

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

December 13, 2013

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 2012 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 2012 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,

by S. Nave

Bradley S. Nave Senior Site Director DuPont Corporate Remediation Group

Enclosure: 2012 Summary Report – Former DuPont Barksdale Works

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



December 13, 2013

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



Re: Summary of 2012 Site Activities Former DuPont Barksdale Explosives Plant BRRTS No. 02-0400156

Dear Mr. Nave:

This letter is intended to provide a summary of work conducted in 2012 at the Former DuPont Barksdale Works site (see Figure 1). The information is provided for your communication to the Wisconsin Department of Natural Resources (WDNR) in order to fulfill their request for annual summary reports detailing field work conducted at the site.

The site characterization efforts conducted during the 2012 field season (May 19 – October 5, 2012) included:

- Characterization sampling of debris and fill materials
- Delineation of subsurface deposits of residual solid product
- Delineation of subsurface site-related residuals
- Surficial soil concentration mapping
- Surface water and sediment sampling
- Waste and selected debris removal and disposal

In addition to these investigative efforts, pilot-scale bio-remediation evaluation work was continued in an effort to further understand the mechanisms for biodegradation of site-related constituents in soil. The 2012 work areas are indicated on Figure 2. The overall scope of work related to each of these efforts is summarized in the following paragraphs.

Debris Screening and Characterization Sampling

Remnant building materials required removal to allow field crews to gain access to delineation sites. These materials included concrete (floor slabs, machine footings, post bases, and walls), bricks (floors of Absorber Houses and nitrating kettle foundations in Mononitration Houses), and granular materials placed as fill below floor slabs. Characterization of these items was conducted in 2011 via chemical analysis, which indicated that most of the debris was devoid of site-related constituents, although some of the material did contain the target analytes. As a result, in 2012 field personnel screened

URS Corporation Waterfront Plaza Tower One 325 West Main Street, Suite 1200 Louisville, KY 40202-4251 Tel: 502.569.2301 Fax: 502.569.2304



these items using amplifying fluorescent polymer (FIDO) and x-ray fluorescence (XRF) tools. Debris managed during the 2012 Site Investigation work is listed in Table 1.

Concrete was typically removed from the foundations in 0.5-cubic foot (cf) or larger pieces. Field staff screened each piece with FIDO as the removal work progressed. The material was segregated into two piles based on the typical FIDO background reading of 0.5 instrument units. Pieces exceeding background were staged at the source locations for future handling. Concrete that tested at or below background levels based on the screening was transported to designated centralized stockpiles for future reuse.

Positive screening detections in concrete only occurred at the Bi-Trinitration and Neutralization Houses. Three machine bases (totaling about 36-cf) that screened positive were left in the TNT07 Bi-Trinitration (PAHB0006) building interior. Approximately 75-cf of wall material from the TNT08 Bi-Trinitration House (PAHB0038) was crushed and added to the biocell C19 sediment trap which was constructed within that building's former footprint. The small volumes (about 1 to 2-cf) of concrete that was indicated to be above background at the two Neutralization House (PAHB0012 and PAHB0038) floor trenches were also added to the C19 trap.

Clean concrete was further segregated based on size and shape. Flatwork pieces (wall and floor fragments) were taken to the former TNT08 Weak Acid (PAHB0022) foundation (stockpile PAH-SP01). Larger diameter concrete (machine foundations and post bases) was added to a stockpile at the TNT08 Mononitration House (PAHB0019) foundation (PAH-SP02). All unaffected concrete removed from source areas was sampled for confirmation of screening results by coring once for every 5-cf collected. The core materials were crushed and composited for every 50-cy added to the piles. No significant NNOCs were detected in any of the six composite samples submitted for laboratory analysis in 2012.

During site construction, residual coal combustion by-products (RCCBs, such as clinkers, cinders, etc.) from the site power plant or acid production buildings were often used as a leveling course below poured concrete floors, as walks adjacent to buildings, or as ballast on rail grades. These RCCBs sometimes contain metal residues (arsenic or lead) which were concentrated as a result of the combustion process. Lead-arsenate pesticides may have also been used to control carpenter ants and other pests around process buildings and rail grades. As a result, the RCCBs were characterized for metallic content as well as potential NNOC impacts.

Characterization of RCCBs was conducted in the former TNT07 Production Line Fortifier (PAHB008), Bi-Trinitration (PAHB006), and Neutralization Houses (PAHB012) for both total and TCLP metals analysis. Values of 50-ppm arsenic and 500-ppm lead as the threshold when segregating cinders based on XRF screening results in 2012.

After concrete had been removed, 3x3 ft grids were established over each foundation area and then the exposed screened the exposed cinders with XRF and FIDO tools. As



Mr. Bradley S. Nave E. I. du Pont de Nemours and Company December 2013 Page 3 of 10

screening progressed, crews marked cinders reading above the XRF thresholds for segregation. Those cinders not marked for segregation were loaded to transports for reuse in bio-cell construction (about 22-cy were placed in the drainage blanket below C19) or were returned to the source excavations as general backfill.

Elevated metals concentrations were only indicated in 2012 inside building foundations; generally within a few inches of machine bases formerly associated with acid handling processes. Impacted cinders were placed in designated, mapped locations until appropriate remediation plans are completed. About 2-cy of cinders were identified by XRF as metals impacted. These were primarily from the Bi-Tri Nitration Houses and were stockpiled on plastic within the foundation walls at the TNT07 Bi-Tri Nitration House (PAHB0006) (PAH-SP04). Smaller amounts of impacted cinders identified in the Neutralization and Fortifying Houses were added to the same stockpile.

About 1-cy of cinders were identified by FIDO as NNOC impacted (typically screening in excess of 3 FIDO instrument units which is characteristic of unimpacted soil at natural moisture contents). These cinders were added to the top of the C19 drainage layer where they will undergo biodegradation during cell operation.

Delineation of Residual Solid Product in the Subsurface

The potential exists for solid residual product to be present in the vicinity of former production buildings. As a result, percussive collection methods such as GeoProbe® (direct push) sampling are not recommended as an initial delineation technique. In these locations, blast shielded excavation equipment and FIDO screening with Expray (qualitative colorimetric explosives identification sprays) confirmation are used to identify explosive hazards.

In 2012, shielded trenching and screening was conducted at the locations listed in Table 2 and indicated on Figure 3. Field crews screened the proposed excavation surface then utilized non-sparking hand tools to investigate detections and remove any residual product identified for off-site incineration. Once screening results were evaluated, the shielded excavator was used to remove a thin layer of soil (1–6 inches) from the work area and screening/hand investigation was repeated on the newly exposed surface. This process continued until undisturbed native soil was encountered. If the excavator depth exceeded 3.5 feet, soils were first brought to the surface by the excavator and then screening was performed in the excavator bucket.

Terra-cotta tile or wood was occasionally encountered during trenching. These materials had been used during site operations as drains, stripper tower casings, flumes and catch boxes for process water management, or as forms used when pouring concrete foundation walls and machine bases. All impacted wood and tile debris removed in 2012 (see Table 1) was shipped to Trade Waste Incinerator in Sauget, IL for destruction.

Trenching discovered approximately 1975-lbs of 2,4,6-trinitrotoluene (TNT) adjacent to foundations at locations consistent with the site conceptual model. The shock-sensitive residual materials removed during 2012 are listed in Table 2.



Mr. Bradley S. Nave E. I. du Pont de Nemours and Company December 2013 Page 4 of 10



Mr. Bradley S. Nave E. I. du Pont de Nemours and Company December 2013 Page 5 of 10

Screening results indicated impacted soils (not containing shock-sensitive concentrations of NNOCs) were present in the buildings investigated in varying amounts as follows:

- Approximately 10-cy of impacted soil was collected from the TNT07 Bi-Tri Nitration House (PAHB0006). The excavated interior of that concrete-walled foundation was leveled and lined with plastic to serve as a stockpile (designated PAH-SP04). The impacted soil collected from the TNT07 Bi-Tri Nitration House (PAHB0006) was returned to this pit to be held until a remedial method is developed.
- About 2-cy soil was segregated from the TNT07 Fortifying House (PAHB0008). This material was added to PAH-SP04.
- The soil in the TNT07 Graining House (PAHB0009) contained about 3-cy of impacts. This soil was added to PAH-SP04.
- The soil inside the TNT07 (PAHB0012) and TNT10 (PAHB0038) Neutralizing Houses was generally impacted and was left within those foundations. The small amount of impacted soil identified outside the foundations was added to the interiors then covered with plastic and clean soil to prevent direct contact until remedial action can be taken.
- The interior of the Refined Triton Wash House (PAJB0006) contained a small area of impacted soil along a former floor drain. This soil (about 0.5-cy) was added toPAH-SP04. Evaluation of the exterior of this building was not completed in 2012 since a large catch box area was identified near the building's southeast corner which will need to be delineated in future work seasons.

Process ditches were investigated by excavating thin layers or soil and screening similar to the process employed at the building foundations. Unlike building sites, most ditches contained layers of solid product which was manually collected once exposed by the thin layer excavation process. Ditches were followed outward from the source buildings until impacts ended. Once bottom and side wall samples were collected, the ditches were backfilled then graded to match adjacent ground so that future drainage does not re-enter the former ditch course. After grading, these work areas were mulched and seeded to prevent erosion.

In this manner, crews trench-investigated 1600-ft of drains and ditches in PAH including 700-ft of previously undocumented ditches whose existence was discovered during building trenching. They also investigated an additional 1450-ft of ditches in PAI using hand auger sampling at 50-ft intervals. The trenching typically discovered solid product layers within 100-ft of buildings and thin or scattered solid product deposits from 100- to 300-ft downstream.

• TNT07 Neutralization House CB Drain (PAHD0052): This 45-ft long wood-lined flume contained about a 2" layer of product that was manually collected and incinerated off-site. Soil outside the wood liner was minimally impacted and left in place to be delineated by direct push sampling during future work seasons.



- TNT07 Neutralization House CB Ditch (PAHD0054): This 320-ft long earth bottomed ditch contained scattered product pieces in its upper 75-ft. This product was manually collected and the soil within 6" of the collected pieces was excavated to PAH-SP04.
- TNT07 Neutralization House CB Overflow Ditch (PAHD0137 and PAHD0053: These ditches included a 125-ft long wood-lined flume which contained about a 1" layer of product that was manually collected and incinerated off-site. Soil outside the wood liner was lightly impacted in some sections and about 3-cy was excavated to PAH-SP04.
- TNT07 Neutralization House RR Ditch (PAHD0056): The eastern member of this pair of 250-ft long earth bottomed ditches contained a very thin layer of dust product (under 0.125") in its upper 95-ft. This layer was collected with 4" of adjacent soil and added to PAH-SP04.
- TNT09 Neutralization House CB Drain (PAHD0084): This ditch contained a 225-ft long wood-lined flume contained about 1 to 0.5" layer of product that was manually collected and incinerated off-site. Sandy clay outside the wood liner was impacted about 2" beyond the wood. This soil was added to bio-cell C21.
- TNT09 Neutralization House RR Ditch (PAHD0088): The 225-ft long section of this earth bottomed ditch contained a very thin layer of product dust (under 0.125") in its upper 95-ft. This layer was collected with 4" of adjacent soil and added to bio-cell C21.
- TNT08 Weak Acid House Ditch (PAHD0060 and PAHD0061): The 140-ft long section of this earth bottomed ditch contained a thin-layered dust product. The layers were under 0.5" in total in the lower 90-ft of the ditch and over 3" in total its upper 50-ft. Both zones were too extensive to address during the 2012 field season. Therefore, these areas were left in place and covered by clean soil until remedial action can be taken.
- TNT08 Area Process Ditch (PAHD0078): This 411-ft long earth bottomed ditch contained scattered fragments of solid product near inflow points of the TNT08 Neutralization House CB Drain (PAHD0059), the TNT07 Neutralization House CB Overflow Ditch (PAHD0138), and the TNT08 Weak Acid House Ditch (PAHD0060). These pieces were collected and incinerated, but the impacted soil along the ditch was extensive therefore the soil was left in place and covered by clean soil until remedial action can be taken.
- TNX Area Ditch (PAID0001, PAID0002, and PAID0003): unlike the other process ditches, this 1650-ft ditch is located in dense trees. The ditch was sampled by hand auger rather than trenching. Auger samples and FIDO screening at 25-ft intervals indicated product is present in up to a 3" layer in a 250-ft segment near the center of the ditch (500 to 750-ft below the ditch headwater). North of this segment, soil is impacted but solid product is absent. From 750 to 850-ft below the ditch headwater (in PAID0003), the ditch has been filled with



Mr. Bradley S. Nave E. I. du Pont de Nemours and Company December 2013 Page 7 of 10

field stones and earth since the time of plant operations. This run was not sampled in 2012. Below the filled segment (in PAID0002 which lies 950 to 1650-ft below the ditch headwater), soil is not significantly impacted. Five tributary ditches in the TNX plant along this lower reach of the TNX Area Ditch were similarly sampled without significant detections.

Delineation of Subsurface Site-related Residuals

Once a building site or ditch had been cleared of potentially explosive materials, grab samples were collected below and to the sides of areas from which explosives had been removed to evaluate soil conditions. Samples were collected about every 25-ft at the following locations (see Table 3 for details):

- TNT07 Fortifying House (PAHB0008) (4 samples)
- TNT07 Bi-Trinitration House (PAHB0006) (12 samples)
- TNT07 Neutralization House (PAHB0012) (19 samples)
- TNT07 Neutralization House Catch Box Ditch (PAHD0052 and PAHD0054) (52 samples)
- TNT07 Neutralization House Catch Box Overflow Ditch (PAHD0053, PAHD0137, PAHD0138, PAHD0139) (35 samples)
- TNT07 Neutralization House RR Ditch (PAHD0056) (40 samples)
- TNT07 Graining House (PAHB0009) (9 samples)
- TNT08 Weak Acid House Ditch (PAHD0060) (18 samples)
- TNT08 Area Ditch (PAHD0078) (47 samples) (46 samples)
- TNT10 Bi-Trinitrating House (PAHB0033) (5 samples)
- TNT10 Neutralization House (PAHB0038) (11 samples)
- TNT09 Neutralization House Catch Box Drain (PAHD0004) (16 samples)
- TNT09 Neutralization House Storm Ditch (PAHD0088) (14 samples)
- TNX Ditch (PAID0001 and PAID0002) (8 of 89 screening samples confirmed by lab)

All samples were analyzed for NNOCs at an on-site laboratory to decrease analytical turnaround and resolve problems with shipping or analyzing soil samples with elevated NNOC concentrations at conventional labs. Twenty of the samples that the on-site laboratory indicated were safe for off-site handling were split and sent to TA Denver for confirmation of on-site laboratory results.

Most of the grab samples contained very few NNOCs. Detections were typically observed within 5 feet of former structures or process ditches. These results confirmed the site conceptual model assumption that concentrations drop off rapidly away from product deposits.



Mr. Bradley S. Nave E. I. du Pont de Nemours and Company December 2013 Page 8 of 10

Surficial Soil Concentration Mapping

In the past, DuPont employed multi-incremental (MI) sampling and FIDO screening techniques to map the distribution of site-related constituents (i.e., nitraromatic 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 surface 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.

In 2012, live FIDO screening (direct screening of in-situ soil) was used to add resolution to the prior broad scale results in areas adjacent to the TNX04 Mono-Binitration House where detections were observed in 2010 (see Figure 4). The intention of this screening was to locate soil containing nitrated xylene isomers that can be treated in a bioremediation test cell. FIDO shots were made on soil scraped bare of vegetation at 5-ft intervals around the anticipated source building. The live FIDO screening indicated that impacts are concentrated in the vicinity of a former waste water catch box and in adjacent areas where surface water run-off from that catch box would have accumulated.

Field staff collected 13 samples from the live screened locations for laboratory confirmation. Testing during the 2012 field season brings the surficial FIDO screening effort to 2,171 tests covering about 113 acres of surface soil at the site.

Surface Water and Sediment Sampling

DuPont continued to monitor sediment and surface water in 2012 to document that siterelated constituents are not leaving the property via storm water movement.

Crews collected surface water and sediment samples on June 13 and August 6, 2012 at each of the following four locations where detectable concentrations had been reported during the 2011 sampling event (see Figure 5):

- SWE001 Front Gate Drainage
- SWF001 Central Drainage
- SWH001 Nitramon Area Drainage
- SWI001 Boyd Creek

Test America Laboratories analyzed the samples for NNOCs including five additional dinitrotoluene (DNT) isomers, and 10 dinitroxylene (DNX) compounds. The August 6 sampling was conducted to add trinitroxylene (TNX) to the test suite.

Concentrations detected in sediment remain below non-industrial (i.e., residential) direct contact screening criteria. Concentrations in surface water remain below screening values for the protection of aquatic life.



Mr. Bradley S. Nave E. I. du Pont de Nemours and Company December 2013 Page 9 of 10

In most cases, concentrations detected have been observed to decrease during the time that DuPont has been sampling perimeter drainages. The exceptions are the amino-dinitrotoluene compounds, which fluctuate between sampling events and range from 0.2 μ g/L to 9.4 μ g/L at the SWF001 location and 0.13 μ g/L to 1.5 μ g/L at the SWI001 sampling site. The surface water quality screening values for 2-amino-4,6-dinitrotoluene and 4-amino-2,6-dinitrotoluene are 19 μ g/L and 20 μ g/L, respectively.

Waste Recovery, Waste Handling, and Disposal

Wastes recovered and disposed of during the fieldwork period included residual solid nitroaromatic and nitramine organic product (i.e., DNT and TNT) as well as selected demolition debris, consisting of residual impacted wood and clay drainage pipe. Waste Management details are provided in the June 4, 2013 Waste Management Progress Report No. 1, Bioremediation Pilot Test – 2012 Field Season, Former DuPont Barksdale Explosives Plant (2013 HWRV Report).

Bio-pilot Activities

In 2012, with written approval from WDNR and as authorized by the site's Hazardous Waste Remediation Variance, four new above ground bio-pilot test cells designed to provide data on degradation of differing mixes of site related compounds were added to the existing tilling and sampling program. Two of the proposed cell sites (C20 and C22), were fitted with drainage and erosion controls were installed but impacted soil was not loaded to the cells. The other two new cells (C19 and C21) were completed and loaded with soil. They are being operated to evaluate the effect of better drainage on the rate of TNT degradation. The 2012 cells are listed below:

- C19 Use Area PAH TNT08 Bi-Trinitration and Neutralization Houses (this cell is designed to test construction of an above ground cell containing impacted soil composited from several buildings. Operation of this cell will determine whether reduction of pore water accumulation by a free draining subgrade will accelerate degradation of TNT impacted soils).
- C20 Use Area PAH TNT07, TNT09 and TNT10 Mononitration Houses (this cell is designed to evaluate degradation of a mixture of COCs containing nitrotoluene, DNT and TNT. It was not loaded with soil this season because asbestos obstructed the proposed source building excavations).
- C21 Use Area PAH TNT09 Neutralization House Ditches (this cell is designed to test construction of an above ground cell containing impacted soil composited from a set of low-lying, linear, source areas. Like C19, operation of this cell will determine whether reduction of pore water accumulation by a free draining subgrade will accelerate degradation of TNT impacted soils).
- C22 Use Area PAI TNX04 Mono-Binitration & Fortifying Houses (this cell is designed to evaluate degradation of a mixture of COCs containing nitroxylene,



Mr. Bradley S. Nave E. I. du Pont de Nemours and Company December 2013 Page 10 of 10

DNX and TNX. It was not loaded with soil this season because degradation of these compounds is still being evaluated off-site at the bench scale).

The pre-existing test cells (see Figure 2), were tilled monthly from June through September. The cells were sampled biweekly for soil indicator parameters. They were also tested for nitramine compounds at start and end of the field season. New cells C19 and C21 were tilled and sampled once (in September of 2012). The data collected is being analyzed for temporal trends as part of the ongoing site bio-attenuation study.

Final seasonal demobilization of equipment and personnel occurred on October 5, 2012. Details regarding the debris and residuals removed for off-site disposal are contained in the 2013 HWRV Report.

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

Sincerely,

C.E. "Cam" Polen P.G.

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

Jon Hammerberg Project Engineer URS

Attachments:

Figures

Figure 1 – Site Location Figure 2 – 2012 Field Work Locations

Figure 3 – 2012 Delineation Field Work Locations

Figure 4 - 2012 Surficial NNOC Mapping Sites

Figure 5 – 2012 Surface Water Sampling Sites

Tables

Table 1-2012 Debris and Product Disposed

Table 2 - 2012 Trench Delineation Locations

Table 3 – 2012 Soil Analytical Samples

TABLES

Table 12012 Debris and Product DisposedSummary of 2012 Site ActivitiesFormer DuPont Barksdale WorksAshland, Wisconsin

Year	Media	Feature ID	Source	Material Description	Waste Volume (cf)	On-Site Management Location	On-Site Containment Type	End of Season Destination	Manifest
2012	Tile Debris	PAHB0038	TNT10 Neutralizing House (Absorber Ho column casings)	42" diam. terra cotta tile	107	SAK-WP01	Lined 20-cy Roll Off	TWI	000712578VES
2012	Tile Debris	PAHD0044	TNT07 Graining House drain	8" diam. terra cotta tile	20	SAK-WP01	Lined 20-cy Roll Off	TWI	000712578VES
2012	Tile Debris	PAHD0040 PAHD0135 PAHD0136	TNT07 Bi/Tri-Nitration House drains	6" diam. terra cotta tile	10	SAK-WP01	Lined 20-cy Roll Off	TWI	000712578VES
2012	Wood Debris	PAHB0011	TNT07 Mono-Nitration House	form boards	2	SAK-WP01	Lined 20-cy Roll Off	TWI	000712578VES
2012	Wood Debris	PAHB0008	TNT07 Fortifying House	form boards	7	SAK-WP01	Lined 20-cy Roll Off	TWI	000712578VES
2012	Wood Debris	PAHB0012	TNT07 Neutralizing House	form boards	3	SAK-WP01	Lined 20-cy Roll Off	TWI	000712578VES
2012	Wood Debris	PAHD0137	TNT07 Neutralizing House Catch Box Overflow Ditch	process wood	38	SAK-WP01	Lined 20-cy Roll Off	TWI	000712578VES
2012	Wood Debris	PAHD0052	TNT07 Neutralizing House Catch Box Drain	process wood	24	SAK-WP01	Lined 20-cy Roll Off	TWI	000712578VES
2012	Wood Debris	PAHD0051	TNT07 Neutralizing House Catch Box	process wood	8	SAK-WP01	Lined 20-cy Roll Off	TWI	000712578VES
2012	Wood Debris	PAHD0084	TNT09 Neutralizing House Catch Box Drain	process wood	64	SAK-WP01	Lined 20-cy Roll Off	TWI	000712578VES
2012	Cinders	PAHB0006	TNT07 Bi-Trinitration House	Subfloor fill				on-site	na
	Cinders	PAHB0008	TNT07 Fortifying House	Subfloor fill				on-site	na
	Cinders	PAHB0009	TNT07 Graining House	Subfloor fill				on-site	na
2012	Cinders	PAHB0012	TNT07 Neutralization House	Subfloor fill				on-site	na
2012	Cinders	PAHB0016	TNT08 Bi/Tri-Nitration House	Subfloor fill				on-site	na
2012	Cinders	PAHB0028	TNT09 Fortifying House	Subfloor fill				on-site	na
2012	Cinders	PAHB0038	TNT10 Neutralization House	Subfloor fill				on-site	na
2012	Cinders	PAJB0006	Refined Triton Wash House	Subfloor fill				on-site	na
2012	Concrete	PAHB0006	TNT07 Bi-Trinitration House	Floors		PAH-SP01	concrete slab	on-site	na
2012	Concrete	PAHB0006	TNT07 Bi-Trinitration House	Machine Bases	36	PAH-SP02	concrete walled pit	on-site	na
	Concrete	PAHB0006	TNT07 Bi-Trinitration House	Machine Bases		PAH-SP04	plastic lined concrete walled pit	on-site	na
	Concrete	PAHB0008	TNT07 Fortifying House	Machine Bases		PAH-SP02	concrete walled pit	on-site	na
	Concrete	PAHB0009	TNT07 Graining House	Floors		PAH-SP01	concrete slab	on-site	na
2012	Concrete	PAHB0012	TNT07 Neutralization House	Floors		PAH-SP01	concrete slab	on-site	na
	Concrete	PAHB0012	TNT07 Neutralization House	Machine Bases		PAH-SP02	concrete walled pit	on-site	na
	Concrete	PAHB0012	TNT07 Neutralization House	Floor trench base	0.9	C19	plastic lined concrete walled biocell sed trap	on-site	na
	Concrete	PAHB0016	TNT08 Bi/Tri-Nitration House	Walls	76	C19	plastic lined concrete walled biocell sed trap	on-site	na
	Concrete	PAHB0028	TNT09 Fortifying House	Machine Bases		PAH-SP02	concrete walled pit	on-site	na
2012	Concrete	PAHB0038	TNT10 Neutralization House	Floors & interior foundation wall		PAH-SP01	concrete slab	on-site	na
2012	Concrete	PAHB0038	TNT10 Neutralization House	Floor trench base	1.6	C19	plastic lined concrete walled biocell sed trap	on-site	na
2012	Concrete	PAHB0038	TNT10 Neutralization House	Absorber House Columns		TNT10 Neut Ho	plastic covered concrete walled pit	on-site	na
2012	Concrete	PAJB0006	Refined Triton Wash House	Floors & machine bases		PAH-SP01	concrete slab	on-site	na

Table 22012 Trench Delineation LocationsSummary of 2012 Site ActivitiesFormer DuPont Barksdale WorksAshland, Wisconsin

Delineation Work Location	Plan Area Investigated (sf)	Max Depth (ft)	Product Removed for Off-site Incineration (lbs)	Segregated Soil (CY)	Destination	No. Confirmation Samples
TNT07 Bi-Trinitration House	837	7	0		PAH-SP04	12
TNT07 Fortifying House	482	6	0			4
TNT07 Graining House			489.2	6.7	Biocell C19	12
TNT07 Neutralization House			1181.4	8.0	Biocell C19	19
TNT08 Bi/Tri-Nitration House			0	47.7	Biocell C19	
TNT09 Fortifying House			0	0.0		
TNT10 Neutralization House			154		TNT10 Neut Ho	11
Refined Triton Wash House			0	1.1	Biocell C19	
TNT07 Neutralization House Catch Box Ditch						52
TNT07 Neutralization House Catch Box Overflow Ditch						35
TNT07 Neutralization House RR Ditch				6.7	Biocell C21	40
TNT08 Weak Acid House Ditch						17
TNT08 Area Ditch			29.4			47
TNT09 Fortifying House Floor Drain Ditch				0.2	Biocell C19	
TNT09 Neutralization House Catch Box Ditch				14.8	Biocell C21	14
TNT09 Neutralization House RR Ditch				14.8	Biocell C21	14
TNX: TNX Ditch (89 hand auger locations)			121.2	0.0		8
2012 Totals	1319	13	1975.2	99.87		285

2012			
Sequence Number	Location	Sublocation Info	Site Description
BAR-S-EC12 001	TNT07 Bi-Tri	Wall Backfill	Interior - base of wall below floor drain pass
BAR-S-EC12 002	TNT07 Bi-Tri	Wall Backfill	Interior - base of wall SW corner
BAR-S-EC12 003	TNT07 Bi-Tri	Wall Backfill	Interior - base of wall NW corner
BAR-S-EC12 004	TNT07 Bi-Tri	Wall Backfill	Interior - base of machine footer center N wall
BAR-S-EC12 005	TNT07 Bi-Tri	Wall Backfill	Interior - base of wall NE corner
BAR-S-EC12 006	TNT07 Bi-Tri	Wall Backfill	Interior - base of wall SE corner
BAR-S-EC12 007	TNT07 Bi-Tri	Wall Backfill	Exterior - base of S wall adj SE corner
BAR-S-EC12 008	TNT07 Bi-Tri	Wall Backfill	Exterior - base of wall adj NW corner
BAR-S-EC12 009	TNT07 Bi-Tri	Wall Backfill	Exterior - base of wall outside water pipes (10' W of NE corner)
BAR-S-EC12 010	TNT07 Bi-Tri	Wall Backfill	Exterior - base of wall center E wall
BAR-S-EC12 011	TNT07 Fort	G2	Interior - SE corner
BAR-S-EC12 012	TNT07 Fort	F5	Interior - Base of SW Pier
BAR-S-EC12 013	TNT07 Fort	B7	Interior - NW corner
BAR-S-EC12 014	TNT07 Fort	D2	Interior - Center base of E wall
BAR-S-EC12 015	TNT07 Neut	B4	Below impact zone N wall 9-ft from east end
BAR-S-EC12 016	TNT07 Neut	B9	Below floor drain pass to CB
BAR-S-EC12 017	TNT07 Neut	D9	Below floor drain pass from upper to lower floor
BAR-S-EC12 018	TNT07 Neut	F2	SE corner of fnd
BAR-S-EC12 019	TNT07 Neut	F13	Center of base of S Wall
BAR-S-EC12 020	TNT07 Neut	C10	Base of Center wall adj floor trench outfall
BAR-S-EC12 021	TNT07 Neut	B14	Center of base of N Wall
BAR-S-EC12 022	TNT07 Neut	D13	Center of bldg
			Centerline of flume - 25'W of CB northwest corner @ base of wood (32"
BAR-S-EC12 023	TNT07 Neut	Neut Ho Drain	BTW)
			Centerline of flume - 25'W of CB northwest corner @ 12" below wood
BAR-S-EC12 024	TNT07 Neut	Neut Ho Drain	(44" BTW)
	TNT07 Neut	Nout Ho Droin	2' S of flume 25'W of CB parthweat carpar @ base don'th (20" BTW)
BAR-S-EC12 025	TINTO/ Neut	Neut Ho Drain	2' S of flume - 25'W of CB northwest corner @ base depth (32" BTW)
BAR-S-EC12 026	TNT07 Neut	Neut Ho Drain	2' N of flume - 25'W of CB northwest corner @ base depth (32" BTW)
BAR-S-EC12 027	TNT07 Neut	CB Overflow Ditch	1.5'N x 1.5"W of CB northwest corner @ 12" BTW
BAR-S-EC12 028	TNT07 Neut	CB Overflow Ditch	1.5'N x 1.5"W of CB northwest corner @ 24" BTW
BAR-S-EC12 029	TNT07 Neut	CB Overflow Ditch	3.8'N x 1.5"W of CB northwest corner @ 12" BTW

2012			
Sequence Number	Location	Sublocation Info	Site Description
BAR-S-EC12 030	TNT07 Neut	CB Overflow Ditch	Centerline of ditch - 6'E of CB northeast corner 30" N of CB (16" BTW)
BAR-S-EC12 031	TNT07 Neut	CB Overflow Ditch	Centerline of ditch - 6'E of CB northeast corner 30" N of CB (28" BTW)
BAR-S-EC12 032	TNT07 Neut	CB Overflow Ditch	South portion of ditch - 6'E of CB northeast corner 10" N of CB (14" BTW)
BAR-S-EC12 033	TNT07 Neut	CB Overflow Ditch	Centerline of ditch - material removed after picking layers
BAR-S-EC12 034	TNT07 Neut	CB Overflow Ditch	Centerline of flume - 12'E of CB northeast corner @ base of wood (20" BTW)
BAR-S-EC12 035	TNT07 Neut	CB Overflow Ditch	Centerline of flume - 12'E of CB northeast corner @ 12" below of wood
BAR-S-EC12 036	TNT07 Neut	CB Overflow Ditch	2' S of flume - 12'E of CB northeast corner @ base depth
BAR-S-EC12 037	TNT07 Neut	CB Overflow Ditch	2' N of flume - 12'E of CB northeast corner @ base depth
BAR-S-EC12 038	TNT07 Neut	CB Overflow Ditch	Centerline of flume - 37'E of CB northeast corner @ base of wood
BAR-S-EC12 039	TNT07 Neut	CB Overflow Ditch	Centerline of flume - 37'E of CB northeast corner @ 10" below of wood
BAR-S-EC12 040	TNT07 Neut	CB Overflow Ditch	Centerline of flume - 37'E of CB northeast corner @ base depth 2' S of flume
BAR-S-EC12 041	B34-11-SE	CC	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 042	B34-11-SE	NE	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 043	B34-14-SE	CC	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 044	B34-15-SE	CC	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 045	B34-15-SE	EC	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 046	B34-15-SE	NC	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 047	B34-15-SE	SC	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 048	B34-16-SW	CC	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 049	B34-16-SW	EC	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 050	B34-15-NW	SC	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 051	C34-03-NE	СС	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 052	C34-03-NW	СС	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 053	C34-04-NW	СС	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 054	C35-01-SW	NC	Exterior ground surface; Fido screen conf; possible NX DNX
BAR-S-EC12 055	PAID001-225	225	TNX Ditch; HA; product layer
BAR-S-EC12 056	PAID001-250	250	TNX Ditch; HA; soil layer with scattered product flakes

2012			
Sequence Number	Location	Sublocation Info	Site Description
BAR-S-EC12 057	PAID001-550	550	TNX Ditch; HA; soil layer with no visible product & low Fido screen
BAR-S-EC12 058	TNT07 Neut	B10	Foundation interior; HA; Subsoil below cinders
BAR-S-EC12 059	TNT07 Neut	B4	Foundation interior; HA; Subsoil below cinders
BAR-S-EC12 060	TNT07 Neut	B5	Foundation interior; HA; Subsoil below cinders
BAR-S-EC12 061	TNT07 Neut	C5	Foundation interior; HA; Subsoil below cinders
BAR-S-EC12 062	TNT07 Neut	F2	Foundation interior; HA; Subsoil below cinders
BAR-S-EC12 063	TNT10 BITRI	B2	Foundation interior; HA; Subsoil below cinders
BAR-S-EC12 064	TNT10 BITRI	C2	Foundation interior; HA; Subsoil below cinders
BAR-S-EC12 065	TNT10 BITRI	D13	Foundation interior; HA; Subsoil below cinders
BAR-S-EC12 066	TNT10 BITRI	E9	Foundation interior; HA; Subsoil below cinders
BAR-S-EC12 067	TNT10 BITRI	B11	Foundation interior; HA; Subsoil below cinders
BAR-S-EC12 068	TNT07 Neut	Overflow Ditch	82' E of bldg; charred product collected from flow path
BAR-S-EC12 069	TNT07 Neut	Overflow Ditch	52' E of bldg; centerline; @ base of wood
BAR-S-EC12 070	TNT07 Neut	Overflow Ditch	52' E of bldg; centerline; 12" below wood
BAR-S-EC12 071	TNT07 Neut	Overflow Ditch	52' E of bldg; 24" S of centerline; @ base of wood depth
BAR-S-EC12 072	TNT07 Neut	Overflow Ditch	52' E of bldg; 24" N of centerline; @ base of wood depth
BAR-S-EC12 073	TNT07 Neut	Overflow Ditch	77' E of bldg; centerline; @ base of wood
BAR-S-EC12 074	TNT07 Neut	Overflow Ditch	77' E of bldg; centerline; 12" below wood
BAR-S-EC12 075	TNT07 Neut	Overflow Ditch	77' E of bldg; 24" S of centerline; @ base of wood depth
BAR-S-EC12 076	TNT07 Neut	Overflow Ditch	77' E of bldg; 24" N of centerline; @ base of wood depth
BAR-S-EC12 077	TNT07 Neut	Overflow Ditch	102' E of bldg; centerline; @ base of wood
BAR-S-EC12 078	TNT07 Neut	Overflow Ditch	102' E of bldg; centerline; 12" below wood
BAR-S-EC12 079	TNT07 Neut	Overflow Ditch	102' E of bldg; 12" S of centerline; @ base of wood depth
BAR-S-EC12 080	TNT07 Neut	Overflow Ditch	102' E of bldg; 12" N of centerline; @ base of wood depth
BAR-S-EC12 081	TNT07 Neut	Overflow Ditch	127' E of bldg; centerline; @ base of wood
BAR-S-EC12 082	TNT07 Neut	Overflow Ditch	127' E of bldg; centerline; 12" below wood
BAR-S-EC12 083	TNT07 Neut	Overflow Ditch	127' E of bldg; 12" S of centerline; @ base of wood depth
BAR-S-EC12 084	TNT07 Neut	Overflow Ditch	127' E of bldg; 12" N of centerline; @ base of wood depth
BAR-S-EC12 085	TNT07 Neut	Overflow Ditch	25' S of Overflow Ditch; centerline; @ base of wood
BAR-S-EC12 086	TNT07 Neut	Overflow Ditch	25' S of Overflow Ditch; centerline; 12" below wood
BAR-S-EC12 087	TNT07 Neut	Overflow Ditch	25' S of Overflow Ditch; 12" W of centerline; @ base of wood depth
BAR-S-EC12 088	TNT07 Neut	Overflow Ditch	25' S of Overflow Ditch; 12" E of centerline; @ base of wood depth
BAR-S-EC12 089	REFINERY	E Process Ditch	15-ft S of Pipe Outfall
BAR-S-EC12 090	C12	Phyto bed edge	Spoil pile east of cell, picked for DNT stained soil

2012			
Sequence Number	Location	Sublocation Info	Site Description
BAR-S-EC12 091	TNT07 Neut	Area Ditch	000' from Neut Ho Ditch, 1'W, @ flow depth
BAR-S-EC12 092	TNT07 Neut	Area Ditch	000' from Neut Ho Ditch, center, @ flow depth
BAR-S-EC12 093	TNT07 Neut	Area Ditch	000' from Neut Ho Ditch, 1'E, @ flow depth
BAR-S-EC12 094	TNT07 Neut	Area Ditch	000' from Neut Ho Ditch, center, 12" below flow depth
BAR-S-EC12 095	TNT07 Neut	Area Ditch	025' from Neut Ho Ditch, 1'W, @ flow depth
BAR-S-EC12 096	TNT07 Neut	Area Ditch	025' from Neut Ho Ditch, center, @ flow depth
BAR-S-EC12 097	TNT07 Neut	Area Ditch	025' from Neut Ho Ditch, 1'E, @ flow depth
BAR-S-EC12 098	TNT07 Neut	Area Ditch	025' from Neut Ho Ditch, center, 12" below flow depth
BAR-S-EC12 099	TNT07 Neut	Area Ditch	050' from Neut Ho Ditch, 1'W, @ flow depth
BAR-S-EC12 100	TNT07 Neut	Area Ditch	050' from Neut Ho Ditch, center, @ flow depth
BAR-S-EC12 101	TNT07 Neut	Area Ditch	050' from Neut Ho Ditch, 1'E, @ flow depth
BAR-S-EC12 102	TNT07 Neut	Area Ditch	050' from Neut Ho Ditch, center, 12" below flow depth
BAR-S-EC12 103	TNT07 Neut	Area Ditch	075' from Neut Ho Ditch, 1'W, @ flow depth
BAR-S-EC12 104	TNT07 Neut	Area Ditch	075' from Neut Ho Ditch, center, @ flow depth
BAR-S-EC12 105	TNT07 Neut	Area Ditch	075' from Neut Ho Ditch, 1'E, @ flow depth
BAR-S-EC12 106	TNT07 Neut	Area Ditch	075' from Neut Ho Ditch, center, 12" below flow depth
BAR-S-EC12 107	TNT07 Neut	Area Ditch	100' from Neut Ho Ditch, 1'W, @ flow depth
BAR-S-EC12 108	TNT07 Neut	Area Ditch	100' from Neut Ho Ditch, center, @ flow depth
BAR-S-EC12 109	TNT07 Neut	Area Ditch	100' from Neut Ho Ditch, 1'E, @ flow depth
BAR-S-EC12 110	TNT07 Neut	Area Ditch	100' from Neut Ho Ditch, center, 12" below flow depth
BAR-S-EC12 111	TNT07 Neut	Area Ditch	125' from Neut Ho Ditch, 1'W, @ flow depth
BAR-S-EC12 112	TNT07 Neut	Area Ditch	125' from Neut Ho Ditch, center, @ flow depth
BAR-S-EC12 113	TNT07 Neut	Area Ditch	125' from Neut Ho Ditch, 1'E, @ flow depth
BAR-S-EC12 114	TNT07 Neut	Area Ditch	125' from Neut Ho Ditch, center, 12" below flow depth
BAR-S-EC12 115	TNT07 Neut	Area Ditch	145' from Neut Ho Ditch, center, below flow depth
BAR-S-EC12 116	TNT07 Neut	Area Ditch	145' from Neut Ho Ditch, 1' west, at flow depth
BAR-S-EC12 117	TNT07 Neut	Area Ditch	145' from Neut Ho Ditch, center, at flow depth
BAR-S-EC12 118	TNT07 Neut	Area Ditch	145' from Neut Ho Ditch, 1' east, at flow depth
BAR-S-EC12 119	TNT07 Neut	Area Ditch	175' from Neut Ho Ditch, center, below flow depth
BAR-S-EC12 120	TNT07 Neut	Area Ditch	175' from Neut Ho Ditch, 1' west, at flow depth
BAR-S-EC12 121	TNT07 Neut	Area Ditch	175' from Neut Ho Ditch, center, at flow depth
BAR-S-EC12 122	TNT07 Neut	Area Ditch	175' from Neut Ho Ditch, 1' east, at flow depth
BAR-S-EC12 123	TNT07 Neut	Area Ditch	200' from Neut Ho Ditch, center, below flow depth
BAR-S-EC12 124	TNT07 Neut	Area Ditch	200' from Neut Ho Ditch, 1' west , at flow depth

2012			
Sequence Number	Location	Sublocation Info	Site Description
BAR-S-EC12 125	TNT07 Neut	Area Ditch	200' from Neut Ho Ditch, center , at flow depth
BAR-S-EC12 126	TNT07 Neut	Area Ditch	200' from Neut Ho Ditch, 1' east, at flow depth
BAR-S-EC12 127	TNT07 Neut	Area Ditch	225' from Neut Ho Ditch, center , below flow depth
BAR-S-EC12 128	TNT07 Neut	Area Ditch	225' from Neut Ho Ditch, 1' west, at flow depth
BAR-S-EC12 129	TNT07 Neut	Area Ditch	225' from Neut Ho Ditch, center, at flow depth
BAR-S-EC12 130	TNT07 Neut	Area Ditch	225' from Neut Ho Ditch, 1' east, at flow depth
BAR-S-EC12 131	TNT07 Neut	Area Ditch	250' from Neut Ho Ditch, center, below flow depth
BAR-S-EC12 132	TNT07 Neut	Area Ditch	250' from Neut Ho Ditch, 1' west, at flow depth
BAR-S-EC12 133	TNT07 Neut	Area Ditch	250' from Neut Ho Ditch, center, at flow depth
BAR-S-EC12 134	TNT07 Neut	Area Ditch	250' from Neut Ho Ditch, 1' east, at flow depth
BAR-S-EC12 135	TNT07 Neut	Area Ditch	275' from Neut Ho Ditch, center, below flow depth
BAR-S-EC12 136	TNT07 Neut	Area Ditch	275' from Neut Ho Ditch, 1' west, at flow depth
BAR-S-EC12 137	TNT07 Neut	Area Ditch	275' from Neut Ho Ditch, center, at flow depth
BAR-S-EC12 138	TNT07 Neut	Area Ditch	275' from Neut Ho Ditch, 1' east, at flow depth
BAR-S-EC12 139	TNT07 Neut	Interior Subgrade	HA; 2-ft composite
BAR-S-EC12 140	TNT07 Neut	Interior Subgrade	HA; 2-ft composite
BAR-S-EC12 141	TNT07 Neut	Interior Subgrade	HA; 2-ft composite
BAR-S-EC12 142	TNT07 Bi-Tri	Interior Subgrade	HA; 4-ft composite
BAR-S-EC12 143	TNT07 Bi-Tri	Interior Subgrade	HA; 4-ft composite
BAR-S-EC12 144	TNT07 Neut	Interior Subgrade	HA; 10-pt; 0-1 ft composite
BAR-S-EC12 145	TNT07 Neut	Railgrade Ditch East	025' from Neut Ho N wall, center of ditch, @ flow depth
BAR-S-EC12 146	TNT07 Neut	Railgrade Ditch East	025' from Neut Ho N wall, 1' E of ditch, @ flow depth
BAR-S-EC12 147	TNT07 Neut	Railgrade Ditch East	025' from Neut Ho N wall, 1' W of ditch, @ flow depth
BAR-S-EC12 148	TNT07 Neut	Railgrade Ditch East	050' from Neut Ho N wall, center of ditch, @ flow depth
BAR-S-EC12 149	TNT07 Neut	Railgrade Ditch East	050' from Neut Ho N wall, 1' E of ditch, @ flow depth
BAR-S-EC12 150	TNT07 Neut	Railgrade Ditch East	050' from Neut Ho N wall, 1' W of ditch, @ flow depth
BAR-S-EC12 151	TNT07 Neut	Railgrade Ditch East	075' from Neut Ho N wall, center of ditch, @ flow depth
BAR-S-EC12 152	TNT07 Neut	Railgrade Ditch East	075' from Neut Ho N wall, 1' E of ditch, @ flow depth
BAR-S-EC12 153	TNT07 Neut	Railgrade Ditch East	075' from Neut Ho N wall, 1' W of ditch, @ flow depth
BAR-S-EC12 154	TNT07 Neut	Railgrade Ditch East	100' from Neut Ho N wall, center of ditch, @ flow depth
BAR-S-EC12 155	TNT07 Neut	Railgrade Ditch East	100' from Neut Ho N wall, 1' E of ditch, @ flow depth
BAR-S-EC12 156	TNT07 Neut	Railgrade Ditch East	100' from Neut Ho N wall, 1' W of ditch, @ flow depth
BAR-S-EC12 157	TNT07 Neut	Railgrade Ditch East	125' from Neut Ho N wall, center of ditch, @ flow depth
BAR-S-EC12 158	TNT07 Neut	Railgrade Ditch East	125' from Neut Ho N wall, 1' E of ditch, @ flow depth

2012			
Sequence Number	Location	Sublocation Info	Site Description
BAR-S-EC12 159	TNT07 Neut	Railgrade Ditch East	125' from Neut Ho N wall, 1' W of ditch, @ flow depth
BAR-S-EC12 160	TNT07 Neut	Railgrade Ditch East	25-ft S of TNT7 Neut NW corner/at centerline/ base of flow-1
BAR-S-EC12 161	TNT07 Neut	Railgrade Ditch East	50-ft S of TNT7 Neut NW corner/at centerline/ base of flow-1
BAR-S-EC12 162	TNT07 Neut	Railgrade Ditch East	75-ft S of TNT7 Neut NW corner/at centerline/ base of flow-1
BAR-S-EC12 163	TNT07 Neut	Railgrade Ditch East	100-ft S of TNT7 Neut NW corner/at centerline/ base of flow-1
BAR-S-EC12 164	TNT07 Neut	Railgrade Ditch East	125-ft S of TNT7 Neut NW corner/at centerline/ base of flow-1
BAR-S-EC12 165	TNT07 Neut	Railgrade Ditch East	150-ft S of TNT7 Neut NW corner/E of centerline/ base of flow
BAR-S-EC12 166	TNT07 Neut	Railgrade Ditch East	150-ft S of TNT7 Neut NW corner/at centerline/ base of flow
BAR-S-EC12 167	TNT07 Neut	Railgrade Ditch East	150-ft S of TNT7 Neut NW corner/W of centerline/ base of flow
BAR-S-EC12 168	TNT07 Neut	Railgrade Ditch East	150-ft S of TNT7 Neut NW corner/at centerline/ base of flow-1
BAR-S-EC12 169	TNT07 Neut	Railgrade Ditch East	175-ft S of TNT7 Neut NW corner/E of centerline/ base of flow
BAR-S-EC12 170	TNT07 Neut	Railgrade Ditch East	175-ft S of TNT7 Neut NW corner/at centerline/ base of flow
BAR-S-EC12 171	TNT07 Neut	Railgrade Ditch East	175-ft S of TNT7 Neut NW corner/W of centerline/ base of flow
BAR-S-EC12 172	TNT07 Neut	Railgrade Ditch East	175-ft S of TNT7 Neut NW corner/at centerline/ base of flow-1
BAR-S-EC12 173	TNT07 Neut	Railgrade Ditch East	200-ft S of TNT7 Neut NW corner/E of centerline/ base of flow
BAR-S-EC12 174	TNT07 Neut	Railgrade Ditch East	200-ft S of TNT7 Neut NW corner/at centerline/ base of flow
BAR-S-EC12 175	TNT07 Neut	Railgrade Ditch East	200-ft S of TNT7 Neut NW corner/W of centerline/ base of flow
BAR-S-EC12 176	TNT07 Neut	Railgrade Ditch East	200-ft S of TNT7 Neut NW corner/at centerline/ base of flow-1
BAR-S-EC12 177	TNT07 Neut	Railgrade Ditch East	225-ft S of TNT7 Neut NW corner/E of centerline/ base of flow
BAR-S-EC12 178	TNT07 Neut	Railgrade Ditch East	225-ft S of TNT7 Neut NW corner/at centerline/ base of flow
BAR-S-EC12 179	TNT07 Neut	Railgrade Ditch East	225-ft S of TNT7 Neut NW corner/W of centerline/ base of flow
BAR-S-EC12 180	TNT07 Neut	Railgrade Ditch East	225-ft S of TNT7 Neut NW corner/at centerline/ base of flow-1
BAR-S-EC12 181	TNT07 Neut	Railgrade Ditch East	245-ft S of TNT7 Neut NW corner/E of centerline/ base of flow
BAR-S-EC12 182	TNT07 Neut	Railgrade Ditch East	245-ft S of TNT7 Neut NW corner/at centerline/ base of flow
BAR-S-EC12 183	TNT07 Neut	Railgrade Ditch East	245-ft S of TNT7 Neut NW corner/W of centerline/ base of flow
BAR-S-EC12 184	TNT07 Neut	Railgrade Ditch East	245-ft S of TNT7 Neut NW corner/at centerline/ base of flow-1
BAR-S-EC12 185	TNT07 Neut	Interior	Subgrade / E half
BAR-S-EC12 186	TNT07 Neut	Interior	Subgrade / W half
BAR-S-EC12 187	TNT10	Neut Ho	Interior / base of foundation wall / SW corner / flooded
BAR-S-EC12 188	TNT10	Neut Ho	Interior / base of foundation wall / NW corner
BAR-S-EC12 189	TNT10	Neut Ho	Interior / base of foundation wall / center S wall / flooded
BAR-S-EC12 190	TNT10	Neut Ho	Interior / base of foundation wall / center N wall
BAR-S-EC12 191	TNT10	Neut Ho	Interior / base of foundation wall / SE corner
BAR-S-EC12 192	TNT10	Neut Ho	Interior / base of foundation wall / NE corner

2012			
Sequence Number	Location	Sublocation Info	Site Description
BAR-S-EC12 193	RTD	Sta 125-130	Stained area W of pond
BAR-S-EC12 194	RTD	Sta 120-125	delta W of pond
BAR-S-EC12 195	RTD	Sta 90-120	Peat area NE of pond
BAR-S-EC12 196	RTD	Sta 120-135	White product pieces from ground surface
BAR-S-EC12 197	TNT08	Area Ditch	0-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 198	TNT08	Area Ditch	0-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 199	TNT08	Area Ditch	0-ft S of TNT7 Neut Overflow Ditch/E of centerline/ 12" below flow line
BAR-S-EC12 200	TNT08	Area Ditch	0-ft S of TNT7 Neut Overflow Ditch/W of centerline/ 12" below flow line
BAR-S-EC12 201	TNT08	Area Ditch	25-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 202	TNT08	Area Ditch	25-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 203	TNT08	Area Ditch	50-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 204	TNT08	Area Ditch	50-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 205	TNT08	Area Ditch	75-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 206	TNT08	Area Ditch	75-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 207	TNT08	Area Ditch	100-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 208	TNT08	Area Ditch	100-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 209	TNT08	Area Ditch	100-ft S of TNT7 Neut Overflow Ditch/E of centerline/ base of flow
BAR-S-EC12 210	TNT08	Area Ditch	100-ft S of TNT7 Neut Overflow Ditch/W of centerline/ base of flow
BAR-S-EC12 211	TNT08	Area Ditch	125-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 212	TNT08	Area Ditch	125-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 213	TNT08	Area Ditch	150-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 214	TNT08	Area Ditch	150-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 215	TNT08	Area Ditch	175-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 216	TNT08	Area Ditch	175-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 217	TNT08	Area Ditch	200-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 218	TNT08	Area Ditch	200-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow

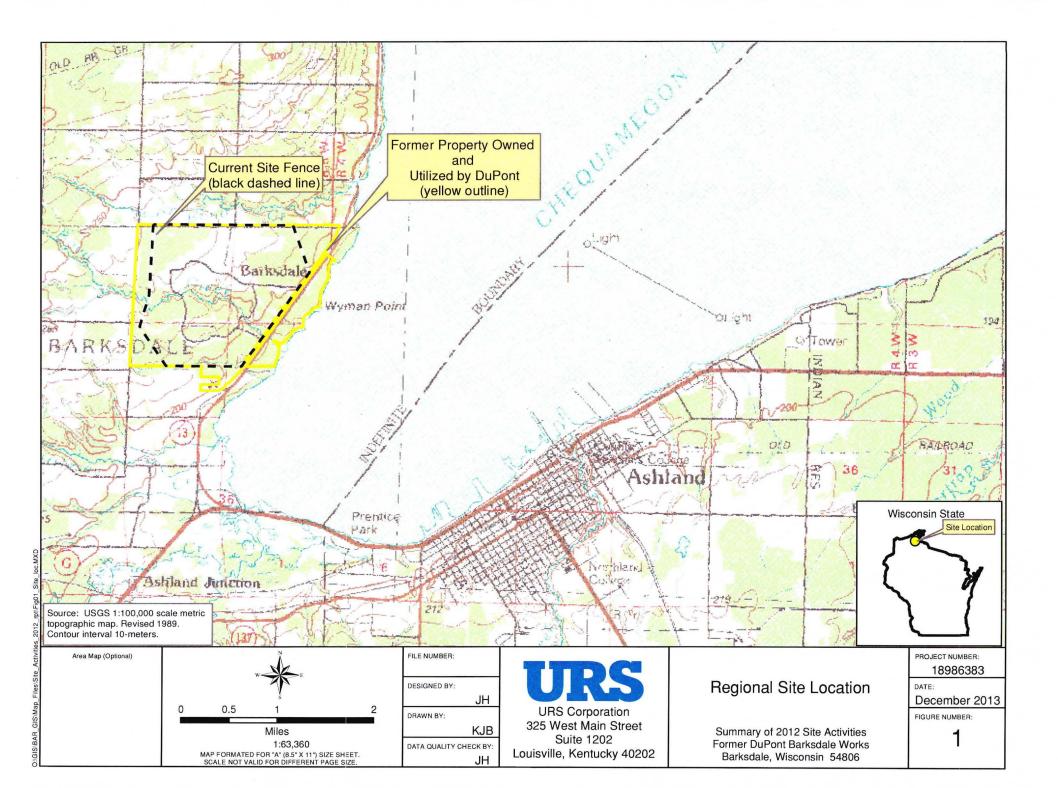
2012			
Sequence Number	Location	Sublocation Info	Site Description
BAR-S-EC12 219	TNT08	Area Ditch	200-ft S of TNT7 Neut Overflow Ditch/E of centerline/ base of flow
BAR-S-EC12 220	TNT08	Area Ditch	200-ft S of TNT7 Neut Overflow Ditch/W of centerline/ base of flow
BAR-S-EC12 221	TNT08	Area Ditch	225-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 222	TNT08	Area Ditch	225-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 223	TNT08	Area Ditch	250-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 224	TNT08	Area Ditch	250-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 225	TNT08	Area Ditch	275-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 226	TNT08	Area Ditch	275-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 227	TNT08	Area Ditch	300-ft S of TNT7 Neut Overflow Ditch/at centerline/ 24" below flow line
BAR-S-EC12 228	TNT08	Area Ditch	300-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 229	TNT08	Area Ditch	300-ft S of TNT7 Neut Overflow Ditch/E of centerline/ base of flow
BAR-S-EC12 230	TNT08	Area Ditch	300-ft S of TNT7 Neut Overflow Ditch/W of centerline/ base of flow
BAR-S-EC12 231	TNT08	Area Ditch	325-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 232	TNT08	Area Ditch	325-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 233	TNT08	Area Ditch	350-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 234	TNT08	Area Ditch	350-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 235	TNT08	Area Ditch	375-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 236	TNT08	Area Ditch	375-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 237	TNT08	Area Ditch	400-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 238	TNT08	Area Ditch	400-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 239	TNT08	Area Ditch	400-ft S of TNT7 Neut Overflow Ditch/E of centerline/ base of flow
BAR-S-EC12 240	TNT08	Area Ditch	400-ft S of TNT7 Neut Overflow Ditch/W of centerline/ base of flow
BAR-S-EC12 241	TNT08	Area Ditch	410-ft S of TNT7 Neut Overflow Ditch/at centerline/ 12" below flow line
BAR-S-EC12 242	TNT08	Area Ditch	410-ft S of TNT7 Neut Overflow Ditch/at centerline/ base of flow
BAR-S-EC12 243	TNT08	Weak Acid Ditch	020' E of TNT08 Ditch / Centerline / At flow depth

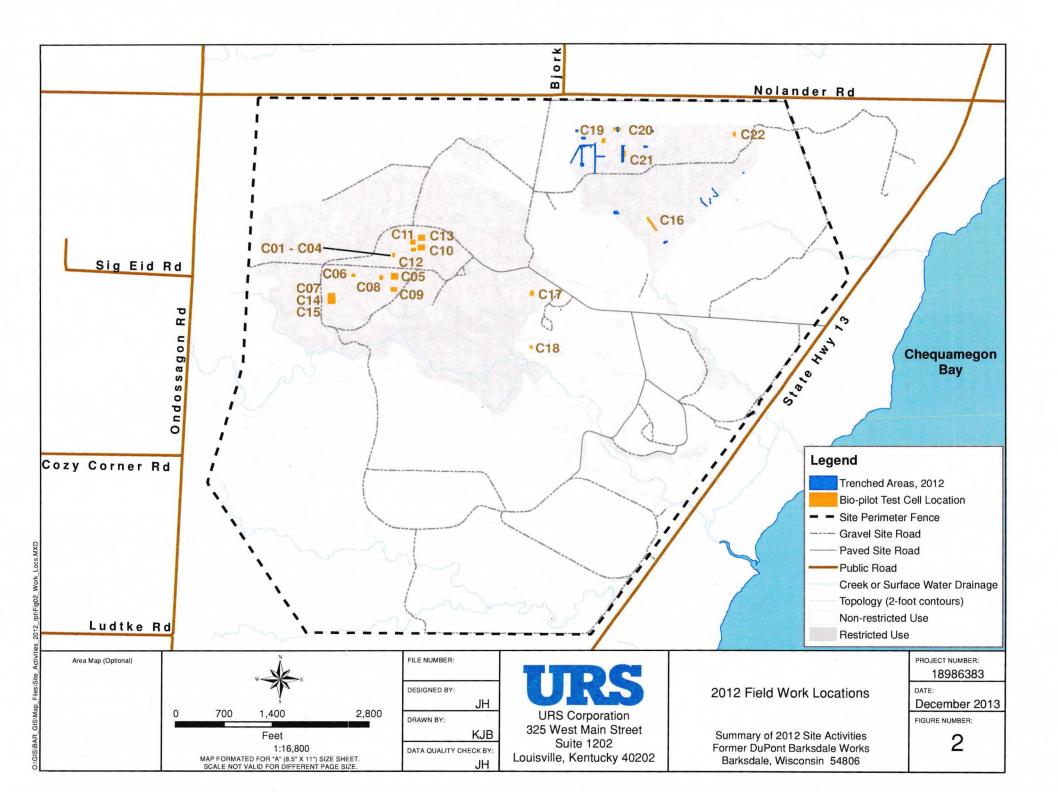
2012			
Sequence Number	Location	Sublocation Info	Site Description
BAR-S-EC12 244	TNT08	Weak Acid Ditch	020' E of TNT08 Ditch / 12" north / At flow depth
BAR-S-EC12 245	TNT08	Weak Acid Ditch	020' E of TNT08 Ditch / 12" south / At flow depth
BAR-S-EC12 246	TNT08	Weak Acid Ditch	045' E of TNT08 Ditch / Centerline / At flow depth
BAR-S-EC12 247	TNT08	Weak Acid Ditch	045' E of TNT08 Ditch / 12" north / At flow depth
BAR-S-EC12 248	TNT08	Weak Acid Ditch	045' E of TNT08 Ditch / 12" south / At flow depth
BAR-S-EC12 249	TNT08	Weak Acid Ditch	000'E of TNT08 Ditch / Centerline / At flow depth
BAR-S-EC12 250	TNT08	Weak Acid Ditch	020' E of TNT08 Ditch / Centerline / Composite of flow zone
BAR-S-EC12 251	TNT08	Weak Acid Ditch	045' E of TNT08 Ditch / Centerline / Composite of flow zone
BAR-S-EC12 252	TNT08	Weak Acid Ditch	050' E of TNT08 Ditch / Centerline / 12" below flow zone
BAR-S-EC12 253	TNT08	Weak Acid Ditch	075' E of TNT08 Ditch / Centerline / 12" below flow zone
BAR-S-EC12 254	TNT08	Weak Acid Ditch	100' E of TNT08 Ditch / Centerline / 6" below flow zone
BAR-S-EC12 255	TNT08	Weak Acid Ditch	113' E of TNT08 Ditch / Centerline / Composite of flow zone
BAR-S-EC12 256	TNT08	Weak Acid Ditch	050' E of TNT08 Ditch / Centerline / flow zone composite
BAR-S-EC12 257	TNT08	Weak Acid Ditch	075' E of TNT08 Ditch / Centerline / flow zone composite
BAR-S-EC12 258	TNT08	Weak Acid Ditch	100' E of TNT08 Ditch / Centerline / flow zone composite
BAR-S-EC12 259	TNT08	Weak Acid Ditch	085-095'E/ composite from flow zone / USACE sample / split A
BAR-S-EC12 260	TNT08	Weak Acid Ditch	085-095'E/ composite from flow zone / USACE sample / split B
BAR-S-EC12 261	TNT09	Neut Ho Storm Ditch	225' S of N bldg wall / centerline / 1" below flow
BAR-S-EC12 262	TNT09	Neut Ho Storm Ditch	200' S of N bldg wall / 12" W of centerline / 6" below flow
BAR-S-EC12 263	TNT09	Neut Ho Storm Ditch	200' S of N bldg wall / centerline / 6" below flow
BAR-S-EC12 264	TNT09	Neut Ho Storm Ditch	200' S of N bldg wall / 12" E of centerline / 6" below flow
BAR-S-EC12 265	TNT09	Neut Ho Storm Ditch	175' S of N bldg wall / centerline / 5" below flow
BAR-S-EC12 266	TNT09	Neut Ho Storm Ditch	150' S of N bldg wall / centerline / 5" below flow
BAR-S-EC12 267	TNT09	Neut Ho Storm Ditch	125' S of N bldg wall / centerline / 5" below flow
BAR-S-EC12 268	TNT09	Neut Ho Storm Ditch	100' S of N bldg wall / 12" W of centerline / 4" below flow
BAR-S-EC12 269	TNT09	Neut Ho Storm Ditch	100' S of N bldg wall / centerline / 4" below flow
BAR-S-EC12 270	TNT09	Neut Ho Storm Ditch	100' S of N bldg wall / 12" E of centerline / 4" below flow
BAR-S-EC12 271	TNT09	Neut Ho Storm Ditch	075' S of N bldg wall / centerline / 6" below flow
BAR-S-EC12 272	TNT09	Neut Ho Storm Ditch	050' S of N bldg wall / centerline / 8" below flow
BAR-S-EC12 273	TNT09	Neut Ho Storm Ditch	025' S of N bldg wall / centerline / 2" below flow
BAR-S-EC12 274	TNT09	Neut Ho Storm Ditch	000' S of N bldg wall / centerline / 17" below flow
BAR-S-EC12 275	TNT09	Neut Ho Catch Basin Drain	000'S of N bldg wall / 12" W of centerline / 0 inches below flow
BAR-S-EC12 276	TNT09	Neut Ho Catch Basin Drain	000'S of N bldg wall / centerline / 4 inches below flow
BAR-S-EC12 277	TNT09	Neut Ho Catch Basin Drain	000'S of N bldg wall / 12" E of centerline / 0 inches below flow

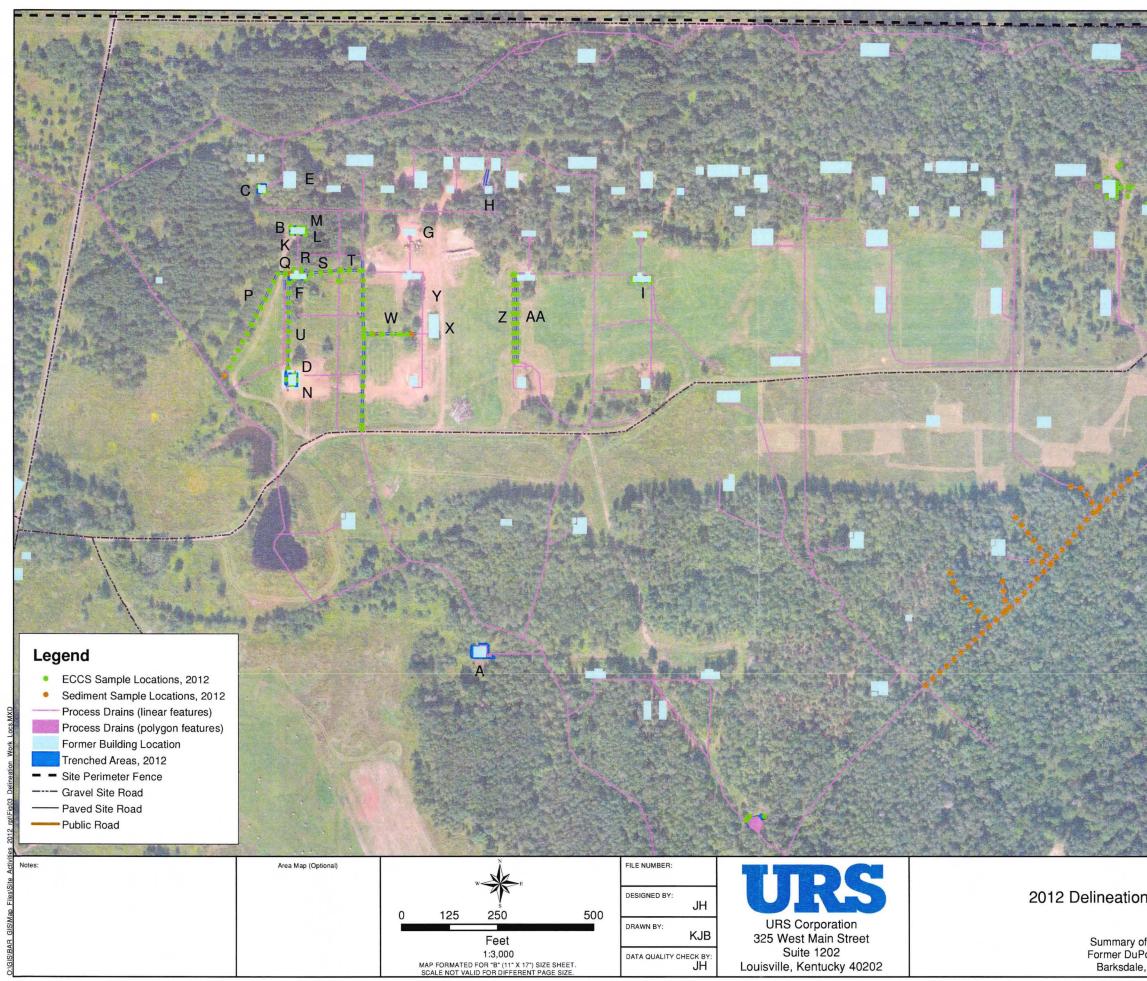
2012		SE TO SEAL STREET	
Sequence Number	Location	Sublocation Info	Site Description
BAR-S-EC12 278	TNT09	Neut Ho Catch Basin Drain	025'S of N bldg wall / centerline / 3 inches below flow
BAR-S-EC12 279	TNT09	Neut Ho Catch Basin Drain	050'S of N bldg wall / centerline / 4 inches below flow
BAR-S-EC12 280	TNT09	Neut Ho Catch Basin Drain	075'S of N bldg wall / centerline / 3 inches below flow
BAR-S-EC12 281	TNT09	Neut Ho Catch Basin Drain	100'S of N bldg wall / 12" W of centerline / 0 inches below flow
BAR-S-EC12 282	TNT09	Neut Ho Catch Basin Drain	100'S of N bldg wall / centerline / 4 inches below flow
BAR-S-EC12 283	TNT09	Neut Ho Catch Basin Drain	100'S of N bldg wall / 12" E of centerline / 1 inch above flow
BAR-S-EC12 284	TNT09	Neut Ho Catch Basin Drain	125'S of N bldg wall / centerline / 4 inches below flow
BAR-S-EC12 285	TNT09	Neut Ho Catch Basin Drain	150'S of N bldg wall / centerline / 4 inches below flow
BAR-S-EC12 286	TNT09	Neut Ho Catch Basin Drain	175'S of N bldg wall / centerline / 4 inches below flow
BAR-S-EC12 287	TNT09	Neut Ho Catch Basin Drain	200'S of N bldg wall / 12" W of centerline / 0 inches below flow
BAR-S-EC12 288	TNT09	Neut Ho Catch Basin Drain	200'S of N bldg wall / centerline / 4 inches below flow
BAR-S-EC12 289	TNT09	Neut Ho Catch Basin Drain	200'S of N bldg wall / 12" E of centerline / 0 inches below flow
BAR-S-EC12 290	TNT09	Neut Ho Catch Basin Drain	225'S of N bldg wall / centerline / 4 inches below flow
			Composite / 045-120'S of N bldg wall / flowline material / moved to
BAR-S-EC12 291	TNT10	Neut Ho	TNT10 Neut SP
BAR-S-EC12 292	TNT07	Graining House	Exterior / E wall centerline / 6" below 1917 working grade
BAR-S-EC12 293	TNT07	Graining House	Exterior / N wall / at wall face / 1" below mass TNT lense
BAR-S-EC12 294	TNT07	Graining House	Exterior / W wall centerline / ballast @ centerline of rail grade
BAR-S-EC12 295	TNT07	Graining House	Exterior / S wall centerline / at base of 4" diam TC / btw TC & wall
			Exterior / E wall / composite / 1917 working grade / placed at TNT10
BAR-S-EC12 296	TNT10	Neut Ho	Neut SP at W end
			Exterior / N wall / composite / 1917 working grade adj to mass TNT
BAR-S-EC12 297	TNT10	Neut Ho	lense / placed at TNT10 Neut SP 10' from W end
			Exterior / N wall / composite / 1917 working grade outside lense area /
BAR-S-EC12 298	TNT10	Neut Ho	placed at TNT10 Neut SP 30' from W end
			Exterior / W wall / composite / btw rail grade & wall / placed at TNT10
BAR-S-EC12 299	TNT10	Neut Ho	Neut SP at E end
BAR-S-EC12 300	C12	Biocell	Dark oily solids believed to be DNT
BAR-S-EC12 301	Lydol	Lydol Ho	Dark stained soil north of Lydol House
BAR-S-EC12 302	TNT07	Graining House	Interior / E wall / grab / center
BAR-S-EC12 303	TNT07	Graining House	Interior / N wall / grab / center subgrade of kettle basin
BAR-S-EC12 304	TNT07	Graining House	Interior / W wall / grab / center
BAR-S-EC12 305	TNT07	Graining House	Interior / S wall / grab / center

2012				
Sequence Number	Location	Sublocation Info	Site Description	
			TNX Ditch / ditch profile trench / centerline / 54" below bank top, 18"	
BAR-S-EC12 306	PAID001	Sta. 038-045	below current ditch bottom, 6" above product layer	
			TNX Ditch / ditch profile trench / centerline / 60" below bank top, 24"	
BAR-S-EC12 307	PAID001	Sta. 038-045	below current ditch bottom, @ product layer	
			TNX Ditch / ditch profile trench / centerline / 66" below bank top, 30"	
BAR-S-EC12 308	PAID001	Sta. 038-045	below current ditch bottom, 6" below product layer	
			TNX Ditch / ditch profile trench / centerline / 60" below bank top, 24"	
			below current ditch bottom, 3" outside original ground-sediment interface	
BAR-S-EC12 309	PAID001	Sta. 038-045	on east bank	
			TNX Ditch / ditch profile trench / centerline / 60" below bank top, 24"	
			below current ditch bottom, 8" outside original ground-sediment interface	
BAR-S-EC12 310	PAID001	Sta. 038-045	on west bank	
			Exterior / N wall / composite of mass TNT lense /"pure" product from	
BAR-S-EC12 311	TNT07	Graining House	soilds collected from N Wall exterior for inicneration	

FIGURES







		CAL PA		
				GARGAN.
and the second		S Sector	A TYTE	
		Sap 150		ACCEPTED
All a ser	-		A A A X T A	Contraction of
	15.47			
tige and the	Label	Feature ID	Description	March 1 and 1 and 1 and 1 and 1
	Α	PAJB0006	Refined Triton: Wash Ho	
	В	PA HB0006	TNT07: Bi/Trinitrating Ho	
Rath	С	PA HB0008	TNT07: Fortifying Ho	
	D	PA HB0009	TNT07: Graining Ho	
	Е	PAHB0011	TNT07: Mono Nitrating Ho	
	F	PAHB0012	TNT07: Neutralizing Ho	
	G	PAHB0016	TNT08: Bi/Trinitrating Ho	
	Н	PAHB0028	TNT09: Fortifying Ho	
· 大王· 王·	1	PA HB0038	TNT10: Neutralizing Ho	
	К	PA HD0040	TNT07: Bi/Tri Ho: floor drain	
R. South	L	PAHD0136	TNT07: Bi-Tri House ? Drain	
C. A	М	PAHD0135	TNT07: Bi-Tri House Floor Drain	
	N	PAHD0044	TNT07: Grain Ho: floor drain	
C.C.	0	PAHD0044	TNT07: Grain Ho: floor drain	
	Р	PAHD0054	TNT07: Neut Ho: Area Ditch	
11 11 11 11 11 11 11 11 11 11 11 11 11	Q	PAHD0052	TNT07: Neut Ho: CB Drain	
and the second	R	PAHD0053	TNT07: Neut Ho: CB overflow	
A state of the state	S	PAHD0137	TNT07: Neut Ho: CB Overflow Drain	
	Т	PAHD0138	TNT07: Neut Ho: CB Overflow Drain	
C. Caller S.	U	PAHD0056	TNT07: Neut Ho: RR Ditch	
362.5	V	PAHD0056	TNT07: Neut Ho: RR Ditch	
	W	PAHD0060	TNT08 Weak Acid Ditch	
	X	PAHD0061	TNT08 Weak Acid Drain	
State Long	Y	PAHD0062	TNT08: Neut Ho CB overflow ditch	
OF E	Z	PAHD0084	TNT09: Neut Ho CB drain	
	AA	PAHD0088	TNT09: Neut Ho Storm Ditch	
				PROJECT NUMBER:
				18986383

2012 Delineation Field Work Locations

Summary of 2012 Site Activities Former DuPont Barksdale Works Barksdale, Wisconsin 54806 PROJECT NUMBER: 18986383 DATE: December 2013

