to be eroded from the site. Any replacement barrier will be subject to the same maintenance and inspection guidelines as outlined in this Maintenance Plan unless indicated otherwise by the WDNR or its successor.

The property owner, in order to maintain the integrity of the soil cap, will maintain a copy of this Maintenance Plan at the Fort McCoy Directorate of Public Works, or the address of the current owner, and make it available to all interested parties (i.e. on-site employees, contractors, future property owners, etc.) for viewing.

Prohibition of Activities and Notification of WDNR Prior to Actions Affecting a Cover or Cap

The following activities are prohibited on any portion of the capped areas shown on Attachment D.2.a., unless prior written approval has been obtained from the WDNR: 1) removal of the existing barrier; 2) replacement with another barrier; 3) excavating or grading of the land surface; 4) placing fill on the capped areas, except when necessary for required repairs; 5) plowing for agricultural cultivation; 6) construction or placement of a building or other structure; or 7) changing the use or occupancy of the property to a residential exposure setting, which may include certain uses, such as single or multiple family residences, a school, day care, senior center, hospital, or similar residential exposure settings.

If removal, replacement or other changes to a cover anticipated or planned, the property owner will contact WDNR at least 45 days before taking such an action, to determine what actions may be necessary to protect human health, safety, or welfare, or the environment, in accordance with s. NR 727.07, Wis. Adm. Code.

Amendment or Withdrawal of Maintenance Plan

This Maintenance Plan can be amended or withdrawn by Fort McCoy or its successors with the written approval of WDNR.

February 2016 contact information

Contact Information, including the name, address and phone number of the individual or facility who will be responsible for annual inspections and arranging for required maintenance.

Site Owner and Operator: U.S.Army- Fort McCoy: Representative: Craig Bartholomew
2171 South 8th Avenue, Fort McCoy, Wisconsin

Phone: (608) 388-8453
Email: craig.o.bartholomew2.civ@mail.mil

Signature:

Craig O'Bartholomew



CLOSED LANDFILL 2

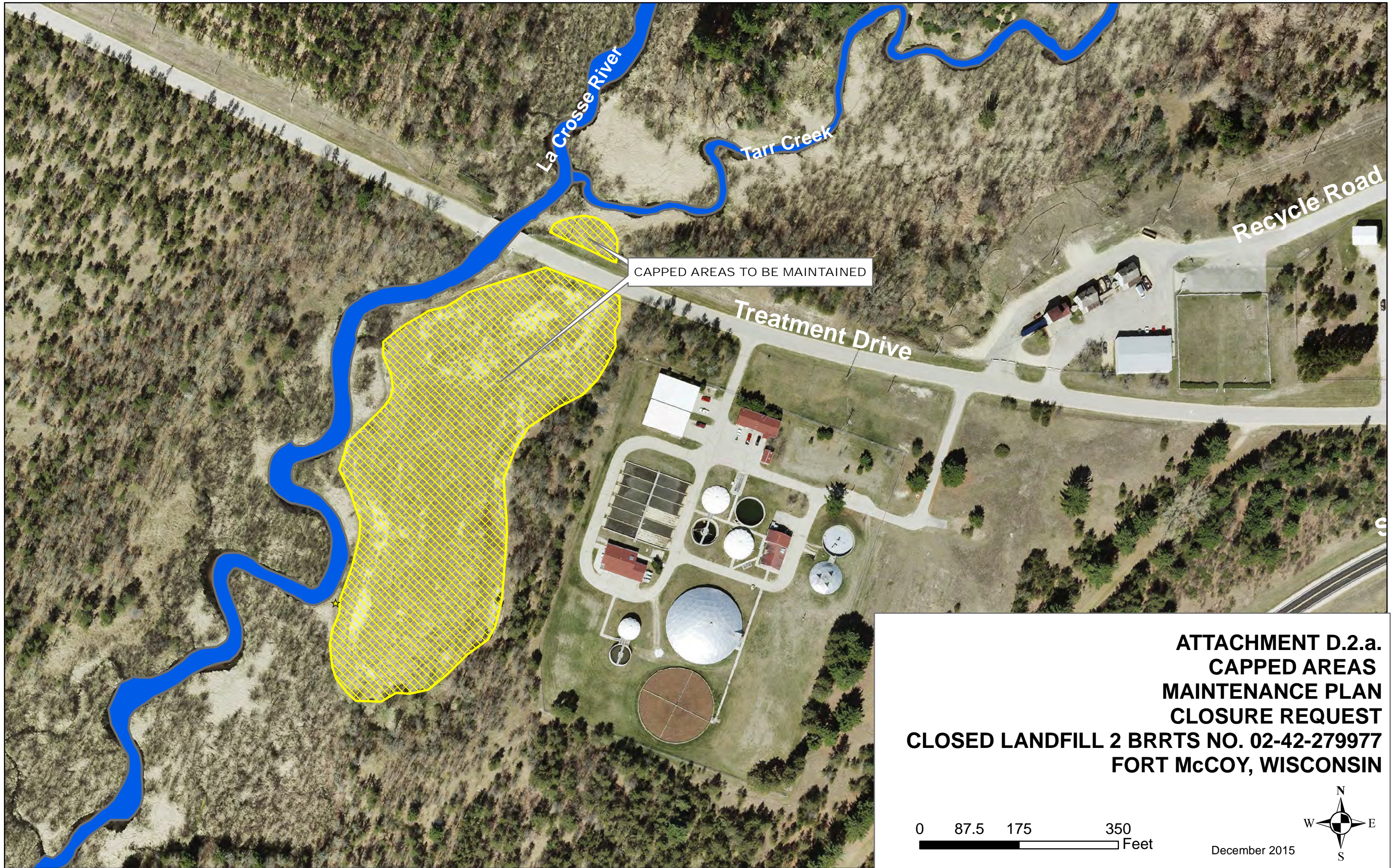
HIGHWAY 21

**ATTACHMENT D.2.
LOCATION MAP
CAP MAINTENANCE PLAN
CLOSURE REQUEST
CLOSED LANDFILL 2
BRRTS NO. 02-42-279977
FORT MCCOY, WISCONSIN**



0 750 1,500 3,000
Feet

DECEMBER 2015



La Crosse River

Tarr Creek

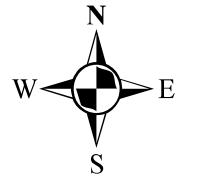
Recycle Road

CAPPED AREAS TO BE MAINTAINED

Treatment Drive

**ATTACHMENT D.2.a.
CAPPED AREAS
MAINTENANCE PLAN
CLOSURE REQUEST
CLOSED LANDFILL 2 BRRTS NO. 02-42-279977
FORT McCOY, WISCONSIN**

0 87.5 175 350 Feet



December 2015

ATTACHMENT D.3. PHOTOGRAPHS
FORT MCCOY CLOSED LANDFILL #2: BRRTS. NO. 02-42-279977
PHOTOS TAKEN 17 & 18 DECEMBER 2015



CAPPED AREA NORTH
OF TREATMENT DRIVE

12/17/2015

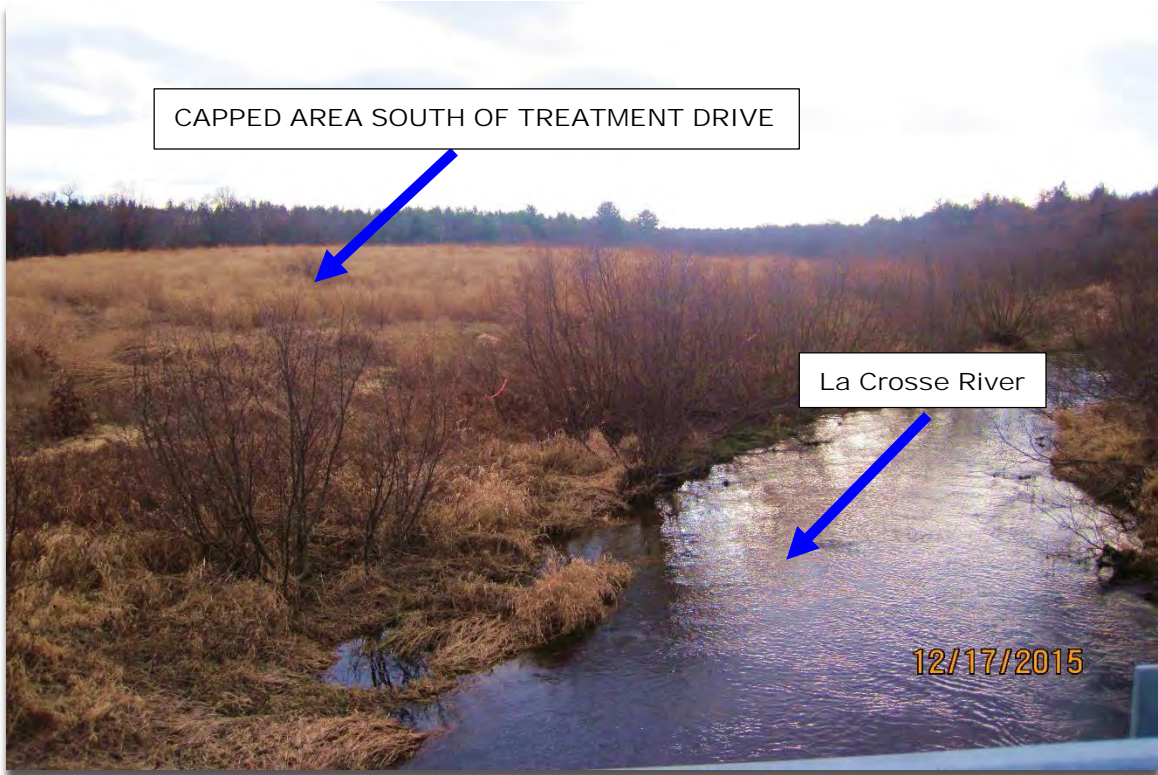
THE CAP NORTH OF TREATMENT DRIVE IS COMPOSED OF TWO FEET OF SOIL COVERED BY TOPSOIL WITH GRASS VEGETATION TO MINIMIZE THE POTENTIAL FOR EROSION (VIEW IS TO THE EAST)



CAPPED AREA SOUTH OF TREATMENT

12/17/2015

THE CAP CONSISTS OF A MINIMUM OF 18 INCHES OF CLEAN SAND, WITH MOST AREAS HAVING 22 TO 32 INCHES OF SAND. THE CAP IS VEGETATED WITH NATIVE PRAIRE GRASS. (VIEW IS TO THE SOUTHWEST)



THE CAP CONSISTS OF A MINIMUM OF 18 INCHES OF CLEAN SAND, WITH MOST AREAS HAVING 22 TO 32 INCHES OF SAND. THE CAP IS VEGETATED WITH NATIVE PRAIRE GRASS. (VIEW IS TO THE SOUTHWEST)



THE CAP OVER THE WESTERN SLOPE ALONG THE RIVER IS CONSTRUCTED OF 12 INCHES OF FILL OVERLAIN BY A GEOTEXTILE FABRIC, WHICH IS OVERLAIN BY 18-24 INCH RIPRAP ARMORING COVERED BY 2-4 INCHES OF SAND VEGETATED WITH NATIVE PRAIRE GRASS. (VIEW IS TO THE SOUTH)



THE CAP OVER THE WESTERN SLOPE ALONG THE RIVER IS CONSTRUCTED OF 12 INCHES OF FILL OVERLAIN BY A GEOTEXTILE FABRIC, WHICH IS OVERLAIN BY 18-24 INCH RIPRAP ARMORING COVERED BY 2-4 INCHES OF SAND VEGETATED WITH NATIVE PRAIRE GRASS. (VIEW IS TO THE NORTH)

Directions: In accordance with s. NR 727.05 (1) (b) 3., Wis. Adm. Code, use of this form for documenting the inspections and maintenance of certain continuing obligations is required. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.]. When using this form, identify the condition that is being inspected. See the closure approval letter for this site for requirements regarding the submittal of this form to the Department of Natural Resources. A copy of this inspection log is required to be maintained either on the property, or at a location specified in the closure approval letter. Do NOT delete previous inspection results. This form was developed to provide a continuous history of site inspection results. The Department of Natural Resources project manager is identified in the closure letter. The project manager may also be identified from the database, BRRTS on the Web, at <http://dnr.wi.gov/botw/SetUpBasicSearchForm.do>, by searching for the site using the BRRTS ID number, and then looking in the "Who" section.

Activity (Site) Name	BRRTS No.
----------------------	-----------

Inspections are required to be conducted (see closure approval letter):

annually
 semi-annually
 other – specify _____

When submittal of this form is required, submit the form electronically to the DNR project manager. An electronic version of this filled out form, or a scanned version may be sent to the following email address (see closure approval letter):

Inspection Date	Inspector Name	Item	Describe the condition of the item that is being inspected	Recommendations for repair or maintenance	Previous recommendations implemented?	Photographs taken and attached?
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier <input type="checkbox"/> vapor mitigation system <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier <input type="checkbox"/> vapor mitigation system <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier <input type="checkbox"/> vapor mitigation system <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier <input type="checkbox"/> vapor mitigation system <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier <input type="checkbox"/> vapor mitigation system <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier <input type="checkbox"/> vapor mitigation system <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N

BRRTS No.

Activity (Site) Name

Continuing Obligations Inspection and Maintenance Log

Form 4400-305 (2/14)

Page 2 of 2

{Click to Add/Edit Image}

Date added:

Title:

{Click to Add/Edit Image}

Date added:

Title:

TABLE OF CONTENTS - ATTACHMENT E: MONITORING WELL INFORMATION

APPLICABLE	NOT APPLICABLE
E. MONITORING WELL INFORMATION	
	All monitoring wells have been located and will be abandoned.

ATTACHMENT E: Monitoring Well Information:

Not Applicable. All monitoring wells have been located and will be abandoned.

TABLE OF CONTENTS - ATTACHMENT F: SOURCE LEGAL DOCUMENTS

APPLICABLE	NOT APPLICABLE
F.1. DEED	
<p>Opinion of the Attorney General that the United States of America is in Possession Under a Clear and complete Title of Certain Land Situated in the County of Monroe, State of Wisconsin, Designated Camp McCoy. (This serves as the deed document for the site)</p>	
F.2. CERTIFIED SURVEY MAP	
	<p>The installation comprises 93 contiguous square miles. There are no certified survey maps or recorded plat maps.</p>
F.3. VERIFICATION OF ZONING	
<p>F.3. Verification of Zoning Map</p>	
F.4. SIGNED STATEMENT	
<p>Signed Deed Statement</p>	

OPINION
OF THE ATTORNEY GENERAL
THAT THE UNITED STATES OF AMERICA
IS IN POSSESSION UNDER A CLEAR AND
COMPLETE TITLE OF CERTAIN LAND SITUATED
IN THE COUNTY OF MONROE, STATE OF WISCONSIN,
DESIGNATED CAMP MC COY

DEPARTMENT OF JUSTICE

WHEREAS, Section 1.02, Chapter 1, Title 1, Wisconsin Statutes, 1949, provides that:

"Subject to the conditions mentioned in section 1.03 the legislature hereby consents to the acquisitions heretofore effected and hereafter to be effected by the United States, by gift, purchase or condemnation proceedings, of the title to places or tracts of land within the state; and, subject to said conditions, the state hereby grants, cedes and conforms to the United States exclusive jurisdiction over all such places and tracts. Such acquisitions are limited to the following purposes:

(1) To sites for the erection of forts, magazines, arsenals, dockyards, custom houses, courthouses, post offices, or other public buildings or for any purpose whatsoever contemplated by the seventeenth clause of section eight of article one of the constitution of the United States.

(2) To a tract of forty thousand acres of land in township 17 and 18 north, ranges 2 and 3 west, near Sparta, in Monroe County, to be used for military purposes as a target and maneuver range and such other purposes as the war department may deem necessary and proper.

(3) To erect thereon dams, abutments, locks, lockkeepers' dwellings, chutes, or other structures necessary or desirable in improving the navigation of the rivers or other waters within the borders of this state," and

WHEREAS, Section 1.03, Chapter 1, Title 1, Wisconsin Statutes, 1949, provides that:

"The conditions mentioned in section 1.02 are the following conditions precedent:

(1) That an application setting forth an exact description of the place or tract so acquired shall be made by an authorized officer of the United States to the governor, accompanied by a plat thereof, and by proof that all conveyances and a copy of the record of all judicial proceedings necessary to the acquisition of an unincumbered title by the United States have been recorded in the office of the register of deeds of each county in which such place or tract may be situated in whole or in part.

(2) That the ceded jurisdiction shall not vest in the United States until they shall have complied with all the requirements on their part of sections 1.02 and 1.03, and shall continue so long only as the place or tract shall remain the property of the United States.

(3) That the State shall forever retain jurisdiction over every such place or tract to the extent that all legal and military process issued under the authority of the state may be served anywhere thereon, or in any building situate in whole or in part thereon." and

WHEREAS, pursuant to said Section 1.02 the United States of America, in my opinion acquired fee simple title by purchase and condemnation proceedings to a tract of land in Townships 17, 18, and 19 North, Ranges 2 and 3 West, in Monroe County, Wisconsin; and

WHEREAS, pursuant to said Section 1.03 an exact description of the area so acquired containing 47,414.88 acres of land, more or less, and comprising a portion of the Camp McCoy military reservation, and accompanied by a plat thereof, and copies of deeds and judgments on declaration of taking certified by the Register of Deeds in the County of Monroe, in which said land is situated in whole, was submitted to the Governor of the State of Wisconsin under date of March 6, 1952.

NOW THEREFORE, it is my opinion:

1. That the United States of America is in possession of the lands and premises hereinafter particularly described for certain works or purposes provided for in the aforementioned Section 1.02 of Chapter 1, Title 1, particularly for use as a target and maneuver range and for construction of needful buildings and structures for use in connection with a military reservation officially designated as Camp McCoy, being 47,414.88 acres of land, more or less, and that such possession is under a clear and complete fee simple title, subject to existing easements for public roads and highways, public utilities, railroads and pipelines; and
2. That the land and premises that have been acquired by the United States of America for the purposes above stated are situated in the County of Monroe, State of Wisconsin, and more particularly described as follows:

All that part of Townships Seventeen (17), Eighteen (18) and Nineteen (19) North, Ranges Two (2) and Three (3) West, Fourth Principal Meridian, Monroe County, Wisconsin, more particularly described as follows:

Beginning at a point, said point being the Section corner common to Sections Twenty-seven (27), Twenty-eight (28), Thirty-three (33) and Thirty-four (34), Twp. Eighteen (18) North, Range Three (3) West; thence North along the West line of said Section Twenty-seven (27) and along the West line of Section Twenty-two (22), Twp. Eighteen (18) North, Range Three (3) West to a point in the South Quarter Quarter line of Section Twenty-one (21), Twp. Eighteen (18) North, Range Three (3) West; thence West along said Quarter Quarter line to a point in the East Quarter Quarter line of said Section Twenty-one (21); thence North along said Quarter Quarter line to a point in the East and West center line

STATE OF IOWA
COUNTY OF [illegible]
[illegible]
[illegible]

of said Section Twenty-one (21); thence East along said center line to a point in the East line of said Section Twenty-one (21); thence North along said East line and the East line of Section Sixteen (16), Twp. Eighteen (18) North, Range Three (3) West to a point in the East and West center line of said Section Sixteen (16); thence West along said center line to a point in the East Quarter Quarter line of said Section Sixteen (16); thence North along said East Quarter Quarter line and the East Quarter Quarter line of Section Nine (9), Twp. Eighteen (18) North, Range Three (3) West to a point in the South Quarter Quarter line of said Section Nine (9); thence East along said Quarter Quarter line to a point in the West line of said Section Nine (9); thence North along said West line and the West line of Section Four (4), Twp. Eighteen (18) North, Range Three (3) West, and the West lines of Sections Thirty-four (34) and Twenty-seven (27), Twp. Nineteen (19) North, Range Three (3) West to the Southeast corner of Section Twenty-one (21), Twp. Nineteen (19) North, Range Three (3) West; thence West along the South line of said Section Twenty-one (21) to the East Quarter Quarter line of said Section Twenty-one (21); thence North along said East Quarter Quarter line to a point in the North line of said Section Twenty-one (21); thence East along said North line to the Northeast corner of said Section Twenty-one (21); thence North along the West Section lines of Sections Fifteen (15) and Ten (10), Twp. Nineteen (19) North, Range Three (3) West to the Northwest corner of said Section Ten (10); thence East along the North lines of said Section Ten (10) and Section Eleven (11), Twp. Nineteen (19) North, Range Three (3) West to the West Quarter Quarter line of said Section Eleven (11); thence South along said Quarter Quarter line to a point in the East and West center line of said Section Eleven (11); thence East along said center line to a point in the North and South center line of said Section Eleven (11); thence South along said center line to a point in the South line of said Section Eleven (11); thence East along said Section line and the South Section line of Section Twelve (12), Twp. Nineteen (19) North, Range Three (3) West, to the North and South center line of said Section Twelve (12); thence North along said center line to a point in the East and West center line of said Section Twelve (12); thence East along said center line to a point in the West line of said Section Twelve (12); thence North along said West line and the West line of Section Six (6), Twp. Nineteen (19) North, Range Three (3) West, to Northwest corner of said Section Six (6); thence East along the North lines of said Section Six (6) and Sections Five (5) and Four (4), Twp. Nineteen (19) North, Range Two (2) West to the Northeast corner of said Section Four (4); thence South along the East Lines of said Section Four (4) and Section Nine (9), Twp. Nineteen (19) North, Range Two (2) West, to the East and West center line of said Section Nine (9); thence West along said center line to a point in the East Quarter Quarter line of said Section Nine (9); thence South along said Quarter Quarter line to a point in the South Quarter Quarter line of said Section Nine (9); thence East along said Quarter Quarter line to a point in the East line of said Section Nine (9); thence South along said East line and the East line of Section Sixteen (16), Township Nineteen (19) North, Range Two (2) West, to the East and West center line of Section Fifteen (15), Twp. Nineteen (19) North, Range Two (2) West; thence East along said center line to a point in the West Quarter Quarter line of said Section Fifteen (15); thence South along said Quarter Quarter line to a point in the South line of said Section Fifteen (15); thence West

along said South line to the Northeast corner of Section Twenty-one (21), Twp. Nineteen (19) North, Range Two (2) West; thence South along the East lines of said Section Twenty-one (21) and Section Twenty-eight (28), Twp. Nineteen (19) North, Range Two (2) West to the East and West center line of said Section Twenty-eight (28); thence West along said center line to a point in the East Quarter Quarter line of said Section Twenty-eight (28); thence South along said Quarter Quarter line to a point in the South Quarter Quarter line of said Section Twenty-eight (28); thence West along said Quarter Quarter line to a point in the North and South center line of said Section Twenty-eight (28); thence South along said center line and the North and South center line of Section Thirty-Three (33), Township Nineteen (19) North, Range Two (2) West to a point in the North quarter quarter line of said Section Thirty-Three (33); thence East along said quarter quarter line to the East line of the West twenty-two (22) acres of the Southwest Quarter (SW $\frac{1}{4}$) of the Northeast Quarter (NE $\frac{1}{4}$) of said Section Thirty-Three (33); thence south along said East line to a point in the East and West center line of said Section Thirty-Three (33); thence East along said center line to a point in the East line of said Section Thirty-Three (33); thence South along said East line to the South quarter quarter line of said Section Thirty-Three (33); thence West six (6) rods along said quarter quarter line to a point on a line lying six (6) rods West of and parallel to said East line of Section Thirty-Three (33); thence South along said line to a point on the Northerly line of a private road known as Franklin Road; thence northwesterly along said Northerly line of Franklin Road to the point of intersection of said Northerly line with the Southerly line of the highway which runs through the Northeast Quarter (NE $\frac{1}{4}$) of the Southeast Quarter (SE $\frac{1}{4}$) of said Section Thirty-Three (33); thence Southwesterly along said Southerly line of said highway to the intersection of said Southerly line with the Southerly line of aforesaid Franklin Road; thence Southeasterly along said Southerly line of Franklin Road to a point on a line lying six (6) rods West of and parallel to the East line of said Section Thirty-Three (33); thence South along said line to a point which is forty (40) rods North of the South line of said Section Thirty-Three (33); thence East six (6) rods to a point on the East line of said Section Thirty-Three (33); thence South along said East line to the Northeast corner of Section Four (4), Township Eighteen (18) North, Range Two (2) West; thence continuing South along the East line of said Section Four (4) to the North quarter quarter line of said Section Four (4); thence West along said quarter quarter line to a point on the North and South center line of said Section Four (4); thence South along said center line to a point in the North line of Section Nine (9), Township Eighteen (18) North, Range Two (2) West; thence West along said North line to the West quarter quarter line of said Section Nine (9); thence South along said quarter quarter line to a point in the North quarter quarter line of said Section Nine (9); thence East along said quarter quarter line to a point in the north and south center line of said Section Nine (9); thence South along said center line to a point in the North line of Section Sixteen (16), Township Eighteen (18) North, Range Two (2) West; thence West along said North line to the West quarter quarter line of said Section Sixteen (16); thence South along said quarter quarter line and the West quarter quarter line of Section Twenty-One (21), Township Eighteen (18) North, Range Two (2) West to a point in the North line of Section Twenty-Eight (28), Township Eighteen (18) North, Range Two (2) West; thence West along said North line to the Northwest corner of said Section Twenty-Eight (28); thence South along the West line of said Section Twenty-Eight (28) to the North quarter quarter line of Section Twenty-Nine (29), Township Eighteen (18) North, Range

Two (2) West; thence West one (1) rod along said quarter quarter line to a point on a line lying one (1) rod West of and parallel to the East line of said Section Twenty-Nine (29); thence South along said line to the East and West center line of said Section Twenty-Nine (29); thence West along said center line and the East and West center lines of Section Thirty (30), Township Eighteen (18) North, Range Two (2) West, and Section Twenty-Five (25), Township Eighteen (18) North, Range Three (3) West to a point on the East line of Section Twenty-Six (26), Township Eighteen (18) North, Range Three (3) West; thence South along said East line to the South quarter quarter line of said Section Twenty-Six (26); thence West along said quarter quarter line to a point on the North and South center line of said Section Twenty-Six (26); thence South along said center line and the North and South center line of Section Thirty-Five (35), Township Eighteen (18) North, Range Three (3) West to a point on the East and West center line of said Section Thirty-Five (35); thence West along said center line to a point on the West quarter-quarter line of said Section Thirty-Five (35); thence South along said quarter quarter line to a point in the Southerly right-of-way line of the Chicago, Milwaukee, St. Paul and Pacific Railroad Company; thence in a Southwesterly direction, three thousand and ten (3,010) feet, more or less, along said Southerly right-of-way line through Sections Thirty-Five (35) and Thirty-Four (34), Township Eighteen (18) North, Range Three (3) West to a point in the South line of said Section Thirty-Four (34); thence West one thousand three hundred twenty (1,320) feet, more or less, along said South line, crossing the rights-of-way of the Chicago, Milwaukee, St. Paul and Pacific Railroad Company and the Chicago and Northwestern Railway Company, to a point in the North and South Center line of Section Three (3), Township Seventeen (17) North, Range Three (3) West; thence South seven hundred twenty-two (722) feet, more or less, along said center line, crossing the rights-of-way of said railway companies to a point in the aforesaid Southerly right-of-way line; thence in a Southwesterly direction along said Southerly right-of-way line to a point in the West line of said Section Three (3); thence North along said West line and the West line of Section Thirty-Four (34), Twp. Eighteen (18) North, Range Three (3) West to the South Quarter Quarter line of said Section Thirty-Four (34); thence East along said Quarter Quarter line to a point in the North and South center line of said Section Thirty-four (34); thence North along said center line to a point in the North Quarter Quarter line of said Section Thirty-four (34); thence West along said Quarter Quarter line to a point in the West Quarter Quarter line of said Section Thirty-four (34); thence North along said Quarter Quarter line to a point in the North line of said Section Thirty-four (34); thence West along said North line to the point of beginning.

Excepting from the above described parcel the Southwest Quarter (SW $\frac{1}{4}$) of the Northeast Quarter (NE $\frac{1}{4}$) of Section Six (6), Township Nineteen (19) North, Range Two (2) West; the rights-of-way of the Chicago, Milwaukee, St. Paul and Pacific Railroad Company and the Chicago and Northwestern Railway Company; and the following described parcel:

Beginning at the Southeast corner of the Southeast Quarter (SE $\frac{1}{4}$) of the Northeast Quarter (NE $\frac{1}{4}$) of Section Twenty-seven (27), Township Eighteen (18) North, Range Three (3) West; thence West Ten (10) rods along the East and West center line of said Section Twenty-seven (27); thence North Ten (10) rods; thence East Ten (10) rods; thence South Ten (10) rods, to the point of beginning.

Also, beginning at a point, said point being the Section corner common to Sections Three (3), Four (4), Nine (9) and Ten (10), Township Eighteen (18) North, Range Two (2) West; thence East along the North line of said Section Ten (10) to the East Quarter Quarter line of said Section Ten (10); thence South along said Quarter Quarter line to a point in the East and West center line of said Section Ten (10); thence West along said center line to a point in the West line of said Section Ten (10); thence North along said West line to the North Quarter Quarter line of aforesaid Section Nine (9); thence West along said Quarter Quarter line to a point in the East Quarter Quarter line of said Section Nine (9); thence North along said Quarter Quarter line to a point in the North line of said Section Nine (9); thence East along said North line to the point of beginning.

Also, beginning at a point, said point being the Section corner common to Sections Fifteen (15), Sixteen (16), Twenty-one (21) and Twenty-two (22), Township Eighteen (18) North, Range Two (2) West; thence West along the South line of said Section Sixteen (16) to the North and South center line of said Section Sixteen (16); thence North along said center line to a point in the east and west center line of said Section Sixteen (16); thence East along said center line to a point in the East Quarter Quarter line of said Section Sixteen (16); thence North along said Quarter Quarter line to a point in the North Quarter Quarter line of said Section Sixteen (16); thence East along said Quarter Quarter line to a point in the East line of said Section Sixteen (16); thence South along said East line to the point of beginning.

Also, beginning at the Northeast corner of the Northeast Quarter ($NE\frac{1}{4}$) of the Southeast Quarter ($SE\frac{1}{4}$) of Section Eighteen (18), Township Seventeen (17) North, Range Two (2) West; thence West, Fifteen (15) chains, on the Quarter line; thence South, Eight (8) chains; thence East, Fifteen (15) chains; thence North, Eight (8) chains, to the point of beginning.

Also, beginning at the Southeast corner of the Southwest Quarter ($SW\frac{1}{4}$) of the Northwest Quarter ($NW\frac{1}{4}$), Section Ten (10), Twp. Seventeen (17) North, Range Two (2) West; thence North along the West Quarter Quarter line of said Section Ten (10) to a point, said point being the center of the Northwest Quarter ($NW\frac{1}{4}$) of said Section Ten (10); thence West, along the North Quarter Quarter line of said Section Ten (10) and the North Quarter Quarter Line of Section Nine (9), Township Seventeen (17) North, Range Two (2) West, to a point, said point being the center of the Northeast Quarter ($NE\frac{1}{4}$) of said Section Nine (9); thence South, along the East Quarter Quarter line of said Section Nine (9) and the East Quarter Quarter line of Section Sixteen (16), Twp. Seventeen (17) North, Range Two (2) West, to a point in the East and West center line of said Section Sixteen (16); thence due West, along said East and West center line, to a point, said point being the center of said Section Sixteen (16); thence due North, Nine Hundred Ninety (990) feet, more or less, along the center line of said Section Sixteen (16), to a point in the South line of the North One Hundred (100) acres of the Northwest Quarter ($NW\frac{1}{4}$) of said Section Sixteen (16); thence due West, along said South line of said North One Hundred (100) acres, to a point in the West line of said Section Sixteen (16); thence due North, along said West line, to a point in the North Quarter Quarter line of Section Seventeen (17), Township Seventeen (17) North, Range Two (2) West; thence due West, along said North Quarter Quarter line, to a point in a North and South

line drawn parallel to and Sixty-four (64) rods East of the East Quarter Quarter line of said Section Seventeen (17); thence due South, Twenty (20) rods, along said North and South line, to a point; thence due West, Sixty-four (64) rods, to a point in the East Quarter Quarter line of said Section Seventeen (17); thence due South, along said East Quarter Quarter line to a point in the East and West center line of said Section Seventeen (17); thence due East, along said East and West center line, to a point in the East line of said Section Seventeen (17); thence due South, along said East line, to a point in the South Quarter Quarter line of said Section Seventeen (17); thence due West, along said South Quarter Quarter line and the South Quarter Quarter line of Section Eighteen (18), Twp. Seventeen (17) North, Range Two (2) West, and the South Quarter Quarter line of Section Thirteen (13), Twp. Seventeen (17) North, Range Three (3) West, to a point in the North and South center line of said Section Thirteen (13); thence due North, along said North and South center line, to a point, said point being the center of said Section Thirteen (13); thence due West, along the East and West center line of said Section Thirteen (13) to a point in the West Quarter Quarter line of said Section Thirteen (13); thence due North, along said West Quarter Quarter line, to a point in the North line of said Section Thirteen (13); thence due West, along said North line and the North line of Section Fourteen (14), Twp. Seventeen (17) North, Range Three (3) West, to a point in the North and South center line of said Section Fourteen (14); thence due South, One Thousand Three Hundred Twenty (1,320) feet, more or less, along said North and South center line, to a point in the North side of road running through said Section Fourteen (14); thence Northwesterly, Two Thousand Nine Hundred Fifty (2,950) feet, more or less, along the Northerly side of said road, to a point, said point being the Northwest corner of said Section Fourteen (14); thence due West, along the South line of Section Ten (10), Twp. Seventeen (17) North, Range Three (3) West, to a point in the West Quarter Quarter line of said Section Ten (10); thence due North, along said West Quarter Quarter line, to a point, said point being the center of the Southwest Quarter ($SW\frac{1}{4}$) of said Section Ten (10); thence due West, along the South Quarter Quarter line of said Section Ten (10), to a point in the west line of said Section Ten (10); thence due North, along said West line, to a point in the North Quarter Quarter line of Section Nine (9), Twp. Seventeen (17) North, Range Three (3) West; thence due West, along said North Quarter Quarter line, to a point, said point being the center of the Northeast Quarter ($NE\frac{1}{4}$) of said Section Nine (9); thence due North, along the East Quarter Quarter line of said Section Nine (9), to a point in the North line of said Section Nine (9); thence West, along said North line, to a point, said point being the intersection of the North and South center line and the South line of Section Four (4), Township Seventeen (17) North, Range Three (3) West; thence in a Southwesterly direction along said Southerly railroad right-of-way line across said Section Nine (9) and Section Eight (8), Township Seventeen (17) North, Range Three (3) West, to a point on the North line of Section Seventeen (17), Twp. Seventeen (17) North, Range Three (3) West; thence East along said North line to the Northeast corner of said Section Seventeen (17); thence South along the East line of said Section Seventeen (17) to the East and West center line of said Section Seventeen (17); thence West along said center line to a point in the North and South center line of said Section Seventeen (17); thence South along said center line to a point on the North line of Section Twenty (20), Twp. Seventeen (17) North, Range Three (3) West; thence West along said North line to the West Quarter Quarter line of

thence South along said Quarter Quarter line to a point in the South Quarter Quarter line of said Section Twenty (20); thence East along said Quarter Quarter line to a point in the North and South center line of said Section Twenty (20); thence South along said center line to a point in the North line of Section Twenty-nine (29); Twp. Seventeen (17) North, Range Three (3) West; thence West along said North line to the West Quarter Quarter line of said Section Twenty-nine (29); thence South along said Quarter Quarter line to a point in the East and West center line of said Section Twenty-nine (29); thence East along said center line to a point in the North and South center line of said Section Twenty-nine (29); thence South along said center line to a point in the South Quarter Quarter line of said Section Twenty-nine (29); thence West along said Quarter Quarter line to a point in the West Quarter Quarter line of said Section Twenty-nine (29); thence South along said Quarter Quarter line to a point in the North line of Section Thirty-two (32), Twp. Seventeen (17) North, Range Three (3) West; thence East along said North line to the North and South center line of said Section Thirty-two (32); thence South along said center line to a point in the North Quarter Quarter line of said Section Thirty-two (32); thence East along said Quarter Quarter line to a point in the West line of Section Thirty-three (33), Twp. Seventeen (17) North, Range Three (3) West; thence North along said West line to a point, said point being Four Hundred Twelve (412) feet South of the Northwest corner of said Section Thirty-three (33); thence due East Four Hundred Fifty-two (452) feet to a point; thence South Thirty-two Degrees, Forty-five Minutes East (S 32°45' E) Four Hundred Seventy (470) feet to a point; thence continuing South Forty-five Degrees, Fifteen Minutes East (S 45°15' E) Four Hundred Twenty-eight (428) feet; thence South Fifty-three Degrees, Forty-five Minutes East (S 53°45' E) Three Hundred (300) feet; thence due East Sixty (60) feet to a point in West Quarter Quarter line, said point being One Thousand Three Hundred Four (1,304) feet South of the North line of said Section Thirty-three (33), Township Seventeen (17) North, Range Three (3) West; thence South along said Quarter Quarter line to a point in the East and West center line of said Section Thirty-three (33); thence East along said center line to a point in the North and South center line of said Section Thirty-three (33); thence South along said center line to a point in the South Quarter Quarter line of said Section Thirty-three (33); thence East along said Quarter Quarter line and the South Quarter Quarter line of Section Thirty-four (34), Twp. Seventeen (17) North, Range Three (3) West, to a point in the North and South center line of said Section Thirty-four (34); thence South along said center line to a point in the South line of said Section Thirty-four (34); thence East along said South line to the Southeast corner of said Section Thirty-four (34); thence North along the East line of said Section Thirty-four (34) to the North Quarter Quarter line of said Section Thirty-four (34); thence West along said Quarter Quarter line to a point in the North Quarter Quarter line of said Section Thirty-four (34); thence North along said Quarter Quarter line to a point in the North line of said Section Thirty-four (34); thence West along said North line to the Southeast corner of Section Twenty-eight (28), Twp. Seventeen (17) North, Range Three (3) West; thence North along the East lines of said Section Twenty-eight (28) and Section Twenty-one (21), Twp. Seventeen (17) North, Range Three (3) West, to the South Quarter Quarter line of Section Twenty-two (22), Twp. Seventeen (17) North, Range Three (3) West; thence East along said Quarter Quarter line to a point in the West Quarter Quarter line of said Section Twenty-two (22); thence North along said Quarter Quarter

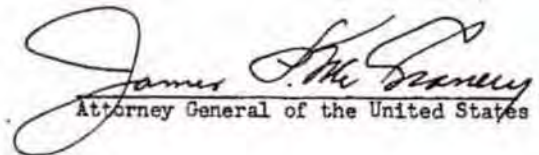
line to a point in the East and West center line of said Section Twenty-two (22); thence East along said center line to a point in the West line of Section Twenty-three (23), Twp. Seventeen (17) North, Range Three (3) West; thence South along said West line to the North line of the South Half ($S\frac{1}{2}$) of the Northwest Quarter ($NW\frac{1}{4}$) of the Southwest Quarter ($SW\frac{1}{4}$); thence East along said North line to a point in the West Quarter Quarter line of said Section Twenty-three (23); thence South along said Quarter Quarter line to a point in the center line of Old United States Highway No. Sixteen (16), which is equal to Station 851 + 00 of Wisconsin Highway Commission Road Plans of Project Number 325-A; thence Easterly along said centerline on a curve to the left of Two Thousand Eight Hundred Sixty-four and Nine Tenths (2,864.9) feet radius, a distance of One Thousand Three Hundred Sixty-two (1,362) feet to a point, said point being the intersection of the North and South center line of said Section Twenty-three (23) with the center line of aforesaid highway, which is equal to Station 837 + 38 of said highway plans; thence East along South Quarter Quarter line of Section Twenty-three (23) and the South Quarter Quarter line of Section Twenty-four (24), Twp. Seventeen (17) North, Range Three (3) West, to a point in the North and South center line of said Section Twenty-four (24); thence North along said center line to a point on a line lying One Hundred Twenty-six (126) feet Northerly of and parallel to the center line of New United States Highway No. Sixteen (16) as now located; thence Easterly along said line to a point in the East Quarter Quarter line of said Section Twenty-four (24); thence South along said Quarter Quarter line to a point on the North right-of-way line of New United States Highway No. Sixteen (16); thence in a Southeasterly direction along said North right-of-way line to a point in the West line of Section Nineteen (19), Township Seventeen (17) North, Range Two (2) West; thence South along said West line to the North Quarter Quarter line of said Section Nineteen (19); thence East along said Quarter Quarter line to a point in the North and South center line of said Section Nineteen (19); thence South along said center line to a point in the North right-of-way line of Old Highway Sixteen (16); thence Northeasterly along said North right-of-way line to a point in the West line of Section Twenty (20), Township Seventeen (17) North, Range Two (2) West; thence South along said West line to the Northwest corner of Section Twenty-nine (29), Township Seventeen (17) North, Range Two (2) West; thence East along the North line of said Section Twenty-nine (29) to the West Quarter Quarter line of said Section Twenty-nine (29); thence South along said Quarter Quarter line to a point in the North Quarter Quarter line; thence East along said Quarter Quarter line and the North Quarter Quarter line of Section Twenty-eight (28), Township Seventeen (17) North, Range Two (2) West to a point in the West Quarter Quarter line of said Section Twenty-eight (28); thence North along said Quarter Quarter line to a point in the South line of Section Twenty-one (21), Township Seventeen (17) North, Range Two (2) West; thence East along said South line to the East Quarter Quarter line of said Section Twenty-one (21); thence North along said Quarter Quarter line to a point in the South Quarter Quarter line of said Section Twenty-one (21); thence East along said Quarter Quarter line to a point in the East line of said Section Twenty-one (21); thence North along said East line and the West line of Section Fifteen (15), Township Seventeen (17) North, Range Two (2) West, to the East and West center line of said Section Fifteen (15); thence East along center line to a point in the West Quarter Quarter line of said Section Fifteen (15); thence North along said Quarter

Quarter line to a point in the North Quarter Quarter line of said Section Fifteen (15); thence East along said Quarter Quarter line to a point in the North and South center line of said Section Fifteen (15); thence North along said center line to a point in the South line of Section Ten (10), Township Seventeen (17) North, Range Two (2) West; thence West along said South line to the Southwest corner of said Section Ten (10); thence North along the West line of said Section Ten (10) to the East and West center line of said Section Ten (10); thence East along said center line to the Southeast corner of the Southwest Quarter (SW $\frac{1}{4}$) of the Northwest Quarter (NW $\frac{1}{4}$) of said Section Ten (10), said corner being the point of beginning.

Excepting from the above described parcel the right-of-way of new U. S. Highway No. 16.

Containing within the limits above described 47,414.88 acres of land, more or less.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the Department of Justice to be affixed this 22nd day of September, A.D., 1952.


James S. McInerney
Attorney General of the United States



F.2. Certified Survey Map:

Not Applicable. The installation comprises 93 contiguous square miles. Closed Landfill #2 is located in the western portion of the property. The site represents a very small portion of the overall property. There are no certified survey maps or recorded plat maps for Closed Landfill #2.

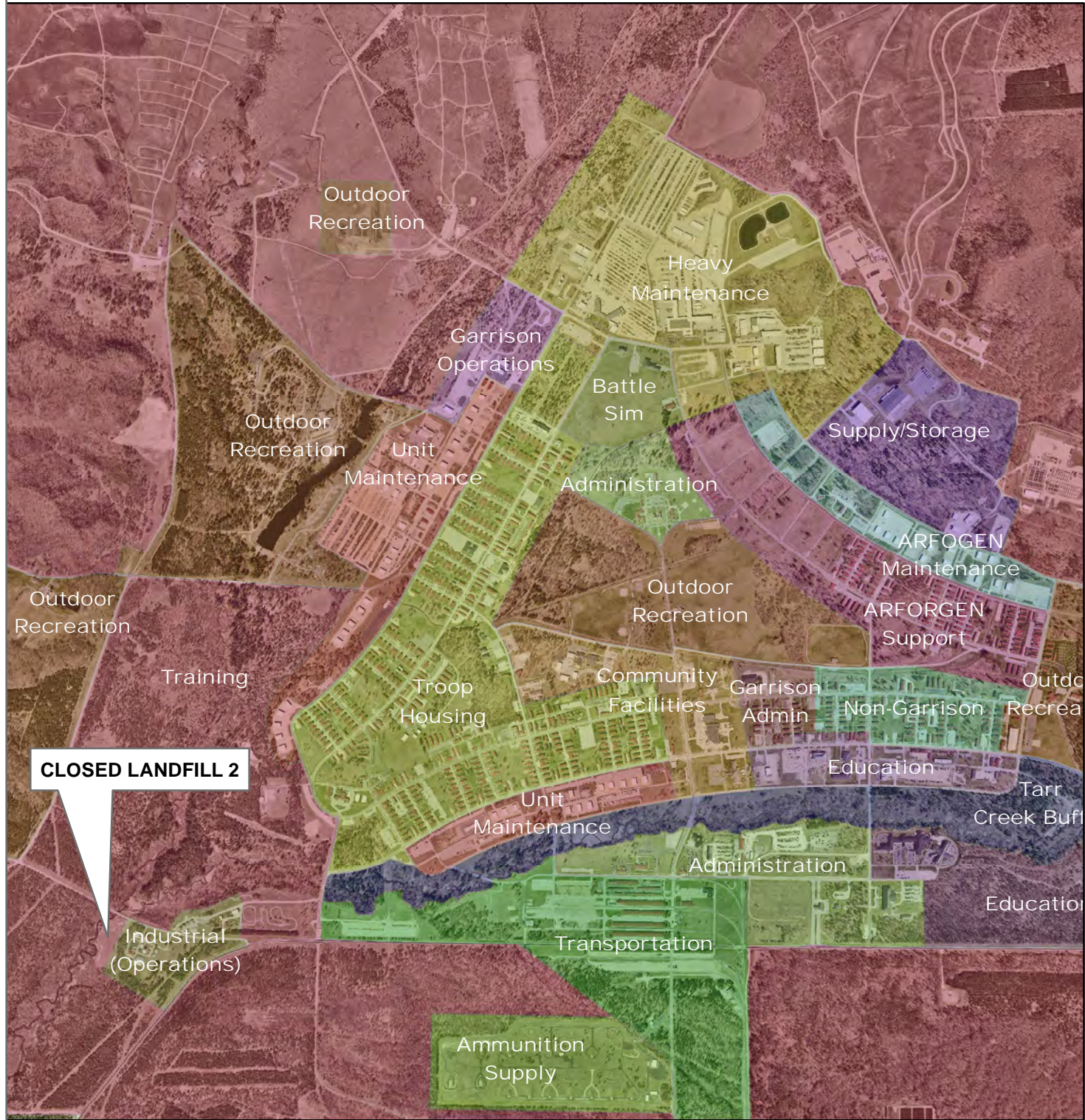
**F.3. VERIFICATION OF ZONING
CLOSURE REQUEST
FORT MCCOY
CLOSED LANDFILL 2
BRRTS NO. 02-42-279977**

0 1,750 3,500
Feet



Legend

- ARFOGEN Maintenance
- ARFORGEN Support
- Administration
- Airfield
- Ammunition Supply
- Battle Sim
- Community Facilities
- Education
- Family Housing
- Garrison Admin
- Garrison Operations
- Heavy Maintenance
- Industrial (Operations)
- Medical Training
- Non-Garrison
- Outdoor Recreation
- Supply/Storage
- Tarr Creek Buffer
- Training
- Transportation
- Troop Housing
- Unit Maintenance





DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT MCCOY
2171 SOUTH 8TH AVENUE
FORT MCCOY, WI 54656-5136

February 5, 2016

Environmental Division

Ms. Mae Willkom
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
P.O. Box 4001
Eau Claire, WI 54702-4001

Dear Ms. Willkom:

I James R. Hessil, Chief of the Environmental Division Fort McCoy, Wisconsin, certify that to the best of my knowledge the opinion of the Attorney General submitted with this statement for the Fort McCoy Closed Landfill #2 site (BRRTS # 02-42-279977) is correct.

Sincerely,

A handwritten signature in cursive script that reads "James R. Hessil".

James R. Hessil
Chief, Environmental Division
Directorate of Public Works

Enclosures

**TABLE OF CONTENTS - ATTACHMENT G: NOTIFICATIONS TO OWNERS OF
AFFECTED PROPERTIES**

APPLICABLE	NOT APPLICABLE
	Deed , Certified Survey Map, Verification of Zoning, Signed Statement are not applicable to this attachment, as no contamination extends off of Fort McCoy property.

ATTACHMENT G: Notifications to Owners of Affected Properties:

Not Applicable. No contamination from Closed Landfill #2 extends beyond the Fort McCoy property boundary.