



DuPont Engineering
325 West Main Street
Suite 1202
Louisville, KY 40202
502-569-7093 Tel 502-569-7898 Fax

December 21, 2012

Mr. Christopher A. Saari
Hydrogeologist
Northern Region Remediation and Redevelopment
State of Wisconsin Department of Natural Resources
Ashland Service Center
2501 Golf Course Road
Ashland, Wisconsin 54806



**Re: Summary of 2011 Site Activities
Former DuPont Barksdale Explosives Plant
BRRTS No. 02-0400156**

Dear Mr. Saari:

Attached is the field work summary report provided to DuPont CRG by URS Corporation. The report includes work activities performed during the 2011 field season at the Former DuPont Barksdale Works site.

Please feel free to contact me at 812-923-1136 if you have any questions or comments.

Sincerely,

Bradley S. Nave
Senior Site Director
DuPont Corporate Remediation Group
(502) 217-1531

Enclosure: 2011 Summary Report – Former DuPont Barksdale Works

cc: Mr. Cary Pooler – URS Corporation
Mr. Paul Bretting – C.G. Bretting Manufacturing Co., Inc.



December 21, 2012

Mr. Bradley S. Nave
Senior Site Director
E. I. du Pont de Nemours and Company
7204 Overlook Cove
Georgetown, IN 47122



**Re: Summary of 2011 Site Activities
Former DuPont Barksdale Explosives Plant
BRRTS No. 02-0400156**

Dear Mr. Nave:

This letter is intended to provide a summary of work activities conducted at the site in 2011 for your communication to the Wisconsin Department of Natural Resources in order to fulfill their request for an annual summary of field work conducted at the Former DuPont Barksdale Works site (see Figure 1).

The site characterization efforts conducted during the 2011 period of fieldwork (i.e., between April and October 2011) included:

- Surficial soil concentration mapping
- Delineation of subsurface explosive deposits
- Delineation of dispersed subsurface site-related residuals
- Characterization sampling of debris and fill materials
- Characterization sampling of identified areas of elevated residual concentration
- Surface water and sediment sampling
- Waste and select debris removal and disposal

In addition to these investigative efforts, pilot-scale bio-pilot work was continued in an effort to further understand the mechanisms for biodegradation of site-related constituents in soil. The overall scope of work related to each of these efforts is summarized in the following paragraphs.

Surficial Soil Concentration Mapping

As you are aware, concentrations of residual site constituents in surficial soil on the site is being accomplished by employing multi-incremental (MI) sampling and FIDO screening techniques to map the distribution of site-related constituents (i.e., nitroaromatic and nitramine organic compounds (NNOCs)) on a broad scale in areas where site decommissioning and/or releases during production have resulted in solid residual product or elevated concentrations of generally dispersed site-related constituents in soil.

The intent of the mapping is to identify the presence or absence of site-related constituents in a given area in order to focus additional investigations and for determining suitability for future recreational use by the site owner. The current status of each of the site's use areas are shown on Figure 2 (valid through September 2013). These allowable use areas are updated based on recent investigation results and communicated to the site owner annually.

In 2011, broad-scale surficial mapping efforts using a combination of MI and FIDO techniques were conducted in the following previously uncharacterized portions of the site (see Figure 3):

- Production Lines TNT07-TNT10 (0.3 acres in Use Area PAH)
- Production Lines TNX01-TNX05 (0.5 acres in Use Area PAI)
- Refined Triton Plant (1.1 acres in Use Area PAJ)
- Triton Refinery (3.1 acres in Use Area PAD)

Field staff collected 84 MI samples from the mentioned above areas. As a verification of the screening results, split samples were collected and submitted for laboratory confirmation at 10% of the screening locations. Testing during the 2011 field season brings the surficial FIDO screening effort total to 2,018 tests covering about 113 acres of surface soil at the site.

In 2011, MI work also added resolution in the following areas where detections were observed in 2009 and 2010:

- PAH: East of TNT10 Graining
- PAI: West of TNX01 Neutralizing
- PAI: East of a reported catch box southwest of TNX01
- PAI: East of the TNX05 Ditch Outfall
- PAI: Northwest of the East TNX Box House Entry
- PAI: North of the TNX04 Neutralizing House
- PAI: West of the TNX05 Neutralizing House
- PAI: Southwest of the West TNX Graining House
- PAJ: Downstream of the ponded area on the Refine Triton Ditch
- PAJ: Entry to the Refined Triton Graining House Area

In addition to the organic compound concentration mapping, surficial soil concentration mapping efforts were also undertaken in locations where inorganic constituents were previously identified as the primary constituents of concern. X-ray fluorescence (XRF) equipment was utilized to determine the concentration of arsenic and lead in these areas and split samples were submitted for laboratory confirmation for 10% of the locations.

In 2011, arsenic and lead mapping was conducted in the following areas (see Figure 4):

- The OV01 Plant (4.9 acres in western PAR)
- The 1953 Acid Recovery Plant (2.6 acres in eastern PAR)

Soil samples for XRF screening were collected from approximately 65 locations across the above areas in 2011. The 2011 metals screening found a southern limit to elevated metals concentrations in the above areas runs along the former power plant coal trestle rail spur.

The testing conducted in 2011 brings the total XRF screening effort to 2,619 sampling locations covering about 16 acres of surface soil at the site.

Delineation of Subsurface Explosive Deposits

The potential exists for solid residual product to be present in the vicinity of all former production buildings. As a result, percussion collection methods such as GeoProbe® sampling are not recommended as an initial characterization technique. In these locations, shielded excavation equipment and FIDO/Expray screening are used as the initial characterization step. Field crews screen the proposed excavation surface then utilize non-sparking hand tools to investigate detections and remove any residual product identified. Once screening results are evaluated, the excavator is used to remove a thin layer of soil (1–2 inches) from the work area and screening/hand investigation is conducted and repeated on the newly exposed surface (as necessary). This process is continued until unaffected, native soil that had not been previously disturbed is encountered. If the excavation depth exceeded 3.5 feet, soils are first brought to the surface by the excavator and then screening is performed in the trench spoil piles.

In 2011, shielded trenching and screening was conducted in the following areas (see Figure 5):

- TNT08 Neutralization House Floors (602-sf 2-ft deep)
- TNT08 Neutralization House Walls (400-sf 5-ft deep)
- TNT08 Neutralization House Ditch (867-sf 3 to 4-ft deep)
- TNT08 Neutralization House RR Ditch (1018-sf 2 to 3-ft deep)
- TNT08 Fortifying House Floors (572-sf 2–ft deep)
- TNT08 Fortifying House Walls (484-sf 5–ft deep)
- TNT08 Fortifying House Drain (445-sf 3–ft deep)
- TNT07 Fortifying House Drain (130-sf 2–ft deep)
- TNT09 Fortifying House Drain (335-sf 6–ft deep)
- TNT10 Fortifying House Drain (194-sf 3–ft deep)
- TNT08 Mononitration House Floors (823-sf 3–ft deep)
- TNT08 Mononitration House Walls (453-sf 5–ft deep)
- TNT08 Mononitration House Drain (515-sf 3–ft deep)

- TNT08 Weak Acid House Ditch (100-sf 2–ft deep)
- TNT08 Graining House Floors (657-sf 2–ft deep)
- TNT08 Graining House Walls (282-sf 6–ft deep)
- TNT08 Graining House Drain (239-sf 2–ft deep)
- TNT08 Graining House RR Ditch (896-sf 3–ft deep)
- TNT07 Graining House Kettle Basin & Motor Mounts (150-sf 1.5–ft deep)
- TNT09 Graining House Kettle Basin & Motor Mounts (150-sf 1.5–ft deep)
- TNT10 Graining House Kettle Basin (85-sf 3–ft deep)

The residual materials removed during this work are summarized in the section on Waste Recovery and Disposal presented below.

Delineation of Subsurface Site-related Residuals

Once a building site or ditch had been cleared of potentially explosive materials, conventional sampling techniques (i.e., GeoProbe®) were employed to determine the limits of adjacent soil with NNOC concentrations above site-specific residual contaminant limits (RCLs). Samples were collected below and to the sides of areas from which explosives had been removed. Samples were initially collected 2 feet to either side of the product removal areas. If screening indicated elevated results, sample collection continued outward from the excavation limit at 5-foot intervals until the limit of the impacted zone was defined. All cores recovered by the GeoProbe® were screened across the full depth sampled using FIDO and Expray screening methods. This process resulted in crews advancing and screening (to a depth of 5 feet below existing grade unless otherwise stated) the following GeoProbe® borings (see Figure 5):

- TNT08 Neutralization House (8 + 2 to 10-ft)
- TNT08 Neutralization House Ditch (11)
- TNT08 Neutralization House RR Ditch (17 + 1 to 10-ft)
- TNT08 Fortifying House (1 to 15–ft)
- TNT08 Fortifying House Drain (6)
- TNT08 Mononitration House (1 to 10-ft)
- TNT08 Mononitration House drain (4)
- TNT08 Bi-Trinitration House (10)
- TNT08 Graining House (7 + 2 to 10-ft)
- TNT08 Graining House Drain (3)
- TNT08 Graining House RR Ditch (7)

The amount of hand recovery required to clear residual solid product listed in the prior section consumed the excavation time available. As a result, two ditches proposed for clearing were not completed in 2011. However, the results observed at the ditch and drain features in the above list indicated that GeoProbe® samples could be safely

collected at locations over 3 feet to the side of former ditches; therefore, data from the following as yet un-cleared ditches was collected in 2011 in order to utilize available GeoProbe® site time:

- TNT08 Weak Acid House Ditch (5 borings, 5 feet deep)
- TNT08 Area Central Ditch (8 borings, 5 feet deep)

The following work sites were only cleared of residual solid product to allow asbestos abatement crews access to specific portions of the buildings listed. The potential remains for other residual solid product deposits at these buildings; therefore, delineation sampling has been postponed until areas outside the concrete basins excavated in 2011 have been cleared.

- TNT07 Graining House kettle basin & motor mounts
- TNT09 Graining House kettle basin & motor mounts
- TNT10 Graining House kettle basin

NNOC delineation work conducted in 2011 resulted in advancing a total of 86 GeoProbe® borings to 5 feet below ground surface (bgs), 6 borings to 10 feet bgs, and 1 boring to 15 feet bgs.

Debris and Fill Characterization Sampling

Remnant building and construction material that potentially required removal to access delineation sites included concrete (floor slabs and walls), bricks (floors of Absorber Houses and nitrating kettle foundations in Mononitration Houses), and granular materials placed as fill below floor slabs. Characterization analysis of these items to determine if they potentially required handling as impacted wastes was conducted prior to beginning delineation work.

Concrete and brick samples were collected June 21, 2011 using a shielded excavator to break out small pieces of building materials from each production building in each of the four production lines (TNT07-10) in Use Area PAH. Staff collected the following samples for screening from the buildings shown on Figure 5:

Building Type	Buildings	Samples/Building	Material	Lbs./Sample
Neutralization Houses	4	6	concrete	4
Fortifying Houses	4	2	concrete	4
Mononitration Houses	4	3	concrete	4
Bi-Trinitration Houses	4	3	concrete	4
Mononitration Houses	4	1	brick	6
Absorption Houses	2	1	brick	6

Each subsample was screened using Expray and FIDO techniques. Crews then crushed the remaining pieces and combined the crushed subsamples into one composite sample for each building type and material.

The following samples were prepared and analyzed for NNOCs.

Sample Name	Building Type	Lines	Sample Type	Subsamples
BAR-V-TNT07NEUT	Neutralization	TNT07	grab	1
BAR-V-PAHMONO	Mononitration	TNT07-10	composite	12
BAR-V-PAHFORT	Fortifying	TNT07-10	composite	8
BAR-V-PAHBTRI	Bi-Trinitration	TNT07-10	composite	12
BAR-V-PAHNEUT	Neutralization	TNT07-10	composite	23
BAR-V-PAHMONOBRICK	Mononitration	TNT07-10	composite	4
BAR-V-PAHABSN	Absorption	TNT07/08 & TNT09/10	composite	2

Subfloor fill samples were collected on June 23, 2011 using a hand auger through the holes made by concrete sampling. Crews sampled from the base of the floor to 1 foot into native soil. Staff collected and screened the following fill samples with Expray and FIDO techniques:

Building Type	Buildings	Samples/Building	Material	Lbs./Sample
Neutralization Houses	4	6	cinders	2
Fortifying Houses	4	2	cinders	2
Mononitration Houses	4	4	cinders	2
Bi-Trinitration Houses	4	4	cinders	2
Absorber Houses	2	2	cinders	2

The samples from buildings with elevated screening results were segregated and analyzed as grabs or two to four sample composites. The remaining subsamples were combined into one composite sample for each building type. The fill samples analyzed for NNOCs were as follows:

Sample Name	Building Type	Lines	Sample Type	Subsamples
BAR-V-PAHFORT08FILL	Fortifying	TNT08	grab	1
BAR-V-PAHMONO09FILL	Mononitration	TNT09	composite	2
BAR-V-PAHNEUT07FILL	Neutralization	TNT07	grab	1
BAR-V-PAHNEUT10FILL	Neutralization	TNT10	composite	4
BAR-V-PAHMONOFILL	Mononitration	TNT07-10	composite	15
BAR-V-PAHFORTFILL	Fortifying	TNT07-10	composite	8
BAR-V-PAHBTRIFILL	Bi-Trinitration	TNT07-10	composite	16
BAR-V-PAHNEUTFILL	Neutralization	TNT07-10	composite	19
BAR-V-PAHABSNFILL	Absorption	TNT07/08 & TNT09/10	composite	4

Characterization Sampling of Areas Identified by Surface Mapping

In order to determine impacted zone thickness and characterize the materials present with respect to RCLs and RCRA threshold values, soil borings were advanced at locations where arsenic or lead had previously been detected by surface mapping (see Figure 6). These borings were advanced to five feet bgs and screened across the full depth using XRF techniques. Samples from the first interval without detections were submitted for laboratory confirmation as representative of the bottom depth of the detected metals. Additional samples were submitted from selected zones where screening indicated elevated concentrations. The locations of this work in 2011 were as follows:

- The 1950 Nitric Acid Recovery line storage tanks and tower sites (PAR013-020)
- The 1950 Nitric Acid Converter House (PAR021-022)
- The 1950 Nitric Acid Condenser House (PAR023)
- The 1950 Nitric Acid Recovery Waste Settling House (PAR024)
- OV01 Plant Dust Catchers (PAR006, PAR007 and PAR025)
- OV01 Plant Scrubber House (PAR008)
- OV01 Plant Absorber House (PAR009-PAR010)
- OV01 Plant Ore Stockpile Area (PAR011-PAR012)
- OV01 Plant Converter House (PAR026)

Surface Water and Sediment Sampling

Crews collected surface water and sediment samples on May 10, 2011 at each of the 12 perimeter locations that had been sampled in prior events (see Figure 7). Test America Laboratories analyzed the samples for NNOCs including five additional dinitrotoluene (DNT) isomers and 10 dinitroxylyene (DNX) compounds.

Location	Surface Water Body
SWA001	UAI Area Drainage
SWB001	Nolander Road Drainage
SWB002	Nolander Road Overflow
SWC001	Triangle Drainage
SWD001	Northern Drainage
SWE001	Front Gate Drainage
SWF001	Central Drainage
SWG001	Substation Drainage
SWH001	Nitramon Area Drainage
SWI001	Boyd Creek
SWJ001	Truck Gate Drainage
SWK001	Mission Springs Creek

Waste Recovery, Waste Handling, and Disposal

Wastes recovered and disposed of during the fieldwork period included asbestos and residual solid nitroaromatic and nitramine organic product (i.e., DNT and TNT). Additionally, selected demolition debris, consisting of residual impacted wood and clay drainage pipe were also collected and disposed.

Asbestos

In late July 2011, DuPont representatives encountered suspected asbestos containing materials (ACM) (i.e., building materials and pipe wrap residues) at the former TRV02 Wash House excavation site located in Use Area PAC. These materials obstructed access to DNT impacted soil slated for removal to resolve bio-toxicity issues at bio-pilot test cell C12. Additional ACM was identified in early August at the Graining House locations slated for excavation in Use Area PAH. In order to complete the scoped removals, a certified asbestos removal crew was mobilized to remove these items as well as previously identified ACM along a former DNT pipeline in Use Area PAO (see Figure 8). In September 2011, the ACM materials were collected by licensed subcontractors then containerized in 55-gallon drums. Approximately 18 cubic feet (cf) of ACM was collected in PAO, 9 cf in PAC, and 30 cf of equally mixed ACM and soil in Use Area PAH for a total of 42 cf of ACM removed in 2011. Drums containing the ACM were labeled, inventoried, and then staged at the on-site non-hazardous waste pad until transportation to the off-site disposal facility was available. The drums were shipped to Veolia ES's Emerald Park Landfill in Oak Creek, WI on September 28, 2011.

DNT and TNT

Residual solid TNT product was removed in 2011 from several locations in conjunction with soil delineation via test trenches (see Figure 9). Subcontractors mechanically unearthed the buried product then staff mapped the configuration of deposits prior to hand loading solid product residues into transfer containers. The work locations and amounts recovered are listed below:

- Area PAH - TNT07 Graining House (46 lbs of soil and waste containing 35 lbs TNT)
- Area PAH - TNT08 Neutralization House (67 lbs of soil and waste containing 13 lbs TNT)
- Area PAH - TNT08 Graining House (1,466 lbs of soil and waste containing 426 lbs TNT)
- Area PAH - TNT08 Fortifying House Drain (215 lbs of soil and waste containing 77 lbs TNT)
- Area PAH - TNT08 Mononitration House Drain (191 lbs of soil and waste containing 24 lbs TNT)
- Area PAH - TNT08 Graining House Floor Drain (254 lbs of soil and waste containing 118 lbs TNT)

- Area PAH - TNT08 Neutralization Ditch (2,774 lbs of soil and waste containing 1,010 lbs TNT)
- Area PAH - TNT08 Neutralization RR Ditch (4,526 lbs of soil and waste containing 466 lbs TNT)
- Area PAH - TNT08 Weak Acid House Ditch (218 lbs of soil and waste containing 37 lbs TNT)
- Area PAH - TNT08 Graining House RR Ditch (583 lbs of soil and waste containing 156 lbs TNT)

In 2011, DuPont also removed 6,832 lbs of soil containing 1,333 lbs of TNT from the northern end of the former Refined Triton catch box. That material had been identified during 2010 construction of bio-pilot test cell C16. DuPont removed residual solid DNT product and soil containing DNT in excess of estimated microbial toxicity thresholds from two locations in 2011 in conjunction with bio-pilot test site improvements (see Figure 9). Subcontractors mechanically unearthed the buried product then staff mapped the configuration of deposits prior to bulk loading solid product residues and entrained soil or debris into roll-off containers. The work locations and amounts recovered are listed below:

- Use Area PAJ – Refined Triton Poned Area (26,793 lbs soil containing about 549 lbs DNT)
- Use Area PAC – TRV02 Wash House / C12 Area (45,229 tons of a soil; water and debris matrix containing about 1,074 lbs of TNT; 7,087 lbs of DNT; and 33 lbs of nitrated xylenes)

The total product removed from the Former Barksdale Works to date (including incidental product entrained in decontamination waste streams) is estimated as follows:

Year	TNT (lbs)	DNT (lbs)	DNX (lbs)	Water (gal)	Debris (tons)	Soil (tons)
2011	5,343	8,008	73	7,069	4.1	34.9
2010	7,523	221	6	3,719	3.0	19.0
2009	1,066	2,577	430	1,547	23.3	27.2
2008	489	686	0	1,426	0.2	2.2
2007	547	3	0	2,728	0.2	2.0
2006	463	6	0	3,708	0.4	5.5
2005	455	1	0	2,211	0.0	0.9
2004	305	0	0	2,839	0.0	0.2
To Date	16,191	11,502	509	25,247	31.2	91.9

As in the past, all residual product and nitramine contaminated soil was appropriately containerized and shipped off-site for subsequent incineration by Veolia ES Technical Solutions in Sauget, IL. Decontamination water was treated by carbon absorption and disposed at the City of Superior Waste Water Treatment Plant.

Demolition Debris

In addition to residual solid product removal actions, debris consisting of wood and clay drainage pipe was also removed from several areas for off-site disposal. The wood removed was primarily associated with construction of drain flumes and catch boxes in site buildings, while the clay drainage pipe was used to convey liquids from buildings (as either floor drain pipe or process sewer). Both of these materials were characterized at several work locations and found to contain up to percentage levels of site-related constituents.

Process impacted wood was encountered at:

- Use Area PAC - TRV02 Wash House / PILOT-C12 site (268-lbs)
- Use Area PAL - DYN01 Lydol Skids / PILOT-C17 site (220-lbs)
- Use Area PAH - TNT08 Graining House (45-lbs)
- Use Area PAH - TNT08 Neutralizing House (55-lbs)
- Use Area PAH - TNT08 Mononitration House (32-lbs)

Process impacted tile was removed from the following product removal locations (see Figure 9) in 2011:

- Use Area PAH - TNT08 Mono-nitration House Floor Drain (1,134-lbs)
- Use Area PAH - TNT08 Fortifying House Floor Drain (1,890-lbs)
- Use Area PAH - TNT08 Graining House Floor Drain (945-lbs)

The small amount of process impacted wood removed from TNT delineation sites in 2011 was sized and shipped with the TNT solids with which it was co-located.

Process impacted wood recovered from the C12 (TRV02 Wash House) site was disposed comingled with the DNT containing wastes and soil removed from that location.

The weights of tile and wood are included within the totals listed on the 2011 manifests for the TNT and DNT solids removed from the same source locations. Manifests for all waste disposed are maintained in DuPont's files and can be made available for review upon request.

Bio-pilot Activities

In 2011 with written approval from WDNR, three new bio-pilot test cells were added to the existing tilling and sampling program to provide data on degradation of differing soil types and mixes of site related compounds. These new cells are listed below:

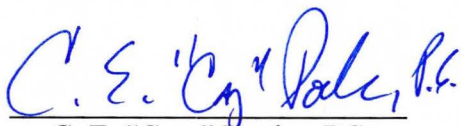
- C16 - Use Area PAJ - Refined Triton Ditch (an area of TNT impacts in sandy soils)
- C17 - Use Area PAL - Upper Dynamite Line Skid Storage Area (an area of high concentration mixed DNX, DNT and TNT impacts in silty soil)
- C18 - Use Area PAM - Lydol Melting House (an area of low concentration mixed DNT and DNX situated in sandy soil)

Mr. Bradley S. Nave
E. I. du Pont de Nemours and Company
December 21, 2012
Page 11 of 11

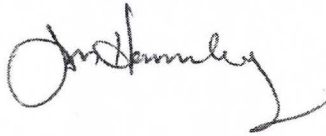
These new cells, as well as the pre-existing test cells (see Figure 10), were tilled monthly from June through September. The cells were sampled biweekly for soil indicator parameters as well as at season start and end for nitramine compounds. The data collected is being analyzed for temporal trends as part of the ongoing site bio-attenuation study.

Should you have any questions or comments, please do not hesitate to call me at (502) 217-1534.

Sincerely,



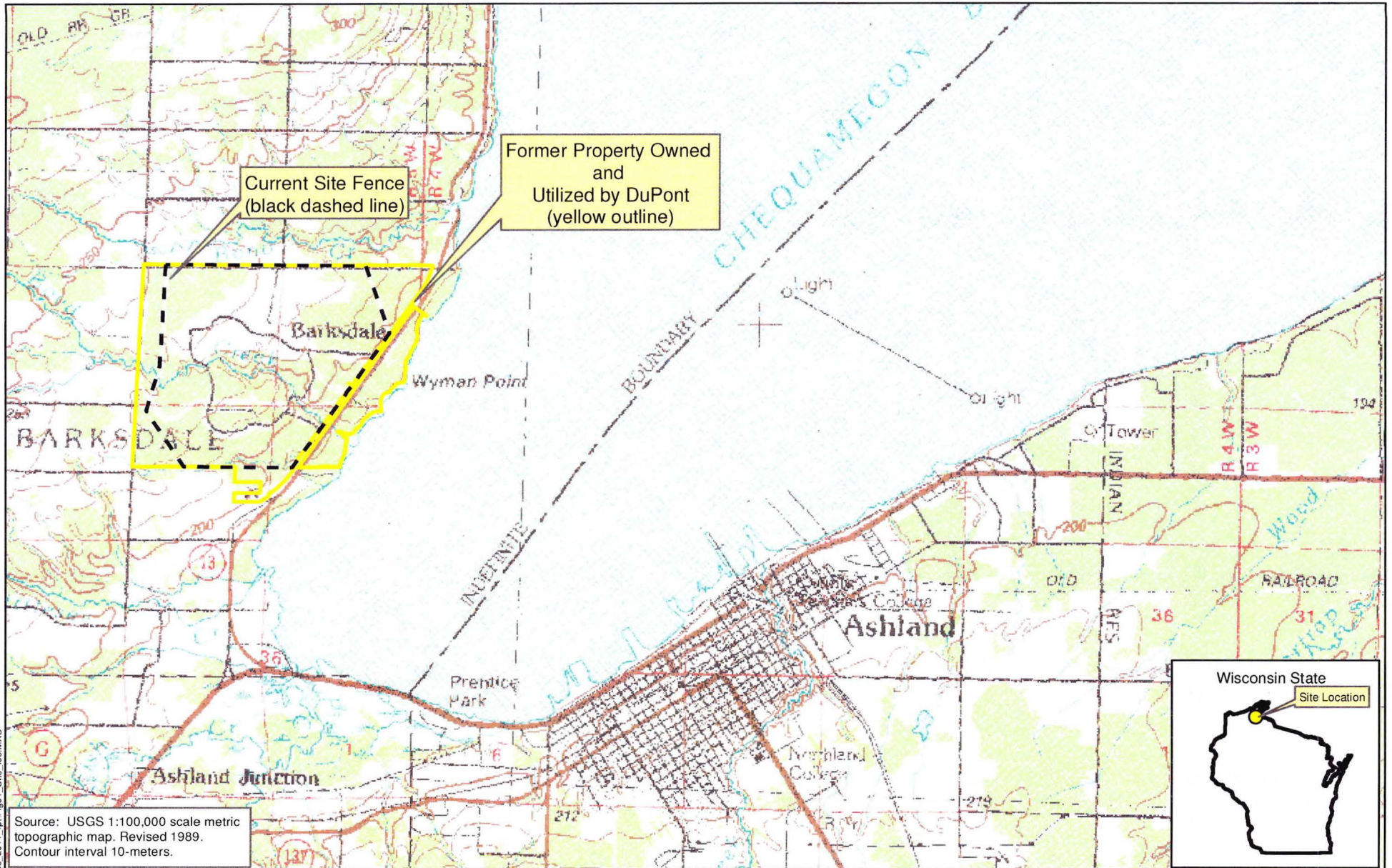
C. E. "Cary" Pooler, PG
Senior Project Manager
URS



Jon Hammerberg
Project Engineer
URS

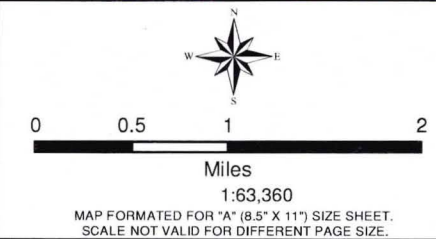
Attachments: Figures (10)

FIGURES



Source: USGS 1:100,000 scale metric topographic map. Revised 1989. Contour interval 10-meters.

Area Map (Optional)



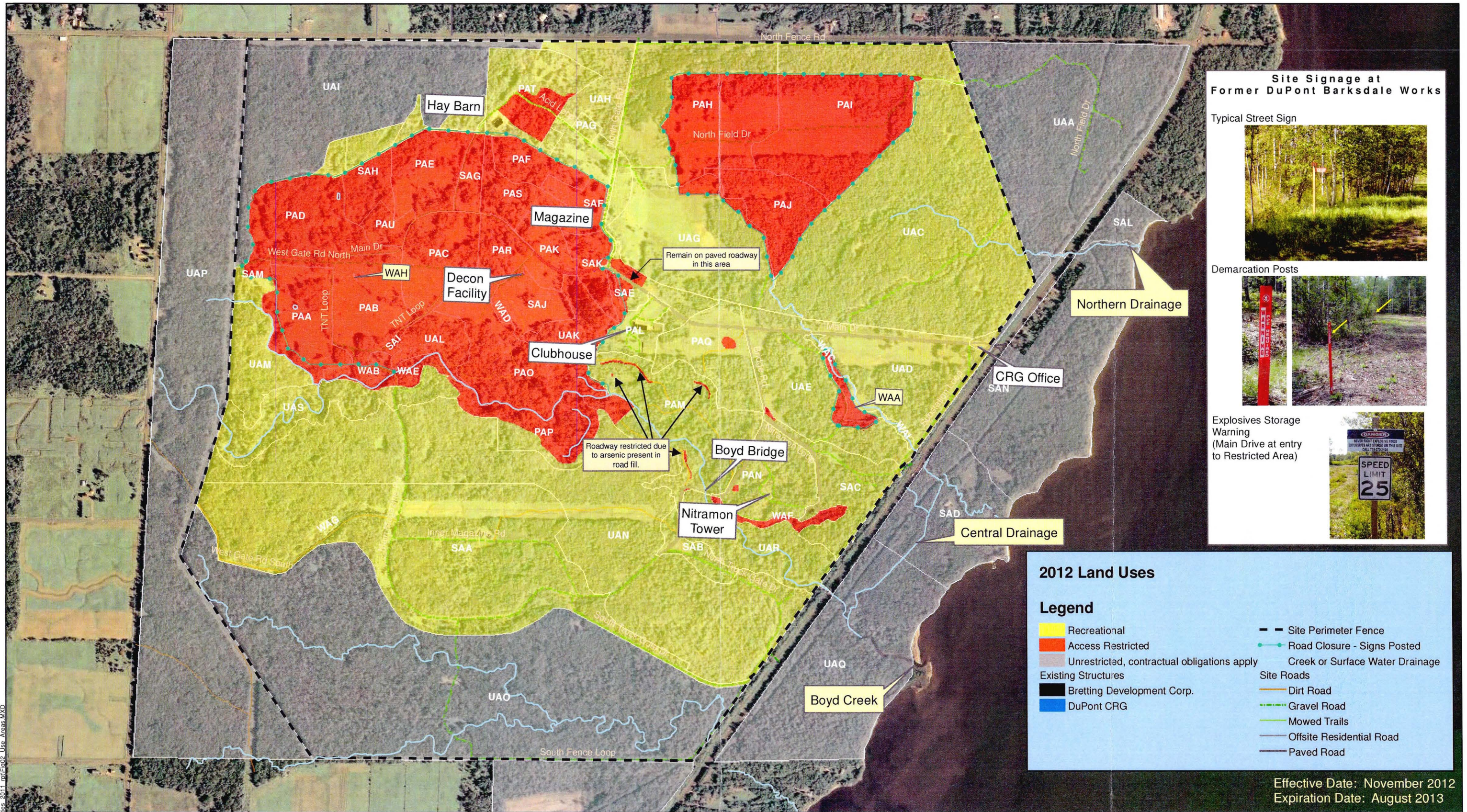
FILE NUMBER:
 DESIGNED BY: JH
 DRAWN BY: KJB
 DATA QUALITY CHECK BY: JH

URS
 URS Corporation
 325 West Main Street
 Suite 1202
 Louisville, Kentucky 40202

Regional Site Location
 Summary of 2011 Site Activities
 Former DuPont Barksdale Works
 Barksdale, Wisconsin 54806

PROJECT NUMBER:
 18987975
 DATE:
 December 2012
 FIGURE NUMBER:
 1

C:\GISBAR_GISMap_Files\Site_Activities_2011_rpt\Fig01_Site_loc.MXD



Site Signage at Former DuPont Barksdale Works



2012 Land Uses

Legend

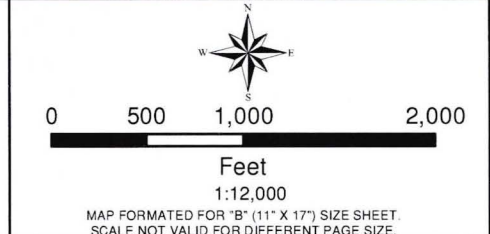
- Recreational
- Access Restricted
- Unrestricted, contractual obligations apply
- Existing Structures
- Breitting Development Corp.
- DuPont CRG
- Site Perimeter Fence
- Road Closure - Signs Posted
- Creek or Surface Water Drainage
- Site Roads
- Dirt Road
- Gravel Road
- Mowed Trails
- Offsite Residential Road
- Paved Road

Effective Date: November 2012
Expiration Date: August 2013

C:\GIS\BAR_GIS\Map_Files\Site_Activities_2011.mxd\Map2_Use_Areas.MXD

Notes:

Area Map (Optional)



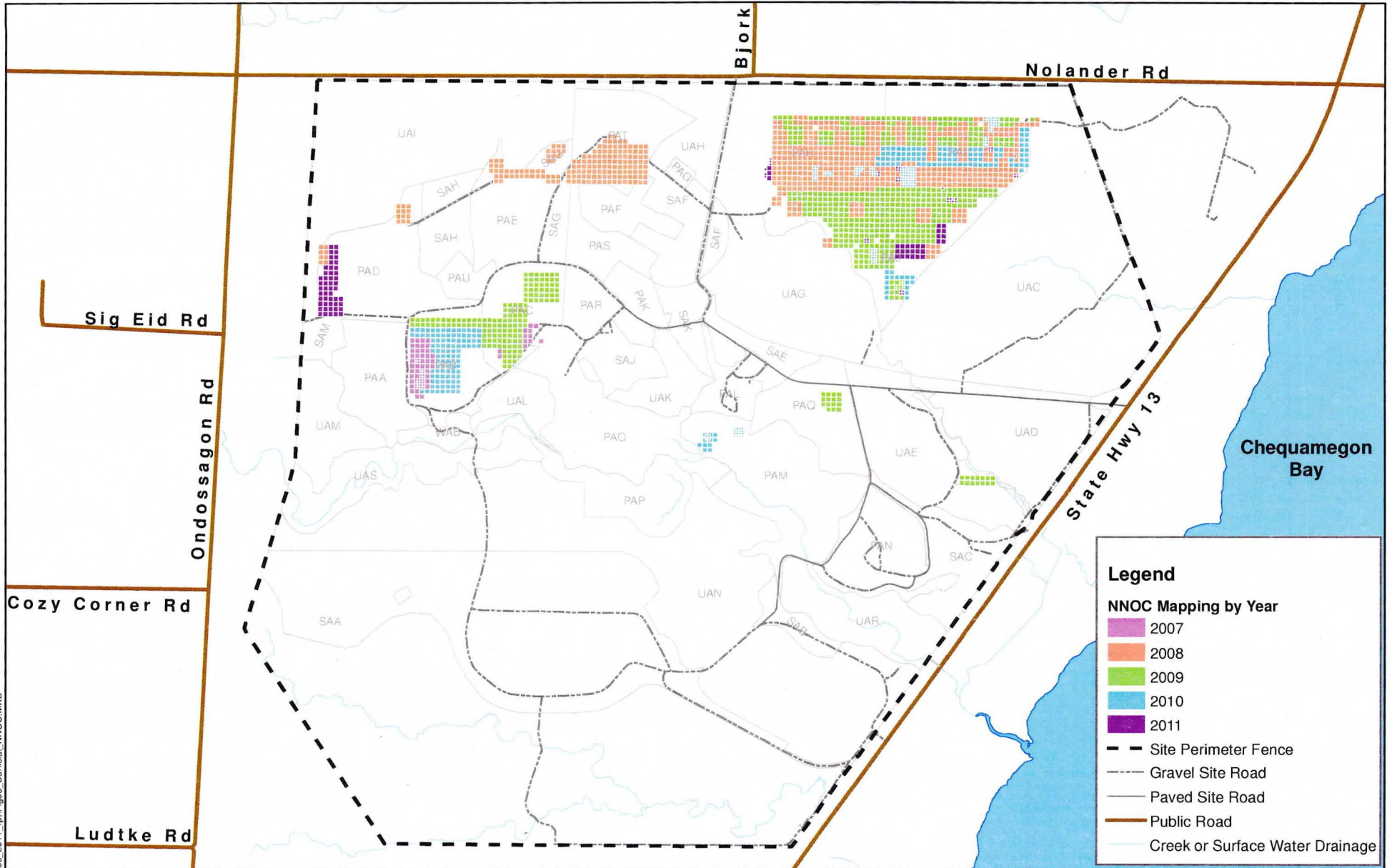
FILE NUMBER:
DESIGNED BY: JH
DRAWN BY: KJB
DATA QUALITY CHECK BY: JH

URS Corporation
325 West Main Street
Suite 1202
Louisville, Kentucky 40202

Use Area Map

Summary of 2011 Site Activities
Former DuPont Barksdale Works
Barksdale, Wisconsin 54806

PROJECT NUMBER:
18987975
DATE:
December 2012
FIGURE NUMBER:
2



Legend

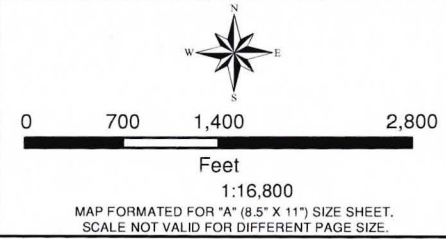
NNOC Mapping by Year

- 2007
- 2008
- 2009
- 2010
- 2011

- Site Perimeter Fence
- Gravel Site Road
- Paved Site Road
- Public Road
- Creek or Surface Water Drainage

O:\GISBAR_GIS\Map_Files\Site_Activities_2011_rpt\Fig03_Surfacial_NNOC.MXD

Area Map (Optional)



FILE NUMBER:	
DESIGNED BY:	JH
DRAWN BY:	KJB
DATA QUALITY CHECK BY:	JH

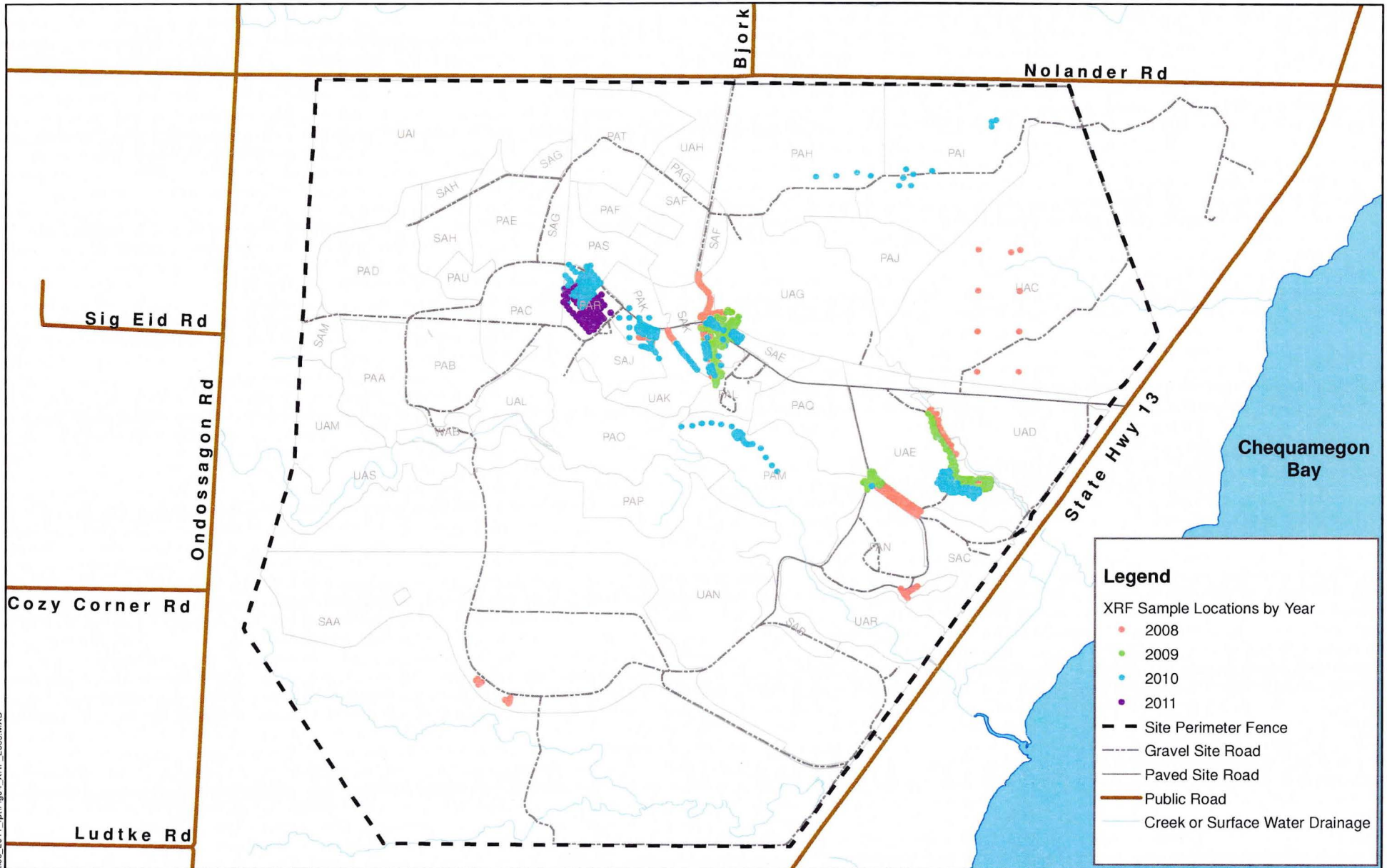
URS

URS Corporation
325 West Main Street
Suite 1202
Louisville, Kentucky 40202

Surfacial NNOC Mapping
2007 - 2011

Summary of 2011 Site Activities
Former DuPont Barksdale Works
Barksdale, Wisconsin 54806

PROJECT NUMBER:	18987975
DATE:	December 2012
FIGURE NUMBER:	3



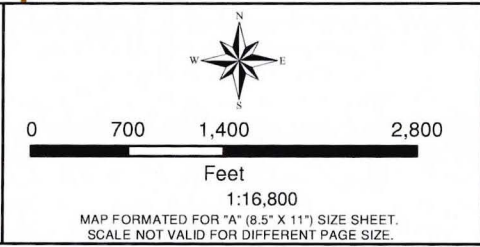
Legend

XRF Sample Locations by Year

- 2008
- 2009
- 2010
- 2011

- Site Perimeter Fence
- - - Gravel Site Road
- Paved Site Road
- Public Road
- Creek or Surface Water Drainage

Area Map (Optional)



FILE NUMBER:	
DESIGNED BY:	JH
DRAWN BY:	KJB
DATA QUALITY CHECK BY:	JH

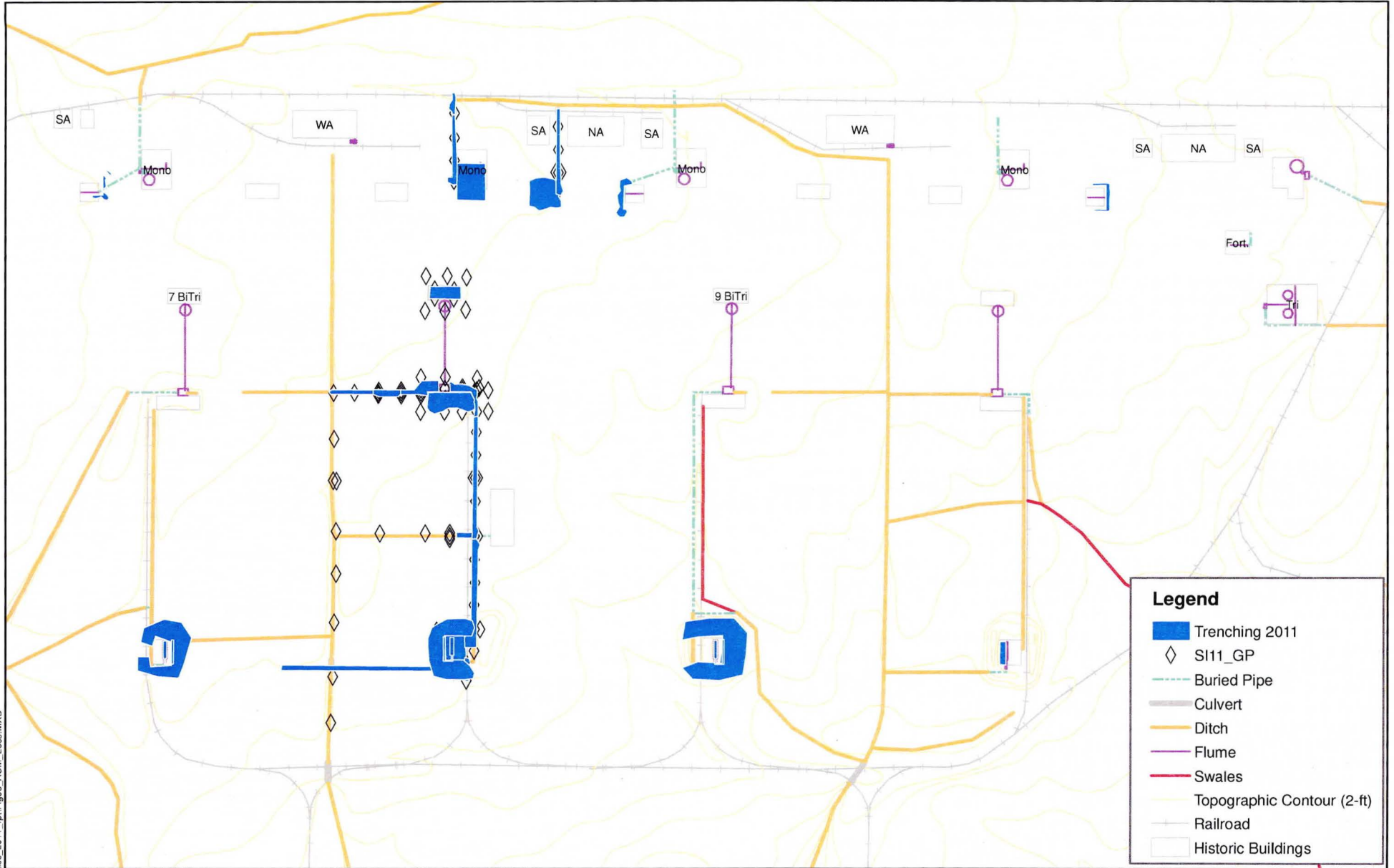
URS

URS Corporation
 325 West Main Street
 Suite 1202
 Louisville, Kentucky 40202

X-ray Fluorescence (XRF)
 Collection Sites 2008 - 2011

Summary of 2011 Site Activities
 Former DuPont Barksdale Works
 Barksdale, Wisconsin 54806

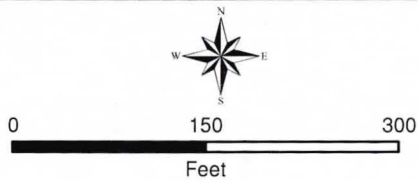
PROJECT NUMBER:	18987975
DATE:	December 2012
FIGURE NUMBER:	4



Legend

- Trenching 2011
- SI11_GP
- Buried Pipe
- Culvert
- Ditch
- Flume
- Swales
- Topographic Contour (2-ft)
- Railroad
- Historic Buildings

Area Map (Optional)



MAP FORMATED FOR "A" (8.5" X 11") SIZE SHEET.
SCALE NOT VALID FOR DIFFERENT PAGE SIZE.

FILE NUMBER:

DESIGNED BY:
JH

DRAWN BY:
KJB

DATA QUALITY CHECK BY:
JH

URS
URS Corporation
325 West Main Street
Suite 1202
Louisville, Kentucky 40202

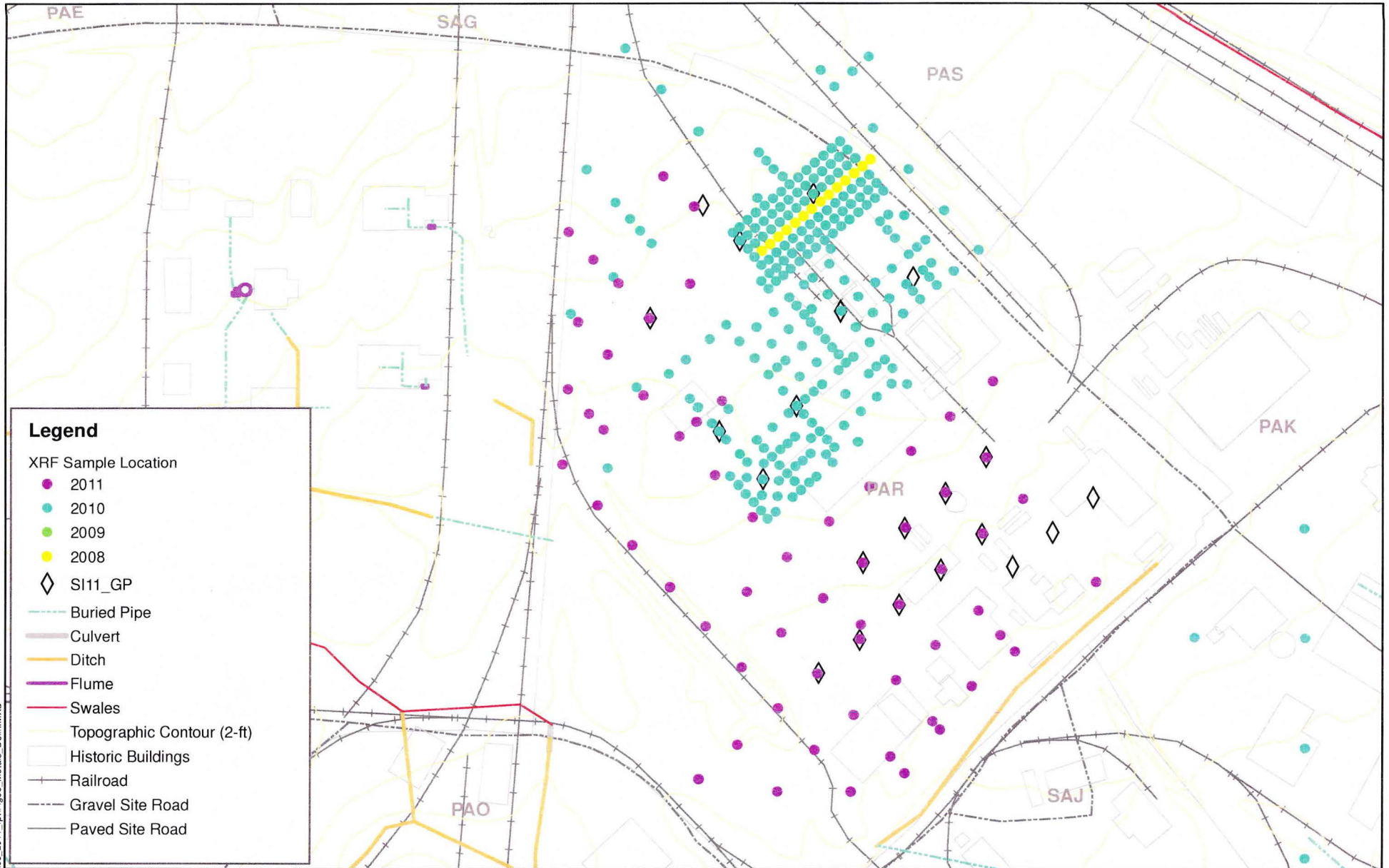
**Shielded Trenching and Screening
Sites 2011**

Summary of 2011 Site Activities
Former DuPont Barksdale Works
Barksdale, Wisconsin 54806

PROJECT NUMBER:
18987975

DATE:
December 2012

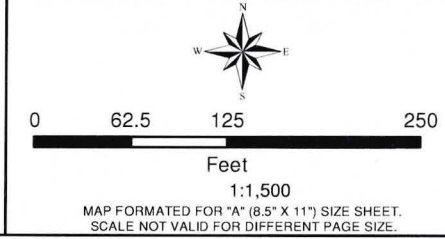
FIGURE NUMBER:
5



Legend

- XRF Sample Location
 - 2011
 - 2010
 - 2009
 - 2008
- ◇ SI11_GP
- Buried Pipe
- Culvert
- Ditch
- Flume
- Swales
- Topographic Contour (2-ft)
- Historic Buildings
- Railroad
- Gravel Site Road
- Paved Site Road

Area Map (Optional)



FILE NUMBER:	
DESIGNED BY:	JH
DRAWN BY:	KJB
DATA QUALITY CHECK BY:	JH

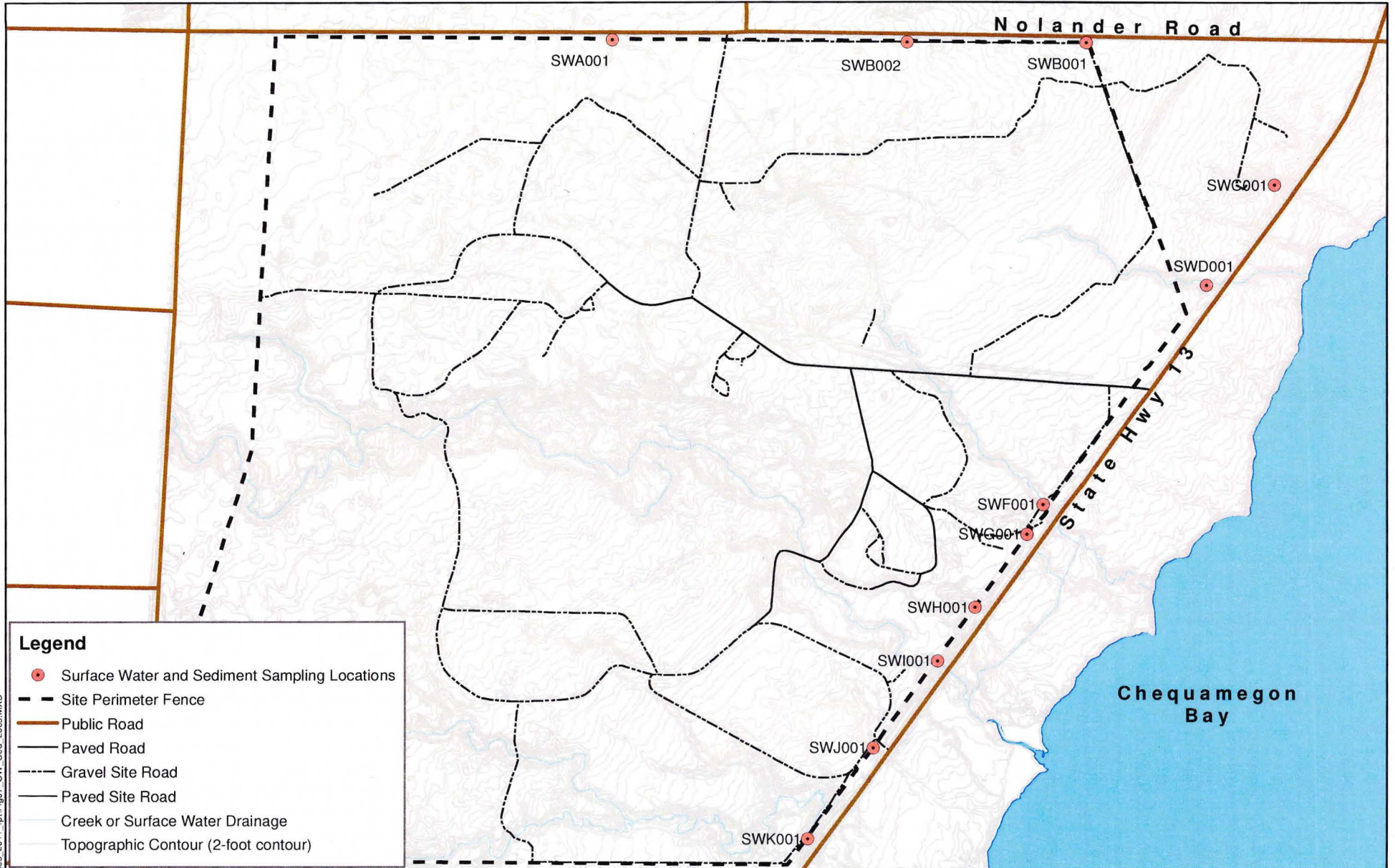
URS
 URS Corporation
 325 West Main Street
 Suite 1202
 Louisville, Kentucky 40202

Metals Delineation and Characterization

Summary of 2011 Site Activities
 Former DuPont Barksdale Works
 Barksdale, Wisconsin 54806

PROJECT NUMBER:	18987975
DATE:	December 2012
FIGURE NUMBER:	6

C:\GIS\BAR_GIS\Map_Files\Site_Activities_2011_rpt\Fig06_Metals_Delin.MXD

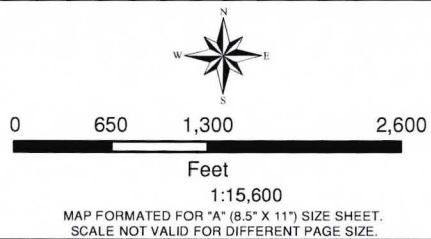


Legend

- Surface Water and Sediment Sampling Locations
- - - Site Perimeter Fence
- Public Road
- Paved Road
- - - Gravel Site Road
- Paved Site Road
- Creek or Surface Water Drainage
- Topographic Contour (2-foot contour)

C:\GIS\BAR_GIS\Map_Files\Site_Activities_2011_rpt\Fig07_SW_Sed_Loccs.MXD

Area Map (Optional)



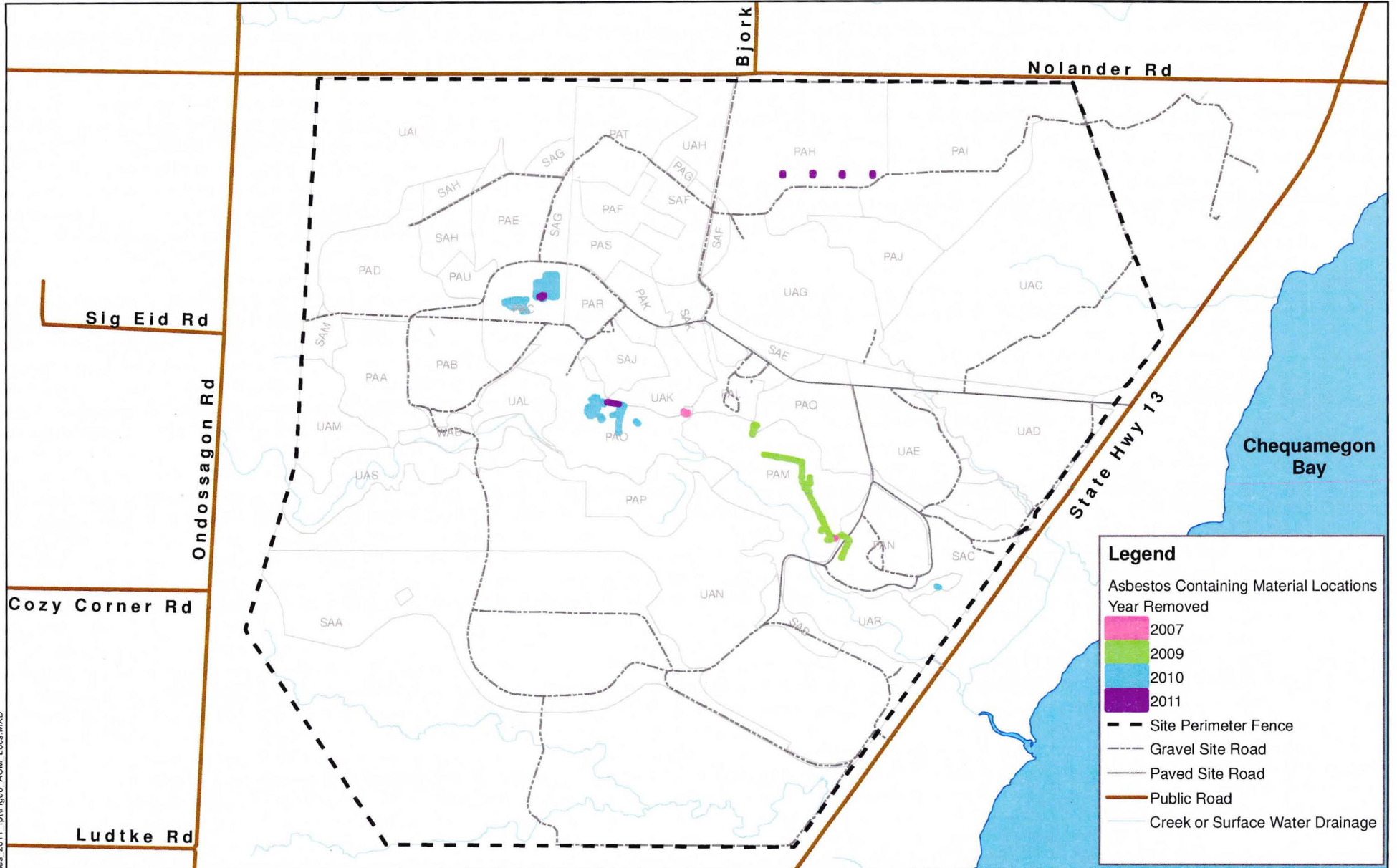
FILE NUMBER:	
DESIGNED BY:	JH
DRAWN BY:	KJB
DATA QUALITY CHECK BY:	JH

URS
 URS Corporation
 325 West Main Street
 Suite 1202
 Louisville, Kentucky 40202

**Surface Water and Sediment
 Sampling Locations
 2011**

Summary of 2011 Site Activities
 Former DuPont Barksdale Works
 Barksdale, Wisconsin 54806

PROJECT NUMBER:	18987975
DATE:	December 2012
FIGURE NUMBER:	7



Legend

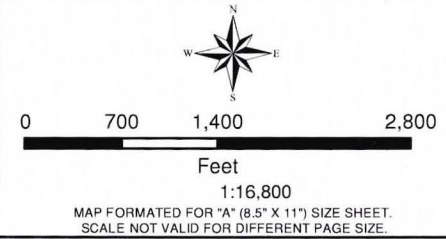
Asbestos Containing Material Locations
Year Removed

- 2007
- 2009
- 2010
- 2011

- Site Perimeter Fence
- Gravel Site Road
- Paved Site Road
- Public Road
- Creek or Surface Water Drainage

O:\GIS\BAR_GIS\Map_Files\Site_Activities_2011_rpt\Fig08_ACM_Locs.MXD

Area Map (Optional)



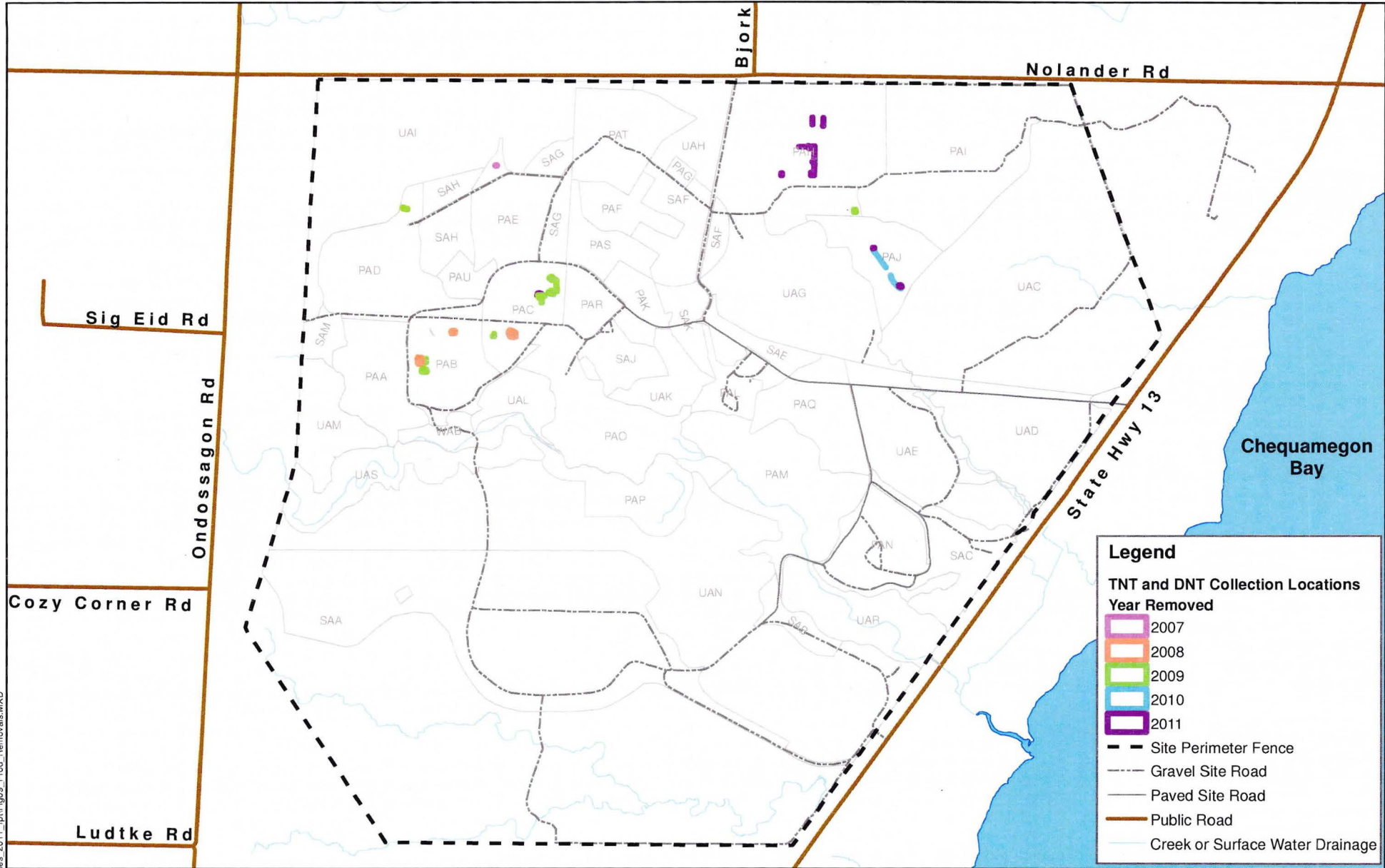
FILE NUMBER:	
DESIGNED BY:	JH
DRAWN BY:	KJB
DATA QUALITY CHECK BY:	JH

URS
 URS Corporation
 325 West Main Street
 Suite 1202
 Louisville, Kentucky 40202

**Asbestos Containing Material
Collection Sites 2011**

Summary of 2011 Site Activities
Former DuPont Barksdale Works
Barksdale, Wisconsin 54806

PROJECT NUMBER:	18987975
DATE:	December 2012
FIGURE NUMBER:	8



Legend

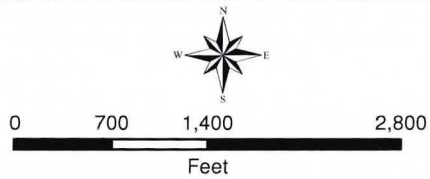
TNT and DNT Collection Locations
Year Removed

- 2007
- 2008
- 2009
- 2010
- 2011

- Site Perimeter Fence
- Gravel Site Road
- Paved Site Road
- Public Road
- Creek or Surface Water Drainage

O:\GIS\BARR_GIS\Map_Files\Site_Activities_2011_rpt\Fig09_Prod_Removals.MXD

Area Map (Optional)



MAP FORMATED FOR "A" (8.5" X 11") SIZE SHEET.
SCALE NOT VALID FOR DIFFERENT PAGE SIZE.

FILE NUMBER:

DESIGNED BY:

JH

DRAWN BY:

KJB

DATA QUALITY CHECK BY:

JH



URS Corporation
325 West Main Street
Suite 1202
Louisville, Kentucky 40202

TNT and DNT Product Removals
2007 - 2011

Summary of 2011 Site Activities
Former DuPont Barksdale Works
Barksdale, Wisconsin 54806

PROJECT NUMBER:

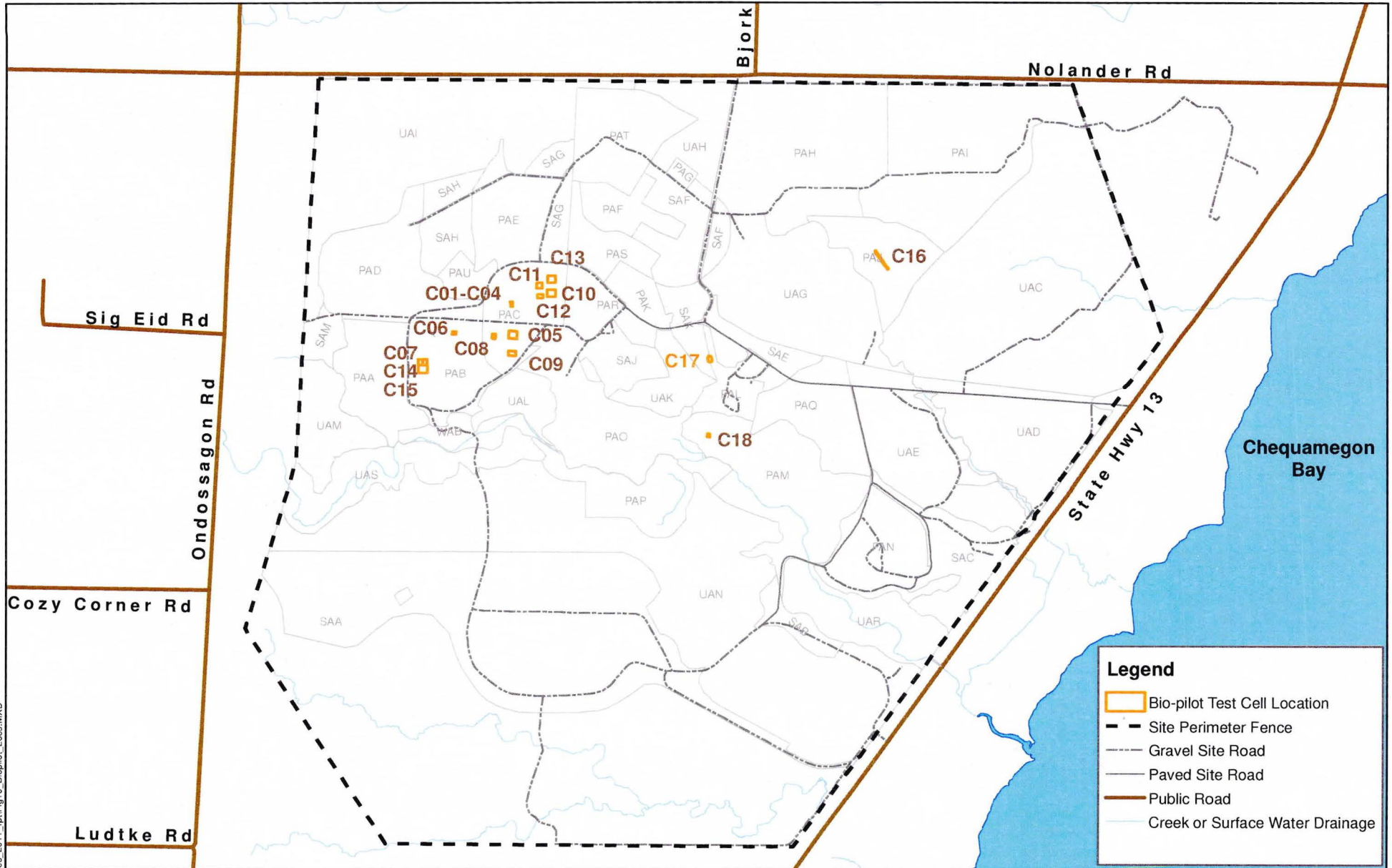
18987975

DATE:

December 2012

FIGURE NUMBER:

9

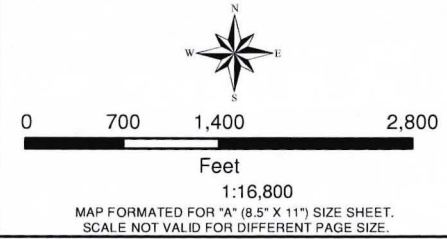


Legend

- Bio-pilot Test Cell Location
- Site Perimeter Fence
- Gravel Site Road
- Paved Site Road
- Public Road
- Creek or Surface Water Drainage

O:\GIS\BAR_GIS\Map_Files\Site_Activities_2011_rpt\Fig10_Biopilot_Locs.MXD

Area Map (Optional)



FILE NUMBER:	
DESIGNED BY:	JH
DRAWN BY:	KJB
DATA QUALITY CHECK BY:	JH

URS
 URS Corporation
 325 West Main Street
 Suite 1202
 Louisville, Kentucky 40202

Bio-pilot Test Cell Locations

Summary of 2011 Site Activities
 Former DuPont Barksdale Works
 Barksdale, Wisconsin 54806

PROJECT NUMBER:	18987975
DATE:	December 2012
FIGURE NUMBER:	10