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for
UXO 7 Ranges (UXO 7)

Naval Support Activity Crane
Crane, Indiana

Naval Facilities Engineering Command Midwest

Contract Number N62472-03-D-0057

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DRAFT
RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION REPORT ADDENDUM FOR UXO 7 RANGES (UXO 7)

NAVAL SUPPORT ACTIVITY, CRANE
CRANE, INDIANA

COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

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ACRONYMS

%R	Percent recovery
ALM	Adult lead model
BaP	Benzo(a)pyrene
bgs	Below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLEAN	Comprehensive Long-Term Environmental Action Navy
COPC	Chemical of potential concern
CAAA	Crane Army Ammunition Activity
CTO	Contract Task Order
DoD	Department of Defense
DI	Deionized
DPT	Direct-Push Technology
DQI	Data Quality Indicator
EcoSSL	Ecological Soil Screening Level
EEQ	Ecological Effects Quotient
ERA	Ecological Risk Assessment
ESL	Ecological screening level
FBL	Fixed-Base Laboratory
FOL	Field Operations Leader
GPS	Global Positioning System
HASP	Health and Safety Plan
HHRA	Human Health Risk Assessment
IEUBK	Integrated Exposure Uptake Biokinetic
IUPPS	Indiana Underground Plant Protection Service
LANL	Los Alamos National Laboratory
MCG	Media Cleanup Goal
mg/kg	Milligram per kilogram
MMRP	Military Munitions Response Program
NAVFAC	Naval Facilities Engineering Command
NPL	National Priorities List
NSA	Naval Support Activity
OB	Open burning
ORNL	Oak Ridge National Laboratory
ORR	Old Rifle Range

PAH	Polynuclear aromatic hydrocarbon
PM	Project Manager
PPE	Personal protective equipment
ppm	Parts per million
PRG	Preliminary remediation goals
PVC	Polyvinyl chloride
QA	Quality assurance
QAPP	Quality Assurance Project Plan
QC	Quality control
RBSL	Risk-based screening level
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SOP	Standard Operating Procedure
SQG	Soil Quality Guideline
SSL	Soil Screening Level
SWMU	Solid Waste Management Unit
Tetra Tech	Tetra Tech NUS, Inc.
UCL	Upper confidence limit
USEPA	United States Environmental Protection Agency
UXO	Unexploded Ordnance
XRF	X-Ray Fluorescence

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

This Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Addendum was performed for the United States Navy, Naval Facilities Engineering Command (NAVFAC) Midwest by Tetra Tech, Inc. (Tetra Tech) under Contract Task Order (CTO) F272 of the Comprehensive Long-Term Environmental Action Navy (CLEAN) IV Contract Number N62472-03-D-0057. Unexploded Ordnance (UXO) 7 is a closed military range. Investigations of closed military ranges are conducted under the Navy Military Munitions Response Program (MMRP). The Department of Defense (DoD) has specified that MMRP investigations be conducted under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Naval Support Activity (NSA) Crane is not listed on the CERCLA National Priorities List (NPL); therefore, the investigation of UXO 7 at NSA Crane was conducted under the RCRA Corrective Action Program.

1.2 FACILITY DESCRIPTION

NSA Crane is located in the southern portion of Indiana, approximately 75 miles southwest of Indianapolis and 71 miles northwest of Louisville, Kentucky, immediately east of Crane Village and Burns City (Figure 1-1). NSA Crane encompasses 62,463 acres (approximately 98 square miles), most of which are located in the northern portion of Martin County. Smaller portions of NSA Crane are located in Greene, Daviess, and Lawrence Counties. NSA Crane is located in a rural, sparsely populated area. Most of NSA Crane is forested, and the surrounding area is wooded or farmed land.

NSA Crane provides material, technical, and logistical support to the Navy for equipment, shipboard, weapons systems, and nonexpendable ordnance items. In addition, NSA Crane supports the Crane Army Ammunition Activity (CAAA) with production, renovation, storage, shipment, demilitarization, and disposal of conventional ammunition.

1.3 SITE DESCRIPTION

UXO 7 includes the former West Trap Range, former East Trap Range, former South Pistol Range, and former Old Rifle Range (ORR). Located within UXO 7, is Solid Waste Management Unit (SWMU 7), which is the Open Burning (OB) Treatment Area. UXO 7 encompasses approximately 20 acres. UXO 7 is located immediately west of NSA Crane Highway 8 in the flat-lying floodplain of Turkey Creek (Figure 1-2). The site consists of a flat-grass covered area bisected from north to south by an unnamed

but maintained gravel road. The four closed ranges (West Trap Range, East Trap Range, South Pistol Range, and ORR), were identified during previous RFI activities conducted at UXO 7. Site features and approximate boundaries for the individual sites that make up UXO 7 are presented in Figure 1-2.

For purposes of the human health and ecological risk assessments conducted on the 2007 RFI data, UXO 7 was categorized into three distinct zones including the southern, central, and northern zones. The East and West Trap Ranges are located within the central zone, while the areas of concern on the 500-yard rifle range are included in the northern zone (Figure 1-2).

1.4 INVESTIGATION BACKGROUND

These former small arms ranges have been the subject of three investigations for contaminants commonly associated with rifle and pistol range ammunition, primarily lead and copper; and also trap range contaminants, which are primarily polynuclear aromatic hydrocarbons (PAHs) and lead.

These small arms ranges sites were all initially investigated as part of an RFI in 2007 and additional information regarding the site history can be found in the UXO 7 RFI Report (Tetra Tech, 2009). The soil samples collected from the pistol range area generally had low-level detections of lead observed by X-Ray Fluorescence (XRF) in the field, and these soil lead concentrations were likely influenced by the lead-containing small arms ammunition fired on the pistol range. A minor subset (three) of the pistol range soil samples had lead detections above 150 parts per million (ppm) by XRF, including the hillside (range backstop) samples from behind the former pistol range target locations. The human health and ecological receptor risk assessments in the UXO 7 RFI Report (Tetra Tech, 2009) for the southern zone indicated no significant risks and no additional sampling activities were recommended or performed for this zone. During the RFI field investigations, PAHs were found to present excess risk to human health in areas of the former trap ranges (Figure 1-3) and lead was found to present excess risk to ecological receptors on the 500-yard Rifle Range (Figure 1-4). The results of the 2007 RFI data were presented in the UXO 7 RFI Report (Tetra Tech, 2009). The subject of this RFI Report Addendum will be the two supplemental sampling events that occurred in November 2011 and September/October 2012. These sampling events will be referred to as Round 1 (November 2011) and Round 2 (September/October 2012).

1.5 REPORT ORGANIZATION

The following sections are presented in the remainder of this document:

- Section 2.0: Field Program Description
- Section 3.0: Presentation of Analytical Results
- Section 4.0: Human Health Risk Updates
- Section 5.0: Ecological Risk Updates
- Section 6.0: Risk Reduction and Mitigation

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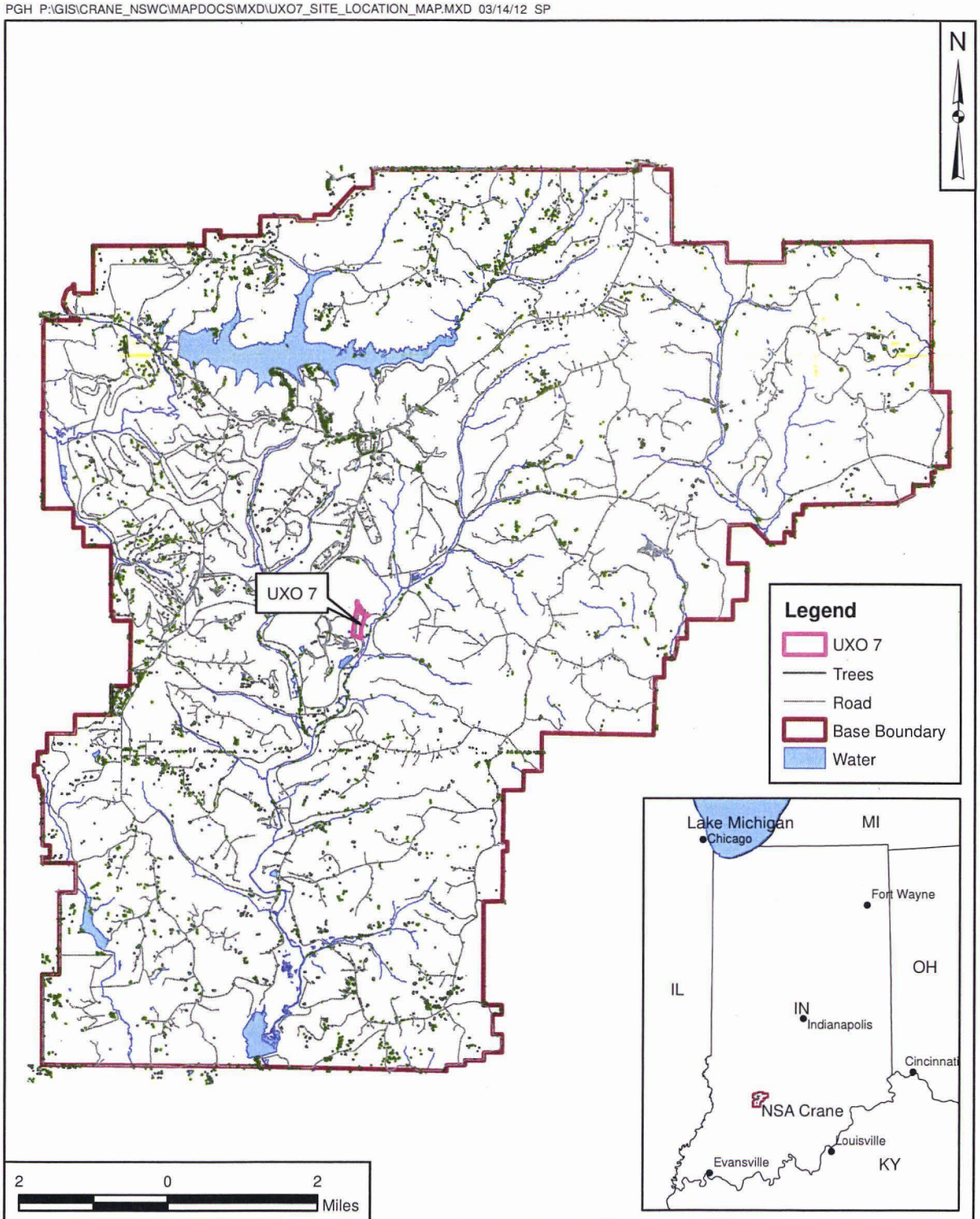

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UXO 7 SITE LOCATION MAP
NSA CRANE
CRANE, INDIANA

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UXO 7 SMALL ARMS RANGES
NSA CRANE
CRANE, INDIANA

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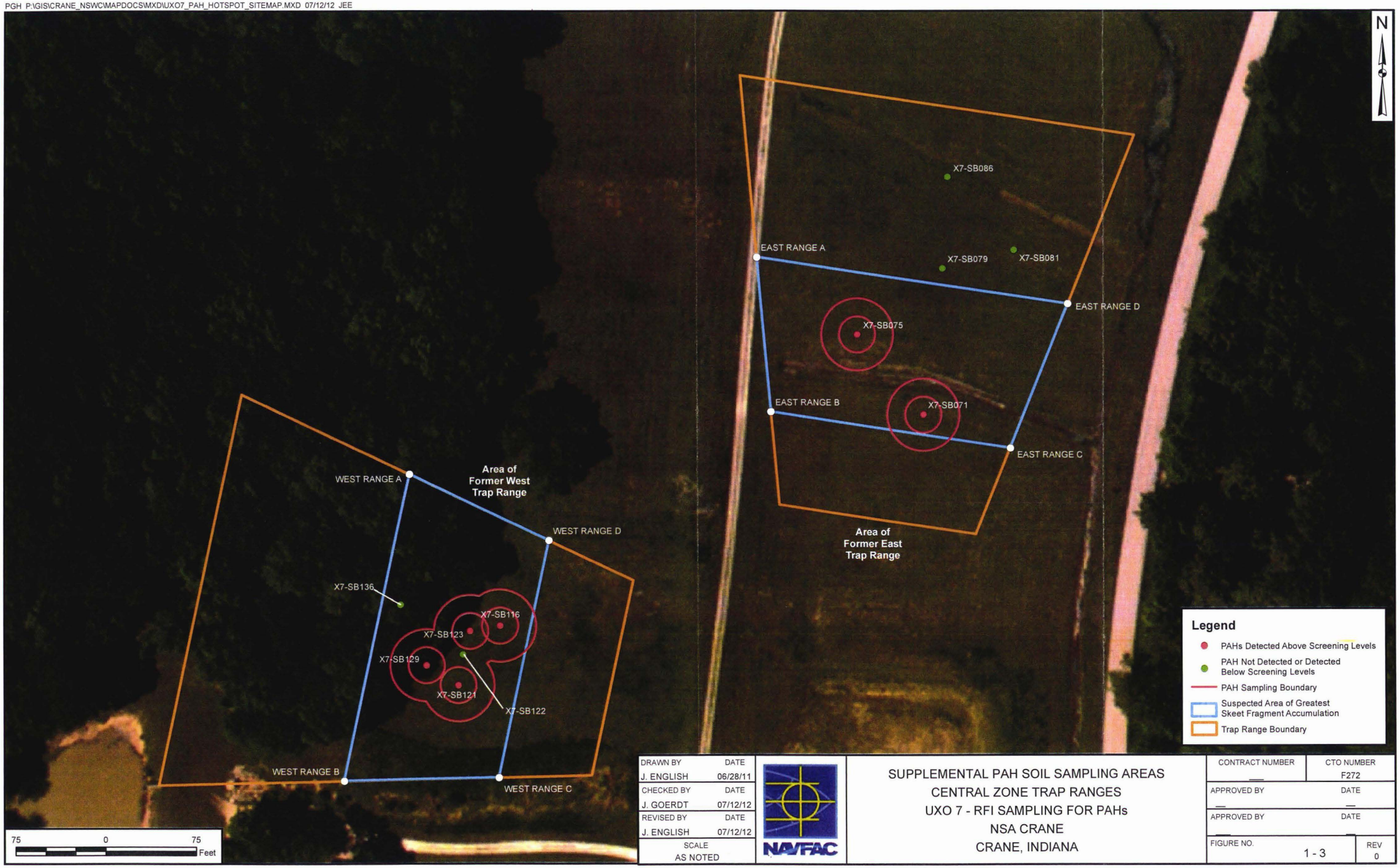

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NAVFAC

SUPPLEMENTAL PAH SOIL SAMPLING AREAS
CENTRAL ZONE TRAP RANGES
UXO 7 - RFI SAMPLING FOR PAHs
NSA CRANE
CRANE, INDIANA

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FIGURE NO. 1 - 3	REV 0

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SUPPLEMENTAL LEAD SOIL SAMPLING AREAS
NORTHERN ZONE
UXO 7 - RFI SAMPLING FOR LEAD
NSA CRANE
CRANE, INDIANA

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FIGURE NO. 1 - 4	REV 0

2.0 FIELD INVESTIGATION

This section describes the sampling activities, procedures, and documentation utilized during the field activities performed during the two supplemental sampling events at NSA Crane, UXO 7.

2.1 OVERVIEW

UXO 7 is comprised of four former shooting ranges: the East Trap Range, the West Trap Range, the South Pistol Range, and the ORR. The UXO 7 RFI (Tetra Tech, 2009) was performed to support human health and ecological risk assessments. The data was adequate for risk assessment purposes, but was not sufficient to fully delineate the nature and extent of the chemicals of concern at UXO 7 which included lead and PAHs for remediation purposes.

The Round 1 supplemental sampling was performed to delineate the horizontal and vertical extent of PAHs at the East and West Trap Ranges in the Central Zone and lead in the Northern Zone of the ORR. All samples during Round 1 were collected by hand auger from 0 to 2 feet below ground surface (bgs) (see Table 2-1). All soil samples collected from the Northern Zone ORR were analyzed in the field for lead via XRF with a subset of those samples shipped to the fixed-base laboratory (FBL) for lead analysis. All soil samples collected from the East and West Trap Ranges were submitted to the FBL for PAH analysis. Table 2-1 summarizes sample collection and associated analyses. Round 1 field work was conducted in accordance with the Technical Memorandum Work Plan for Proposed Supplemental Sampling Activities at UXO 7, approved by the USEPA in October, 2011.

The results of the Round 1 sampling event proved to be insufficient to perform removal actions; therefore, additional sampling was performed. Round 2 supplemental sampling was performed to delineate the horizontal and vertical extent of PAH contamination at the East and West Trap Range and lead contamination in the Northern Zone of the ORR.

2.2 MOBILIZATION/DEMOBILIZATION

Round 1

Tetra Tech personnel mobilized to NSA Crane on November 7, 2011. All field team members reviewed the approved Quality Assurance Project Plan (QAPP), Technical Memorandum for this supplemental sampling event, associated appendices, and updated Health and Safety Plan (HASP) prior to the start of

the project activities. In addition, the Field Operations Leader (FOL) held a field team orientation meeting to ensure that personnel were familiar with the scope of the field activities.

Prior to the initiation of fieldwork, the FOL arrived at the site and began onsite mobilization activities. These activities included coordination with NSA Crane personnel and utility clearance of all proposed boring locations through Indiana Underground Plant Protection Service (IUPPS). The equipment required for the field activities was shipped to the site. At the conclusion of field activities, the FOL completed the decontamination and demobilization of all equipment.

Round 2

Following the approval of the Technical Memorandum Work Plan (Tetra Tech, 2012), Tetra Tech personnel mobilized to NSA Crane for Round 2 supplemental sampling at UXO 7 on September 4, 2012. The FOL held a field team orientation meeting to ensure that personnel including subcontractors were familiar with the scope of the field activities for Round 2 and the HASP. A direct-push technology (DPT) drill rig was used for Round 2 sample collection and underwent an equipment checklist prior to utilization.

Round 2 was separated into two shifts. The first one was from September 4-13, 2012 and the second from October 2-10, 2012.

Prior to the initiation of fieldwork, the FOL arrived at the site and began onsite mobilization activities. These activities included coordination with NSA Crane personnel and utility clearance of all proposed boring locations through IUPPS. The equipment required for the field activities was shipped to the site. At the conclusion of field activities, the FOL completed the decontamination and demobilization.

2.3 SITE INVESTIGATION METHODOLOGIES AND PROCEDURES

2.3.1 Hand Augering

The majority of borings at UXO 7 during Round 1 were completed by hand auger techniques. DPT was utilized for a small number of borings collected at the base of the dirt mound located in the Northern Zone. Hand augering involves manually turning a 2 ½-inch stainless steel auger bucket into the ground surface to the desired sample depth. All hand augered soil borings at UXO 7 were advanced to a maximum depth of 2 feet bgs unless refusal was encountered prior to that depth. If refusal was encountered at a depth 1 foot bgs, the auger was removed and repositioned nearby until a depth greater than 1 foot bgs was achieved. Upon reaching the desired depth, the soil from the boring was homogenized and a portion was then placed in a disposable plastic bag. The auger bucket was

decontaminated in the field between each sample location as outlined in SOP-07 of the Technical Memorandum for Round 1.

2.3.2 Direct-Push Technology

A track-mounted DPT GeoProbe® drill rig was used to collect surface and subsurface soil samples during Round 2. Samples were collected with the use of DPT Macro-core® sampling techniques for chemical and lithologic analysis.

Samples were collected in 4-foot liners and the total depth varied per location (see Table 2-1). Upon advancement to the desired depth, the boring was abandoned by placing bentonite from the bottom of the boring to the ground surface in accordance with federal and state regulations

2.3.3 XRF Analyses

All soil samples collected from the Northern Zone of the ORR were processed in the field and scanned for lead via a portable XRF analyzer in accordance with SOP-10. Sample processing included homogenizing the soil sample, removing large rocks or other debris, crushing the sample to uniform size, and drying the sample in a convection oven. Three separate XRF measurements were made for each soil sample, and the reported concentration is the average value of those three readings (see Appendix A). The XRF readings were taken from each end of the baggie and one in the middle. A lead field action level of 125 ppm was used as the field action limit during the XRF screening process. This value was chosen based on past experience that shows field XRF results to be potentially biased low. XRF lead concentrations exceeding 125 ppm may be indicative of lead concentrations in excess of the 192 milligrams per kilogram (mg/kg) benchmark ecological screening level that was agreed upon by the Navy and the United States Environmental Protection Agency (USEPA) for UXO 7.

If the lead XRF result was less than 125 ppm, no additional samples were collected in the vicinity of that sample location. If the average XRF concentration was greater than 125 ppm, additional soil samples were collected around the location until the extent of the contamination could be defined both vertically and horizontally.

Sample IDs, average XRF concentrations, and associated FBL concentrations are presented in Appendix A, along with all soil sample logs, QC logs, and chain-of custody forms.

2.3.4 Sample Logging

Samples were logged on Multiple Sample Log Sheets during Rounds 1 and 2 of the supplemental sampling events. The sample log sheets are included in Appendix A of this report and contain the following information as appropriate:

- Sample ID
- Name of person(s) collecting the sample
- Sample depth, date, and time
- Laboratory analyses
- Quality Assurance (QA) samples

2.4 SAMPLING OPERATIONS

Round 1

To better evaluate the human health and ecological risk at UXO 7, the former small arms ranges were grouped into three exposure units (Northern Zone, Central Zone, and Southern Zone) (**Figure 1-2**). The source of PAHs detected in soil from the former trap ranges in the Central Zone is the tar pitch/bitumen binder materials which are used in the manufacturing of the clay pigeon targets. There were low-level detections of lead observed in trap range soil samples which likely originated in part from the lead shot in the ammunition cartridges fired from the shotguns. The lead concentrations detected in the trap range soil samples were collected during the original RFI sampling and those samples all had XRF readings below 50 ppm, indicating that soil lead contamination was not an issue at the trap ranges. These XRF results were confirmed by limited FBL soil sample analyses. The lead risks associated with portions of the 500-yard Rifle Range (Rifle Range) located in the northern zone are a result of lead bullets fired at the Rifle Range.

Based on these risks, supplemental sampling was conducted in November 2011 (Round 1) to more fully delineate the lead and PAH contamination in order to support a prescriptive removal action (Tetra Tech, 2011). The majority of soil samples collected during the Round 1 supplemental sampling at UXO 7 were collected by hand auger from 0 to 2 feet bgs (see **Table 2-1**). Additional samples, at depths greater than 2 feet bgs, were collected utilizing DPT. All soil samples collected in the northern zone of the Rifle Range were analyzed in the field for lead via XRF. Based on the XRF results exceeding the field action limit, additional "step-out" samples were collected.

Select samples were then shipped to the FBL for lead analysis. PAH analysis at the FBL was conducted on samples collected from the East and West Trap Ranges because clay targets were only used within those two areas.

Round 2

Based on the results of Round 1 supplemental sampling, a second round was necessary to fully delineate the horizontal and vertical extent of lead and PAH contamination at UXO 7. Round 2 sampling was conducted in September and October of 2012 to completely delineate the lead and PAH contamination in order to support a prescriptive removal action (Tetra Tech, 2012). All samples were collected using a DPT rig. All samples collected from the East and West Trap Ranges were shipped to the FBL for PAH analysis. Samples collected from the Rifle Range were analyzed in the field using XRF. Step-out sampling occurred during Round 2 until the Northern Zone was completed delineated both vertically and horizontally using XRF.

All samples during Round 2 were collected by DPT. PAH sample depths reached down to 6 feet bgs at various locations within the East and West Trap Ranges. Surface soil samples were collected from 0 to 1-foot bgs and 1 to 2-feet bgs. Subsurface soil samples were collected in 2-foot intervals from 2 feet down to 6 feet bgs. For lead delineation in the Northern Zone, additional samples were proposed in 1-foot intervals down to depths of 5 feet bgs. Table 2-1 summarizes the samples shipped to the FBL for laboratory analysis. Round 2 field work was conducted in accordance with the Technical Memorandum Work Plan for Proposed Supplemental Sampling (Round 2), approved by the USEPA in August, 2012.

2.5 FIELD SAMPLE DOCUMENTATION

Sample documentation consisted of the completion of multi-sample log sheets, chain-of-custody records, field logbooks, and health and safety documentation. Field documentation was completed as per SOP-03. The sample log sheets contain information such as sample location, sample ID, container requirements, analyses to be performed, and sample type, time, and date. Any unusual circumstances encountered during sample collection were noted on the form. Multi-sample logsheets can be found in Appendix A of this document. Chain-of-custody forms (See Appendix A) were used to track each sample from collection to receipt and analysis at the FBL.

2.6 SAMPLE HANDLING, PACKAGING, AND SHIPPING

Sample handling activities included field-related considerations concerning the selection of sample containers, allowable holding times, sample custody, and maintaining samples at the appropriate storage temperature. All sample containers shipped to the FBL were wrapped in bubble wrap and sealed in

Ziploc® bags to minimize the possibility of breakage during transport. The sample containers were then placed in a cooler lined with a large plastic garbage bag and covered with ice. A temperature blank was placed in each cooler prior to shipment. The plastic garbage bag was sealed with a knot, and the chain-of-custody form was sealed in a Ziploc® bag and taped to the inside of the cooler lid. A signed and dated custody seal was applied to each end of the cooler and then covered with strapping tape to provide a tamper-evident seal. A Federal Express® airbill was applied to the shipping cooler. Tetra Tech maintained custody of the samples until they were relinquished to Federal Express®. The Federal Express® tracking number (airbill number) was recorded on the chain-of-custody form, and the sender's copy of the airbill was maintained for shipment tracking, if needed. All samples were shipped to the FBL for overnight delivery and received within sample holding times.

2.7 QUALITY CONTROL SAMPLES

Quality assurance/quality control (QA/QC) samples were generated and collected during both rounds of sampling to monitor both field and laboratory procedures, in accordance with the Technical Memorandum (Tetra Tech, 2011). QA/QC samples included field duplicates, equipment rinsate blanks, and temperature blanks. Field duplicate results are tabulated in Appendix C of this document. Types of QA/QC samples are briefly described as follows:

- Field Duplicates – consisted of a single sample split into two portions. Field duplicates were collected at the rate of 1 in 20 during both rounds of supplemental sampling to assess the overall precision of the sampling and analysis program.

- Equipment Rinsate Blanks – obtained under representative field conditions by collecting the water generated by running analyte-free water through or over sample collection equipment after decontamination and before use. When pre-cleaned, dedicated, or disposable sampling equipment was used (no decontamination was required), one equipment rinsate blank was collected as a batch blank. Equipment rinsate blanks were analyzed for the chemical constituents as the associated environmental samples.

- Temperature Blanks – used to determine if samples were adequately cooled during shipment. Temperature blanks consisted of analyte-free water poured into a clean sample container at the site or supplied by the FBL. One temperature blank was submitted to the laboratory in each cooler, and the temperature was checked upon receipt at the laboratory.

2.8 GPS/SURVEY

Each proposed sample location was initially marked in the field utilizing a Trimble GeoXH 6000 global positioning system (GPS). Upon sample collection, all northing and easting coordinates for each sample were updated via GPS by Tetra Tech personnel. Additionally, the majority of Round 1 and Round 2 sample locations were surveyed by a professional surveyor licensed in the State of Indiana. This information is retained in the Tetra Tech main database and can be used as a reference if repeat sampling is required at any of the sampling locations. Also, following sampling activities, each location was marked by polyvinyl chloride (PVC) pipe that was spray-painted with a bright color and driven into the ground.

2.9 DECONTAMINATION

The non-dedicated, non-disposable equipment (i.e., hand auger and DPT shoe) involved in field sampling activities were decontaminated before beginning work, between each sample location/boring, and the completion of field activities in accordance with SOP-07.

The following decontamination steps were taken:

- Potable water and phosphate-free detergent wash (scrub if necessary)
- Potable water rinse
- Deionized (DI) water rinse
- Air dry (if possible)
- Wrap in aluminum foil (if not used immediately)

2.10 INVESTIGATION-DERIVED WASTE HANDLING

Both rounds of supplemental sampling generated potentially contaminated wastes including personal protective equipment (PPE) and decontamination fluids. Management of each residue was performed as follows:

PPE – All PPE were double bagged and placed in NSA Crane trash receptacles (i.e., dumpsters).

Sampling Equipment Decontamination Fluids – All equipment decontamination fluids were collected and discharged to the NSA Crane permitted waste treatment plant.

All soil removed from a sample location that was not used as part of that sample was returned to its original boring.

2.11 SITE MANAGEMENT AND FACILITY SUPPORT

The FOL was designated as the lead in coordinating all day-to-day activities during the investigation. The FOL was responsible for ensuring that all field team members including subcontractors) were familiar with the approved Technical Memorandums and the HASP in effect during both rounds of supplemental sampling. Additionally, the FOL was responsible for all sampling operations, QA/QC field documentation requirements, and field change orders. The FOL reported to the Project Manager (PM) on a daily basis regarding the status of fieldwork.

All site preparation, mobilization/demobilization, and sampling activities were coordinated through NSA Crane personnel through pre-visit communication and meetings during the field work.

2.12 RECORDKEEPING

Records were maintained for the daily activities that took place during both rounds of supplemental sampling. Other records, including multi-sample log sheets and chain of custody forms, were completed in accordance with SOP-03 of the Technical Memorandum (September, 2011). Information recorded daily included field activities, weather conditions, identity and arrival and departure times of personnel, management issues, etc. Copies of daily activity of records are included in Appendix A.

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
West Trap Range (Figure 2-1)							
X7-SS116-0002	10/6/2007	RFI-2007	DPT	0-2			X
X7-SB116-0204	9/7/2012	2	DPT	2-4			X
X7-SB116-0406	9/7/2012	2	DPT	4-6			X
X7-SS121-0002	10/6/2007	RFI-2007	DPT	0-2			X
X7-SB121-0204	9/7/2012	2	DPT	2-4			X
X7-SB121-0406	9/7/2012	2	DPT	4-6			X
X7-SS122-0002	10/6/2007	RFI-2007	DPT	0-2			X
X7-SS123-0002	10/6/2007	RFI-2007	DPT	0-2			X
X7-SB123-0204	9/7/2012	2	DPT	2-4			X
X7-SB123-0406	9/7/2012	2	DPT	4-6			X
X7-SS129-0002	10/6/2007	RFI-2007	DPT	0-2			X
X7-SS136-0002	10/6/2007	RFI-2007	DPT	0-2			X
X7-SS200-0001	11/10/2011	1	HA	0-1			X
X7-SS200-0102	11/10/2011	1	HA	1-2			X
X7-SS201-0001	11/10/2011	1	HA	0-1			X
X7-SS201-0102	11/10/2011	1	HA	1-2			X
X7-SS202-0001	11/10/2011	1	HA	0-1			X
X7-SS202-0102	11/10/2011	1	HA	1-2			X
X7-SS203-0001	11/10/2011	1	HA	0-1			X
X7-SS203-0102	11/10/2011	1	HA	1-2			X
X7-SB203-0204	9/7/2012	2	DPT	2-4			X
X7-SB203-0406	9/7/2012	2	DPT	4-6			X
X7-SS204-0001	11/10/2011	1	HA	0-1			X
X7-SS204-0102	11/10/2011	1	HA	1-2			X
X7-SS205-0001	11/10/2011	1	HA	0-1			X
X7-SS205-0102	11/10/2011	1	HA	1-2			X
X7-SS206-0001	11/10/2011	1	HA	0-1			X
X7-SS206-0102	11/10/2011	1	HA	1-2			X
X7-SS207-0001	11/10/2011	1	HA	0-1			X
X7-SS207-0102	11/10/2011	1	HA	1-2			X
X7-SS208-0001	11/10/2011	1	HA	0-1			X
X7-SS208-0102	11/10/2011	1	HA	1-2			X
X7-SS209-0001	11/10/2011	1	HA	0-1			X

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS209-0102	11/10/2011	1	HA	1-2			X
X7-SS210-0001	11/10/2011	1	HA	0-1			X
X7-SS210-0102	11/10/2011	1	HA	1-2			X
X7-SS211-0001	11/10/2011	1	HA	0-1			X
X7-SS211-0102	11/10/2011	1	HA	1-2			X
X7-SS212-0001	11/10/2011	1	HA	0-1			X
X7-SS212-0102	11/10/2011	1	HA	1-2			X
X7-SS213-0001	11/10/2011	1	HA	0-1			X
X7-SS213-0102	11/10/2011	1	HA	1-2			X
X7-SS214-0001	11/10/2011	1	HA	0-1			X
X7-SS214-0102	11/10/2011	1	HA	1-2			X
X7-SS215-0001	11/10/2011	1	HA	0-1			X
X7-SS215-0102	11/10/2011	1	HA	1-2			X
X7-SS216-0001	11/10/2011	1	HA	0-1			X
X7-SS216-0102	11/10/2011	1	HA	1-2			X
X7-SS217-0001	11/10/2011	1	HA	0-1			X
X7-SS217-0102	11/10/2011	1	HA	1-2			X
X7-SS218-0001	11/10/2011	1	HA	0-1			X
X7-SS218-0102	11/10/2011	1	HA	1-2			X
X7-SS219-0001	11/10/2011	1	HA	0-1			X
X7-SS219-0102	11/10/2011	1	HA	1-2			X
X7-SS220-0001	11/10/2011	1	HA	0-1			X
X7-SS220-0102	11/10/2011	1	HA	1-2			X
X7-SS221-0001	11/10/2011	1	HA	0-1			X
X7-SS221-0102	11/10/2011	1	HA	1-2			X
X7-SS222-0001	11/10/2011	1	HA	0-1			X
X7-SS222-0102	11/10/2011	1	HA	1-2			X
X7-SS223-0001	11/10/2011	1	HA	0-1			X
X7-SS223-0102	11/10/2011	1	HA	1-2			X
X7-SS224-0001	11/10/2011	1	HA	0-1			X
X7-SS225-0001	11/10/2011	1	HA	0-1			X
X7-SS225-0102	11/10/2011	1	HA	1-2			X
X7-SS226-0001	11/10/2011	1	HA	0-1			X
X7-SS226-0102	11/10/2011	1	HA	1-2			X
X7-SS227-0001	11/10/2011	1	HA	0-1			X
X7-SS227-0102	11/10/2011	1	HA	1-2			X

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB227-0204	9/7/2012	2	DPT	2-4			X
X7-SB227-0406	9/7/2012	2	DPT	4-6			X
X7-SS228-0001	11/10/2011	1	HA	0-1			X
X7-SS228-0102	11/10/2011	1	HA	1-2			X
X7-SS229-0001	11/10/2011	1	HA	0-1			X
X7-SS229-0102	11/10/2011	1	HA	1-2			X
X7-SS230-0001	11/10/2011	1	HA	0-1			X
X7-SS230-0102	11/10/2011	1	HA	1-2			X
X7-SS231-0001	11/10/2011	1	HA	0-1			X
X7-SS232-0001	11/10/2011	1	HA	0-1			X
X7-SS232-0102	11/10/2011	1	HA	1-2			X
X7-SS233-0001	11/10/2011	1	HA	0-1			X
X7-SS233-0102	11/10/2011	1	HA	1-2			X
X7-SS234-0001	11/10/2011	1	HA	0-1			X
X7-SS234-0102	11/10/2011	1	HA	1-2			X
X7-SS237-0001	11/10/2011	1	HA	0-1			X
X7-SS238-0001	11/10/2011	1	HA	0-1			X
X7-SS239-0001	11/10/2011	1	HA	0-1			X
X7-SS240-0001	11/10/2011	1	HA	0-1			X
X7-SS240-0102	11/10/2011	1	HA	1-2			X
X7-SS241-0001	11/10/2011	1	HA	0-1			X
X7-SS241-0102	11/10/2011	1	HA	1-2			X
X7-SS435-0001	No Sample Collected(1)						
X7-SS435-0102	No Sample Collected(1)						
X7-SB435-0204	No Sample Collected(1)						
X7-SB435-0406	No Sample Collected(1)						
X7-SS436-0001	No Sample Collected(1)						
X7-SS436-0102	No Sample Collected(1)						
X7-SB436-0204	No Sample Collected(1)						
X7-SB436-0406	No Sample Collected(1)						
X7-SS437-0001	No Sample Collected(1)						
X7-SS437-0102	No Sample Collected(1)						
X7-SB437-0204	No Sample Collected(1)						
X7-SB437-0406	No Sample Collected(1)						
X7-SS438-0001	No Sample Collected(1)						
X7-SS438-0102	No Sample Collected(1)						

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB438-0204	No Sample Collected[1]						
X7-SB438-0406	No Sample Collected[1]						
X7-SS439-0001	9/7/2012	2	DPT	0-1			X
X7-SS439-0102	9/7/2012	2	DPT	1-2			X
X7-SB439-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB439-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS440-0001	No Sample Collected[1]						
X7-SS440-0102	No Sample Collected[1]						
X7-SB440-0204	No Sample Collected[1]						
X7-SB440-0406	No Sample Collected[1]						
X7-SS441-0001	10/3/2012	2	DPT	0-1			X
X7-SS441-0102	10/3/2012	2	DPT	1-2			X
X7-SB441-0204	10/3/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB441-0406	10/3/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS442-0001	10/3/2012	2	DPT	0-1			X
X7-SS442-0102	10/3/2012	2	DPT	1-2			X
X7-SB442-0204	10/3/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB442-0406	10/3/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS443-0001	10/3/2012	2	DPT	0-1			X
X7-SS443-0102	10/3/2012	2	DPT	1-2			X
X7-SB443-0204	10/3/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB443-0406	10/3/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS444-0001	No Sample Collected[1]						
X7-SS444-0102	No Sample Collected[1]						
X7-SB444-0204	No Sample Collected[1]						
X7-SB444-0406	No Sample Collected[1]						
X7-SS445-0001	9/7/2012	2	DPT	0-1			X
X7-SS445-0102	9/7/2012	2	DPT	1-2			X
X7-SB445-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB445-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS446-0001	9/7/2012	2	DPT	0-1			X
X7-SS446-0102	9/7/2012	2	DPT	1-2			X
X7-SB446-0204	9/7/2012	2	DPT	2-4			X
X7-SB446-0406	9/7/2012	2	DPT	4-6			X
X7-SS447-0001	9/7/2012	2	DPT	0-1			X
X7-SS447-0102	9/7/2012	2	DPT	1-2			X

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB447-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB447-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS448-0001	9/7/2012	2	DPT	0-1			X
X7-SS448-0102	9/7/2012	2	DPT	1-2			X
X7-SB448-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB448-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS449-0001	9/7/2012	2	DPT	0-1			X
X7-SS449-0102	9/7/2012	2	DPT	1-2			X
X7-SB449-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB449-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS450-0001	No Sample Collected(1)						
X7-SS450-0102	No Sample Collected(1)						
X7-SB450-0204	No Sample Collected(1)						
X7-SB450-0406	No Sample Collected(1)						
X7-SS451-0001	9/7/2012	2	DPT	0-1			X
X7-SS451-0102	9/7/2012	2	DPT	1-2			X
X7-SB451-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB451-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS452-0001	No Sample Collected(1)						
X7-SS452-0102	No Sample Collected(1)						
X7-SB452-0204	No Sample Collected(1)						
X7-SB452-0406	No Sample Collected(1)						
X7-SS453-0001	9/7/2012	2	DPT	0-1			X
X7-SS453-0102	9/7/2012	2	DPT	1-2			X
X7-SB453-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB453-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS454-0001	No Sample Collected(1)						
X7-SS454-0102	No Sample Collected(1)						
X7-SB454-0204	No Sample Collected(1)						
X7-SB454-0406	No Sample Collected(1)						
X7-SS455-0001	9/7/2012	2	DPT	0-1			X
X7-SS455-0102	9/7/2012	2	DPT	1-2			X
X7-SB455-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB455-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS4560001	No Sample Collected(1)						
X7-SS456-0102	No Sample Collected(1)						

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB456-0204	No Sample Collected[1]						
X7-SB456-0406	No Sample Collected[1]						
X7-SS457-0001	9/7/2012	2	DPT	0-1			X
X7-SS457-0102	9/7/2012	2	DPT	1-2			X
X7-SB457-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB457-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS458-0001	No Sample Collected[1]						
X7-SS458-0102	No Sample Collected[1]						
X7-SB458-0204	No Sample Collected[1]						
X7-SB458-0406	No Sample Collected[1]						
X7-SS459-0001	9/7/2012	2	DPT	0-1			X
X7-SS459-0102	9/7/2012	2	DPT	1-2			X
X7-SB459-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB459-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS460-0001	9/7/2012	2	DPT	0-1			X
X7-SS460-0102	9/7/2012	2	DPT	1-2			X
X7-SB460-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB460-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS461-0001	No Sample Collected[1]						
X7-SS461-0102	No Sample Collected[1]						
X7-SB461-0204	No Sample Collected[1]						
X7-SB461-0406	No Sample Collected[1]						
X7-SS462-0001	9/7/2012	2	DPT	0-1			X
X7-SS462-0102	9/7/2012	2	DPT	1-2			X
X7-SB462-0204	9/7/2012	2	DPT	2-4			X
X7-SB462-0406	9/7/2012	2	DPT	4-6			X
X7-SS463-0001	9/7/2012	2	DPT	0-1			X
X7-SS463-0102	9/7/2012	2	DPT	1-2			X
X7-SB463-0204	9/7/2012	2	DPT	2-4			X
X7-SB463-0406	9/7/2012	2	DPT	4-6			X
X7-SS464-0001	9/7/2012	2	DPT	0-1			X
X7-SS464-0102	9/7/2012	2	DPT	1-2			X
X7-SB464-0204	9/7/2012	2	DPT	2-4			X
X7-SB464-0406	9/7/2012	2	DPT	4-6			X
X7-SS465-0001	9/7/2012	2	DPT	0-1			X
X7-SS465-0102	9/7/2012	2	DPT	1-2			X

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB465-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB465-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS466-0001	9/7/2012	2	DPT	0-1			X
X7-SS466-0102	9/7/2012	2	DPT	1-2			X
X7-SB466-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB466-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS467-0001	No Sample Collected(1)						
X7-SS467-0102	No Sample Collected(1)						
X7-SB467-0204	No Sample Collected(1)						
X7-SB467-0406	No Sample Collected(1)						
X7-SS468-0001	No Sample Collected(1)						
X7-SS468-0102	No Sample Collected(1)						
X7-SB468-0204	No Sample Collected(1)						
X7-SB468-0406	No Sample Collected(1)						
X7-SS469-0001	10/3/2012	2	DPT	0-1			X
X7-SS469-0102	10/3/2012	2	DPT	1-2			X
X7-SB469-0204	10/3/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB469-0406	10/3/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS470-0001	10/3/2012	2	DPT	0-1			X
X7-SS470-0102	10/3/2012	2	DPT	1-2			X
X7-SB470-0204	10/3/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB470-0406	10/3/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS471-0001	9/7/2012	2	DPT	0-1			X
X7-SS471-0102	9/7/2012	2	DPT	1-2			X
X7-SB471-0204	9/7/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB471-0406	9/7/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS472-0001	10/3/2012	2	DPT	0-1			X
X7-SS472-0102	10/3/2012	2	DPT	1-2			X
X7-SB472-0204	10/3/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB472-0406	10/3/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS473-0001	No Sample Collected(1)						
X7-SS473-0102	No Sample Collected(1)						
X7-SB473-0204	No Sample Collected(1)						
X7-SB473-0406	No Sample Collected(1)						
X7-SS474-0001	No Sample Collected(1)						
X7-SS474-0102	No Sample Collected(1)						

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB474-0204	No Sample Collected[1]						
X7-SB474-0406	No Sample Collected[1]						
X7-SS475-0001	No Sample Collected[1]						
X7-SS475-0102	No Sample Collected[1]						
X7-SB475-0204	No Sample Collected[1]						
X7-SB475-0406	No Sample Collected[1]						
X7-SS476-0001	No Sample Collected[1]						
X7-SS476-0102	No Sample Collected[1]						
X7-SB476-0204	No Sample Collected[1]						
X7-SB476-0406	No Sample Collected[1]						
X7-SS476-0001	No Sample Collected[1]						
X7-SS477-0102	No Sample Collected[1]						
X7-SB477-0204	No Sample Collected[1]						
X7-SB477-0406	No Sample Collected[1]						
X7-SS478-0001	No Sample Collected[1]						
X7-SS478-0102	No Sample Collected[1]						
X7-SB478-0204	No Sample Collected[1]						
X7-SB478-0406	No Sample Collected[1]						
East Trap Range (Figure 2-2)							
X7-SS071-0002	10/7/2007	RFI-2007	HA	0-2			X
X7-SS075-0002	10/7/2007	RFI-2007	HA	0-2			X
X7-SB075-0204	9/6/2012	2	DPT	2-4			X
X7-SB075-0406	9/6/2012	2	DPT	4-6			X
X7-SS079-0002	10/7/2007	RFI-2007	HA	0-2			X
X7-SS081-0002	10/7/2007	RFI-2007	HA	0-2			X
X7-SS086-0002	10/7/2007	RFI-2007	HA	0-2			X
X7-SS242-0001	11/9/2011	1	HA	0-1			X
X7-SS242-0102	11/9/2011	1	HA	1-2			X
X7-SB242-0204	9/6/2012	2	DPT	2-4			X
X7-SB242-0406	9/6/2012	2	DPT	4-6			X
X7-SS243-0001	11/9/2011	1	HA	0-1			X
X7-SS243-0102	11/9/2011	1	HA	1-2			X
X7-SB243-0204	9/6/2012	2	DPT	2-4			X
X7-SB243-0406	9/6/2012	2	DPT	4-6			X
X7-SS244-0001	11/9/2011	1	HA	0-1			X
X7-SS244-0102	11/9/2011	1	HA	1-2			X

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS245-0001	11/9/2011	1	HA	0-1			X
X7-SS245-0102	11/9/2011	1	HA	1-2			X
X7-SS246-0001	11/9/2011	1	HA	0-1			X
X7-SS246-0102	11/9/2011	1	HA	1-2			X
X7-SS247-0001	11/9/2011	1	HA	0-1			X
X7-SS247-0102	11/9/2011	1	HA	1-2			X
X7-SB247-0204	9/6/2012	2	DPT	2-4			X
X7-SB247-0406	9/6/2012	2	DPT	4-6			X
X7-SS248-0001	11/9/2011	1	HA	0-1			X
X7-SS248-0102	11/9/2011	1	HA	1-2			X
X7-SS249-0001	11/9/2011	1	HA	0-1			X
X7-SS249-0102	11/9/2011	1	HA	1-2			X
X7-SS250-0001	11/9/2011	1	HA	0-1			X
X7-SS250-0102	11/9/2011	1	HA	1-2			X
X7-SS251-0001	11/9/2011	1	HA	0-1			X
X7-SS251-0102	11/9/2011	1	HA	1-2			X
X7-SS252-0001	11/9/2011	1	HA	0-1			X
X7-SS252-0102	11/9/2011	1	HA	1-2			X
X7-SS253-0001	11/9/2011	1	HA	0-1			X
X7-SS253-0102	11/9/2011	1	HA	1-2			X
X7-SS254-0001	11/9/2011	1	HA	0-1			X
X7-SS254-0102	11/9/2011	1	HA	1-2			X
X7-SB254-0204	9/6/2012	2	DPT	2-4			X
X7-SB254-0406	9/6/2012	2	DPT	4-6			X
X7-SS255-0001	11/9/2011	1	HA	0-1			X
X7-SS255-0102	11/9/2011	1	HA	1-2			X
X7-SB255-0204	9/6/2012	2	DPT	2-4			X
X7-SB255-0406	9/6/2012	2	DPT	4-6			X
X7-SS256-0001	11/9/2011	1	HA	0-1			X
X7-SS256-0102	11/9/2011	1	HA	1-2			X
X7-SB256-0204	9/6/2012	2	DPT	2-4			X
X7-SB256-0406	9/6/2012	2	DPT	4-6			X
X7-SS257-0001	11/9/2011	1	HA	0-1			X
X7-SS257-0102	11/9/2011	1	HA	1-2			X
X7-SS258-0001	11/9/2011	1	HA	0-1			X
X7-SS258-0102	11/9/2011	1	HA	1-2			X

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS259-0001	11/9/2011	1	HA	0-1			X
X7-SS259-0102	11/9/2011	1	HA	1-2			X
X7-SS260-0001	11/9/2011	1	HA	0-1			X
X7-SS260-0102	11/9/2011	1	HA	1-2			X
X7-SS261-0001	11/9/2011	1	HA	0-1			X
X7-SS261-0102	11/9/2011	1	HA	1-2			X
X7-SB261-0204	9/6/2012	2	DPT	2-4			X
X7-SB261-0406	9/6/2012	2	DPT	4-6			X
X7-SS262-0001	11/9/2011	1	HA	0-1			X
X7-SS262-0102	11/9/2011	1	HA	1-2			X
X7-SS263-0001	11/9/2011	1	HA	0-1			X
X7-SS263-0102	11/9/2011	1	HA	1-2			X
X7-SS265-0001	11/9/2011	1	HA	0-1			X
X7-SS265-0102	11/9/2011	1	HA	1-2			X
X7-SS266-0001	11/9/2011	1	HA	0-1			X
X7-SS266-0102	11/9/2011	1	HA	1-2			X
X7-SS267-0001	11/9/2011	1	HA	0-1			X
X7-SS267-0102	11/9/2011	1	HA	1-2			X
X7-SS270-0001	11/9/2011	1	HA	0-1			X
X7-SS270-0102	11/9/2011	1	HA	1-2			X
X7-SS271-0001	11/9/2011	1	HA	0-1			X
X7-SS271-0102	11/9/2011	1	HA	1-2			X
X7-SS272-0001	11/9/2011	1	HA	0-1			X
X7-SS272-0102	11/9/2011	1	HA	1-2			X
X7-SS479-0001	No Sample Collected(1)						
X7-SS479-0102	No Sample Collected(1)						
X7-SB479-0204	No Sample Collected(1)						
X7-SB479-0406	No Sample Collected(1)						
X7-SS480-0001	No Sample Collected(1)						
X7-SS480-0102	No Sample Collected(1)						
X7-SB480-0204	No Sample Collected(1)						
X7-SB480-0406	No Sample Collected(1)						
X7-SS481-0001	No Sample Collected(1)						
X7-SS481-0102	No Sample Collected(1)						
X7-SB481-0204	No Sample Collected(1)						
X7-SB481-0406	No Sample Collected(1)						

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS482-0001	No Sample Collected(1)						
X7-SS482-0102	No Sample Collected(1)						
X7-SB482-0204	No Sample Collected(1)						
X7-SB482-0406	No Sample Collected(1)						
X7-SS483-0001	No Sample Collected(1)						
X7-SS483-0102	No Sample Collected(1)						
X7-SB483-0204	No Sample Collected(1)						
X7-SB483-0406	No Sample Collected(1)						
X7-SS484-0001	No Sample Collected(1)						
X7-SS484-0102	No Sample Collected(1)						
X7-SB484-0204	No Sample Collected(1)						
X7-SB484-0406	No Sample Collected(1)						
X7-SS485-0001	No Sample Collected(1)						
X7-SS485-0102	No Sample Collected(1)						
X7-SB485-0204	No Sample Collected(1)						
X7-SB485-0406	No Sample Collected(1)						
X7-SS486-0001	No Sample Collected(1)						
X7-SS486-0102	No Sample Collected(1)						
X7-SB486-0204	No Sample Collected(1)						
X7-SB486-0406	No Sample Collected(1)						
X7-SS487-0001	No Sample Collected(1)						
X7-SS487-0102	No Sample Collected(1)						
X7-SB487-0204	No Sample Collected(1)						
X7-SB487-0406	No Sample Collected(1)						
X7-SS488-0001	No Sample Collected(1)						
X7-SS488-0102	No Sample Collected(1)						
X7-SB488-0204	No Sample Collected(1)						
X7-SB488-0406	No Sample Collected(1)						
X7-SS489-0001	No Sample Collected(1)						
X7-SS489-0102	No Sample Collected(1)						
X7-SB489-0204	No Sample Collected(1)						
X7-SB489-0406	No Sample Collected(1)						
X7-SS490-0001	No Sample Collected(1)						
X7-SS490-0102	No Sample Collected(1)						
X7-SB490-0204	No Sample Collected(1)						
X7-SB490-0406	No Sample Collected(1)						

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS491-0001	9/6/2012	2	DPT	0-1			X
X7-SS491-0102	9/6/2012	2	DPT	1-2			X
X7-SB491-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB491-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS492-0001	9/6/2012	2	DPT	0-1			X
X7-SS492-0102	9/6/2012	2	DPT	1-2			X
X7-SB492-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB492-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS493-0001	9/6/2012	2	DPT	0-1			X
X7-SS493-0102	9/6/2012	2	DPT	1-2			X
X7-SB493-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB493-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS494-0001	9/6/2012	2	DPT	0-1			X
X7-SS494-0102	9/6/2012	2	DPT	1-2			X
X7-SB494-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB494-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS495-0001	No Sample Collected(1)						
X7-SS495-0102	No Sample Collected(1)						
X7-SB495-0204	No Sample Collected(1)						
X7-SB495-0406	No Sample Collected(1)						
X7-SS496-0001	No Sample Collected(1)						
X7-SS496-0102	No Sample Collected(1)						
X7-SB496-0204	No Sample Collected(1)						
X7-SB496-0406	No Sample Collected(1)						
X7-SS497-0001	10/3/2012	2	DPT	0-1			X
X7-SS497-0102	10/3/2012	2	DPT	1-2			X
X7-SB497-0204	10/3/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB497-0406	10/3/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS498-0001	9/6/2012	2	DPT	0-1			X
X7-SS498-0102	9/6/2012	2	DPT	1-2			X
X7-SB498-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB498-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS499-0001	No Sample Collected(1)						
X7-SS499-0102	No Sample Collected(1)						
X7-SB499-0204	No Sample Collected(1)						
X7-SB499-0406	No Sample Collected(1)						

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS500-0001	No Sample Collected[1]						
X7-SS500-0102	No Sample Collected[1]						
X7-SB500-0204	No Sample Collected[1]						
X7-SB500-0406	No Sample Collected[1]						
X7-SS501-0001	No Sample Collected[1]						
X7-SS501-0102	No Sample Collected[1]						
X7-SB501-0204	No Sample Collected[1]						
X7-SB501-0406	No Sample Collected[1]						
X7-SS502-0001	9/6/2012	2	DPT	0-1			X
X7-SS502-0102	9/6/2012	2	DPT	1-2			X
X7-SB502-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB502-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS503-0001	9/6/2012	2	DPT	0-1			X
X7-SS503-0102	9/6/2012	2	DPT	1-2			X
X7-SB503-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB503-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS504-0001	10/3/2012	2	DPT	0-1			X
X7-SS504-0102	10/3/2012	2	DPT	1-2			X
X7-SB504-0204	10/3/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB504-0406	10/3/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS505-0001	9/6/2012	2	DPT	0-1			X
X7-SS505-0102	9/6/2012	2	DPT	1-2			X
X7-SB505-0204	9/6/2012	2	DPT	2-4			X
X7-SB505-0406	9/6/2012	2	DPT	4-6			X
X7-SS506-0001	10/3/2012	2	DPT	0-1			X
X7-SS506-0102	10/3/2012	2	DPT	1-2			X
X7-SB506-0204	10/3/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB506-0406	10/3/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS507-0001	9/6/2012	2	DPT	0-1			X
X7-SS507-0102	9/6/2012	2	DPT	1-2			X
X7-SB507-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB507-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS508-0001	No Sample Collected[1]						
X7-SS508-0102	No Sample Collected[1]						
X7-SB508-0204	No Sample Collected[1]						
X7-SB508-0406	No Sample Collected[1]						

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS509-0001	No Sample Collected[1]						
X7-SS509-0102	No Sample Collected[1]						
X7-SB509-0204	No Sample Collected[1]						
X7-SB509-0406	No Sample Collected[1]						
X7-SS510-0001	9/6/2012	2	DPT	0-1			X
X7-SS510-0102	9/6/2012	2	DPT	1-2			X
X7-SB510-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB510-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS511-0001	9/6/2012	2	DPT	0-1			X
X7-SS511-0102	9/6/2012	2	DPT	1-2			X
X7-SB511-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB511-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS512-0001	No Sample Collected[1]						
X7-SS512-0102	No Sample Collected[1]						
X7-SB512-0204	No Sample Collected[1]						
X7-SB512-0406	No Sample Collected[1]						
X7-SS513-0001	10/3/2012	2	DPT	0-1			X
X7-SS513-0102	10/3/2012	2	DPT	1-2			X
X7-SB513-0204	10/3/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB513-0406	10/3/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS514-0001	No Sample Collected[1]						
X7-SS514-0102	No Sample Collected[1]						
X7-SB514-0204	No Sample Collected[1]						
X7-SB514-0406	No Sample Collected[1]						
X7-SS515-0001	No Sample Collected[1]						
X7-SS515-0102	No Sample Collected[1]						
X7-SB515-0204	No Sample Collected[1]						
X7-SB515-0406	No Sample Collected[1]						
X7-SS516-0001	No Sample Collected[1]						
X7-SS516-0102	No Sample Collected[1]						
X7-SB516-0204	No Sample Collected[1]						
X7-SB516-0406	No Sample Collected[1]						
X7-SS517-0001	No Sample Collected[1]						
X7-SS517-0102	No Sample Collected[1]						
X7-SB517-0204	No Sample Collected[1]						
X7-SB517-0406	No Sample Collected[1]						

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS518-0001	9/6/2012	2	DPT	0-1			X
X7-SS518-0102	9/6/2012	2	DPT	1-2			X
X7-SB518-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB518-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS519-0001	9/6/2012	2	DPT	0-1			X
X7-SS519-0102	9/6/2012	2	DPT	1-2			X
X7-SB519-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB519-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS520-0001	No Sample Collected(1)						
X7-SS520-0102	No Sample Collected(1)						
X7-SB520-0204	No Sample Collected(1)						
X7-SB520-0406	No Sample Collected(1)						
X7-SS521-0001	9/6/2012	2	DPT	0-1			X
X7-SS521-0102	9/6/2012	2	DPT	1-2			X
X7-SB521-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB521-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS522-0001	9/6/2012	2	DPT	0-1			X
X7-SS522-0102	9/6/2012	2	DPT	1-2			X
X7-SB522-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB522-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS523-0001	No Sample Collected(1)						
X7-SS523-0102	No Sample Collected(1)						
X7-SB523-0204	No Sample Collected(1)						
X7-SB523-0406	No Sample Collected(1)						
X7-SS524-0001	No Sample Collected(1)						
X7-SS524-0102	No Sample Collected(1)						
X7-SB524-0204	No Sample Collected(1)						
X7-SB524-0406	No Sample Collected(1)						
X7-SS525-0001	9/6/2012	2	DPT	0-1			X
X7-SS525-0102	9/6/2012	2	DPT	1-2			X
X7-SB525-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB525-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS526-0001	9/6/2012	2	DPT	0-1			X
X7-SS526-0102	9/6/2012	2	DPT	1-2			X
X7-SB526-0204	9/6/2012	2	DPT	2-4			X
X7-SB526-0406	9/6/2012	2	DPT	4-6			X

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS527-0001	9/6/2012	2	DPT	0-1			X
X7-SS527-0102	9/6/2012	2	DPT	1-2			X
X7-SB527-0204	9/6/2012	2	DPT	2-4			X
X7-SB527-0406	9/6/2012	2	DPT	4-6			X
X7-SS528-0001	9/6/2012	2	DPT	0-1			X
X7-SS528-0102	9/6/2012	2	DPT	1-2			X
X7-SB528-0204	9/6/2012	2	DPT	2-4			X
X7-SB528-0406	9/6/2012	2	DPT	4-6			X
X7-SS529-0001	9/6/2012	2	DPT	0-1			X
X7-SS529-0102	9/6/2012	2	DPT	1-2			X
X7-SB529-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB529-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS530-0001	9/6/2012	2	DPT	0-1			X
X7-SS530-0102	9/6/2012	2	DPT	1-2			X
X7-SB530-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB530-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS531-0001	9/6/2012	2	DPT	0-1			X
X7-SS531-0102	9/6/2012	2	DPT	1-2			X
X7-SB531-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB531-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS532-0001	No Sample Collected(1)						
X7-SS532-0102	No Sample Collected(1)						
X7-SB532-0204	No Sample Collected(1)						
X7-SB532-0406	No Sample Collected(1)						
X7-SS533-0001	10/3/2012	2	DPT	0-1			X
X7-SS533-0102	10/3/2012	2	DPT	1-2			X
X7-SB533-0204	10/3/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB533-0406	10/3/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS534-0001	No Sample Collected(1)						
X7-SS534-0102	No Sample Collected(1)						
X7-SB534-0204	No Sample Collected(1)						
X7-SB534-0406	No Sample Collected(1)						
X7-SS535-0001	9/6/2012	2	DPT	0-1			X
X7-SS535-0102	9/6/2012	2	DPT	1-2			X
X7-SB535-0204	9/6/2012	2	DPT	2-4			X
X7-SB535-0406	9/6/2012	2	DPT	4-6			X

TABLE 2-1

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SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS536-0001	9/6/2012	2	DPT	0-1			X
X7-SS536-0102	9/6/2012	2	DPT	1-2			X
X7-SB536-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB536-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS537-0001	No Sample Collected(1)						
X7-SS537-0102	No Sample Collected(1)						
X7-SB537-0204	No Sample Collected(1)						
X7-SB537-0406	No Sample Collected(1)						
X7-SS538-0001	No Sample Collected(1)						
X7-SS538-0102	No Sample Collected(1)						
X7-SB538-0204	No Sample Collected(1)						
X7-SB538-0406	No Sample Collected(1)						
X7-SS539-0001	No Sample Collected(1)						
X7-SS539-0102	No Sample Collected(1)						
X7-SB539-0204	No Sample Collected(1)						
X7-SB539-0406	No Sample Collected(1)						
X7-SS540-0001	10/3/2012	2	DPT	0-1			X
X7-SS540-0102	10/3/2012	2	DPT	1-2			X
X7-SB540-0204	10/3/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB540-0406	10/3/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS541-0001	9/6/2012	2	DPT	0-1			X
X7-SS541-0102	9/6/2012	2	DPT	1-2			X
X7-SB541-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB541-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS542-0001	9/6/2012	2	DPT	0-1			X
X7-SS542-0102	9/6/2012	2	DPT	1-2			X
X7-SB542-0204	9/6/2012	2	DPT	2-4	Sample Not Analyzed(2)		
X7-SB542-0406	9/6/2012	2	DPT	4-6	Sample Not Analyzed(2)		
X7-SS543-0001	No Sample Collected(1)						
X7-SS543-0102	No Sample Collected(1)						
X7-SB543-0204	No Sample Collected(1)						
X7-SB543-0406	No Sample Collected(1)						
X7-SS544-0001	No Sample Collected(1)						
X7-SS544-0102	No Sample Collected(1)						
X7-SB544-0204	No Sample Collected(1)						
X7-SB544-0406	No Sample Collected(1)						

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
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SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS545-0001	No Sample Collected[1]						
X7-SS545-0102	No Sample Collected[1]						
X7-SB545-0204	No Sample Collected[1]						
X7-SB545-0406	No Sample Collected[1]						
X7-SS546-0001	10/3/2012	2	DPT	0-1			X
X7-SS546-0102	10/3/2012	2	DPT	1-2			X
X7-SB546-0204	10/3/2012	2	DPT	2-4	Sample Not Analyzed[2]		
X7-SB546-0406	10/3/2012	2	DPT	4-6	Sample Not Analyzed[2]		
X7-SS547-0001	No Sample Collected[1]						
X7-SS547-0102	No Sample Collected[1]						
X7-SB547-0204	No Sample Collected[1]						
X7-SB547-0406	No Sample Collected[1]						
X7-SS548-0001	No Sample Collected[1]						
X7-SS548-0102	No Sample Collected[1]						
X7-SB548-0204	No Sample Collected[1]						
X7-SB548-0406	No Sample Collected[1]						
X7-SS549-0001	No Sample Collected[1]						
X7-SS549-0102	No Sample Collected[1]						
X7-SB549-0204	No Sample Collected[1]						
X7-SB549-0406	No Sample Collected[1]						
X7-SS550-0001	No Sample Collected[1]						
X7-SS550-0102	No Sample Collected[1]						
X7-SB550-0204	No Sample Collected[1]						
X7-SB550-0406	No Sample Collected[1]						
Northernmost Area of Northern Zone - 500-yard Rifle Range (Figure 2-4)							
X7-SS054-0002	10/4/2007	RFI-2007	HA	0-2	X		
X7-SS055-0002	10/4/2007	RFI-2007	HA	0-2	X	X	
X7-SB055-0203	9/8/2012	2	DPT	2-3	X		
X7-SB055-0304	9/8/2012	2	DPT	3-4	X		
X7-SS173-0002	10/7/2007	RFI-2007	HA	0-2	X	X	
X7-SS174-0002	10/7/2007	RFI-2007	HA	0-2	X	X	
X7-SB174-0203	9/8/2012	2	DPT	2-3	X		
X7-SB174-0304	9/8/2012	2	DPT	3-4	X		
X7-SS175-0002	10/7/2007	RFI-2007	HA	0-2	X	X	
X7-SS176-0002	10/7/2007	RFI-2007	HA	0-2	X		
X7-SS189-0002	10/9/2007	RFI-2007	HA	0-2	X	X	

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS190-0002	10/9/2007	RFI-2007	HA	0-2	X		
X7-SB190-0203	9/8/2012	2	DPT	2-3	X		
X7-SB190-0304	9/8/2012	2	DPT	3-4	X		
X7-SS274-0001	11/8/2011	1	HA	0-1	X		
X7-SS274-0102	11/8/2011	1	HA	1-2	X		
X7-SB274-0203	9/8/2012	2	DPT	2-3	X		
X7-SB274-0304	9/8/2012	2	DPT	3-4	X		
X7-SS275-0001	11/8/2011	1	HA	0-1	X		
X7-SS275-0102	11/8/2011	1	HA	1-2	X		
X7-SB275-0203	9/8/2012	2	DPT	2-3	X		
X7-SB275-0304	9/8/2012	2	DPT	3-4	X		
X7-SS276-0001	11/8/2011	1	HA	0-1	X		
X7-SS276-0102	11/8/2011	1	HA	1-2	X		
X7-SS277-0001	11/8/2011	1	HA	0-1	X		
X7-SS277-0102	11/8/2011	1	HA	1-2	X		
X7-SB277-0203	9/8/2012	2	DPT	2-3	X		
X7-SB277-0304	9/8/2012	2	DPT	3-4	X		
X7-SS278-0001	11/8/2011	1	HA	0-1	X		
X7-SS278-0102	11/8/2011	1	HA	1-2	X		
X7-SB278-0203	9/8/2012	2	DPT	2-3	X		
X7-SB278-0304	9/8/2012	2	DPT	3-4	X		
X7-SS279-0001	11/8/2011	1	HA	0-1	X		
X7-SS279-0102	11/8/2011	1	HA	1-2	X		
X7-SB279-0203	11/12/2011	1	DPT	2-3	X	X	
X7-SS280-0001	11/8/2011	1	HA	0-1	X		
X7-SS280-0102	11/8/2011	1	HA	1-2	X	X	
X7-SS281-0001	11/8/2011	1	HA	0-1	X		
X7-SS281-0102	11/8/2011	1	HA	1-2	X		
X7-SS282-0001	11/8/2011	1	HA	0-1	X		
X7-SS282-0102	11/8/2011	1	HA	1-2	X		
X7-SB282-0203	11/12/2011	1	HA	2-3	X		
X7-SS283-0001	11/8/2011	1	HA	0-1	X		
X7-SS283-0102	11/8/2011	1	HA	1-2	X		
X7-SB283-0203	9/8/2012	2	DPT	2-3	X		
X7-SB283-0304	9/8/2012	2	DPT	3-4	X		
X7-SS284-0001	11/8/2011	1	HA	0-1	X		

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS284-0102	11/8/2011	1	HA	1-2	X		
X7-SS285-0001	11/8/2011	1	HA	0-1	X		
X7-SB285-0102	9/8/2012	2	DPT	1-2	X		
X7-SB285-0203	9/8/2012	2	DPT	2-3	X		
X7-SB285-0304	9/8/2012	2	DPT	3-4	X		
X7-SS286-0001	11/8/2011	1	HA	0-1	X		
X7-SS287-0001	11/8/2011	1	HA	0-1	X	X	
X7-SS288-0001	11/8/2011	1	HA	0-1	X	X	
X7-SS289-0001	11/8/2011	1	HA	0-1	X		
X7-SS290-0001	11/8/2011	1	HA	0-1	X		
X7-SS290-0102	11/8/2011	1	HA	1-2	X		
X7-SS321-0001	11/12/2011	1	HA	0-1	X	X	
X7-SS321-0102	11/12/2011	1	HA	1-2	X		
X7-SS323-0001	11/12/2011	1	HA	0-1	X	X	
X7-SS323-0102	11/12/2011	1	HA	1-2	X		
X7-SS325-0001	11/12/2011	1	HA	0-1	X		
X7-SS325-0102	11/11/2011	1	HA	1-2	X		
X7-SS327-0001	11/12/2011	1	HA	0-1	X	X	
X7-SS329-0001	11/12/2011	1	HA	0-1	X	X	
X7-SS331-0001	11/12/2011	1	HA	0-1	X	X	
X7-SS331-0102	11/12/2011	1	HA	1-2	X		
X7-SS333-0001	11/12/2011	1	HA	0-1	X	X	
X7-SS333-0102	11/12/2011	1	HA	1-2	X		
X7-SS336-0001	11/12/2011	1	HA	0-1	X	X	
X7-SS336-0102	11/12/2011	1	HA	1-2	X		
X7-SS337-0001	11/12/2011	1	HA	0-1	X	X	
X7-SS342-0102	11/12/2011	1	HA	1-2	X	X	
X7-SB342-0203	9/8/2012	2	DPT	2-3	X		
X7-SB342-0304	9/8/2012	2	DPT	3-4	X		
X7-SS344-0001	11/12/2011	1	HA	0-1	X	X	
X7-SS344-0102	11/12/2011	1	HA	1-2	X		
X7-SS423-0001	11/14/2011	1	HA	0-1	X	X	
X7-SS423-0102	11/14/2011	1	HA	1-2	X		
X7-SS424-0001	11/14/2011	1	HA	0-1	X	X	
X7-SS424-0102	11/14/2011	1	HA	1-2	X	X	
X7-SS425-0001	11/14/2011	1	HA	0-1	X	X	

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS425-0102	11/14/2011	1	HA	1-2	X		
X7-SB426-0304	11/14/2011	1	DPT	3-4	X		
X7-SB427-0304	11/14/2011	1	DPT	3-4	X	X	
X7-SB428-0304	11/14/2011	1	DPT	3-4	X		
X7-SS429-0001	11/14/2011	1	HA	0-1	X	X	
X7-SB567-0001	9/9/2012	2	DPT	0-1	X		
X7-SB567-0102	9/9/2012	2	DPT	1-2	X		
X7-SB567-0203	9/9/2012	2	DPT	2-3	NA		
X7-SB567-0304	9/9/2012	2	DPT	3-4	NA		
X7-SB568-0001	9/9/2012	2	DPT	0-1	X		
X7-SB568-0102	9/9/2012	2	DPT	1-2	X	X	
X7-SB568-0203	9/9/2012	2	DPT	2-3	X		
X7-SB568-0304	9/9/2012	2	DPT	3-4	X		
X7-SB569-0001	9/9/2012	2	DPT	0-1	X		
X7-SB569-0102	9/9/2012	2	DPT	1-2	X	X	
X7-SB569-0203	9/9/2012	2	DPT	2-3	X		
X7-SB569-0304	9/9/2012	2	DPT	3-4	X		
X7-SB570-0001	9/9/2012	2	DPT	0-1	X		
X7-SB570-0102	9/9/2012	2	DPT	1-2	X		
X7-SB570-0203	9/9/2012	2	DPT	2-3	X		
X7-SB570-0304	9/9/2012	2	DPT	3-4	X		
X7-SB571-0001	9/9/2012	2	DPT	0-1	X		
X7-SB571-0102	9/9/2012	2	DPT	1-2	X		
X7-SB571-0203	9/9/2012	2	DPT	2-3	NA		
X7-SB571-0304	9/9/2012	2	DPT	3-4	NA		
X7-SB572-0001	9/9/2012	2	DPT	0-1	X		
X7-SB572-0102	9/9/2012	2	DPT	1-2	X		
X7-SB572-0203	9/9/2012	2	DPT	2-3	NA		
X7-SB572-0304	9/9/2012	2	DPT	3-4	NA		
X7-SB573-0001	9/8/2012	2	DPT	0-1	X		
X7-SB573-0102	9/8/2012	2	DPT	1-2	X		
X7-SB573-0203	9/8/2012	2	DPT	2-3	NA		
X7-SB573-0304	9/8/2012	2	DPT	3-4	NA		
X7-SB574-0001	9/8/2012	2	DPT	0-1	X		
X7-SB574-0102	9/8/2012	2	DPT	1-2	X		
X7-SB574-0203	9/8/2012	2	DPT	2-3	NA		

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UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
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SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB574-0304	9/8/2012	2	DPT	3-4	NA		
X7-SB575-0001	9/9/2012	2	DPT	0-1	X		
X7-SB575-0102	9/9/2012	2	DPT	1-2	X		
X7-SB575-0203	9/9/2012	2	DPT	2-3	NA		
X7-SB575-0304	9/9/2012	2	DPT	3-4	NA		
X7-SB576-0001	9/9/2012	2	DPT	0-1	X		
X7-SB576-0102	9/9/2012	2	DPT	1-2	X		
X7-SB576-0203	9/9/2012	2	DPT	2-3	NA		
X7-SB576-0304	9/9/2012	2	DPT	3-4	NA		
X7-SB577-0001	9/9/2012	2	DPT	0-1	X	X	
X7-SB577-0102	9/9/2012	2	DPT	1-2	X		
X7-SB577-0203	9/9/2012	2	DPT	2-3	NA		
X7-SB577-0304	9/9/2012	2	DPT	3-4	NA		
X7-SS607-0001	9/10/2012	2	DPT	0-1	X		
X7-SS607-0102	9/10/2012	2	DPT	1-2	X		
X7-SS607-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS607-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS608-0001	9/10/2012	2	DPT	0-1	X	X	
X7-SS608-0102	9/10/2012	2	DPT	1-2	X		
X7-SS608-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS608-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS609-0001	9/10/2012	2	DPT	0-1	X		
X7-SS609-0102	9/10/2012	2	DPT	1-2	X		
X7-SS609-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS609-0304	9/10/2012	2	DPT	3-4	NA		
Central Area of Northern Zone - 400-yard Firing Berm (Figure 2-4)							
X7-SS043-0002	10/3/2007	RFI-2007	HA	0-2	X		
X7-SS044-0002	10/3/2007	RFI-2007	HA	0-2	X	X	
X7-SS044-0102	9/7/2012	2	DPT	1-2	X		
X7-SB044-0203	9/7/2012	2	DPT	2-3	X		
X7-SS045-0002	10/3/2007	RFI-2007	HA	0-2	X	X	
X7-SB045-0203	9/7/2012	2	DPT	2-3	X		
X7-SB045-0304	9/7/2012	2	DPT	3-4	X		
X7-SB045-0405	9/8/2012	2	DPT	4-5	X		
X7-SB045-0506	9/8/2012	2	DPT	5-6	X		
X7-SS046-0002	10/3/2007	RFI-2007	HA	0-2	X	X	

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SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB574-0304	9/8/2012	2	DPT	3-4	NA		
X7-SB575-0001	9/9/2012	2	DPT	0-1	X		
X7-SB575-0102	9/9/2012	2	DPT	1-2	X		
X7-SB575-0203	9/9/2012	2	DPT	2-3	NA		
X7-SB575-0304	9/9/2012	2	DPT	3-4	NA		
X7-SB576-0001	9/9/2012	2	DPT	0-1	X		
X7-SB576-0102	9/9/2012	2	DPT	1-2	X		
X7-SB576-0203	9/9/2012	2	DPT	2-3	NA		
X7-SB576-0304	9/9/2012	2	DPT	3-4	NA		
X7-SB577-0001	9/9/2012	2	DPT	0-1	X	X	
X7-SB577-0102	9/9/2012	2	DPT	1-2	X		
X7-SB577-0203	9/9/2012	2	DPT	2-3	NA		
X7-SB577-0304	9/9/2012	2	DPT	3-4	NA		
X7-SS607-0001	9/10/2012	2	DPT	0-1	X		
X7-SS607-0102	9/10/2012	2	DPT	1-2	X		
X7-SS607-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS607-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS608-0001	9/10/2012	2	DPT	0-1	X	X	
X7-SS608-0102	9/10/2012	2	DPT	1-2	X		
X7-SS608-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS608-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS609-0001	9/10/2012	2	DPT	0-1	X		
X7-SS609-0102	9/10/2012	2	DPT	1-2	X		
X7-SS609-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS609-0304	9/10/2012	2	DPT	3-4	NA		
Central Area of Northern Zone - 400-yard Firing Berm (Figure 2-3)							
X7-SS043-0002	10/3/2007	RFI-2007	HA	0-2	X		
X7-SS044-0002	10/3/2007	RFI-2007	HA	0-2	X	X	
X7-SS044-0102	9/7/2012	2	DPT	1-2	X		
X7-SB044-0203	9/7/2012	2	DPT	2-3	X		
X7-SS045-0002	10/3/2007	RFI-2007	HA	0-2	X	X	
X7-SB045-0203	9/7/2012	2	DPT	2-3	X		
X7-SB045-0304	9/7/2012	2	DPT	3-4	X		
X7-SB045-0405	9/8/2012	2	DPT	4-5	X		
X7-SB045-0506	9/8/2012	2	DPT	5-6	X		
X7-SS046-0002	10/3/2007	RFI-2007	HA	0-2	X	X	

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
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NSA CRANE
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SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB046-0203	9/8/2012	2	DPT	2-3	X		
X7-SB046-0304	9/8/2012	2	DPT	3-4	X		
X7-SB046-0405	9/10/2012	2	DPT	4-5	X		
X7-SB046-0506	9/10/2012	2	DPT	5-6	X		
X7-SS047-0002	10/3/2007	RFI-2007	HA	0-2	X		
X7-SS048-0002	10/3/2007	RFI-2007	HA	0-2	X	X	
X7-SS057-0002	10/4/2007	RFI-2007	HA	0-2	X	X	
X7-SS177-0002	10/7/2007	RFI-2007	HA	0-2	X	X	
X7-SS178-0002	10/7/2007	RFI-2007	HA	0-2	X	X	
X7-SS179-0002	10/7/2007	RFI-2007	HA	0-2	X	X	
X7-SS180-0002	10/7/2007	RFI-2007	HA	0-2	X	X	
X7-SS181-0002	10/7/2007	RFI-2007	HA	0-2	X	X	
X7-SB181-0203	9/8/2012	2	DPT	X	X		
X7-SB181-0304	9/8/2012	2	DPT	3-4	X		
X7-SS182-0002	10/7/2007	RFI-2007	HA	0-2	X	X	
X7-SS291-0001	11/8/2011	1	HA	0-1	X		
X7-SS291-0102	11/8/2011	1	HA	1-2	X		
X7-SB291-0203	11/11/2011	1	HA	2-3	X	X	
X7-SB291-0304	9/7/2012	2	DPT	3-4	X		
X7-SB291-0405	9/7/2012	2	DPT	4-5	X		
X7-SS292-0001	11/8/2011	1	HA	0-1	X		
X7-SS292-0102	11/8/2011	1	HA	1-2	X		
X7-SS293-0001	11/8/2011	1	HA	0-1	X		
X7-SS294-0001	11/8/2011	1	HA	0-1	X		
X7-SS294-0102	11/8/2011	1	HA	1-2	X		
X7-SS295-0001	11/8/2011	1	HA	0-1	X		
X7-SS295-0102	11/8/2011	1	HA	1-2	X		
X7-SB295-0203	11/11/2011	1	HA	2-3	X		
X7-SB295-0304	9/8/2012	2	DPT	3-4	X	X	
X7-SB295-0405	9/8/2012	2	DPT	4-5	X		
X7-SS296-0001	11/8/2011	1	HA	0-1	X		
X7-SS296-0102	11/8/2011	1	HA	1-2	X		
X7-SB296-0203	11/11/2011	1	HA	2-3	X		
X7-SB296-0304	9/8/2012	2	DPT	3-4	X		
X7-SB296-0405	9/8/2012	2	DPT	4-5	X		
X7-SB296-0506	9/10/2012	2	DPT	5-6	X		

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB296-0607	9/10/2012	2	DPT	6-7	X		
X7-SS297-0001	11/7/2011	1	HA	0-1	X		
X7-SS297-0102	11/7/2011	1	HA	1-2	X		
X7-SB297-0203	11/11/2011	1	HA	2-3	X		
X7-SB297-0304	9/8/2012	2	DPT	3-4	X		
X7-SB297-0405	9/8/2012	2	DPT	4-5	X		
X7-SS298-0001	11/7/2011	1	HA	0-1	X		
X7-SS298-0102	11/7/2011	1	HA	1-2	X		
X7-SB298-0203	9/8/2012	2	DPT	2-3	X		
X7-SB298-0304	9/8/2012	2	DPT	3-4	X		
X7-SB298-0405	9/9/2012	2	DPT	4-5	X	X	
X7-SB298-0506	9/9/2012	2	DPT	5-6	X		
X7-SS299-0001	11/7/2011	1	HA	0-1	X		
X7-SS299-0102	11/7/2011	1	HA	1-2	X		
X7-SB299-0203	11/11/2011	1	HA	2-3	X		
X7-SS300-0001	11/7/2011	1	HA	0-1	X		
X7-SS300-0102	11/7/2011	1	HA	1-2	X		
X7-SB300-0203	9/8/2012	2	DPT	2-3	X		
X7-SB300-0304	9/8/2012	2	DPT	3-4	X		
X7-SB300-0405	9/10/2012	2	DPT	4-5	X		
X7-SB300-0506	9/10/2012	2	DPT	5-6	X		
X7-SS301-0001	11/7/2011	1	HA	0-1	X		
X7-SS301-0102	11/7/2011	1	HA	1-2	X		
X7-SB301-0203	11/11/2011	1	HA	2-3	X		
X7-SB301-0304	9/8/2012	2	DPT	3-4	X		
X7-SB301-0405	9/8/2012	2	DPT	4-5	X		
X7-SS302-0001	11/7/2011	1	HA	0-1	X		
X7-SS302-0102	11/7/2011	1	HA	1-2	X		
X7-SS303-0001	11/7/2011	1	HA	0-1	X		
X7-SS303-0102	11/7/2011	1	HA	1-2	X		
X7-SB303-0203	9/8/2012	2	DPT	2-3	X		
X7-SB303-0304	9/8/2012	2	DPT	3-4	X		
X7-SS304-0001	11/7/2011	1	HA	0-1	X		
X7-SS305-0001	11/8/2011	1	HA	0-1	X		
X7-SS305-0102	11/8/2011	1	HA	1-2	X		
X7-SS306-0001	11/8/2011	1	HA	0-1	X		

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS306-0102	11/8/2011	1	HA	1-2	X		
X7-SB306-0203	11/11/2011	1	HA	2-3	X		
X7-SS307-0001	11/8/2011	1	HA	0-1	X		
X7-SS307-0102	11/8/2011	1	HA	1-2	X		
X7-SS308-0001	11/7/2011	1	HA	0-1	X		
X7-SS308-0102	11/7/2011	1	HA	1-2	X		
X7-SB308-0203	11/11/2011	1	HA	2-3	X		
X7-SS345-0001	11/11/2011	1	HA	0-1	X		
X7-SS345-0102	11/11/2011	1	HA	1-2	X	X	
X7-SS347-0001	11/11/2011	1	HA	0-1	X		
X7-SS347-0102	11/11/2011	1	HA	1-2	X	X	
X7-SS349-0001	11/11/2011	1	HA	0-1	X		
X7-SS349-0102	11/11/2011	1	HA	1-2	X		
X7-SB349-0203	9/8/2012	2	DPT	2-3	X		
X7-SB349-0304	9/8/2012	2	DPT	3-4	X		
X7-SS351-0001	11/11/2011	1	HA	0-1	X	X	
X7-SS351-0102	11/11/2011	1	HA	1-2	X	X	
X7-SB351-0203	9/7/2012	2	DPT	2-3	X		
X7-SB351-0304	9/7/2012	2	DPT	3-4	X	X	
X7-SB351-0405	9/10/2012	2	DPT	4-5	X		
X7-SB351-0506	9/10/2012	2	DPT	5-6	X	X	
X7-SB351-0607	9/11/2012	2	DPT	6-7	X		
X7-SB351-0708	9/11/2012	2	DPT	7-8	X		
X7-SS353-0001	11/11/2011	1	HA	0-1	X	X	
X7-SS355-0001	11/11/2011	1	HA	0-1	X	X	
X7-SS355-0102	11/11/2011	1	HA	1-2	X		
X7-SS357-0001	11/11/2011	1	HA	0-1	X		
X7-SS357-0102	11/11/2011	1	HA	1-2	X		
X7-SS358-0001	11/11/2011	1	HA	0-1	X		
X7-SS358-0102	11/11/2011	1	HA	1-2	X		
X7-SB358-0203	9/8/2012	2	DPT	2-3	X		
X7-SB358-0304	9/8/2012	2	DPT	3-4	X		
X7-SB358-0405	9/10/2012	2	DPT	4-5	X		
X7-SB358-0506	9/10/2012	2	DPT	5-6	X	X	
X7-SB358-0607	9/11/2012	2	DPT	6-7	X		
X7-SB358-0708	9/11/2012	2	DPT	7-8	X		

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
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SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS360-0001	11/11/2011	1	HA	0-1	X		
X7-SS360-0102	11/11/2011	1	HA	1-2	X		
X7-SB360-0203	9/8/2012	2	DPT	2-3	X		
X7-SB360-0304	9/8/2012	2	DPT	3-4	X		
X7-SS361-0001	11/11/2011	1	HA	0-1	X		
X7-SS361-0102	11/11/2011	1	HA	1-2	X		
X7-SB361-0203	9/8/2012	2	DPT	2-3	X		
X7-SB361-0304	9/8/2012	2	DPT	3-4	X		
X7-SS363-0001	11/11/2011	1	HA	0-1	X	X	
X7-SS363-0102	11/11/2011	1	HA	1-2	X		
X7-SS365-0001	11/11/2011	1	HA	0-1	X		
X7-SS365-0102	11/11/2011	1	HA	1-2	X		
X7-SB365-0203	9/8/2012	2	DPT	2-3	X		
X7-SB365-0304	9/8/2012	2	DPT	3-4	X		
X7-SS368-0001	11/11/2011	1	HA	0-1	X		
X7-SS368-0102	11/11/2011	1	HA	1-2	X		
X7-SB368-0203	9/9/2012	2	DPT	2-3	X	X	
X7-SB368-0304	9/9/2012	2	DPT	3-4	X		
X7-SS369-0001	11/11/2011	1	HA	0-1	X		
X7-SS369-0102	11/11/2011	1	HA	1-2	X	X	
X7-SB369-0203	9/8/2012	2	DPT	2-3	X		
X7-SB369-0304	9/8/2012	2	DPT	3-4	X		
X7-SB369-0405	9/8/2012	2	DPT	4-5	X		
X7-SB369-0506	9/8/2012	2	DPT	5-6	X		
X7-SS391-0001	11/8/2011	1	HA	0-1	X		
X7-SS391-0102	11/8/2011	1	HA	1-2	X		
X7-SB391-0203	11/11/2011	1	HA	2-3	X		
X7-SS392-0001	11/8/2011	1	HA	0-1	X	X	
X7-SS393-0001	11/8/2011	1	HA	0-1	X		
X7-SS393-0102	11/8/2011	1	HA	1-2	X	X	
X7-SB393-0203	11/11/2011	1	HA	2-3	X		
X7-SS394-0001	11/8/2011	1	HA	0-1	X		
X7-SS394-0102	11/8/2011	1	HA	1-2	X		
X7-SB394-0203	11/11/2011	1	HA	2-3	X		
X7-SS395-0001	11/8/2011	1	HA	0-1	X		
X7-SS395-0102	11/8/2011	1	HA	1-2	X		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
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NSA CRANE
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SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB395-0203	11/11/2011	1	HA	2-3	X		
X7-SB395-0304	9/8/2012	2	HA	3-4	X		
X7-SB395-0405	9/8/2012	2	HA	4-5	X	X	
X7-SB395-0506	9/10/2012	2	HA	5-6	X		
X7-SB395-0607	9/10/2012	2	HA	6-7	X		
X7-SS396-0001	11/8/2011	1	HA	0-1	X		
X7-SS396-0102	11/8/2011	1	HA	1-2	X		
X7-SB396-0203	11/11/2011	1	HA	2-3	X		
X7-SB396-0304	No Sample Collected(3)						
X7-SB396-0405	No Sample Collected(3)						
X7-SS398-0001	11/11/2011	1	HA	0-1	X		
X7-SS398-0102	11/11/2011	1	HA	1-2	X		
X7-SB398-0203	9/7/2012	2	DPT	2-3	X		
X7-SB398-0304	9/7/2012	2	DPT	3-4	X		
X7-SB398-0405	9/8/2012	2	DPT	4-5	X		
X7-SB398-0506	9/8/2012	2	DPT	5-6	X		
X7-SS400-0001	11/11/2011	1	HA	0-1	X		
X7-SS401-0001	11/11/2011	1	HA	0-1	X	X	
X7-SS401-0102	11/11/2011	1	HA	1-2	X		
X7-SB401-0203	9/7/2012	2	DPT	2-3	X		
X7-SB401-0304	9/7/2012	2	DPT	3-4	X		
X7-SS402-0001	11/11/2011	1	HA	0-1	X	X	
X7-SS404-0001	11/11/2011	1	HA	0-1	X		
X7-SS404-0102	11/11/2011	1	HA	1-2	X		
X7-SS406-0001	11/11/2011	1	HA	0-1	X		
X7-SS407-0001	11/14/2011	1	HA	0-1	X	X	
X7-SS408-0001	11/14/2011	1	HA	0-1	X	X	
X7-SS408-0102	11/14/2011	1	HA	1-2	X		
X7-SB409-0304	11/14/2011	1	DPT	3-4	X		
X7-SB409-0405	9/7/2012	2	DPT	4-5	X		
X7-SB409-0506	9/7/2012	2	DPT	5-6	X		
X7-SS410-0001	11/14/2011	1	HA	0-1	X	X	
X7-SB411-0304	11/14/2011	1	DPT	3-4	X		
X7-SS412-0001	11/14/2011	1	HA	0-1	X	X	
X7-SS412-0102	11/14/2011	1	HA	1-2	X		
X7-SB413-0304	11/14/2011	1	DPT	3-4	X		

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NSA CRANE
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SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB413-0405	No Sample Collected[3]						
X7-SB413-0506	No Sample Collected[3]						
X7-SS414-0001	11/14/2011	1	HA	0-1	X	X	
X7-SS414-0102	11/14/2011	1	HA	1-2	X		
X7-SS415-0001	11/14/2011	1	HA	0-1	X	X	
X7-SS415-0102	11/14/2011	1	HA	1-2	X		
X7-SS416-0001	11/14/2011	1	HA	0-1	X	X	
X7-SB417-0304	11/14/2011	1	DPT	3-4	X		
X7-SB417-0405	11/14/2011	1	DPT	4-5	X		
X7-SB417-0506	11/14/2011	1	DPT	5-6	X		
X7-SB417-0607	9/8/2012	2	DPT	6-7	X		
X7-SS418-0001	11/14/2011	1	HA	0-1	X		
X7-SS420-0001	11/14/2011	1	HA	0-1	X		
X7-SS420-0102	11/14/2011	1	HA	1-2	X		
X7-SS420-0203	11/14/2011	1	HA	2-3	X		
X7-SS421-0001	11/14/2011	1	HA	0-1	X		
X7-SS421-0102	11/14/2011	1	HA	1-2	X		
X7-SS422-0001	11/14/2011	1	HA	0-1	X		
X7-SS422-0102	11/14/2011	1	HA	1-2	X	X	
X7-SS422-0203	11/14/2011	1	HA	2-3	X		
X7-SS551-0001	9/7/2012	2	DPT	0-1	X		
X7-SS551-0102	9/7/2012	2	DPT	1-2	X		
X7-SB551-0203	9/7/2012	2	DPT	2-3	X		
X7-SB551-0304	9/7/2012	2	DPT	3-4	X		
X7-SB551-0405	9/10/2012	2	DPT	4-5	X		
X7-SB551-0506	9/10/2012	2	DPT	5-6	X		
X7-SS552-0001	9/7/2012	2	DPT	0-1	X		
X7-SS552-0102	9/7/2012	2	DPT	1-2	X		
X7-SB552-0203	9/7/2012	2	DPT	2-3	X		
X7-SB552-0304	9/7/2012	2	DPT	3-4	X		
X7-SB552-0405	9/10/2012	2	DPT	4-5	X		
X7-SB552-0506	9/10/2012	2	DPT	5-6	X		
X7-SS553-0001	9/8/2012	2	DPT	0-1	X		
X7-SS553-0102	9/8/2012	2	DPT	1-2	X		
X7-SB553-0203	9/8/2012	2	DPT	2-3	X		

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB553-0304	9/8/2012	2	DPT	3-4	X		
X7-SS554-0001	9/8/2012	2	DPT	0-1	X		
X7-SS554-0102	9/8/2012	2	DPT	1-2	X		
X7-SB554-0203	9/8/2012	2	DPT	2-3	X		
X7-SB554-0304	9/8/2012	2	DPT	3-4	X		
X7-SB554-0405	9/10/2012	2	DPT	4-5	X		
X7-SB554-0506	9/10/2012	2	DPT	5-6	X		
X7-SS555-0001	9/8/2012	2	DPT	0-1	X		
X7-SS555-0102	9/8/2012	2	DPT	1-2	X		
X7-SB555-0203	9/8/2012	2	DPT	2-3	X		
X7-SB555-0304	9/8/2012	2	DPT	3-4	X		
X7-SS556-0001	9/8/2012	2	DPT	0-1	X		
X7-SS556-0102	9/8/2012	2	DPT	1-2	X		
X7-SB556-0203	9/8/2012	2	DPT	2-3	X		
X7-SB556-0304	9/8/2012	2	DPT	3-4	X		
X7-SB556-0405	9/10/2012	2	DPT	4-5	X		
X7-SB556-0506	9/10/2012	2	DPT	5-6	X		
X7-SB556-0607	9/11/2012	2	DPT	6-7	X		
X7-SB556-0708	9/11/2012	2	DPT	7-8	X		
X7-SS557-0001	9/8/2012	2	DPT	0-1	X		
X7-SS557-0102	9/8/2012	2	DPT	1-2	X		
X7-SB557-0203	9/8/2012	2	DPT	2-3	X		
X7-SB557-0304	9/8/2012	2	DPT	3-4	X		
X7-SB557-0405	9/10/2012	2	DPT	4-5	X		
X7-SB557-0506	9/10/2012	2	DPT	5-6	X		
X7-SS558-0001	9/8/2012	2	DPT	0-1	X		
X7-SS558-0102	9/8/2012	2	DPT	1-2	X		
X7-SB558-0203	9/8/2012	2	DPT	2-3	X		
X7-SB558-0304	9/8/2012	2	DPT	3-4	X		
X7-SB558-0405	9/10/2012	2	DPT	4-5	X		
X7-SB558-0506	9/10/2012	2	DPT	5-6	X	X	
X7-SB558-0607	9/10/2012	2	DPT	6-7	X		
X7-SB558-0708	9/10/2012	2	DPT	7-8	X		
X7-SS559-0001	9/8/2012	2	DPT	0-1	X		
X7-SS559-0102	9/8/2012	2	DPT	1-2	X		
X7-SB559-0203	9/8/2012	2	DPT	2-3	X		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
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SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB559-0304	9/8/2012	2	DPT	3-4	X		
X7-SS560-0001	9/8/2012	2	DPT	0-1	X		
X7-SS560-0102	9/8/2012	2	DPT	1-2	X		
X7-SB560-0203	9/8/2012	2	DPT	2-3	X		
X7-SB560-0304	9/8/2012	2	DPT	3-4	X		
X7-SS561-0001	9/8/2012	2	DPT	0-1	X		
X7-SS561-0102	9/8/2012	2	DPT	1-2	X		
X7-SB561-0203	9/8/2012	2	DPT	2-3	X	X	
X7-SB561-0304	9/8/2012	2	DPT	3-4	X		
X7-SB561-0405	9/10/2012	2	DPT	4-5	X		
X7-SB561-0506	9/10/2012	2	DPT	5-6	NA		
X7-SS562-0001	9/8/2012	2	DPT	0-1	X		
X7-SS562-0102	9/8/2012	2	DPT	1-2	X		
X7-SB562-0203	9/8/2012	2	DPT	2-3	X		
X7-SB562-0304	9/8/2012	2	DPT	3-4	X		
X7-SS563-0001	9/8/2012	2	DPT	0-1	X	X	
X7-SS563-0102	9/8/2012	2	DPT	1-2	X		
X7-SB563-0203	9/8/2012	2	DPT	2-3	X		
X7-SB563-0304	9/8/2012	2	DPT	3-4	X		
X7-SS564-0001	9/8/2012	2	DPT	0-1	X		
X7-SS564-0102	9/8/2012	2	DPT	1-2	X		
X7-SB564-0203	9/8/2012	2	DPT	2-3	X		
X7-SB564-0304	9/8/2012	2	DPT	3-4	X		
X7-SS565-0001	9/7/2012	2	DPT	0-1	X		
X7-SS565-0102	9/7/2012	2	DPT	1-2	X		
X7-SB565-0203	9/7/2012	2	DPT	2-3	X		
X7-SB565-0304	9/7/2012	2	DPT	3-4	X		
X7-SB565-0405	9/10/2012	2	DPT	4-5	X		
X7-SB565-0506	9/10/2012	2	DPT	5-6	X		
X7-SS566-0001	9/7/2012	2	DPT	0-1	X		
X7-SS566-0102	9/7/2012	2	DPT	1-2	X		
X7-SB566-0203	9/7/2012	2	DPT	2-3	X		
X7-SB566-0304	9/7/2012	2	DPT	3-4	X		
X7-SB566-0405	9/11/2012	2	DPT	4-5	X		
X7-SB566-0506	9/11/2012	2	DPT	5-6	NA		
X7-SS581-0001	9/7/2012	2	DPT	0-1	X		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS581-0102	9/7/2012	2	DPT	1-2	X		
X7-SS582-0001	9/7/2012	2	DPT	0-1	X		
X7-SS582-0102	9/7/2012	2	DPT	1-2	X		
X7-SB582-0203	9/7/2012	2	DPT	2-3	X		
X7-SB582-0304	9/7/2012	2	DPT	3-4	X		
X7-SB582-0405	9/10/2012	2	DPT	4-5	X		
X7-SB582-0506	9/10/2012	2	DPT	5-6	X		
X7-SS583-0001	9/7/2012	2	DPT	0-1	X		
X7-SS583-0102	9/7/2012	2	DPT	1-2	X		
X7-SB583-0203	9/7/2012	2	DPT	2-3	X		
X7-SB583-0304	9/7/2012	2	DPT	3-4	X		
X7-SB583-0405	9/10/2012	2	DPT	4-5	X		
X7-SB583-0506	9/10/2012	2	DPT	5-6	X		
X7-SS584-0001	9/7/2012	2	DPT	0-1	X	X	
X7-SS584-0102	9/7/2012	2	DPT	1-2	X		
X7-SB584-0203	9/10/2012	2	DPT	2-3	X		
X7-SB584-0304	9/10/2012	2	DPT	3-4	X		
X7-SS585-0001	9/7/2012	2	DPT	0-1	X		
X7-SS585-0102	9/7/2012	2	DPT	1-2	X		
X7-SS585-0203	9/7/2012	2	DPT	2-3	NA		
X7-SS585-0304	9/7/2012	2	DPT	3-4	NA		
X7-SS586-0001	9/10/2012	2	DPT	0-1	X		
X7-SS586-0102	9/10/2012	2	DPT	1-2	X	X	
X7-SS586-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS586-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS587-0001	9/10/2012	2	DPT	0-1	X	X	
X7-SS587-0102	9/10/2012	2	DPT	1-2	X		
X7-SS587-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS587-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS588-0001	9/10/2012	2	DPT	0-1	X		
X7-SS588-0102	9/10/2012	2	DPT	1-2	X		
X7-SB588-0203	9/10/2012	2	DPT	2-3	X		
X7-SB588-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS589-0001	9/10/2012	2	DPT	0-1	X		
X7-SS589-0102	9/10/2012	2	DPT	1-2	X		
X7-SB589-0203	9/10/2012	2	DPT	2-3	X		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB589-0304	9/10/2012	2	DPT	3-4	X		
X7-SS590-0001	9/10/2012	2	DPT	0-1	X		
X7-SS590-0102	9/10/2012	2	DPT	1-2	X		
X7-SS590-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS590-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS591-0001	9/10/2012	2	DPT	0-1	X		
X7-SS591-0102	9/10/2012	2	DPT	1-2	X		
X7-SB591-0203	9/10/2012	2	DPT	2-3	X		
X7-SB591-0304	9/10/2012	2	DPT	3-4	X		
X7-SS592-0001	9/10/2012	2	DPT	0-1	X		
X7-SS592-0102	9/10/2012	2	DPT	1-2	X		
X7-SB592-0203	9/10/2012	2	DPT	2-3	X		
X7-SB592-0304	9/10/2012	2	DPT	3-4	X		
X7-SB592-0405	9/10/2012	2	DPT	4-5	X		
X7-SB592-0506	9/10/2012	2	DPT	5-6	X	X	
X7-SB592-0607	9/11/2012	2	DPT	6-7	X		
X7-SB592-0708	9/11/2012	2	DPT	7-8	X		
X7-SS593-0001	9/10/2012	2	DPT	0-1	X		
X7-SS593-0102	9/10/2012	2	DPT	1-2	X		
X7-SB593-0203	9/10/2012	2	DPT	2-3	X		
X7-SB593-0304	9/10/2012	2	DPT	3-4	X	X	
X7-SS594-0001	9/10/2012	2	DPT	0-1	X		
X7-SS594-0102	9/10/2012	2	DPT	1-2	X		
X7-SB594-0203	9/10/2012	2	DPT	2-3	X		
X7-SB594-0304	9/10/2012	2	DPT	3-4	X		
X7-SS595-0001	9/10/2012	2	DPT	0-1	X	X	
X7-SS595-0102	9/10/2012	2	DPT	1-2	X		
X7-SS595-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS595-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS596-0001	9/10/2012	2	DPT	0-1	X		
X7-SS596-0102	9/10/2012	2	DPT	1-2	X		
X7-SS596-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS596-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS597-0001	9/10/2012	2	DPT	0-1	X		
X7-SS597-0102	9/10/2012	2	DPT	1-2	X		
X7-SS597-0203	9/10/2012	2	DPT	2-3	NA		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS597-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS598-0001	9/10/2012	2	DPT	0-1	X		
X7-SS598-0102	9/10/2012	2	DPT	1-2	X		
X7-SS598-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS598-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS599-0001	9/10/2012	2	DPT	0-1	X		
X7-SS599-0102	9/10/2012	2	DPT	1-2	X		
X7-SS599-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS599-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS600-0001	9/10/2012	2	DPT	0-1	X		
X7-SS600-0102	9/10/2012	2	DPT	1-2	X		
X7-SS600-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS600-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS601-0001	9/10/2012	2	DPT	0-1	X		
X7-SS601-0102	9/10/2012	2	DPT	1-2	X		
X7-SB601-0203	9/10/2012	2	DPT	2-3	X		
X7-SB601-0304	9/10/2012	2	DPT	3-4	X		
X7-SS602-0001	9/10/2012	2	DPT	0-1	X		
X7-SS602-0102	9/10/2012	2	DPT	1-2	X		
X7-SB602-0203	9/10/2012	2	DPT	2-3	X		
X7-SB602-0304	9/10/2012	2	DPT	3-4	X		
X7-SS603-0001	9/10/2012	2	DPT	0-1	X		
X7-SS603-0102	9/10/2012	2	DPT	1-2	X		
X7-SB603-0203	9/10/2012	2	DPT	2-3	X		
X7-SB603-0304	9/10/2012	2	DPT	3-4	X		
X7-SB603-0405	9/11/2012	2	DPT	4-5	X		
X7-SB603-0506	9/11/2012	2	DPT	5-6	X		
X7-SS604-0001	9/10/2012	2	DPT	0-1	X		
X7-SS604-0102	9/10/2012	2	DPT	1-2	X		
X7-SB604-0203	9/10/2012	2	DPT	2-3	X		
X7-SB604-0304	9/10/2012	2	DPT	3-4	X		
X7-SS605-0001	9/10/2012	2	DPT	0-1	X		
X7-SS605-0102	9/10/2012	2	DPT	1-2	X		
X7-SB605-0203	9/10/2012	2	DPT	2-3	X		
X7-SB605-0304	9/10/2012	2	DPT	3-4	X		
X7-SS606-0001	9/10/2012	2	DPT	0-1	X		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS606-0102	9/10/2012	2	DPT	1-2	X		
X7-SS606-0203	9/10/2012	2	DPT	2-3	NA		
X7-SS606-0304	9/10/2012	2	DPT	3-4	NA		
X7-SS610-0001	9/11/2012	2	DPT	0-1	X		
X7-SS610-0102	9/11/2012	2	DPT	1-2	X		
X7-SB610-0203	9/11/2012	2	DPT	2-3	X		
X7-SB610-0304	9/11/2012	2	DPT	3-4	NA		
X7-SS611-0001	9/11/2012	2	DPT	0-1	X		
X7-SS611-0102	9/11/2012	2	DPT	1-2	X		
X7-SB611-0203	9/11/2012	2	DPT	2-3	X	X	
X7-SB611-0304	9/11/2012	2	DPT	3-4	X		
X7-SB611-0405	9/11/2012	2	DPT	4-5	X		
X7-SS612-0001	9/11/2012	2	DPT	0-1	X		
X7-SS612-0102	9/11/2012	2	DPT	1-2	X		
X7-SB612-0203	9/11/2012	2	DPT	2-3	X		
X7-SB612-0304	9/11/2012	2	DPT	3-4	X		
X7-SS613-0001	9/11/2012	2	DPT	0-1	X		
X7-SS613-0102	9/11/2012	2	DPT	1-2	X		
X7-SB613-0203	9/11/2012	2	DPT	2-3	X		
X7-SB613-0304	9/11/2012	2	DPT	3-4	X		
X7-SS614-0001	9/11/2012	2	DPT	0-1	X		
X7-SS614-0102	9/11/2012	2	DPT	1-2	X		
X7-SS614-0203	9/11/2012	2	DPT	2-3	NA		
X7-SS614-0304	9/11/2012	2	DPT	3-4	NA		
X7-SS615-0001	9/11/2012	2	DPT	0-1	X		
X7-SS615-0102	9/11/2012	2	DPT	1-2	X		
X7-SB615-0203	9/11/2012	2	DPT	2-3	X		
X7-SB615-0304	9/11/2012	2	DPT	3-4	X	X	
X7-SS616-0001	9/11/2012	2	DPT	0-1	X		
X7-SS616-0102	9/11/2012	2	DPT	1-2	X		
X7-SB616-0203	9/11/2012	2	DPT	2-3	X		
X7-SB616-0304	9/11/2012	2	DPT	3-4	X		
X7-SS617-0001	9/11/2012	2	DPT	0-1	X		
X7-SS617-0102	9/11/2012	2	DPT	1-2	X		
X7-SS617-0203	9/11/2012	2	DPT	2-3	NA		
X7-SS617-0304	9/11/2012	2	DPT	3-4	NA		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS618-0001	9/11/2012	2	DPT	0-1	X		
X7-SS618-0102	9/11/2012	2	DPT	1-2	X		
X7-SS618-0203	9/11/2012	2	DPT	2-3	X		
X7-SS618-0304	9/11/2012	2	DPT	3-4	NA		
X7-SS619-0001	9/11/2012	2	DPT	0-1	X		
X7-SS619-0102	9/11/2012	2	DPT	1-2	X		
X7-SB619-0203	9/11/2012	2	DPT	2-3	X		
X7-SB619-0304	9/11/2012	2	DPT	3-4	X		
X7-SB619-0405	9/11/2012	2	DPT	4-5	X		
X7-SB619-0506	9/11/2012	2	DPT	5-6	X		
X7-SS620-0001	9/11/2012	2	DPT	0-1	X		
X7-SS620-0102	9/11/2012	2	DPT	1-2	X		
X7-SB620-0203	9/11/2012	2	DPT	2-3	X	X	
X7-SB620-0304	9/11/2012	2	DPT	3-4	X		
X7-SS621-0001	9/11/2012	2	DPT	0-1	X		
X7-SS621-0102	9/11/2012	2	DPT	1-2	X	X	
X7-SB621-0203	9/11/2012	2	DPT	2-3	X		
X7-SB621-0304	9/11/2012	2	DPT	3-4	X		
X7-SS622-0001	9/11/2012	2	DPT	0-1	X		
X7-SS622-0102	9/11/2012	2	DPT	1-2	X		
X7-SB622-0203	9/11/2012	2	DPT	2-3	X		
X7-SB622-0304	9/11/2012	2	DPT	3-4	X		
X7-SS623-0001	9/11/2012	2	DPT	0-1	X		
X7-SS623-0102	9/11/2012	2	DPT	1-2	X		
X7-SS623-0203	9/11/2012	2	DPT	2-3	NA		
X7-SS623-0304	9/11/2012	2	DPT	3-4	NA		
X7-SS624-0001	9/11/2012	2	DPT	0-1	X	X	
X7-SS624-0102	9/11/2012	2	DPT	1-2	X		
X7-SB624-0203	9/11/2012	2	DPT	2-3	X		
X7-SB624-0304	9/11/2012	2	DPT	3-4	X		
X7-SB624-0405	10/3/2012	2	DPT	4-5	X		
X7-SB624-0506	10/3/2012	2	DPT	5-6	X		
X7-SB624-0607	10/3/2012	2	DPT	6-7	X		
X7-SB624-0708	10/3/2012	2	DPT	7-8	X		
X7-SS625-0001	9/11/2012	2	DPT	0-1	X		
X7-SS625-0102	9/11/2012	2	DPT	1-2	X		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB625-0203	9/11/2012	2	DPT	2-3	X		
X7-SB625-0304	9/11/2012	2	DPT	3-4	X		
X7-SB625-0405	10/3/2012	2	DPT	4-5	X		
X7-SB625-0506	10/3/2012	2	DPT	5-6	X		
X7-SB625-0607	10/3/2012	2	DPT	6-7	X		
X7-SB625-0708	10/3/2012	2	DPT	7-8	NA		
X7-SS626-0001	9/11/2012	2	DPT	0-1	X	X	
X7-SS626-0102	9/11/2012	2	DPT	1-2	X		
X7-SB626-0203	9/11/2012	2	DPT	2-3	X		
X7-SB626-0304	9/11/2012	2	DPT	3-4	X		
X7-SS627-0001	9/11/2012	2	DPT	0-1	X		
X7-SS627-0102	9/11/2012	2	DPT	1-2	X	X	
X7-SB627-0203	9/11/2012	2	DPT	2-3	X		
X7-SB627-0304	9/11/2012	2	DPT	3-4	X		
X7-SS628-0001	9/11/2012	2	DPT	0-1	X		
X7-SS628-0102	9/11/2012	2	DPT	1-2	X		
X7-SS628-0203	9/11/2012	2	DPT	2-3	NA		
X7-SS628-0304	9/11/2012	2	DPT	3-4	NA		
X7-SS629-0001	10/3/2012	2	DPT	0-1	X		
X7-SS629-0102	10/3/2012	2	DPT	1-2	X		
X7-SB629-0203	10/3/2012	2	DPT	2-3	X		
X7-SB629-0304	10/3/2012	2	DPT	3-4	X		
X7-SB629-0405	10/6/2012	2	DPT	4-5	X		
X7-SB629-0506	10/6/2012	2	DPT	5-6	X		
X7-SS630-0001	10/3/2012	2	DPT	0-1	X		
X7-SS630-0102	10/3/2012	2	DPT	1-2	X		
X7-SB630-0203	10/3/2012	2	DPT	2-3	X		
X7-SB630-0304	10/3/2012	2	DPT	3-4	X		
X7-SS631-0001	10/3/2012	2	DPT	0-1	X		
X7-SS631-0102	10/3/2012	2	DPT	1-2	X		
X7-SB631-0203	10/3/2012	2	DPT	2-3	X		
X7-SS632-0001	10/3/2012	2	DPT	0-1	X		
X7-SS632-0102	10/3/2012	2	DPT	1-2	X		
X7-SB632-0203	10/3/2012	2	DPT	2-3	X		
X7-SB632-0304	10/3/2012	2	DPT	3-4	X		
X7-SB632-0405	10/3/2012	2	DPT	4-5	X		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
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SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB632-0506	10/3/2012	2	DPT	5-6	X		
X7-SS633-0001	10/3/2012	2	DPT	0-1	X		
X7-SS633-0102	10/3/2012	2	DPT	1-2	X		
X7-SB633-0203	10/3/2012	2	DPT	2-3	X		
X7-SB633-0304	10/3/2012	2	DPT	3-4	X		
X7-SS634-0001	10/3/2012	2	DPT	0-1	X		
X7-SS634-0102	10/3/2012	2	DPT	1-2	X		
X7-SB634-0203	10/3/2012	2	DPT	2-3	X		
X7-SB634-0304	10/3/2012	2	DPT	3-4	X		
X7-SS635-0001	10/3/2012	2	DPT	0-1	X		
X7-SS635-0102	10/3/2012	2	DPT	1-2	X		
X7-SB635-0203	10/3/2012	2	DPT	2-3	X		
X7-SB635-0304	10/3/2012	2	DPT	3-4	X		
X7-SB635-0405	10/3/2012	2	DPT	4-5	X		
X7-SB635-0506	10/3/2012	2	DPT	5-6	X		
X7-SS636-0001	10/3/2012	2	DPT	0-1	X		
X7-SS636-0102	10/3/2012	2	DPT	1-2	X		
X7-SB636-0203	10/3/2012	2	DPT	2-3	X		
X7-SB636-0304	10/3/2012	2	DPT	3-4	X		
X7-SS637-0001	10/3/2012	2	DPT	0-1	X		
X7-SS637-0102	10/3/2012	2	DPT	1-2	X		
X7-SB637-0203	10/3/2012	2	DPT	2-3	X		
X7-SB637-0304	10/3/2012	2	DPT	3-4	X		
X7-SB637-0405	10/6/2012	2	DPT	4-5	X		
X7-SB637-0506	10/6/2012	2	DPT	5-6	X		
X7-SS638-0001	10/3/2012	2	DPT	0-1	X		
X7-SS638-0102	10/3/2012	2	DPT	1-2	X		
X7-SB638-0203	10/3/2012	2	DPT	2-3	X		
X7-SB638-0304	10/3/2012	2	DPT	3-4	X		
X7-SB638-0405	10/6/2012	2	DPT	4-5	X	X	
X7-SB638-0506	10/6/2012	2	DPT	5-6	X		
X7-SS639-0001	10/3/2012	2	DPT	0-1	X		
X7-SS639-0102	10/3/2012	2	DPT	1-2	X		
X7-SB639-0203	10/3/2012	2	DPT	2-3	X		
X7-SB639-0304	10/3/2012	2	DPT	3-4	X		
X7-SS640-0001	10/3/2012	2	DPT	0-1	X		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
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NSA CRANE
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SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS640-0102	10/3/2012	2	DPT	1-2	X		
X7-SB640-0203	10/3/2012	2	DPT	2-3	X		
X7-SB640-0304	10/3/2012	2	DPT	3-4	X		
X7-SS641-0001	10/3/2012	2	DPT	0-1	X		
X7-SS641-0102	10/3/2012	2	DPT	1-2	X		
X7-SB641-0203	10/3/2012	2	DPT	2-3	X		
X7-SB641-0304	10/3/2012	2	DPT	3-4	X		
X7-SS642-0001	10/3/2012	2	DPT	0-1	X		
X7-SS642-0102	10/3/2012	2	DPT	1-2	X		
X7-SB642-0203	10/3/2012	2	DPT	2-3	X		
X7-SB642-0304	10/3/2012	2	DPT	3-4	X		
X7-SS643-0001	10/3/2012	2	DPT	0-1	X	X	
X7-SS643-0102	10/3/2012	2	DPT	1-2	X		
X7-SB643-0203	10/3/2012	2	DPT	2-3	X		
X7-SB643-0304	10/3/2012	2	DPT	3-4	X		
X7-SS644-0001	10/3/2012	2	DPT	0-1	X		
X7-SS644-0102	10/3/2012	2	DPT	1-2	X		
X7-SB644-0203	10/3/2012	2	DPT	2-3	X		
X7-SB644-0304	10/3/2012	2	DPT	3-4	X		
X7-SS645-0001	10/3/2012	2	DPT	0-1	X		
X7-SS645-0102	10/3/2012	2	DPT	1-2	X		
X7-SB645-0203	10/3/2012	2	DPT	2-3	X		
X7-SB645-0304	10/3/2012	2	DPT	3-4	X		
X7-SS646-0001	10/3/2012	2	DPT	0-1	X		
X7-SS646-0102	10/3/2012	2	DPT	1-2	X	X	
X7-SB646-0203	10/3/2012	2	DPT	2-3	X		
X7-SB646-0304	10/3/2012	2	DPT	3-4	X		
X7-SS647-0001	10/3/2012	2	DPT	0-1	X		
X7-SS647-0102	10/3/2012	2	DPT	1-2	X		
X7-SB647-0203	10/3/2012	2	DPT	2-3	X		
X7-SB647-0304	10/3/2012	2	DPT	3-4	X		
X7-SS648-0001	10/3/2012	2	DPT	0-1	X		
X7-SS648-0102	10/3/2012	2	DPT	1-2	X		
X7-SB648-0203	10/3/2012	2	DPT	2-3	X		
X7-SB648-0304	10/3/2012	2	DPT	3-4	X		
X7-SS649-0001	10/3/2012	2	DPT	0-1	X		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS649-0102	10/3/2012	2	DPT	1-2	X		
X7-SB649-0203	10/3/2012	2	DPT	2-3	X		
X7-SB649-0304	10/3/2012	2	DPT	3-4	X		
X7-SS650-0001	10/3/2012	2	DPT	0-1	X		
X7-SS650-0102	10/3/2012	2	DPT	1-2	X		
X7-SB650-0203	10/3/2012	2	DPT	2-3	X		
X7-SB650-0304	10/3/2012	2	DPT	3-4	NA		
X7-SS651-0001	10/3/2012	2	DPT	0-1	X		
X7-SS651-0102	10/3/2012	2	DPT	1-2	X	X	
X7-SB651-0203	10/3/2012	2	DPT	2-3	X		
X7-SB651-0304	10/3/2012	2	DPT	3-4	X		
X7-SS652-0001	10/3/2012	2	DPT	0-1	X	X	
X7-SS652-0102	10/3/2012	2	DPT	1-2	X		
X7-SB652-0203	10/3/2012	2	DPT	2-3	X		
X7-SB652-0304	10/3/2012	2	DPT	3-4	NA		
X7-SS653-0001	10/3/2012	2	DPT	0-1	X		
X7-SS653-0102	10/3/2012	2	DPT	1-2	X		
X7-SB653-0203	10/3/2012	2	DPT	2-3	X		
X7-SB653-0304	10/3/2012	2	DPT	3-4	X		
X7-SS654-0001	10/3/2012	2	DPT	0-1	X		
X7-SS654-0102	10/3/2012	2	DPT	1-2	X		
X7-SB654-0203	10/3/2012	2	DPT	2-3	X		
X7-SB654-0304	10/3/2012	2	DPT	3-4	X		
X7-SS655-0001	10/3/2012	2	DPT	0-1	X		
X7-SS655-0102	10/3/2012	2	DPT	1-2	X		
X7-SB655-0203	10/3/2012	2	DPT	2-3	X		
X7-SB655-0304	10/3/2012	2	DPT	3-4	X		
X7-SS656-0001	10/3/2012	2	DPT	0-1	X	X	
X7-SS656-0102	10/3/2012	2	DPT	1-2	X	X	
X7-SB656-0203	10/3/2012	2	DPT	2-3	X		
X7-SB656-0304	10/3/2012	2	DPT	3-4	X		
X7-SS657-0001	10/3/2012	2	DPT	0-1	X		
X7-SS657-0102	10/3/2012	2	DPT	1-2	X		
X7-SB657-0203	10/3/2012	2	DPT	2-3	X		
X7-SB657-0304	10/3/2012	2	DPT	3-4	X		
X7-SB657-0405	10/6/2012	2	DPT	4-5	X		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
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SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB657-0506	10/6/2012	2	DPT	5-6	X		
X7-SS658-0001	10/3/2012	2	DPT	0-1	X		
X7-SS658-0102	10/3/2012	2	DPT	1-2	X		
X7-SB658-0203	10/3/2012	2	DPT	2-3	X		
X7-SB658-0304	10/3/2012	2	DPT	3-4	X		
X7-SS659-0001	10/3/2012	2	DPT	0-1	X	X	
X7-SS659-0102	10/3/2012	2	DPT	1-2	X		
X7-SB659-0203	10/3/2012	2	DPT	2-3	X		
X7-SB659-0304	10/3/2012	2	DPT	3-4	NA		
X7-SS660-0001	10/3/2012	2	DPT	0-1	X		
X7-SS660-0102	10/3/2012	2	DPT	1-2	X		
X7-SB660-0203	10/3/2012	2	DPT	2-3	X		
X7-SB660-0304	10/3/2012	2	DPT	3-4	X		
X7-SS661-0001	10/3/2012	2	DPT	0-1	X	X	
X7-SS661-0102	10/3/2012	2	DPT	1-2	X		
X7-SB661-0203	10/3/2012	2	DPT	2-3	X		
X7-SB661-0304	10/3/2012	2	DPT	3-4	NA		
X7-SS662-0001	10/3/2012	2	DPT	0-1	X	X	
X7-SS662-0102	10/3/2012	2	DPT	1-2	X		
X7-SB662-0203	10/3/2012	2	DPT	2-3	X		
X7-SB662-0304	10/3/2012	2	DPT	3-4	NA		
X7-SS663-0001	10/3/2012	2	DPT	0-1	X		
X7-SS663-0102	10/3/2012	2	DPT	1-2	X		
X7-SB663-0203	10/3/2012	2	DPT	2-3	X		
X7-SB663-0304	10/3/2012	2	DPT	3-4	NA		
X7-SS664-0001	10/4/2012	2	DPT	0-1	X		
X7-SS664-0102	10/4/2012	2	DPT	1-2	X		
X7-SB664-0203	10/4/2012	2	DPT	2-3	NA		
X7-SB664-0304	10/4/2012	2	DPT	3-4	NA		
X7-SS665-0001	10/4/2012	2	DPT	0-1	X		
X7-SS665-0102	10/4/2012	2	DPT	1-2	X		
X7-SB665-0203	10/4/2012	2	DPT	2-3	NA		
X7-SB665-0304	10/4/2012	2	DPT	3-4	NA		
X7-SS666-0001	10/4/2012	2	DPT	0-1	X		
X7-SS666-0102	10/4/2012	2	DPT	1-2	X		
X7-SB666-0203	10/4/2012	2	DPT	2-3	NA		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB666-0304	10/4/2012	2	DPT	3-4	NA		
X7-SS667-0001	10/4/2012	2	DPT	0-1	X		
X7-SS667-0102	10/4/2012	2	DPT	1-2	X		
X7-SB667-0203	10/4/2012	2	DPT	2-3	X		
X7-SB667-0304	10/4/2012	2	DPT	3-4	X		
X7-SS668-0001	10/4/2012	2	DPT	0-1	X	X	
X7-SS668-0102	10/4/2012	2	DPT	1-2	X	X	
X7-SB668-0203	10/4/2012	2	DPT	2-3	X		
X7-SB668-0304	10/4/2012	2	DPT	3-4	X		
X7-SS669-0001	10/4/2012	2	DPT	0-1	X		
X7-SS669-0102	10/4/2012	2	DPT	1-2	X		
X7-SB669-0203	10/4/2012	2	DPT	2-3	X		
X7-SB669-0304	10/4/2012	2	DPT	3-4	X		
X7-SS670-0001	10/4/2012	2	DPT	0-1	X		
X7-SS670-0102	10/4/2012	2	DPT	1-2	X		
X7-SB670-0203	10/4/2012	2	DPT	2-3	X		
X7-SB670-0304	10/4/2012	2	DPT	3-4	X		
X7-SS671-0001	10/4/2012	2	DPT	0-1	X		
X7-SS671-0102	10/4/2012	2	DPT	1-2	X		
X7-SB671-0203	10/4/2012	2	DPT	2-3	X		
X7-SB671-0304	10/4/2012	2	DPT	3-4	NA		
X7-SS672-0001	10/4/2012	2	DPT	0-1	X		
X7-SS672-0102	10/4/2012	2	DPT	1-2	X		
X7-SB672-0203	10/4/2012	2	DPT	2-3	X		
X7-SB672-0304	10/4/2012	2	DPT	3-4	NA		
X7-SS673-0001	10/4/2012	2	DPT	0-1	X		
X7-SS673-0102	10/4/2012	2	DPT	1-2	X		
X7-SB673-0203	10/4/2012	2	DPT	2-3	X		
X7-SB673-0304	10/4/2012	2	DPT	3-4	NA		
X7-SS674-0001	10/4/2012	2	DPT	0-1	X		
X7-SS674-0102	10/4/2012	2	DPT	1-2	X		
X7-SB674-0203	10/4/2012	2	DPT	2-3	X		
X7-SB674-0304	10/4/2012	2	DPT	3-4	NA		
X7-SS675-0001	10/4/2012	2	DPT	0-1	X		
X7-SS675-0102	10/4/2012	2	DPT	1-2	X		
X7-SB675-0203	10/4/2012	2	DPT	2-3	X		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB675-0304	10/4/2012	2	DPT	3-4	X		
X7-SS676-0001	10/4/2012	2	DPT	0-1	X		
X7-SS676-0102	10/4/2012	2	DPT	1-2	X		
X7-SB676-0203	10/4/2012	2	DPT	2-3	X		
X7-SB676-0304	10/4/2012	2	DPT	3-4	X		
X7-SS677-0001	10/4/2012	2	DPT	0-1	X		
X7-SS677-0102	10/4/2012	2	DPT	1-2	X		
X7-SB677-0203	10/4/2012	2	DPT	2-3	X		
X7-SB677-0304	10/4/2012	2	DPT	3-4	X		
X7-SS678-0001	10/4/2012	2	DPT	0-1	X		
X7-SS678-0102	10/4/2012	2	DPT	1-2	X		
X7-SB678-0203	10/4/2012	2	DPT	2-3	X		
X7-SB678-0304	10/4/2012	2	DPT	3-4	X		
X7-SS679-0001	10/6/2012	2	DPT	0-1	X		
X7-SS679-0102	10/6/2012	2	DPT	1-2	X		
X7-SB679-0203	10/6/2012	2	DPT	2-3	X		
X7-SB679-0304	10/6/2012	2	DPT	3-4	X		
X7-SS680-0001	10/6/2012	2	DPT	0-1	X	X	
X7-SS680-0102	10/6/2012	2	DPT	1-2	X	X	
X7-SB680-0203	10/6/2012	2	DPT	2-3	X		
X7-SB680-0304	10/6/2012	2	DPT	3-4	X		
X7-SS681-0001	10/6/2012	2	DPT	0-1	X	X	
X7-SS681-0102	10/6/2012	2	DPT	1-2	X		
X7-SB681-0203	10/6/2012	2	DPT	2-3	X		
X7-SB681-0304	10/6/2012	2	DPT	3-4	NA		
X7-SS682-0001	10/6/2012	2	DPT	0-1	X	X	
X7-SS682-0102	10/6/2012	2	DPT	1-2	X		
X7-SB682-0203	10/6/2012	2	DPT	2-3	X		
X7-SB682-0304	10/6/2012	2	DPT	3-4	NA		
X7-SS683-0001	10/6/2012	2	DPT	0-1	X		
X7-SS683-0102	10/6/2012	2	DPT	1-2	X		
X7-SB683-0203	10/6/2012	2	DPT	2-3	NA		
X7-SB683-0304	10/6/2012	2	DPT	3-4	NA		
X7-SS684-0001	10/4/2012	2	DPT	0-1	X		
X7-SS684-0102	10/4/2012	2	DPT	1-2	X		
X7-SB684-0203	10/4/2012	2	DPT	2-3	NA		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB684-0304	10/4/2012	2	DPT	3-4	NA		
X7-SS685-0001	10/4/2012	2	DPT	0-1	X		
X7-SS685-0102	10/4/2012	2	DPT	1-2	X		
X7-SB685-0203	10/4/2012	2	DPT	2-3	NA		
X7-SB685-0304	10/4/2012	2	DPT	3-4	NA		
X7-SS686-0001	10/4/2012	2	DPT	0-1	X		
X7-SS686-0102	10/4/2012	2	DPT	1-2	X		
X7-SB686-0203	10/4/2012	2	DPT	2-3	X		
X7-SB686-0304	10/4/2012	2	DPT	3-4	NA		
X7-SS687-0001	10/4/2012	2	DPT	0-1	X	X	
X7-SS687-0102	10/4/2012	2	DPT	1-2	X		
X7-SB687-0203	10/4/2012	2	DPT	2-3	X		
X7-SB687-0304	10/4/2012	2	DPT	3-4	NA		
X7-SS688-0001	10/8/2012	2	DPT	0-1	X		
X7-SS688-0102	10/8/2012	2	DPT	1-2	X		
X7-SB688-0203	10/8/2012	2	DPT	2-3	NA		
X7-SB688-0304	10/8/2012	2	DPT	3-4	NA		
X7-SS689-0001	10/8/2012	2	DPT	0-1	X		
X7-SS689-0102	10/8/2012	2	DPT	1-2	X		
X7-SB689-0203	10/8/2012	2	DPT	2-3	X		
X7-SB689-0304	10/8/2012	2	DPT	3-4	NA		
X7-SS690-0001	10/8/2012	2	DPT	0-1	X		
X7-SS690-0102	10/8/2012	2	DPT	1-2	X		
X7-SB690-0203	10/8/2012	2	DPT	2-3	NA		
X7-SB690-0304	10/8/2012	2	DPT	3-4	NA		
X7-SS691-0001	10/8/2012	2	DPT	0-1	X		
X7-SS691-0102	10/8/2012	2	DPT	1-2	X		
X7-SB691-0203	10/8/2012	2	DPT	2-3	X	X	
X7-SB691-0304	10/8/2012	2	DPT	3-4	X		
X7-SS692-0001	10/8/2012	2	DPT	0-1	X		
X7-SS692-0102	10/8/2012	2	DPT	1-2	X		
X7-SB692-0203	10/8/2012	2	DPT	2-3	X		
X7-SB692-0304	10/8/2012	2	DPT	3-4	X		
X7-SS693-0001	10/8/2012	2	DPT	0-1	X		
X7-SS693-0102	10/8/2012	2	DPT	1-2	X		
X7-SB693-0203	10/8/2012	2	DPT	2-3	NA		

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SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB693-0304	10/8/2012	2	DPT	3-4	NA		
X7-SS694-0001	10/8/2012	2	DPT	0-1	X	X	
X7-SS694-0102	10/8/2012	2	DPT	1-2	X		
X7-SB694-0203	10/8/2012	2	DPT	2-3	X		
X7-SB694-0304	10/8/2012	2	DPT	3-4	NA		
X7-SS695-0001	10/8/2012	2	DPT	0-1	X		
X7-SS695-0102	10/8/2012	2	DPT	1-2	X		
X7-SB695-0203	10/8/2012	2	DPT	2-3	NA		
X7-SB695-0304	10/8/2012	2	DPT	3-4	NA		
X7-SS696-0001	10/8/2012	2	DPT	0-1	X		
X7-SS696-0102	10/8/2012	2	DPT	1-2	X		
X7-SB696-0203	10/8/2012	2	DPT	2-3	X	X	
X7-SB696-0304	10/8/2012	2	DPT	3-4	X		
X7-SS697-0001	10/8/2012	2	DPT	0-1	X		
X7-SS697-0102	10/8/2012	2	DPT	1-2	X		
X7-SB697-0203	10/8/2012	2	DPT	2-3	NA		
X7-SB697-0304	10/8/2012	2	DPT	3-4	NA		
X7-SS698-0001	10/8/2012	2	DPT	0-1	X		
X7-SS698-0102	10/8/2012	2	DPT	1-2	X		
X7-SB698-0203	10/8/2012	2	DPT	2-3	NA		
X7-SB698-0304	10/8/2012	2	DPT	3-4	NA		
X7-SS699-0001	10/8/2012	2	DPT	0-1	X		
X7-SS699-0102	10/8/2012	2	DPT	1-2	X		
X7-SB699-0203	10/8/2012	2	DPT	2-3	NA		
X7-SB699-0304	10/8/2012	2	DPT	3-4	NA		
X7-SS700-0001	10/8/2012	2	DPT	0-1	X		
X7-SS700-0102	10/8/2012	2	DPT	1-2	X		
X7-SB700-0203	10/8/2012	2	DPT	2-3	NA		
X7-SB700-0304	10/8/2012	2	DPT	3-4	NA		
X7-SS701-0001	10/8/2012	2	DPT	0-1	X		
X7-SS701-0102	10/8/2012	2	DPT	1-2	X		
X7-SB701-0203	10/8/2012	2	DPT	2-3	X		
X7-SB701-0304	10/8/2012	2	DPT	3-4	X		
X7-SS702-0001	10/8/2012	2	DPT	0-1	X		
X7-SS702-0102	10/8/2012	2	DPT	1-2	X		
X7-SB702-0203	10/8/2012	2	DPT	2-3	NA		

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB702-0304	10/8/2012	2	DPT	3-4	NA		
X7-SS703-0001	10/8/2012	2	DPT	0-1	X		
X7-SS703-0102	10/8/2012	2	DPT	1-2	X		
X7-SB703-0203	10/8/2012	2	DPT	2-3	NA		
X7-SB703-0304	10/8/2012	2	DPT	3-4	NA		
Southernmost Area of Northern Zone - Dirt Mound (Figure 2-5)							
X7-SS038-0002	10/3/2007	RFI-2007	HA	0-2	X		
X7-SB038-0203	9/8/2012	2	DPT	2-3	X		
X7-SB038-0304	9/8/2012	2	DPT	3-4	X		
X7-SS039-0002	10/3/2007	RFI-2007	HA	0-2	X	X	
X7-SB039-0203	9/8/2012	2	DPT	2-3	X	X	
X7-SB039-0304	9/8/2012	2	DPT	3-4	X		
X7-SS040-0002	10/3/2007	RFI-2007	HA	0-2	X		
X7-SS041-0002	10/3/2007	RFI-2007	HA	0-2	X		
X7-SS042-0002	10/3/2007	RFI-2007	HA	0-2	X		
X7-SS184-0002	10/7/2007	RFI-2007	HA	0-2	X	X	
X7-SS309-0001	11/7/2011	1	HA	0-1	X		
X7-SS310-0001	11/7/2011	1	HA	0-1	X		
X7-SS310-0102	11/7/2011	1	HA	1-2	X	X	
X7-SB310-0203	11/12/2011	1	HA	2-3	X	X	
X7-SB310-0304	9/8/2012	2	DPT	3-4	X		
X7-SB310-0405	9/8/2012	2	DPT	4-5	X	X	
X7-SS311-0001	11/7/2011	1	HA	0-1	X		
X7-SS312-0001	11/7/2011	1	HA	0-1	X		
X7-SS312-0102	11/7/2011	1	HA	1-2	X	X	
X7-SS312-0203	9/8/2012	2	DPT	2-3	X		
X7-SS312-0304	9/8/2012	2	DPT	3-4	X		
X7-SS313-0001	11/7/2011	1	HA	0-1	X	X	
X7-SS313-0102	11/7/2011	1	HA	1-2	X		
X7-SB313-0203	11/12/2011	1	HA	2-3	X		
X7-SB313-0304	9/8/2012	2	DPT	3-4	X		
X7-SB313-0405	9/8/2012	2	DPT	4-5	X		
X7-SS314-0001	11/7/2011	1	HA	0-1	X		
X7-SS314-0102	11/7/2011	1	HA	1-2	X		
X7-SS315-0001	11/7/2011	1	HA	0-1	X	X	
X7-SS315-0102	11/7/2011	1	HA	1-2	X		

TABLE 2-1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SS316-0001	11/7/2011	1	HA	0-1	X		
X7-SS316-0102	11/7/2011	1	HA	1-2	X		
X7-SS317-0001	11/7/2011	1	HA	0-1	X		
X7-SS318-0001	11/7/2011	1	HA	0-1	X		
X7-SS319-0001	11/7/2011	1	HA	0-1	X		
X7-SS320-0001	11/7/2011	1	HA	0-1	X		
X7-SS320-0102	11/7/2011	1	HA	1-2	X		
X7-SB320-0203	11/12/2011	1	HA	2-3	X		
X7-SS371-0001	11/12/2011	1	HA	0-1	X	X	
X7-SS371-0102	9/8/2012	2	DPT	1-2	X	X	
X7-SB371-0203	9/8/2012	2	DPT	2-3	X		
X7-SS373-0001	11/12/2011	1	HA	0-1	X		
X7-SS376-0001	11/12/2011	1	HA	0-1	X		
X7-SS376-0102	11/12/2011	1	HA	1-2	X	X	
X7-SS377-0001	11/12/2011	1	HA	0-1	X		
X7-SS377-0102	11/12/2011	1	HA	1-2	X	X	
X7-SS379-0001	11/12/2011	1	HA	0-1	X		
X7-SS383-0001	11/12/2011	1	HA	0-1	X		
X7-SS385-0001	11/12/2011	1	HA	0-1	X	X	
X7-SS385-0102	11/12/2011	1	HA	1-2	X		
X7-SS387-0001	11/12/2011	1	HA	0-1	X		
X7-SB430-0304	11/15/2011	1	DPT	3-4	X		
X7-SB430-0405	11/15/2011	1	DPT	4-5	X		
X7-SB430-0506	11/15/2011	1	DPT	5-6	X		
X7-SB431-0304	11/15/2011	1	DPT	3-4	X		
X7-SB431-0405	11/15/2011	1	DPT	4-5	X	X	
X7-SB432-0304	11/15/2011	1	DPT	3-4	X		
X7-SB432-0405	11/15/2011	1	DPT	4-5	X		
X7-SS434-0001	11/15/2011	1	HA	0-1	X	X	
X7-SS434-0102	11/15/2011	1	HA	1-2	X		
X7-SB578-0001	9/8/2012	2	DPT	3-4	X		
X7-SB578-0102	9/8/2012	2	DPT	1-2	X		
X7-SB578-0203	9/8/2012	2	DPT	2-3	NA		
X7-SB578-0304	9/8/2012	2	DPT	3-4	NA		
X7-SB579-0001	9/8/2012	2	DPT	0-1	X		
X7-SB579-0102	9/8/2012	2	DPT	1-2	X		

TABLE 2-1

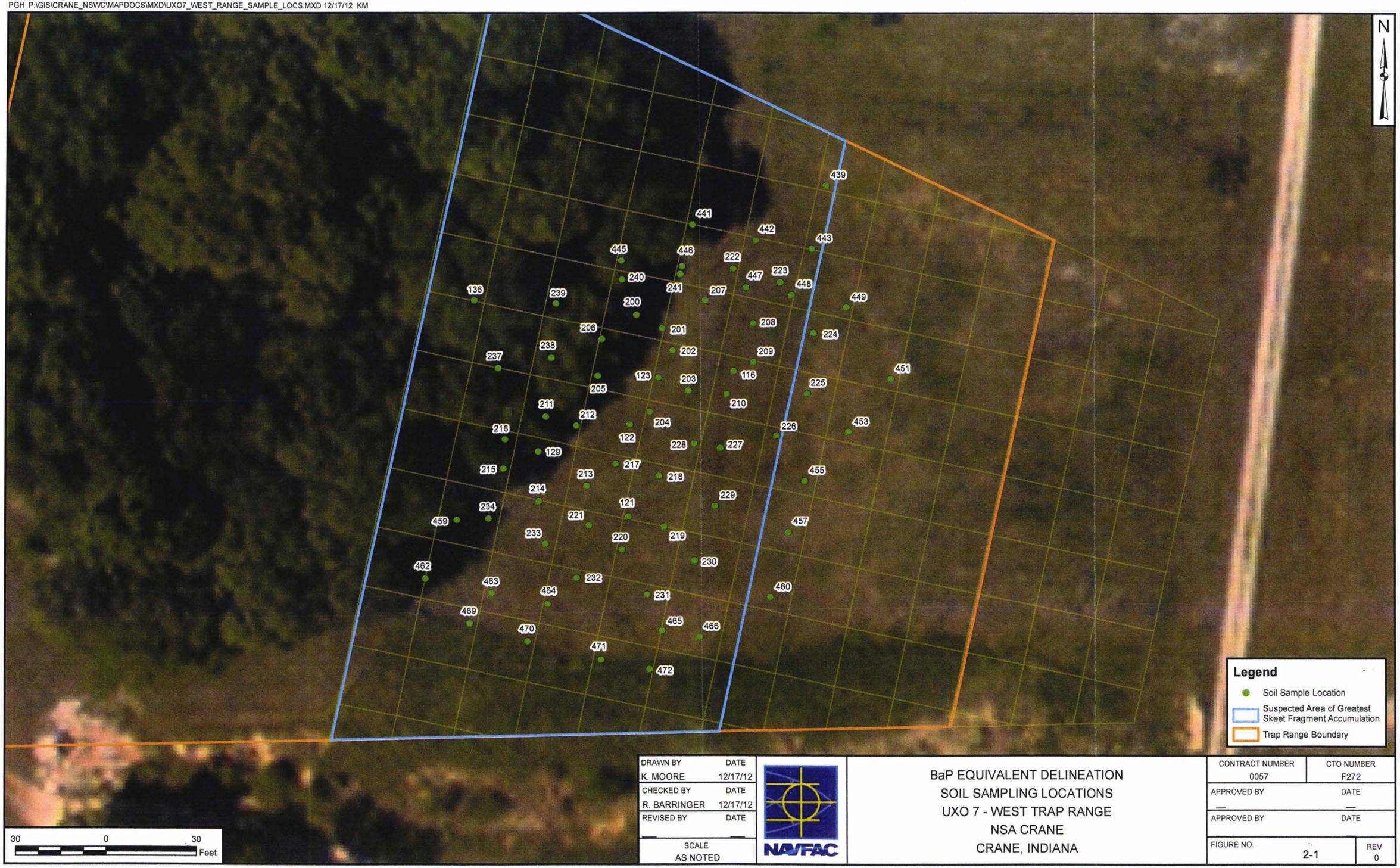
SAMPLE COLLECTION AND ANALYSIS SUMMARY
UXO 7 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE COLLECTION DATE	SAMPLE ROUND	SAMPLE METHOD	SAMPLE DEPTH (ft bgs)	XRF (LEAD)	FBL ANALYSIS	
						LEAD	PAHs
X7-SB579-0203	9/8/2012	2	DPT	2-3	NA		
X7-SB579-0304	9/8/2012	2	DPT	3-4	NA		
X7-SB580-0001	9/8/2012	2	DPT	0-1	X		
X7-SB580-0102	9/8/2012	2	DPT	1-2	X		
X7-SB580-0203	9/8/2012	2	DPT	2-3	NA		

bgs = below ground surface
DPT = Direct-push technology
FBL = Fixed-base laboratory
ft = feet
HA = Hand auger
NA = not analyzed
PAHs = polycyclic hydrocarbons
XRF = X-Ray fluorescence

(1) = Sample proposed, but not collected since not needed for PAH delineation.
(2) = Sample collected, but not analyzed. Not required for delineation.
(3) = Proposed sample not collected due to its close proximity to adjacent location.

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_WEST_RANGE_SAMPLE_LOCS.MXD 12/17/12 KM



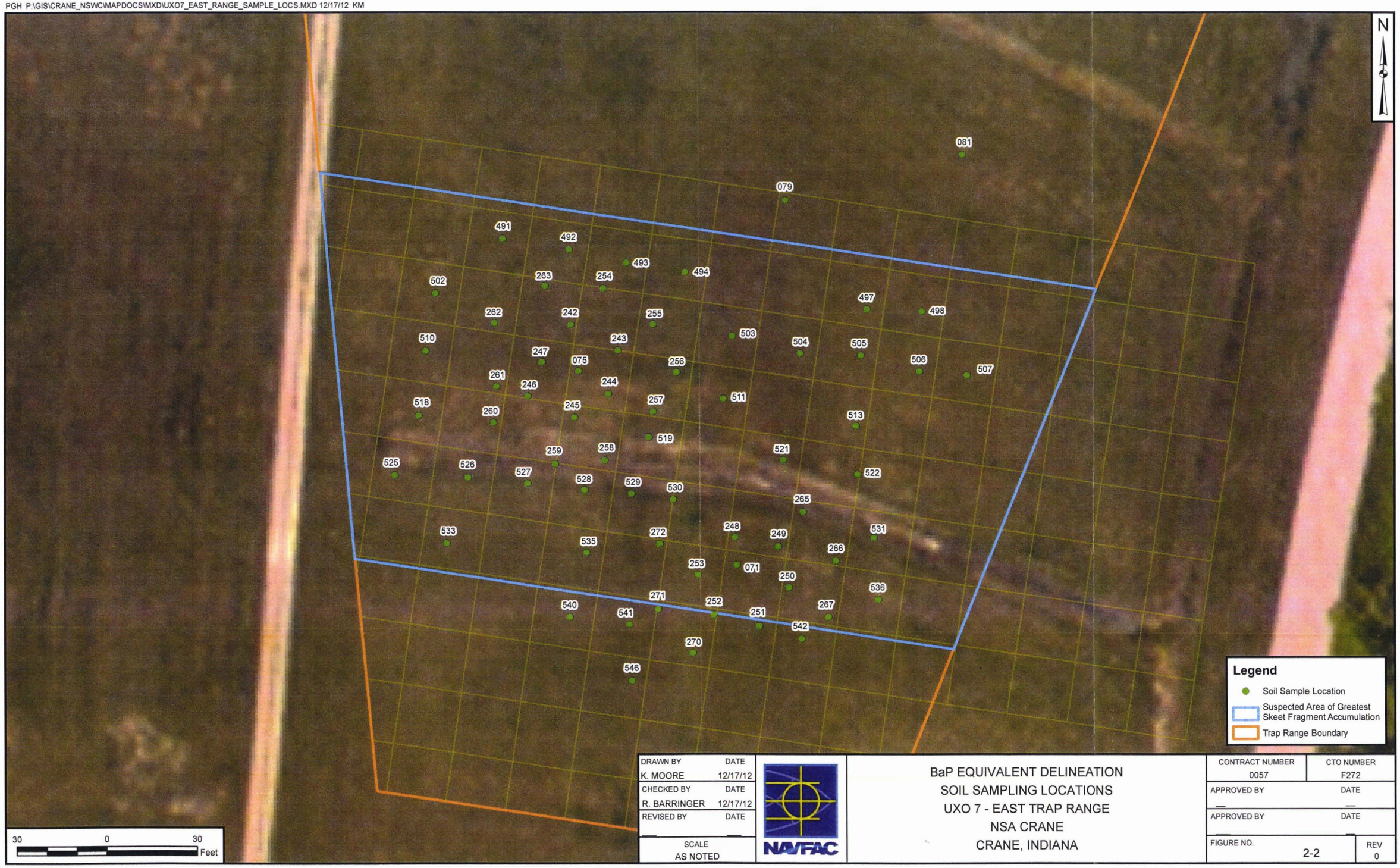
DRAWN BY	DATE
K. MOORE	12/17/12
CHECKED BY	DATE
R. BARRINGER	12/17/12
REVISED BY	DATE
SCALE	
AS NOTED	

NAVFAC

BaP EQUIVALENT DELINEATION
SOIL SAMPLING LOCATIONS
UXO 7 - WEST TRAP RANGE
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
0057	F272
APPROVED BY	DATE
—	—
APPROVED BY	DATE
FIGURE NO.	REV
2-1	0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_EAST_RANGE_SAMPLE_LOCS.MXD 12/17/12 KM



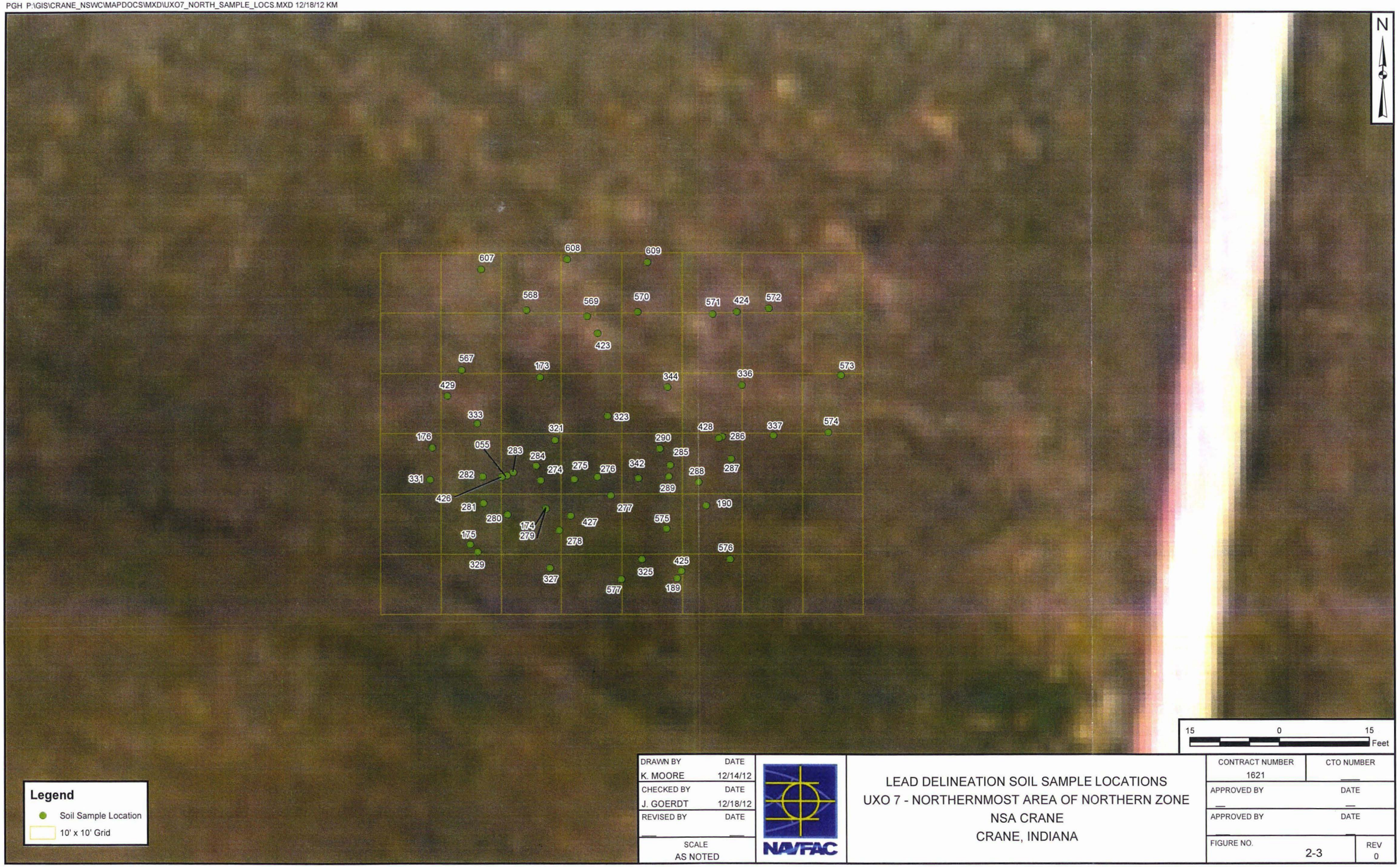
DRAWN BY	DATE
K. MOORE	12/17/12
CHECKED BY	DATE
R. BARRINGER	12/17/12
REVISED BY	DATE
—	—
SCALE	
AS NOTED	

NAVFAC

BaP EQUIVALENT DELINEATION
SOIL SAMPLING LOCATIONS
UXO 7 - EAST TRAP RANGE
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
0057	F272
APPROVED BY	DATE
—	—
APPROVED BY	DATE
—	—
FIGURE NO. 2-2	REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_NORTH_SAMPLE_LOCS.MXD 12/18/12 KM



Legend

- Soil Sample Location
- 10' x 10' Grid

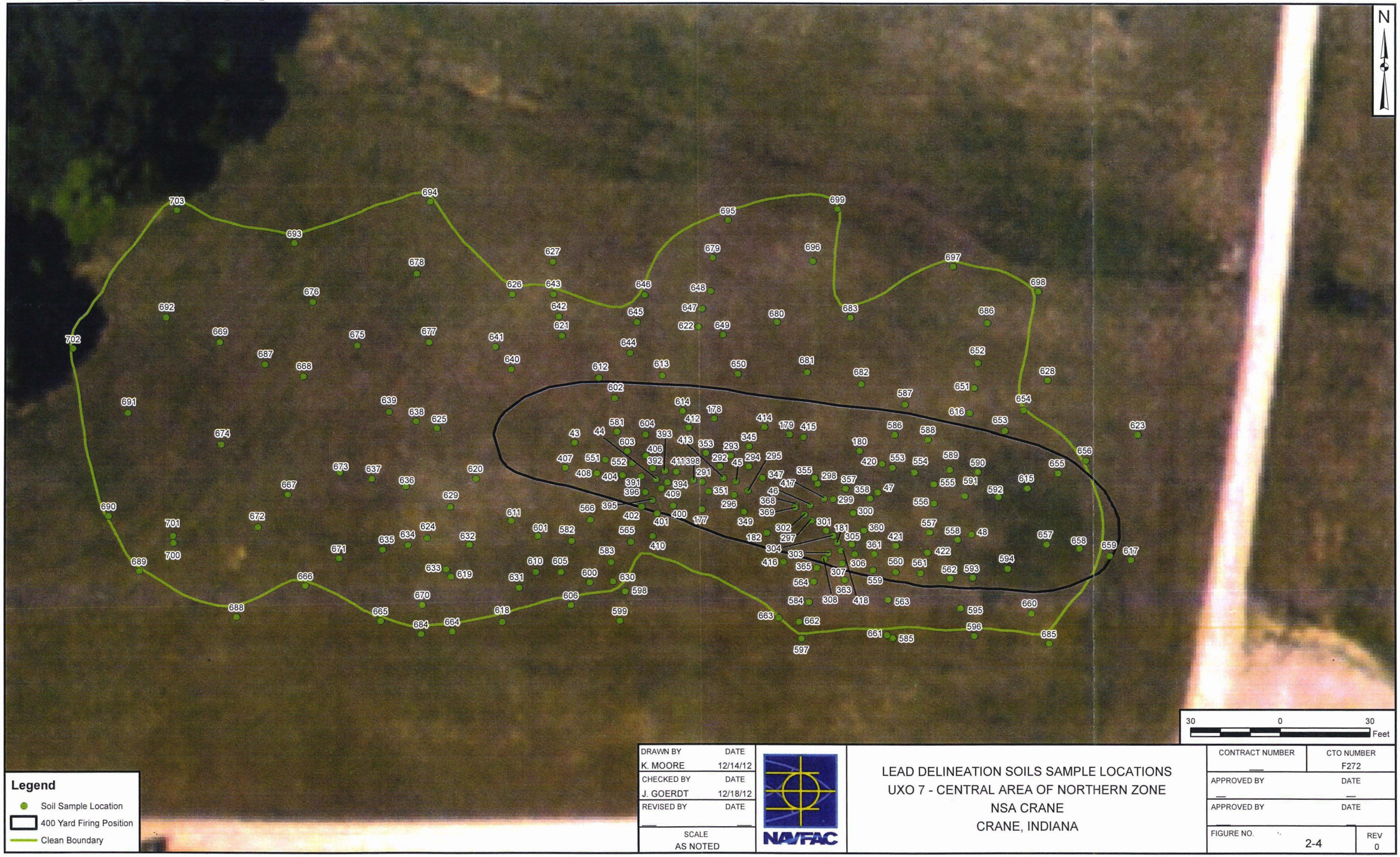
DRAWN BY	DATE
K. MOORE	12/14/12
CHECKED BY	DATE
J. GOERDT	12/18/12
REVISED BY	DATE
SCALE	
AS NOTED	

NAVFAC

LEAD DELINEATION SOIL SAMPLE LOCATIONS
UXO 7 - NORTHERNMOST AREA OF NORTHERN ZONE
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
1621	—
APPROVED BY	DATE
—	—
APPROVED BY	DATE
—	—
FIGURE NO. 2-3	REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_CENTRAL_SAMPLE_LOCS.MXD 12/18/12 KM



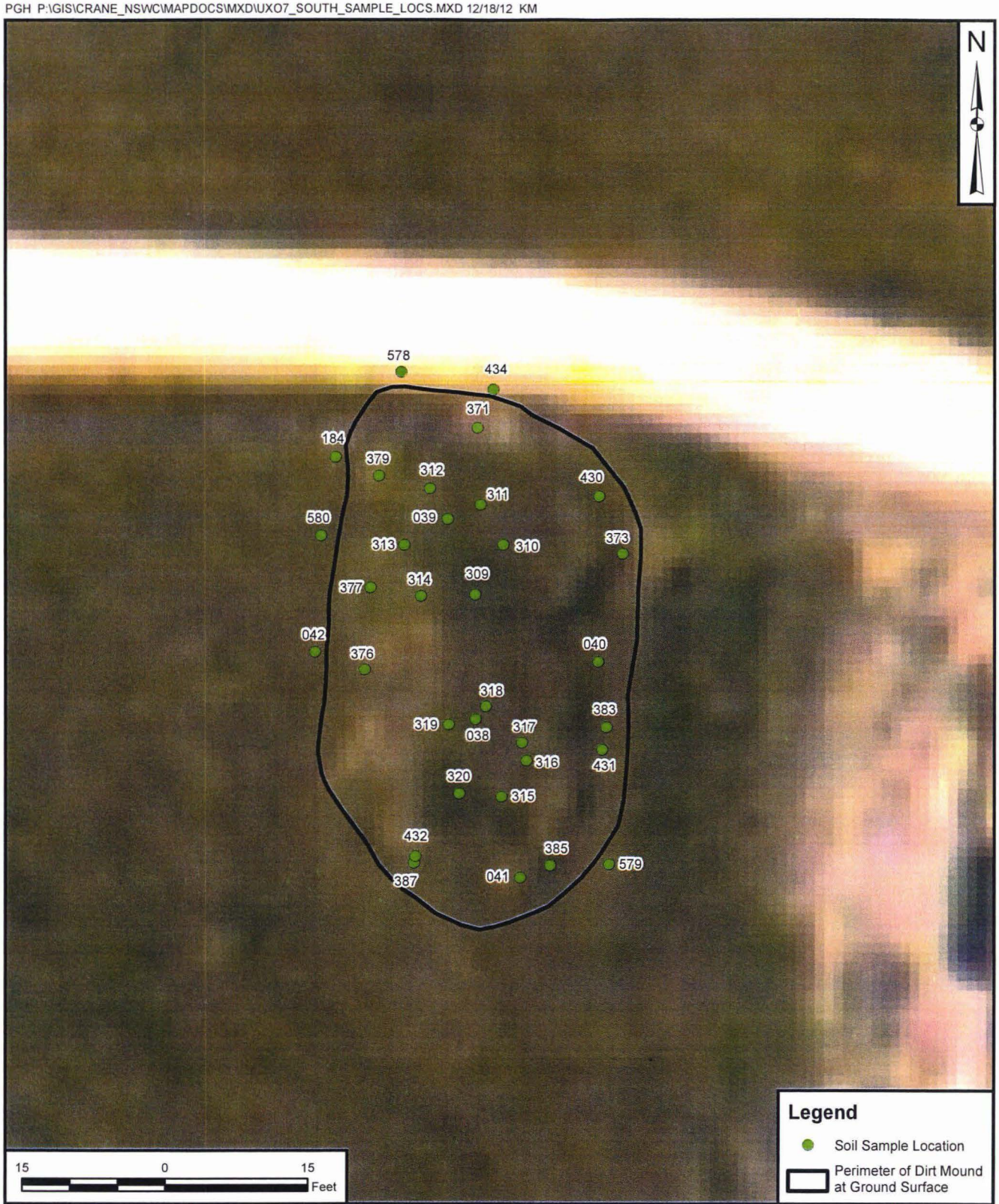
DRAWN BY	DATE
K. MOORE	12/14/12
CHECKED BY	DATE
J. GOERDT	12/18/12
REVISED BY	DATE
SCALE	
AS NOTED	

NAVFAC

LEAD DELINEATION SOILS SAMPLE LOCATIONS
UXO 7 - CENTRAL AREA OF NORTHERN ZONE
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
	F272
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. 2-4	REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_SOUTH_SAMPLE_LOCS.MXD 12/18/12 KM



DRAWN BY	DATE			CONTRACT NUMBER	CTO NUMBER
K. MOORE	12/14/12	NAVFAC	LEAD DELINEATION SOIL SAMPLE LOCATIONS UXO 7 - SOUTHERNMOST AREA OF NORTHERN ZONE NSA CRANE CRANE, INDIANA	—	F272
CHECKED BY	DATE			APPROVED BY	DATE
J. GOERDT	12/18/12			—	—
REVISED BY	DATE			APPROVED BY	DATE
—	—			—	—
SCALE AS NOTED				FIGURE NO. 2-5	REV 0

3.0 PRESENTATION OF ANALYTICAL RESULTS

3.1 PAHS (AS BAP EQUIVALENTS) IN UXO 7 TRAP RANGE SOIL

Both the East and West Trap Ranges inside UXO 7 were initially investigated as part of an RFI in 2007. The source of PAHs detected in soil from the former trap ranges is the tar pitch/bitumen binder materials used in the manufacturing of the clay pigeon targets.

Specific information regarding UXO 7 site history is presented in the UXO 7 RFI Report (Tetra Tech, 2009). During the UXO 7 RFI sampling event, samples were collected and analyzed for both PAHs and metals. Samples collected during the UXO 7 RFI from the former trap range areas and evaluated for PAHs and BaP equivalents were adequate for risk assessments. The analytical results from the RFI indicated an excess human health residential exposure risk from the PAHs. For purposes of designing remedial measures, a more robust sampling program was developed during 2011 to perform supplemental soil sampling at the two former trap ranges in the Central Zone to more clearly delineate and assess the relative exposure risks for PAHs in soil as BaP equivalents. The refined understanding of the distribution and extent of PAHs (as BaP equivalents) within the former trap range soil supports limited removals of specific soil volumes with measured elevated BaP concentrations to reduce potential exposure cancer risk hazards for future residential human receptors to acceptable levels.

Supplemental soil sampling was completed during November 2011 (Sampling Round 1) and September/October 2012 (Rounds 2A and 2B, respectively) to more fully delineate the extent of PAH contamination within the soil of the former trap ranges at UXO 7, and the soil samples were collected in accordance with the SOPs and QA procedures presented in the approved Supplemental Sampling Activities at UXO 7 Ranges (approved October 21, 2011). The area of greatest skeet fragment accumulation on these trap ranges was defined as beginning at a distance of approximately 75 feet from the range firing area and continuing downrange for another 125 feet from that 75-foot line (extending a total distance of approximately 200 feet from the range firing area). The blue trapezoids shown on Figures 2-1 and 2-2 enclose the suspected area of maximum skeet fragment accumulation. The supplemental sampling program focused on defining the nature and extent of PAHs in soil within those areas, but when necessary continued beyond those boundaries to more fully assess the distribution and extent of PAHs (as BaP equivalents) within the former trap ranges soil (Figures 3-1, 3-2, 3-3, and 3-4).

During all of the UXO 7 trap range soil sampling and investigation events (2007 through 2012), PAHs were detected in multiple range soil samples and based on the magnitude of detected concentrations presented excess human health cancer risks to future residential receptors in the Central Zone of UXO 7.

The skeet-derived PAH contamination in the former trap range soil was expected to be confined to the surficial 2-feet of soil. However, the supplemental sampling approach extended down to a depth of 6 feet bgs and was appropriate to provide confirmation of the specific depth intervals where PAH contamination had accumulated in the vertical soil profile. There were isolated instances where the PAH contamination (as BaP equivalents) was present in trap range soil at concentrations above human health risk based screening levels at depths of more than two feet bgs.

Nearly 400 soil samples were collected and shipped to the FBL; however, not all collected samples were analyzed. Only the sample locations and associated sample depths adjacent to former locations exhibiting BaP equivalent contamination were initially authorized for analysis by the FBL as identified on **Table 3-1 and Table 3-2**. The remaining collected samples were processed and extracted by the FBL, but were only approved for analysis when authorized by Tetra Tech to fill data gaps on nature and extent of BaP equivalent contamination. A total of approximately 300 soil samples were eventually approved for analysis (inclusive of RFI PAH samples and supplemental rounds) for the West and East Trap Ranges and are summarized on **Table 3-1 and Table 3-2** and presented on **Figure 2-1 and Figure 2-2,** respectively.

3.2 LEAD IN UXO 7 RIFLE RANGE SOIL

The Northernmost, Central, and Southernmost Areas within the Northern Zone of the Rifle Range at UXO 7 were initially investigated as part of an RFI in 2007. The source of lead contamination detected in soil from these areas is a result of lead bullets fired at the range.

Specific information regarding UXO 7 site history is presented in the UXO 7 RFI Report (Tetra Tech, 2009). During the UXO 7 RFI sampling event, samples were collected and analyzed for lead in various areas of the Rifle Range. Samples collected during the UXO 7 RFI from the Rifle Range areas and evaluated for lead were adequate for risk assessments, and the analytical results from the RFI indicated an excess human health residential exposure risk from the lead. Additionally, The USEPA and the Navy agreed upon a preliminary remediation goal (PRG) concentration of 192 mg/kg as an acceptable ecological benchmark to be applied as a site-wide arithmetic average soil lead concentration for UXO 7. A sample-specific lead concentration of 621 mg/kg was also agreed upon indicating all surface soil samples with a lead concentration greater than 621 mg/kg would be removed. Based on this information, lead concentrations greater than the Navy/EPA agreed upon average concentration of 192 mg/kg and the sample-specific lead concentration of 621 mg/kg in the surface soil (defined as ground surface to two feet below ground surface [bgs]) remain in the Northern Zone of UXO 7. Specifically, these areas include the Northernmost Area (small area located between the 400- and 500-yard firing berms), Central Area

(400-yard firing berm), and the Southernmost Area (dirt mound). Lead concentrations in deeper soil (greater than two feet bgs) are not regarded as biologically available to ecological receptors, but could serve as potential exposure sources to future human receptors for construction workers, etc.

For purposes of designing remedial measures a more robust sampling program was developed during 2011 to perform supplemental soil sampling at the three areas within the Northern Zone of UXO 7 to more clearly delineate and assess the relative exposure risks for lead in soil. These areas include the Northernmost Area, the Central Area, and the Southernmost Area. The refined understanding of the distribution and extent of lead within the soil of these three areas supports limited removals of specific soil volumes which contain measured elevated lead concentrations to reduce potential ecological and human health risks.

Supplemental soil sampling was completed during November 2011 (Sampling Round 1) and September/October 2012 (Rounds 2A and 2B, respectively) to more fully delineate the extent of lead contamination within the soil of the three identified areas at UXO 7. The soil samples were collected in accordance with the SOPs and QA procedures presented in the approved Supplemental Sampling Activities at UXO 7 Ranges (approved October 21, 2011). The supplemental sampling program focused on defining the nature and extent of lead in soil within the Northernmost Area, Central Area, and Southernmost Area of the UXO 7 Rifle Range.

During all of the UXO 7 Rifle Range soil sampling and investigation events (2007 through 2012), lead was detected in multiple range soil samples and based on the magnitude of detected concentrations presented excess human health and ecological risks. The supplemental sampling approach extended down to a depth of 8 feet bgs in some locations and was appropriate to provide confirmation of the specific depth intervals where lead contamination had accumulated in the vertical soil profile (Figures 3-5 through 3-10).

Over 1,000 soil samples were collected from the three areas of the Rifle Range, with the majority of these samples undergoing field XRF analysis for lead. Representative soil samples evaluated by the field XRF approach were also submitted for FBL analysis to determine the overall accuracy of the XRF field screening process and to add greater credibility to the XRF data through a correlation analysis of the FBL and field data. A correlation study comparing XRF and FBL analytical lead data was completed to establish laboratory equivalent (calculated) lead concentrations based on the field measurements. Information regarding the correlation between XRF lead field samples and FBL lead analyzed samples is provided in **Appendix D**. **Table 2-1** presents a summary of the samples collected within the three areas

during the individual rounds of sampling at UXO 7. **Figure 2-3**, **Figure 2-4**, and **Figure 2-5** present the sample locations for the Northernmost Area, Central Area, and Southernmost Area, respectively.

3.3 DATA QUALITY REVIEW

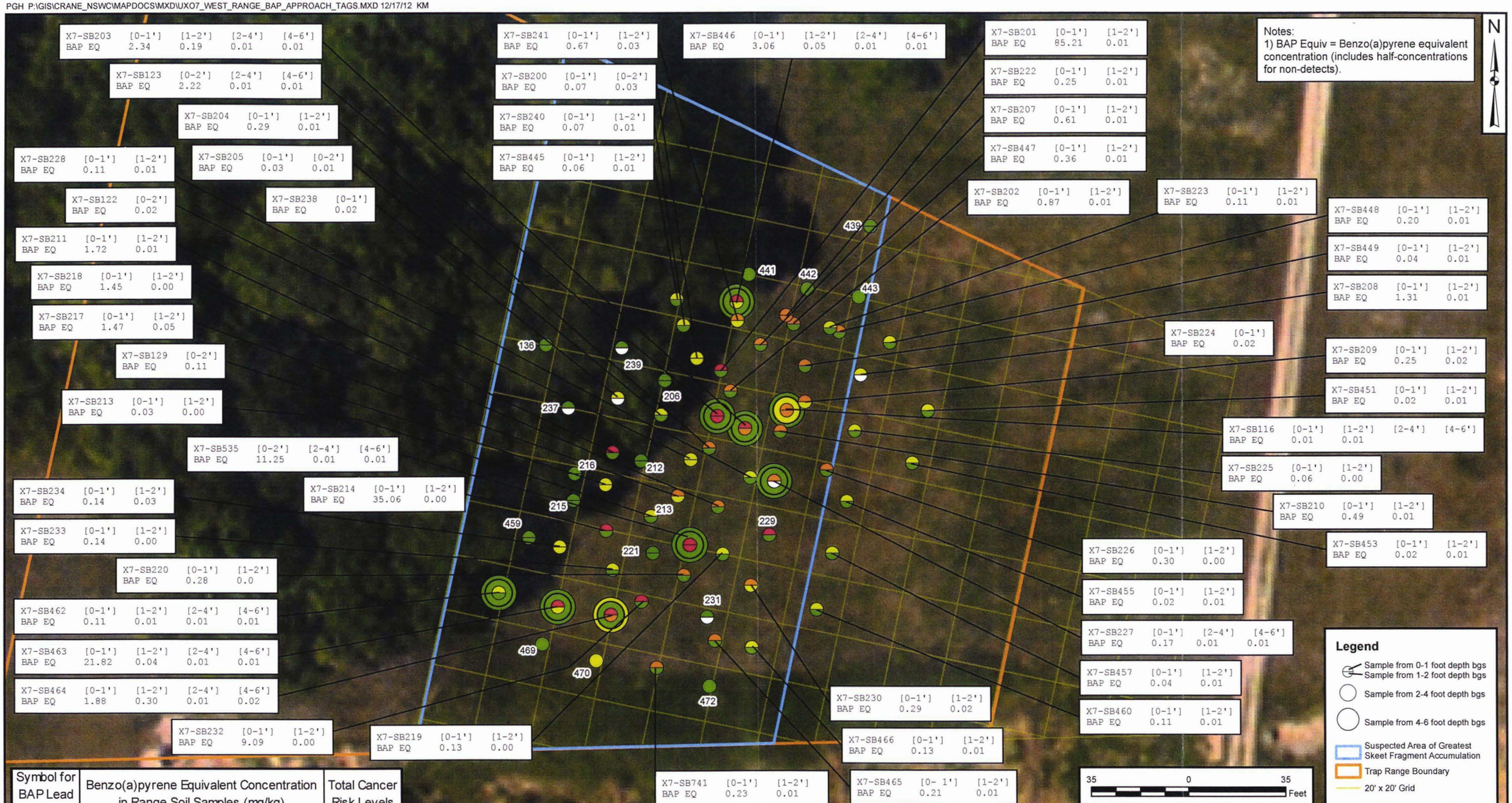
Data quality indicators (DQIs) are parameters monitored to help establish the quality of data generated during an investigation. Some of the DQIs are generated from analysis of field samples (e. g., field duplicates), and some are generated from the analysis of FBL samples (e. g., FBL duplicates). Individually, field and FBL DQIs provide measures of the performance of the respective investigative operations (field or FBL). During data validation, individual QC results were evaluated. If individual QC results were acceptable, no validation flag was assigned to an analytical result; otherwise, a flag indicating the type of QC deficiency was assigned to the result. Samples collected at UXO 7, were separated into five areas including the Northernmost Area, Central Area, Southernmost Area, East Trap Range, and West Trap Range. Tables C-1 through C-4 (Appendix C) present the qualified data along with the reason for qualification for each site, except the Southernmost Area, which did not have any qualified data. No data from UXO 7 were rejected and all data are considered useable for their intended purpose.

TABLES 3-1 THROUGH 3-5

ARE INCLUDED IN APPENDIX C

ON COMPACT DISC WITH THIS DOCUMENT

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_WEST_RANGE_BAP_APPROACH_TAGS.MXD 12/17/12 KM



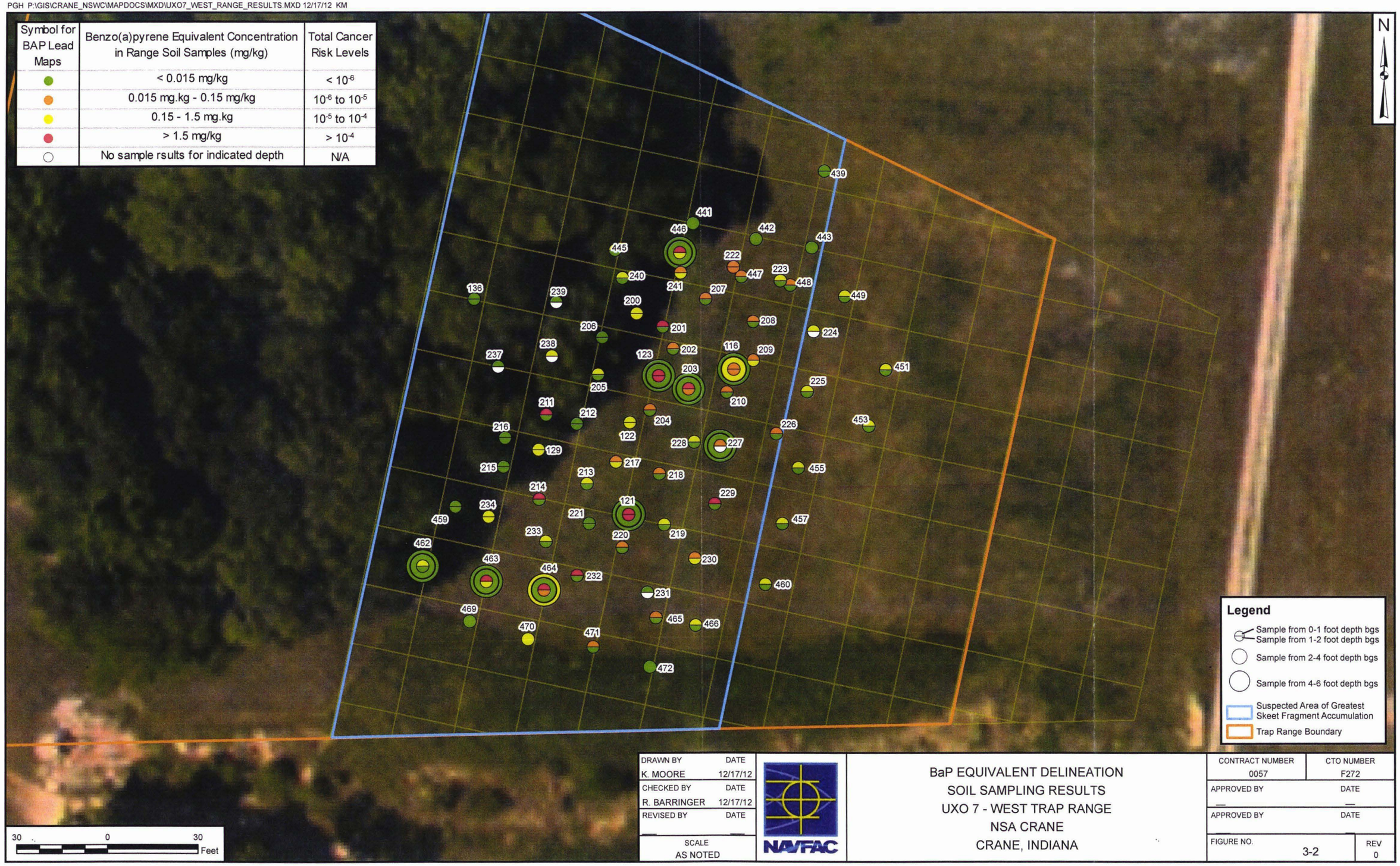
Symbol for BAP Lead Maps	Benzo(a)pyrene Equivalent Concentration in Range Soil Samples (mg/kg)	Total Cancer Risk Levels
●	< 0.015 mg/kg	$< 10^{-6}$
●	0.015 mg.kg - 0.15 mg/kg	10^{-6} to 10^{-5}
●	0.15 - 1.5 mg.kg	10^{-5} to 10^{-4}
●	> 1.5 mg/kg	$> 10^{-4}$
○	No sample rsults for indicated depth	N/A

DRAWN BY J. ENGLISH	DATE 03/01/12	BaP EQUIVALENTS IN RANGE SOIL FROM RFI (2007) & SUPPLEMENTAL SAMPLING UXO 7 - WEST TRAP RANGE NSA CRANE CRANE, INDIANA
CHECKED BY R. BARRINGER	DATE 12/17/12	
REVISED BY K. MOORE	DATE 12/17/12	
SCALE AS NOTED		

NAVFAC

CONTRACT NUMBER 0057	CTO NUMBER F272
APPROVED BY —	DATE —
APPROVED BY —	DATE —
FIGURE NO. 3-1	REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_WEST_RANGE_RESULTS.MXD 12/17/12 KM



Symbol for BAP Lead Maps	Benzo(a)pyrene Equivalent Concentration in Range Soil Samples (mg/kg)	Total Cancer Risk Levels
●	< 0.015 mg/kg	$< 10^{-6}$
●	0.015 mg.kg - 0.15 mg/kg	10^{-6} to 10^{-5}
●	0.15 - 1.5 mg.kg	10^{-5} to 10^{-4}
●	> 1.5 mg/kg	$> 10^{-4}$
○	No sample rsults for indicated depth	N/A

DRAWN BY	DATE
K. MOORE	12/17/12
CHECKED BY	DATE
R. BARRINGER	12/17/12
REVISED BY	DATE
SCALE AS NOTED	

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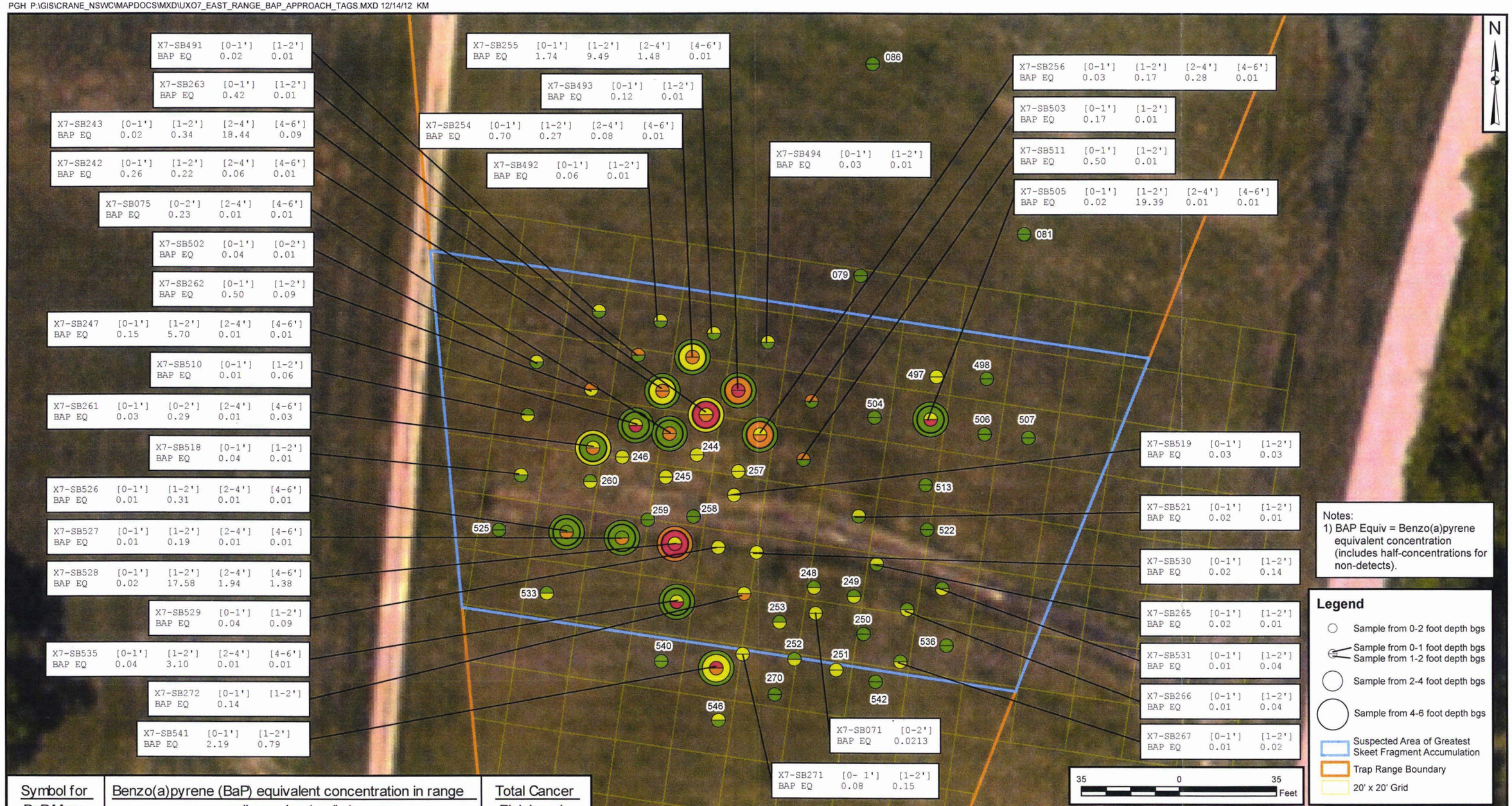
BaP EQUIVALENT DELINEATION
SOIL SAMPLING RESULTS
UXO 7 - WEST TRAP RANGE
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
0057	F272
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. 3-2	REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_EAST_RANGE_BAP_APPROACH_TAGS.MXD 12/14/12 KM



Symbol for BaP Maps	Benzo(a)pyrene (BaP) equivalent concentration in range soil samples (mg/kg)	Total Cancer Risk Levels
●	<0.015 mg/kg	$< 10^{-6}$
●	0.015 mg/kg to 0.15 mg/kg	10^{-6} to 10^{-5}
●	0.15 mg/kg to 1.5 mg/kg	10^{-5} to 10^{-4}
●	>1.5 mg/kg	$> 10^{-4}$

DRAWN BY	DATE
J. NOVAK	10/04/12
CHECKED BY	DATE
R. BARRINGER	12/14/12
REVISED BY	DATE

SCALE
AS NOTED

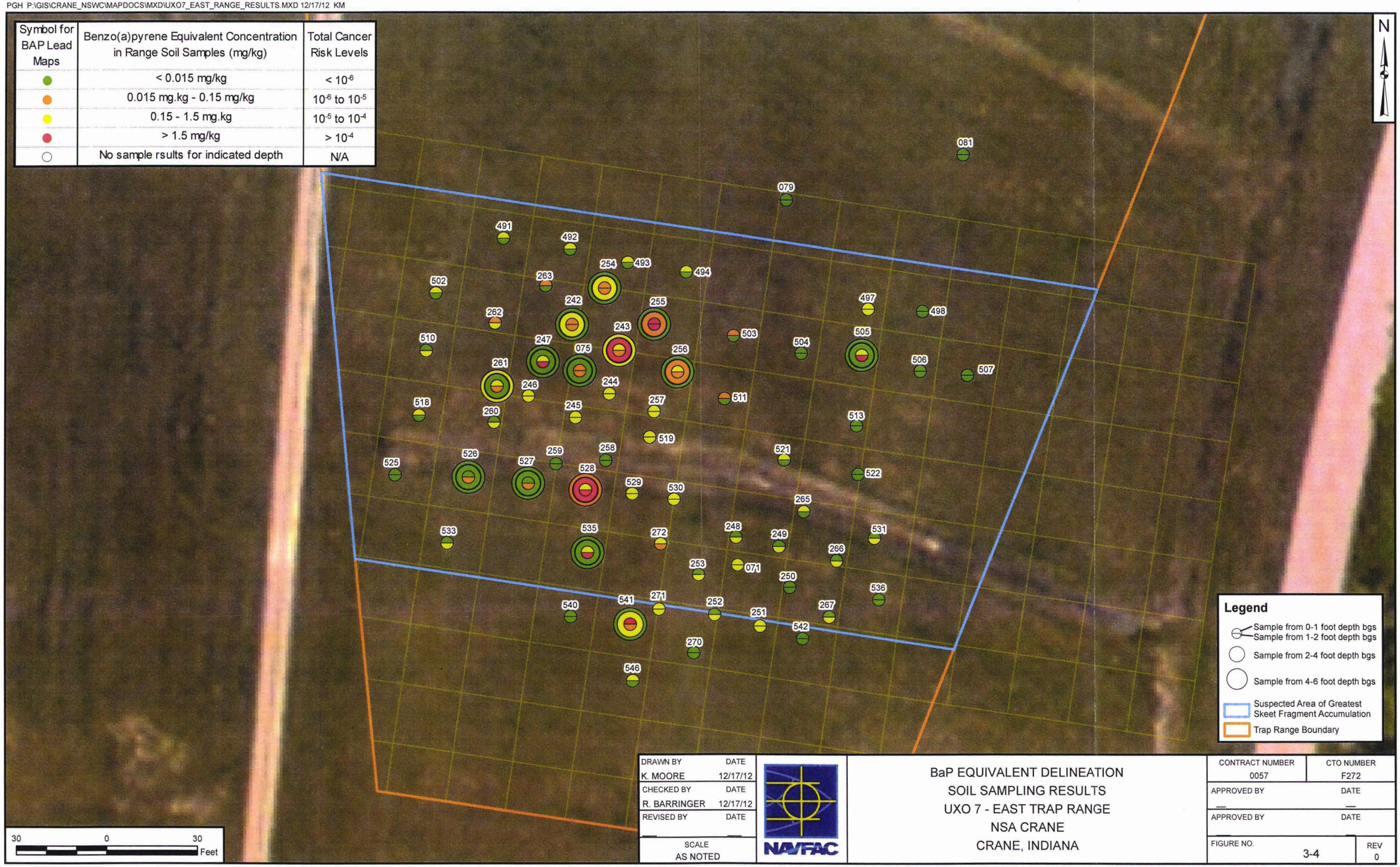
NAVFAC

BaP EQUIVALENT DELINEATION SOIL SAMPLING RESULTS
UXO 7 - EAST TRAP RANGE
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
0057	F272
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. 3-3	REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_EAST_RANGE_RESULTS.MXD 12/17/12 KM

Symbol for BAP Lead Maps	Benzo(a)pyrene Equivalent Concentration in Range Soil Samples (mg/kg)	Total Cancer Risk Levels
●	< 0.015 mg/kg	$< 10^{-6}$
●	0.015 mg.kg - 0.15 mg/kg	10^{-6} to 10^{-5}
●	0.15 - 1.5 mg.kg	10^{-5} to 10^{-4}
●	> 1.5 mg/kg	$> 10^{-4}$
○	No sample rsults for indicated depth	N/A



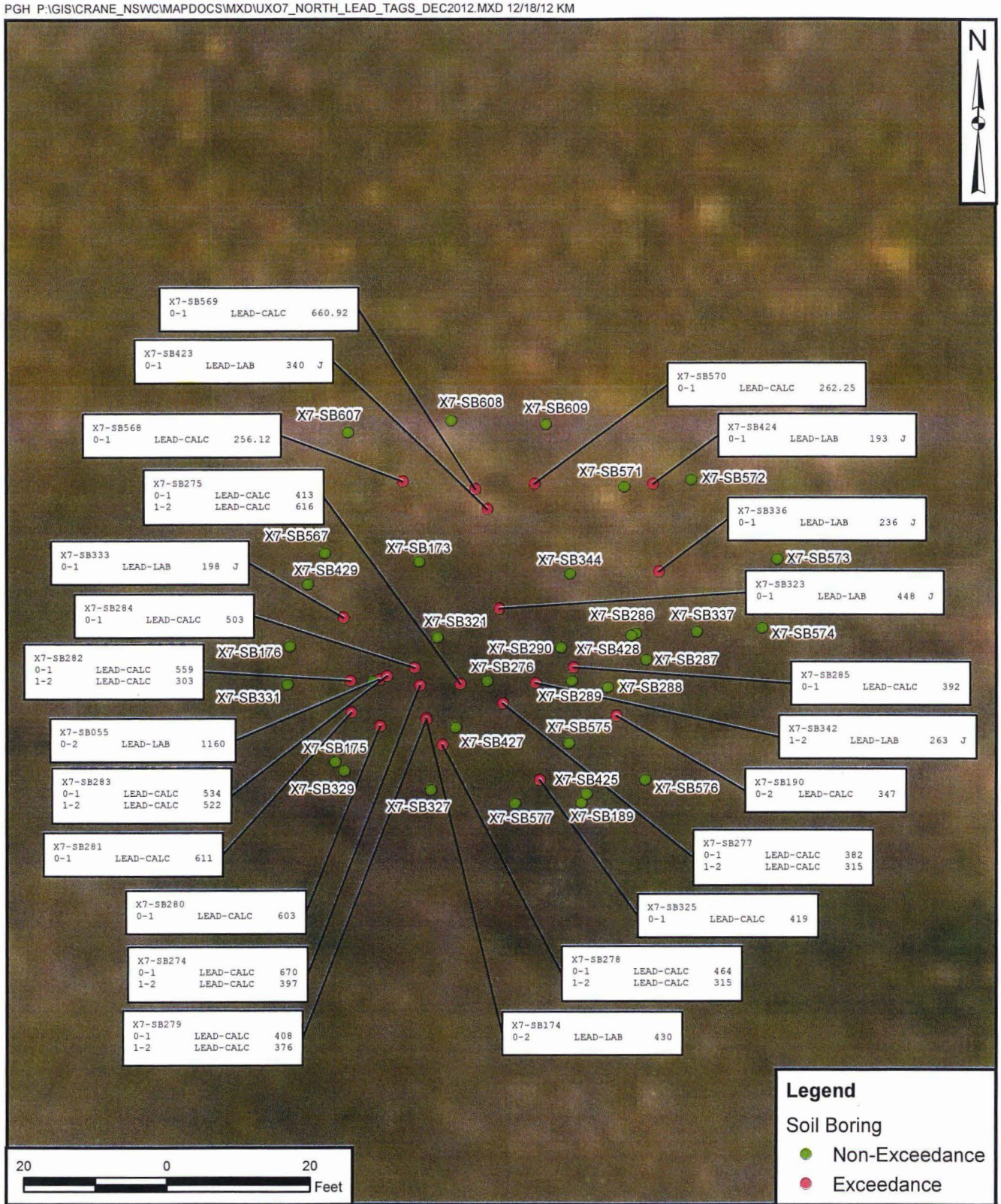
DRAWN BY	DATE
K. MOORE	12/17/12
CHECKED BY	DATE
R. BARRINGER	12/17/12
REVISED BY	DATE
—	—
SCALE AS NOTED	

NAVFAC

BaP EQUIVALENT DELINEATION
SOIL SAMPLING RESULTS
UXO 7 - EAST TRAP RANGE
NSA CRANE
CRANE, INDIANA

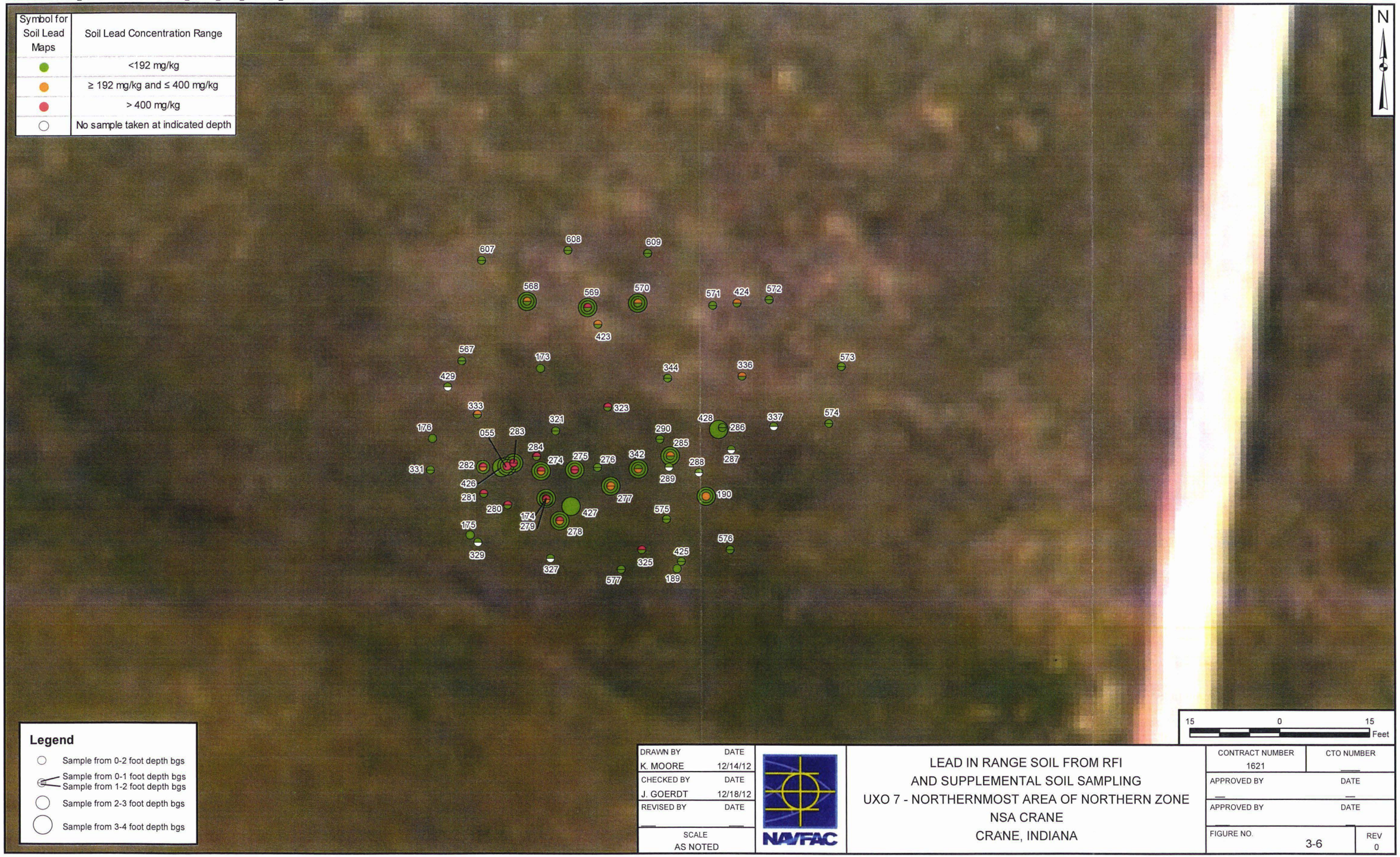
CONTRACT NUMBER	CTO NUMBER
0057	F272
APPROVED BY	DATE
—	—
APPROVED BY	DATE
—	—
FIGURE NO. 3-4	REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_NORTH_LEAD_TAGS_DEC2012.MXD 12/18/12 KM



DRAWN BY	DATE			CONTRACT NUMBER	CTO NUMBER
K. MOORE	12/12/12	NAVFAC	LEAD IN RANGE SOIL FROM RFI AND SUPPLEMENTAL SOIL SAMPLING UXO 7 - NORTHERNMOST AREA OF NORTHERN ZONE NSA CRANE CRANE, INDIANA	—	F272
CHECKED BY	DATE			APPROVED BY	DATE
R. BARRINGER	12/12/12			—	—
REVISED BY	DATE			APPROVED BY	DATE
—	—			—	—
SCALE AS NOTED				FIGURE NO. 3-5	REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_NORTH_LEAD_RESULTS_2012.MXD 12/18/12 KM



Symbol for Soil Lead Maps	Soil Lead Concentration Range
●	<192 mg/kg
●	≥ 192 mg/kg and ≤ 400 mg/kg
●	> 400 mg/kg
○	No sample taken at indicated depth

Legend

- ○ Sample from 0-2 foot depth bgs
- ⊖ Sample from 0-1 foot depth bgs; Sample from 1-2 foot depth bgs
- ○ Sample from 2-3 foot depth bgs
- ○ Sample from 3-4 foot depth bgs

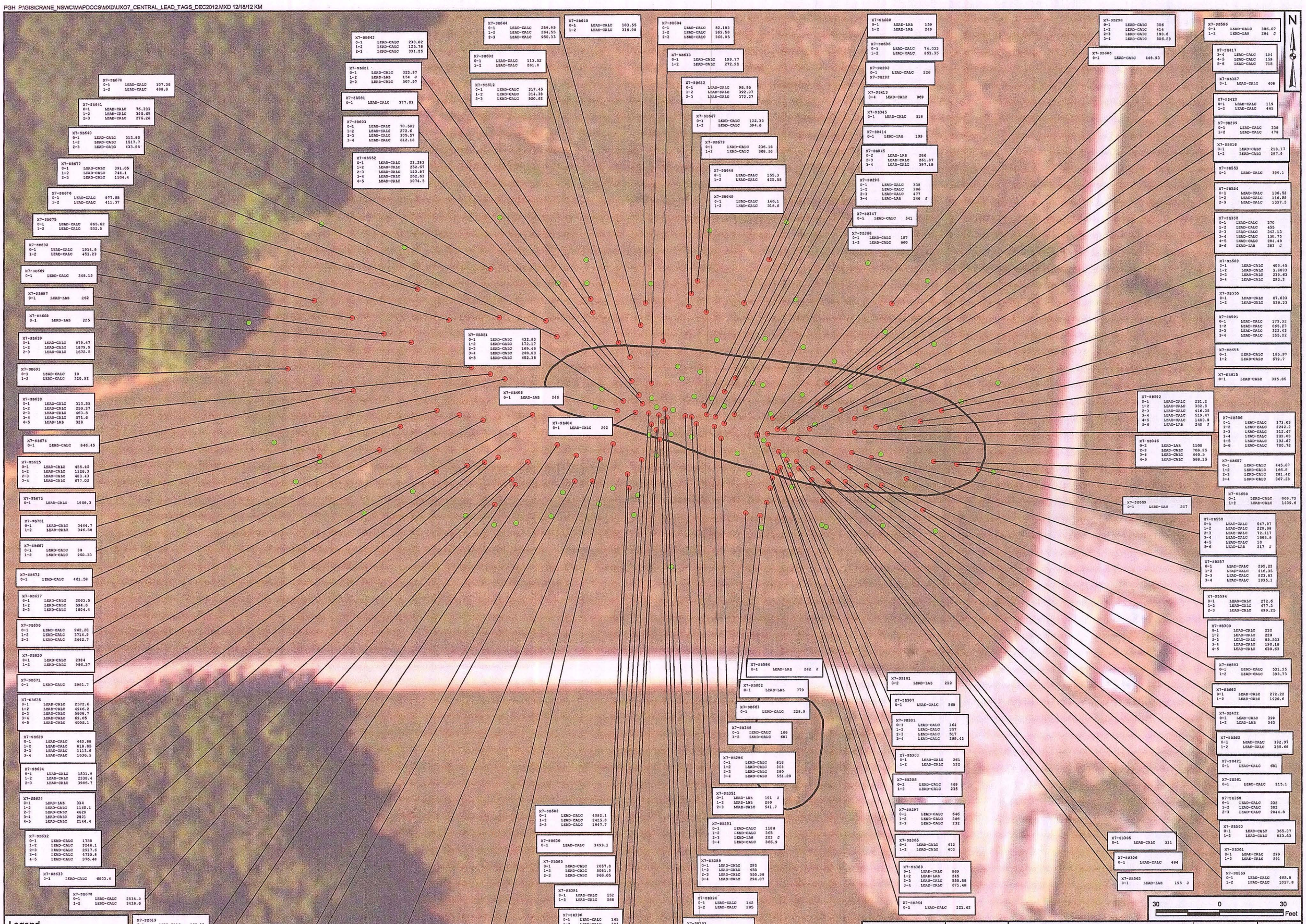
DRAWN BY	DATE
K. MOORE	12/14/12
CHECKED BY	DATE
J. GOERDT	12/18/12
REVISED BY	DATE
SCALE AS NOTED	

NAVFAC

LEAD IN RANGE SOIL FROM RFI
AND SUPPLEMENTAL SOIL SAMPLING
UXO 7 - NORTHERNMOST AREA OF NORTHERN ZONE
NSA CRANE
CRANE, INDIANA

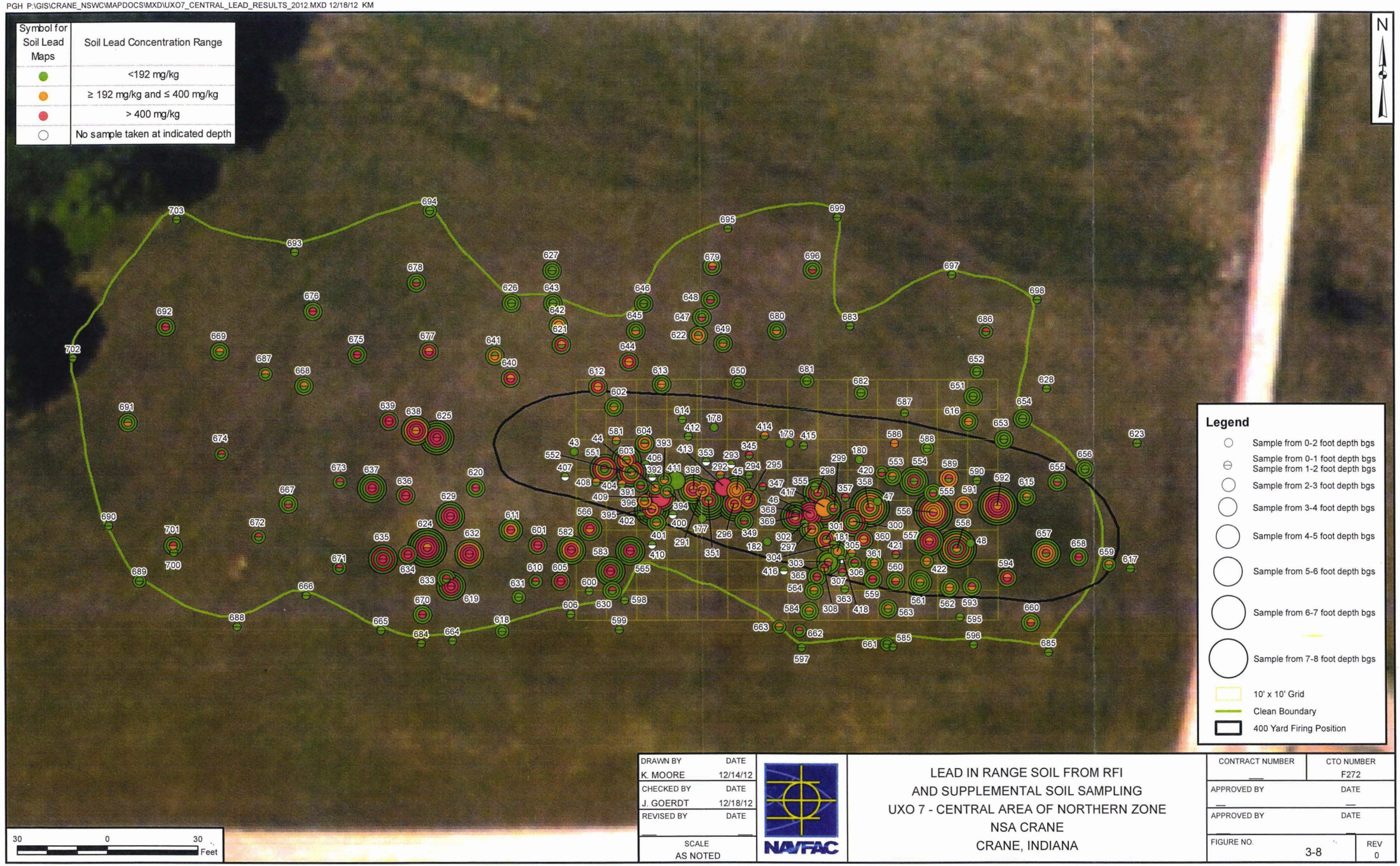
CONTRACT NUMBER	CTO NUMBER
1621	—
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. 3-6	REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_CENTRAL_LEAD_TAGS_DEC2012.MXD 12/18/12 KM



DRAWN BY K. MOORE	DATE 12/12/12	LEAD IN RANGE SOIL FROM RFI AND SUPPLEMENTAL SOIL SAMPLING UXO 7 - CENTRAL AREA OF NORTHERN ZONE NSA CRANE CRANE, INDIANA	CONTRACT NUMBER — / CTO NUMBER F272
CHECKED BY R. BARRINGER	DATE 12/12/12		APPROVED BY — / DATE —
REVISED BY —	DATE —		APPROVED BY — / DATE —
SCALE AS NOTED		NAVFAC	FIGURE NO. 3-7 / REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_CENTRAL_LEAD_RESULTS_2012.MXD 12/18/12 KM



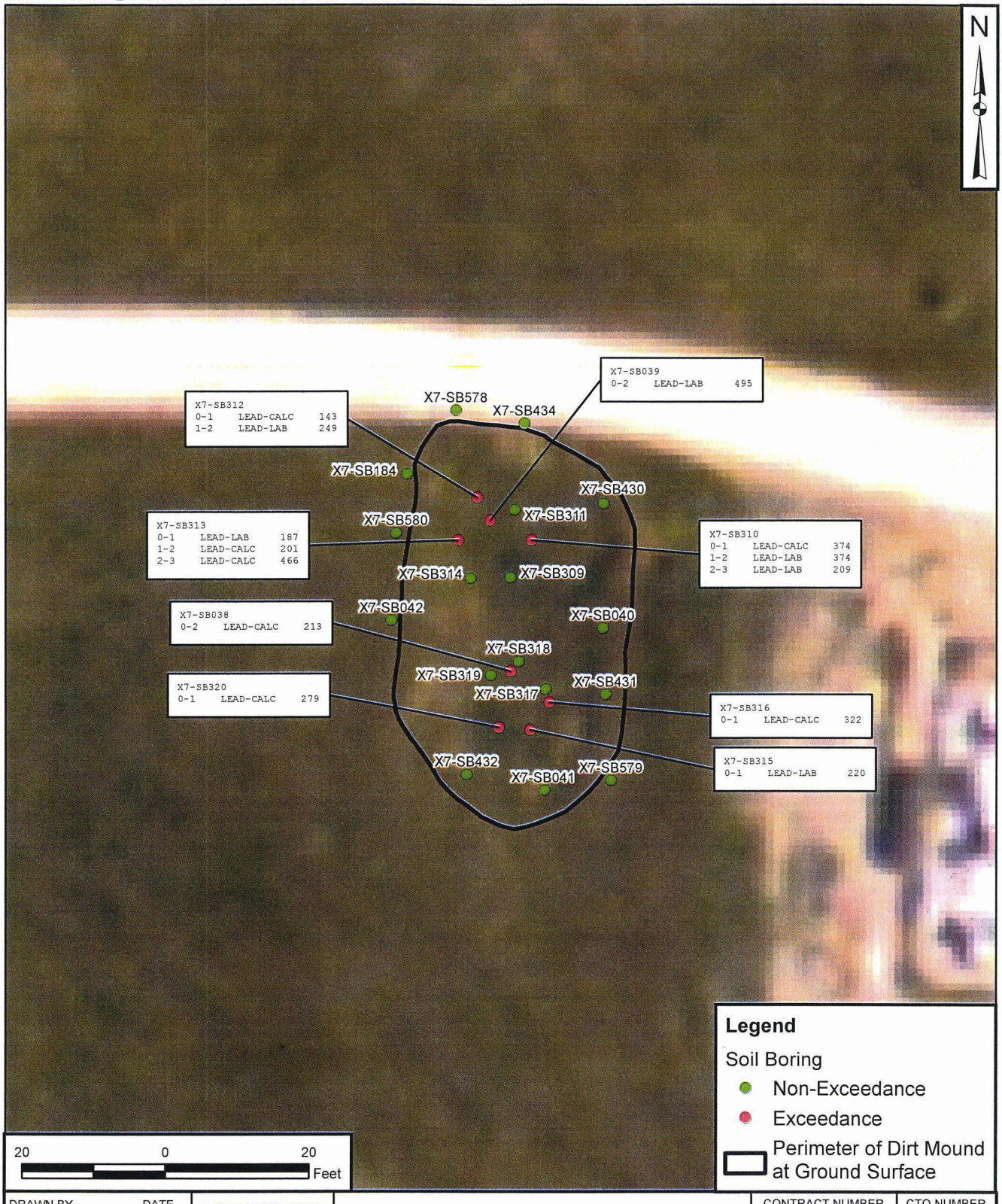
DRAWN BY	DATE
K. MOORE	12/14/12
CHECKED BY	DATE
J. GOERDT	12/18/12
REVISED BY	DATE
SCALE AS NOTED	

NAVFAC

LEAD IN RANGE SOIL FROM RFI
AND SUPPLEMENTAL SOIL SAMPLING
UXO 7 - CENTRAL AREA OF NORTHERN ZONE
NSA CRANE
CRANE, INDIANA

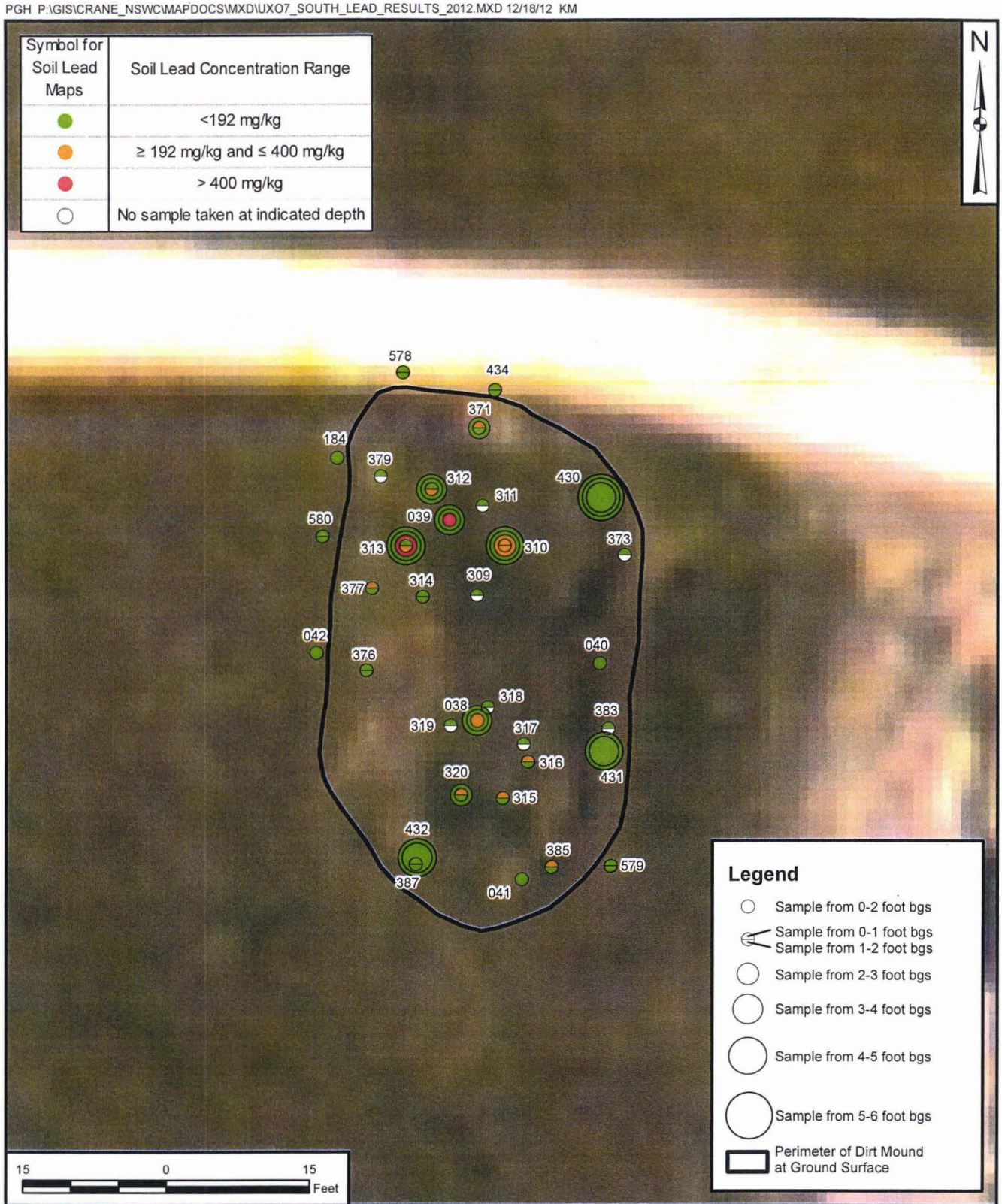
CONTRACT NUMBER	CTO NUMBER
—	F272
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. 3-8	REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_SOUTH_LEAD_TAGS_DEC2012.MXD 12/18/12 KM



DRAWN BY	DATE			CONTRACT NUMBER	CTO NUMBER
K. MOORE	12/12/12	NAVFAC	LEAD IN RANGE SOIL FROM RFI AND SUPPLEMENTAL SOIL SAMPLING UXO 7 - SOUTHERNMOST AREA OF NORTHERN ZONE NSA CRANE CRANE, INDIANA	—	F272
CHECKED BY	DATE			APPROVED BY	DATE
R. BARRINGER	12/12/12			—	—
REVISED BY	DATE			APPROVED BY	DATE
—	—			—	—
SCALE AS NOTED				FIGURE NO. 3-9	REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_SOUTH_LEAD_RESULTS_2012.MXD 12/18/12 KM



DRAWN BY	DATE	LEAD IN RANGE SOIL FROM RFI AND SUPPLEMENTAL SOIL SAMPLING UXO 7 - SOUTHERNMOST AREA OF NORTHERN ZONE NSA CRANE CRANE, INDIANA	CONTRACT NUMBER	CTO NUMBER
K. MOORE	12/14/12		—	F272
CHECKED BY	DATE		APPROVED BY	DATE
J. GOERDT	12/18/12		—	—
REVISED BY	DATE		APPROVED BY	DATE
—	—		—	—
SCALE AS NOTED			FIGURE NO. 3-10	REV 0

4.0 HUMAN HEALTH RISK ASSESSMENT

The goal of this human health risk assessment (HHRA) update for UXO 7 was to re-evaluate combination of data collected for the Initial RFI (Tetra Tech 2009) and the additional Round 1 and Round 2 data collected in support of planned interim measures. Lead and PAHs had been identified as the major contaminants in UXO 7 soil. The initial HHRA had identified significant risks to human receptors from PAHs in soil. The additional data delineated the extent of contamination for use in estimation of remediation volumes and did not affect the initial HHRA conclusion that concentrations of PAHs in soil at the West and East Trap Ranges presented significant risk and that remedial actions are required.

In the baseline HHRA The Integrated Exposure Uptake Biokinetic (IEUBK) model and Adult Lead Model (ALM) analyses of lead concentrations in surface soil at UXO 7 indicated that predicted blood levels for children, adult workers, adult recreational users, and their fetuses were acceptable (i.e., within USEPA's goals and the probabilities of exceeding these goals from exposure to lead in soil were less than the USEPA goal of 5 percent Because the results for the Northern Zone, which were evaluated in the IEUBK and ALM analysis, were less than USEPA goals, it was not necessary to estimate risks for the Central and Southern Zones because the average lead concentrations in these areas (184 and 22.9 mg/kg, respectively) were less than the average concentration in the Northern Zone (278 mg/kg). Figure 1-2 shows the three zones.

The ecological risk assessment had identified the need for remedial actions to reduce risks from ecological receptors in the Northern Zone. For purposes of remediation the Northern Zone had been divided into three distinct areas (Northernmost, Central and Southernmost). The average lead concentration in the Northernmost Area using the combined dataset is 151 mg/kg. In the Central Area the average lead concentration in the combined dataset is 401 mg/kg. In the Southernmost Area the average lead concentration is 117 mg/kg. The lead concentration of 401 mg/kg in the Central Area is slightly above the residential lead screening criteria of 400 mg/kg. However, this concentration would not be expected to result in an exceedance of USEPA's goals for lead. Figure 1-2 shows the three areas within the Northern Zone.

Remedial actions will be conducted in all three areas of the Northern Zone to address excess risk from lead to ecological receptors. The ecological MCGs for lead are attainment of an average lead concentration of less than 192 mg/kg lead for each zone with no remaining soils with lead concentrations above 652 mg/kg. Attainment of the lead MCGs for protection of ecological receptors is expected to also lead to reductions of risk from lead to human receptors. Because attainment of ecological MCGs will

significantly reduce lead concentrations in the Northern Zone Central Area to below 278 mg/kg it was not necessary to re-evaluate lead risks.

5.0 ECOLOGICAL RISK UPDATES

The goal of this ecological risk assessment (ERA) update is to re-evaluate risks to ecological receptors from PAHs in the surface soil of the West and East Trap Ranges at Unexploded Ordnance (UXO) 7, because additional soil samples for PAH analysis have been collected since the ERA was presented in the RFI Report for UXO 7 Ranges (Tetra Tech, 2009). Risks from lead were not re-evaluated because ecological risks from lead were found to be significant in the initial UXO 7 RFI report. The objective for collection of additional samples was to refine the delineation for interim measures.

The general methodology that was followed for this ERA update was presented in the ERA in the RFI Report (Tetra Tech, 2009), and is not repeated here. However, there have been some changes in the methodology used to conduct ERAs at NSA Crane since the 2009 RFI report so these changes have been incorporated into this update, and are noted when they occur.

5.1 SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN

The first step in this ERA update was to select the contaminants of potential concern (COPCs) using the most current toxicity data. Table 5-1 presents the soil screening levels for the four primary receptor groups that were evaluated in the ERA: plants, invertebrates, birds, and mammals. This is a difference from the ERA conducted in the RFI Report which only presented the lowest screening level for those receptor groups. The surface soil screening levels were selected in the following order of preference:

- USEPA Ecological Soil Screening Levels (Eco SSLs) (USEPA, 2007b) were selected first because they are the most current screening levels.

- Canadian Soil Quality Guidelines (SQG) (CCME, 2010) were selected next because they were developed following a similar approach as the USEPA Eco SSLs and are also relatively current.

- Oak Ridge National Laboratory (ORNL) Toxicological Benchmarks for invertebrates (Efroymson et al., 1997a) and plants (Efroymson et al., 1997b) were selected next because they are common benchmarks used for screening, but are typically based on a less robust data set than the Canadian SQGs

- Los Alamos National Laboratory (LANL) ECORISK database (version 3.1; LANL, 2011) were selected in the absence of data in the other references.

No Region 5 Ecological Screening Levels (ESLs) were used because all of the ESLs for PAHs are based on risks to mammals, and the USEPA Eco SSLs were used as the screening levels for mammals.

The next step in the process was to compile the analytical data into tables for the initial screening. The data were segregated into West Trap Range samples and East Trap Range samples and only data collected from the top two feet were included. Also, although there will likely be a removal action to excavate soil containing elevated levels of PAHs based on human health risks, for this initial screening, all the data collected from within the top two feet of soil were included in the screening tables. The COPC selection was conducted using the following rules:

- A contaminant was initially selected as a COPC for risks to terrestrial plants or soil invertebrates if the maximum detected concentration in surface soil exceeded the associated screening level or a screening level was not available.

- A contaminant was retained for food chain modeling for wildlife if its maximum detected concentration exceeded an associated soil screening level for birds or mammals or a screening level was not available for a bioaccumulative chemical. If the ecological effects quotient (EEQ) was greater than 1.0 based on the conservative food chain model, the chemical was initially selected as a COPC.

Tables 5-2 and 5-3 present the COPC selection tables for the West Trap Range samples and East Trap Range samples, respectively. For plants, 10 PAHs were selected as COPCs in both the West and East Trap Ranges because screening levels were not available. Six PAHs in the West Trap Range and one PAH in the East Trap Range were selected as COPCs because their maximum detected concentrations were greater than their respective screening levels, resulting in EEQs that were greater than 1.0. For invertebrates, nine PAHs in the West Trap Range and one PAH in the East Trap Range were selected as COPCs, because their maximum detected concentrations were greater than their respective screening levels.

As presented above, the avian and mammal screening levels were used to determine whether food chain modeling was needed for those chemicals. The determination of whether a chemical was selected as a COPC was based on the results of the food chain modeling. For mammals, screening levels were available for all of the PAHs, but screening levels were only available for a few of the PAHs for birds. Nine PAHs in the West Trap Range and eight PAHs in the East Trap Range were retained for food chain modeling because their maximum detected concentrations were greater than their respective avian or mammal screening levels. In addition, six PAHs in both the West and East Trap Ranges were retained for food chain modeling because avian screening levels were not available, even though the maximum

detected concentration did not exceed the mammal screening level. Those PAHs were still included in the mammal food chain model for simplicity, because the calculation spreadsheets were already set up for all of the PAHs. Finally, three PAHs were not retained for food chain modeling in either the West or East Trap Ranges because they are not considered bioaccumulative.

The food chain modeling was conducted in accordance with the methodology presented in the ERA in the RFI Report (Tetra Tech, 2009). However, some of the exposure factors have changed since the ERA was conducted. Also, some of the current soil-to-invertebrate bioaccumulation factors are different than the ones used in the 2009 ERA to reflect comments from USEPA Region 5 on other risk assessments conducted at NSA Crane. These updated tables are presented in Appendix E.

Tables 5-4 and 5-5 summarize the results of the Tier 1 inputs food chain modeling for terrestrial soil receptors. Appendix E presents the calculation worksheets. The following summarizes the results of the food chain modeling for terrestrial receptors using maximum concentrations and conservative input parameters:

West Trap Range

- Herbivorous mammal: Three PAHs had an EEQ greater than 1.0 and were initially selected as COPCs.
- Herbivorous bird: Four PAHs had an EEQ greater than 1.0 and were initially selected as COPCs.
- Invertivorous mammal: Nine PAHs had EEQs greater than 1.0 and were initially selected as COPCs.
- Invertivorous bird: Twelve PAHs had EEQs greater than 1.0 and were initially selected as COPCs.

East Trap Range

- Herbivorous mammal: No PAHs had an EEQ greater than 1.0 so none were initially selected as COPCs.
- Herbivorous bird: No PAHs had an EEQ greater than 1.0 so none were initially selected as COPCs.
- Invertivorous mammal: Eight PAHs had EEQs greater than 1.0 and were initially selected as COPCs.
- Invertivorous bird: Nine PAHs had EEQs greater than 1.0 and were initially selected as COPCs.

5.2 RISK EVALUATION

This risk evaluation is comparable to Step 3a of the ERA process which consists of refining the conservative exposure assumptions/concentrations used to evaluate potential risks to ecological receptors and re-evaluating the analytical data using benchmarks that are more appropriate for the

assessment endpoints. The Step 3a process is presented in the ERA in the RFI Report (Tetra Tech, 2009).

5.2.1 West Trap Range Risk Evaluation

This section presents the risk evaluation for plants, invertebrates, mammals, and birds from chemical concentrations in the West Trap Range.

Several PAHs were selected as COPCs for plants because their maximum detected concentrations were greater than their respective plant screening levels. Their concentrations only exceeded the screening level at four locations in the surface interval (SB201, SB214, SB463, and SB232). All of those locations are bounded within 20 to 30 feet by samples with concentrations less than the screening level (see Figure E-3 for sample locations). Also, all of those locations are proposed for excavation because the PAH concentrations exceed human health criteria. Plant screening levels were not available for 10 PAHs. As presented below for the East Trap Range, data presented in the Eco SSL document for PAHs shows that PAHs are typically not toxic to plants except at high soil concentrations with the lowest listed EC_{50} of 30 mg/kg from Mitchell et al. (1988). Concentrations of some of the other PAHs were greater than the lowest Canadian SQG of 2.5 mg/kg in samples from only four locations in addition to the ones listed above (SB121, SB123, SB229, and SB470). All of these locations are bounded within 20 to 30 feet by samples with concentrations less than the screening level. Also, all of these locations are proposed for excavation because the PAH concentrations exceed human health criteria. For these reasons, risks to plants from PAHs are low and they are eliminated as COPCs for plants.

Nine PAHs were selected as COPCs for invertebrates because their maximum detected concentration were greater than their respective invertebrate screening levels. Concentrations of PAHs only exceeded their screening level at three locations in the surface interval (SB201, SB214, and SB463). All of those locations are bounded within 20 to 30 feet by samples with concentrations less than the screening level. Also, all of those locations are proposed for excavation because the PAH concentrations exceed human health criteria. For these reasons, risks to invertebrates from PAHs are low and therefore, eliminated as COPCs for invertebrates.

As discussed above, EEQs from the terrestrial food chain modeling were greater than 1.0 for PAHs using maximum chemical concentrations and conservative exposure assumptions. Therefore, as part of the risk evaluation, food chain risks were recalculated using average chemical concentrations and average exposure parameters. Table 5-6 summarizes the results of the average food chain modeling for terrestrial soil receptors. Appendix E presents the calculation worksheets. No chemicals had EEQs

greater than 1.0; therefore, impacts to mammals and birds are not expected from chemicals detected in surface soil at the West Trap Range.

5.2.2 East Trap Range Risk Evaluation

This section presents the risk evaluation for plants, invertebrates, mammals, and birds from chemical concentrations in the East Trap Range.

Benzo(b)fluoranthene was the only PAH selected as a COPC for plants because its maximum detected concentration was greater than a plant screening level. Benzo(b)fluoranthene concentrations only exceeded the screening level at two locations in the surface interval (SB505 and SB528). Both of those locations are bounded within 20 feet by samples with concentrations less than the screening level (see Figure E-3 for sample locations). Therefore, the potentially impacted area is very small. Also, both of those locations are proposed for excavation because the PAH concentrations exceed human health criteria. Plant screening levels were not available for ten PAHs. However, data presented on Table 3.1 in the Eco SSL document for PAHs shows that PAHs are typically not toxic to plants except at high soil concentrations with the lowest listed EC_{50} of 30 mg/kg from Mitchell et al. (1988). Also, the Canadian SQGs are relatively high for anthracene (2.5 mg/kg), benzo(a)pyrene (20 mg/kg), and fluoranthene (50 mg/kg) (CCME, 2010), as seen on Table 1. Concentrations of some of the other PAHs were greater than the lowest Canadian SQG of 2.5 mg/kg in samples from only three locations in addition to the ones listed above (SB255, SB247, and SB535). All of these locations are bounded within 20 feet by samples with concentrations less than the screening level. Also, all of these locations are proposed for excavation because the PAH concentrations exceed human health criteria. For these reasons, risks to plants from PAHs are low and therefore, eliminated as COPCs for plants.

Benzo(b)fluoranthene was the only PAH selected as a COPC for invertebrates because its maximum detected concentration was greater than an invertebrate screening level. It only exceeded the screening level at two locations in the surface interval (SB505 and SB528). Similar to what was discussed above for plants, both of those locations are bounded within 20 feet by samples with concentrations less than the screening level and both of those locations are proposed for excavation. For these reasons, risks to invertebrates from benzo(b)fluoranthene are low and it is eliminated as a COPC for invertebrates. No other PAHs had concentrations greater than their respective screening levels in any samples, so risks to invertebrates from PAHs are low and therefore, eliminated as COPCs for invertebrates.

As discussed above, EEQs from the terrestrial food chain modeling were greater than 1.0 for PAHs using maximum chemical concentrations and conservative exposure assumptions. Therefore, as part of the

risk evaluation, food chain risks were recalculated using average chemical concentrations and average exposure parameters. Table 5-7 summarizes the results of the average food chain modeling for terrestrial soil receptors. Appendix E presents the calculation worksheets. No chemicals had EEQs were greater than 1.0; therefore, impacts to mammals and birds are not expected from chemicals detected in surface soil at the East Trap Range.

5.3 ECOLOGICAL RISK SUMMARY AND CONCLUSIONS

This ERA Update evaluated risks to plants, invertebrates, birds, and mammals from exposure to PAHs in surface soil. Based on the initial screening of the chemical data, several chemicals were initially selected as COPCs in surface soil because they were detected at concentrations that exceeded conservative screening levels, they had EEQs greater than 1.0 in the conservative food chain model, or because they did not have screening levels.

These chemicals were then further evaluated to refine the list of COPCs, and to better characterize risks to ecological receptors. After further evaluation, no chemicals were retained as COPCs for risks to any of the ecological receptors.

TABLE 5-1

SOIL SCREENING LEVELS
UXO 7 - RANGES (FORMER RIFLE/PISTOL AND TRAP RANGES)
NSA CRANE, INDIANA

Parameter	Ecological Soil Screening Level							
	Plant		Invertebrate		Avian		Mammal	
	Value	Source	Value	Source	Value	Source	Value	Source
Polycyclic Aromatic Hydrocarbons (mg/kg)								
1-Methylnaphthalene[1]	NA	NA	29	EcoSSL	NA	NA	100	EcoSSL
2-Methylnaphthalene	NA	NA	29	EcoSSL	NA	NA	100	EcoSSL
Acenaphthene	20	ORNL	29	EcoSSL	NA	NA	100	EcoSSL
Acenaphthylene	20	ORNL[2]	29	EcoSSL	NA	NA	100	EcoSSL
Anthracene	2.5	CCME	29	EcoSSL	NA	NA	100	EcoSSL
Benzo(a)anthracene	18	LANL	18	EcoSSL	0.8	LANL	1.1	EcoSSL
Benzo(a)pyrene	20	CCME	18	EcoSSL	NA	NA	1.1	EcoSSL
Benzo(b)fluoranthene	18	LANL	18	EcoSSL	NA	NA	1.1	EcoSSL
Benzo(g,h,i)perylene	NA	NA	18	EcoSSL	NA	NA	1.1	EcoSSL
Benzo(k)fluoranthene	NA	NA	18	EcoSSL	NA	NA	1.1	EcoSSL
Chrysene	NA	NA	18	EcoSSL	NA	NA	1.1	EcoSSL
Dibenzo(a,h)anthracene	NA	NA	18	EcoSSL	NA	NA	1.1	EcoSSL
Fluoranthene	50	CCME	29	EcoSSL	NA	NA	100	EcoSSL
Fluorene	NA	NA	29	EcoSSL	NA	NA	100	EcoSSL
Indeno(1,2,3-cd)pyrene	NA	NA	18	EcoSSL	NA	NA	1.1	EcoSSL
Naphthalene	1	LANL	29	EcoSSL	3.4	LANL	100	EcoSSL
Phenanthrene	NA	NA	29	EcoSSL	NA	NA	100	EcoSSL
Pyrene	NA	NA	18	EcoSSL	34	LANL	1.1	EcoSSL

Ecological Screening Level sources used in the order of preference:
EcoSSL - EPA Ecological Soil Screening Levels (USEPA, 2005a-h, 2006a, 2007b-g, 2008)
CCME - Canadian Soil Quality Guidelines (CCME, 1999a-e, 2001, 2004a-d, 2006, 2010).
ORNL - Oak Ridge National Laboratory Toxicological Benchmarks for plants and invertebrates (Efroymson et al., 1997a, 1997b).
LANL (3.1 Ecorisk database; LANL, 2012)

Footnotes:
1 - Values are for 2-methylnaphthalene
2 - Value for acenaphthene.

NA - Not available.

TABLE 5-2

ECOLOGICAL COPC SELECTION - SURFACE SOIL IN THE WEST TRAP RANGE
UXO 7 - RANGES (FORMER RIFLE/PISTOL AND TRAP RANGES)
NSA CRANE, INDIANA

Parameter	Frequency of Detection	Minimum Detection	Maximum Detection	Sample ID of Maximum Detection	Average of Detections[1,2]	Average of All Results[1,3]	Ecological Screening Level[4]				Ecological Effects Quotient[5]				Deletion or Selection of COPCs for Invertebrates/Plants		Further Evaluated in Terrestrial Food Chain Modeling[6]	
							Plants	Invertebrates	Avian	Mammals	Plants	Invertebrates	Avian	Mammals	COPC (yes/no)?	Rationale	Evaluated (yes/no)?	Rationale
Polycyclic Aromatic Hydrocarbons (mg/kg)																		
1-METHYLNAPHTHALENE	18/122	0.00211 J	0.318	X7-SS201-0001	0.042	0.008	NA	29	NA	100	NA	0.01	NA	0.003	YES	NSL	NO	NONBIO
2-METHYLNAPHTHALENE	23/128	0.00213 J	0.362	X7-SS201-0001	0.042	0.009	NA	29	NA	100	NA	0.01	NA	0.004	YES	NSL	NO	NONBIO
ACENAPHTHENE	47/128	0.00203 J	2.3	X7-SS201-0001	0.139	0.052	20	29	NA	100	0.12	0.08	NA	0.02	NO	BSL	YES	NSL, BIO
ACENAPHTHYLENE	1/128	0.027	0.027	X7-SS123-0002	0.027	0.003	20	29	NA	100	0.001	0.00	NA	0.0003	NO	BSL	YES	NSL, BIO
ANTHRACENE	53/128	0.00194 J	3.33	X7-SS232-0001	0.19	0.079	2.5	29	NA	100	1.3	0.11	NA	0.03	YES	ASL	YES	NSL, BIO
BENZO(A)ANTHRACENE	86/128	0.00193 J	52.3	X7-SS201-0001	1.42	0.96	18	18	0.8	1.1	2.9	2.9	65	48	YES	ASL	YES	ASL, BIO
BENZO(A)PYRENE	91/128	0.00257 J	56.6	X7-SS201-0001	1.49	1.06	20	18	NA	1.1	2.83	3.1	NA	51	YES	ASL	YES	NSL, ASL, BIO
BENZO(B)FLUORANTHENE	95/128	0.00246 J	79.4	X7-SS201-0001	1.95	1.45	18	18	NA	1.1	4.4	4.4	NA	72	YES	ASL	YES	NSL, ASL, BIO
BENZO(G,H,I)PERYLENE	90/128	0.00228 J	48.3	X7-SS201-0001	1.14	0.80	NA	18	NA	1.1	NA	2.7	NA	44	YES	NSL, ASL	YES	NSL, ASL, BIO
BENZO(K)FLUORANTHENE	83/128	0.00229 J	23	X7-SS201-0001	0.74	0.48	NA	18	NA	1.1	NA	1.3	NA	21	YES	NSL, ASL	YES	NSL, ASL, BIO
CHRYSENE	86/128	0.00212 J	66.8	X7-SS201-0001	1.76	1.18	NA	18	NA	1.1	NA	3.7	NA	61	YES	NSL, ASL	YES	NSL, ASL, BIO
DIBENZO(A,H)ANTHRACENE	44/128	0.00211 J	10.3	X7-SS201-0001	0.44	0.15	NA	18	NA	1.1	NA	0.57	NA	9.4	YES	NSL	YES	NSL, ASL, BIO
FLUORANTHENE	94/128	0.00208 J	61.4	X7-SS201-0001	1.64	1.21	50	29	NA	100	1.2	2.1	NA	0.6	YES	ASL	YES	NSL, BIO
FLUORENE	33/128	0.00239 J	1.3	X7-SS232-0001	0.12	0.034	NA	29	NA	100	NA	0.04	NA	0.01	YES	NSL	YES	NSL, BIO
INDENO(1,2,3-CD)PYRENE	90/128	0.002 J	48.4	X7-SS201-0001	1.12	0.79	NA	18	NA	1.1	NA	2.7	NA	44	YES	NSL, ASL	YES	NSL, ASL, BIO
NAPHTHALENE	22/128	0.00239 J	1.43	X7-SS201-0001	0.14	0.026	1	29	3.4	100	1.4	0.05	0.42	0.01	YES	ASL	NO	BSL, NONBIO
PHENANTHRENE	90/128	0.00201 J	13.7	X7-SS201-0001	0.51	0.36	NA	29	NA	100	NA	0.47	NA	0.1	YES	NSL	YES	NSL, BIO
PYRENE	95/128	0.00197 J	62.6	X7-SS201-0001	1.68	1.25	NA	18	34	1.1	NA	3.5	1.8	57	YES	NSL, ASL	YES	ASL, BIO

Shading indicates the EEQ is greater than 1.0, the chemical is selected as a COPC, or the chemical is retained for food chain modeling.
EEQ - Ecological Effects Quotient
COPC - Chemical of Potential Concern
NA - Not Applicable/Not Available

1 - When duplicate results are available, the maximum of the original and duplicate sample is used in the calculation.
2 - Average of detected concentrations only.
3 - Average of all analytical results including one-half of the detection limit for non-detects.
4 - The sources of the screening levels are presented in Appendix ___.
5 - EEQ is calculated by dividing the chemical concentration by its screening level. Value is unitless.
6 - Chemicals with EEQs for birds or mammals greater than 1.0 or bioaccumulative chemicals without bird or mammal screening values are retained for food chain modeling.

Rationale Codes for COPC Selection:
ASL - Above Screening Level
BIO - Bioaccumulative chemical
BSL - Below Screening Level
NSL - No Screening Level
NONBIO - Non-bioaccumulative chemical

TABLE 5-3

ECOLOGICAL COPC SELECTION - SURFACE SOIL IN THE EAST TRAP RANGE
UXO 7 - RAMGES (FORMER RIFLE/PISTOL AND TRAP RANGES)
NSA CRANE, INDIANA

Parameter	Frequency of Detection	Minimum Detection	Maximum Detection	Sample ID of Maximum Detection	Average of Detections[1,2]	Average of All Results[1,3]	Ecological Screening Level[4]				Ecological Effects Quotient[5]				Deletion or Selection of COPCs for Invertebrates/Plants		Further Evaluated in Terrestrial Food Chain Modeling[6]	
							Plants	Invertebrates	Avian	Mammals	Plants	Invertebrates	Avian	Mammals	COPC (yes/no)?	Rationale	Evaluated (yes/no)?	Rationale
Polycyclic Aromatic Hydrocarbons (mg/kg)																		
1-METHYLNAPHTHALENE	5/122	0.0033 J	0.0507	X7-SS528-0102	0.02	0.004	NA	29	NA	100	NA	0.002	NA	0.001	YES	NSL	NO	NONBIO
2-METHYLNAPHTHALENE	6/127	0.0029 J	0.0598	X7-SS528-0102	0.02	0.004	NA	29	NA	100	NA	0.002	NA	0.001	YES	NSL	NO	NONBIO
ACENAPHTHENE	28/127	0.0019 J	0.545	X7-SS528-0102	0.04	0.01	20	29	NA	100	0.03	0.02	NA	0.005	NO	BSL	YES	NSL, BIO
ANTHRACENE	39/127	0.0021 J	0.502	X7-SS528-0102	0.04	0.02	2.5	29	NA	100	0.20	0.02	NA	0.005	NO	BSL	YES	NSL, BIO
BENZO(A)ANTHRACENE	85/127	0.0037 J	10.6	X7-SS505-0102	0.46	0.31	18	18	0.8	1.1	0.59	0.59	13.3	9.6	NO	BSL	YES	ASL, BIO
BENZO(A)PYRENE	107/127	0.0019 J	15.4	X7-SS505-0102	0.48	0.40	20	18	NA	1.1	0.77	0.86	NA	14	NO	BSL	YES	NSL, ASL, BIO
BENZO(B)FLUORANTHENE	109/127	0.0021 J	20.9	X7-SS505-0102	0.63	0.54	18	18	NA	1.1	1.16	1.16	NA	19	YES	ASL	YES	NSL, ASL, BIO
BENZO(G,H,I)PERYLENE	98/127	0.0022 J	8.65	X7-SS505-0102	0.33	0.25	NA	18	NA	1.1	NA	0.48	NA	7.9	YES	NSL	YES	NSL, ASL, BIO
BENZO(K)FLUORANTHENE	92/127	0.0020 J	6.93	X7-SS505-0102	0.26	0.19	NA	18	NA	1.1	NA	0.39	NA	6.3	YES	NSL	YES	NSL, ASL, BIO
CHRYSENE	86/127	0.0020 J	13.4	X7-SS505-0102	0.56	0.38	NA	18	NA	1.1	NA	0.74	NA	12.2	YES	NSL	YES	NSL, ASL, BIO
DIBENZO(A,H)ANTHRACENE	41/127	0.0020 J	1.03	X7-SS255-0102	0.06	0.02	NA	18	NA	1.1	NA	0.06	NA	0.94	YES	NSL	YES	NSL, BIO
FLUORANTHENE	107/127	0.0019 J	11.8	X7-SS505-0102, X7-SS528-0102	0.44	0.37	50	29	NA	100	0.24	0.41	NA	0.12	NO	BSL	YES	NSL, BIO
FLUORENE	19/127	0.0020 J	0.192	X7-SS528-0102	0.03	0.01	NA	29	NA	100	NA	0.01	NA	0.002	YES	NSL	YES	NSL, BIO
INDENO(1,2,3-CD)PYRENE	97/127	0.0020 J	7.63	X7-SS528-0102	0.31	0.24	NA	18	NA	1.1	NA	0.42	NA	6.9	YES	NSL	YES	NSL, ASL, BIO
NAPHTHALENE	12/127	0.0021 J	0.154	X7-SS528-0102	0.04	0.01	1	29	3.4	100	0.15	0.01	0.05	0.002	NO	BSL	NO	BSL, NONBIO
PHENANTHRENE	85/127	0.0023 J	1.97	X7-SS505-0102	0.10	0.07	NA	29	NA	100	NA	0.07	NA	0.02	YES	NSL	YES	NSL, BIO
PYRENE	107/127	0.0019 J	12.7	X7-SS505-0102	0.45	0.38	NA	18	34	1.1	NA	0.71	0.37	11.5	YES	NSL	YES	ASL, BIO

Shading indicates the EEQ is greater than 1.0, the chemical is selected as a COPC, or the chemical is retained for food chain modeling.
EEQ - Ecological Effects Quotient
COPC - Chemical of Potential Concern
NA - Not Applicable/Not Available

1 - When duplicate results are available, the maximum of the original and duplicate sample is used in the calculation.
2 - Average of detected concentrations only.
3 - Average of all analytical results including one-half of the detection limit for non-detects.
4 - The sources of the screening levels are presented in Appendix ___.
5 - EEQ is calculated by dividing the chemical concentration by its screening level. Value is unitless.
6 - Chemicals with EEQs for birds or mammals greater than 1.0 or bioaccumulative chemicals without bird or mammal screening values are retained for food chain modeling.

Rationale Codes for COPC Selection:
ASL - Above Screening Level
BIO - Bioaccumulative chemical
BSL - Below Screening Level
NSL - No Screening Level
NONBIO - Non-bioaccumulative chemical

TABLE 5-4

TERRESTRIAL FOOD CHAIN MODEL - TIER 1 SCENARIO - WEST TRAP RANGE
INVERTIVOROUS AND HERBIVOROUS RECEPTORS
UXO 7 - RANGES (FORMER RIFLE/PISTOL AND TRAP RANGES)
NSA CRANE, INDIANA

Chemical	Herbivorous Receptors EEQs				Invertivorous Receptors EEQs			
	Bobwhite Quail		Meadow Vole		Woodcock		Short-Tailed Shrew	
	NOAEL-based	LOAEL-based	NOAEL-based	LOAEL-based	NOAEL-based	LOAEL-based	NOAEL-based	LOAEL-based
Polycyclic Aromatic Hydrocarbons								
ACENAPHTHENE	1.6E-02	1.6E-03	6.7E-05	1.2E-05	3.4E-01	3.4E-02	8.9E-03	1.6E-03
ACENAPHTHYLENE	1.1E-03	1.1E-04	1.7E-05	3.1E-06	5.7E-02	5.7E-03	1.6E-03	3.0E-04
ANTHRACENE	7.1E-02	7.1E-03	9.4E-04	1.7E-04	7.9E-01	7.9E-02	2.1E-02	3.9E-03
BENZO(A)ANTHRACENE	4.0E-01	4.0E-02	2.3E-01	3.6E-03	8.4E+00	8.4E-01	2.3E+01	3.8E-01
BENZO(A)PYRENE	7.3E-01	7.3E-02	7.9E-01	1.3E-02	7.7E+00	7.7E-01	2.1E+01	3.4E-01
BENZO(B)FLUORANTHENE	1.8E+00	1.8E-01	2.6E+00	4.1E-02	2.0E+01	2.0E+00	5.8E+01	9.2E-01
BENZO(G,H,I)PERYLENE	2.3E+00	2.3E-01	3.8E+00	6.1E-02	1.4E+01	1.4E+00	4.0E+01	6.3E-01
BENZO(K)FLUORANTHENE	2.5E-01	2.5E-02	2.3E-01	3.7E-03	5.8E+00	5.8E-01	1.7E+01	2.7E-01
CHRYSENE	5.1E-01	5.1E-02	2.8E-01	4.5E-03	1.5E+01	1.5E+00	4.3E+01	6.9E-01
DIBENZO(A,H)ANTHRACENE	1.4E-01	1.4E-02	1.6E-01	2.5E-03	2.3E+00	2.3E-01	6.7E+00	1.1E-01
FLUORANTHENE	2.0E+00	2.0E-01	2.9E-02	5.4E-03	1.8E+01	1.8E+00	4.9E-01	9.0E-02
FLUORENE	9.3E-03	9.3E-04	4.0E-05	7.3E-06	1.2E+00	1.2E-01	3.2E-02	6.0E-03
INDENO(1,2,3-CD)PYRENE	6.1E-01	6.1E-02	6.5E-01	1.0E-02	1.3E+01	1.3E+00	3.9E+01	6.2E-01
PHENANTHRENE	3.1E-01	3.1E-02	4.2E-03	7.8E-04	2.4E+00	2.4E-01	6.2E-02	1.1E-02
PYRENE	2.7E+00	2.7E-01	4.5E+00	7.2E-02	1.1E+01	1.1E+00	3.1E+01	4.9E-01

Cells are shaded if the value is greater than 1.0

NOAEL - No Observed Adverse Effects Level
LOAEL - Lowest Observed Adverse Effects Level
EEQ - Ecological Effects Quotient

TABLE 5-5

TERRESTRIAL FOOD CHAIN MODEL - TIER 1 SCENARIO - EAST TRAP RANGE
INVERTIVOROUS AND HERBIVOROUS RECEPTORS
UXO 7 - RANGES (FORMER RIFLE/PISTOL AND TRAP RANGES)
NSA CRANE, INDIANA

Chemical	Herbivorous Receptors EEQs				Invertivorous Receptors EEQs			
	Bobwhite Quail		Meadow Vole		Woodcock		Short-Tailed Shrew	
	NOAEL-based	LOAEL-based	NOAEL-based	LOAEL-based	NOAEL-based	LOAEL-based	NOAEL-based	LOAEL-based
Polycyclic Aromatic Hydrocarbons								
ACENAPHTHENE	4.2E-03	4.2E-04	2.1E-05	3.9E-06	8.1E-02	8.1E-03	2.1E-03	3.9E-04
ANTHRACENE	1.5E-02	1.5E-03	2.1E-04	3.8E-05	1.2E-01	1.2E-02	3.2E-03	5.9E-04
BENZO(A)ANTHRACENE	8.8E-02	8.8E-03	5.8E-02	9.3E-04	1.7E+00	1.7E-01	4.7E+00	7.6E-02
BENZO(A)PYRENE	2.0E-01	2.0E-02	2.2E-01	3.5E-03	2.1E+00	2.1E-01	5.8E+00	9.3E-02
BENZO(B)FLUORANTHENE	4.7E-01	4.7E-02	6.8E-01	1.1E-02	5.3E+00	5.3E-01	1.5E+01	2.4E-01
BENZO(G,H,I)PERYLENE	3.2E-01	3.2E-02	5.1E-01	8.1E-03	2.5E+00	2.5E-01	7.1E+00	1.1E-01
BENZO(K)FLUORANTHENE	8.0E-02	8.0E-03	7.9E-02	1.3E-03	1.7E+00	1.7E-01	5.0E+00	8.1E-02
CHRYSENE	1.1E-01	1.1E-02	7.0E-02	1.1E-03	3.0E+00	3.0E-01	8.6E+00	1.4E-01
DIBENZO(A,H)ANTHRACENE	1.4E-02	1.4E-03	1.6E-02	2.5E-04	2.3E-01	2.3E-02	6.7E-01	1.1E-02
FLUORANTHENE	3.8E-01	3.8E-02	5.6E-03	1.0E-03	3.5E+00	3.5E-01	9.4E-02	1.7E-02
FLUORENE	2.1E-03	2.1E-04	1.9E-05	3.6E-06	1.7E-01	1.7E-02	4.8E-03	8.8E-04
INDENO(1,2,3-CD)PYRENE	9.6E-02	9.6E-03	1.0E-01	1.6E-03	2.1E+00	2.1E-01	6.1E+00	9.8E-02
PHENANTHRENE	7.9E-02	7.9E-03	1.2E-03	2.2E-04	3.4E-01	3.4E-02	8.9E-03	1.6E-03
PYRENE	5.5E-01	5.5E-02	9.1E-01	1.5E-02	2.2E+00	2.2E-01	6.2E+00	1.0E-01

Cells are shaded if the value is greater than 1.0

NOAEL - No Observed Adverse Effects Level
LOAEL - Lowest Observed Adverse Effects Level
EEQ - Ecological Effects Quotient

TABLE 5-6

TERRESTRIAL FOOD CHAIN MODEL - TIER 2, STEP 3A SCENARIO - WEST TRAP RANGE
INVERTIVOROUS AND HERBIVOROUS RECEPTORS
UXO 7 - RANGES (FORMER RIFLE/PISTOL AND TRAP RANGES)
NSA CRANE, INDIANA

Chemical	Herbivorous Receptors EEQs				Invertivorous Receptors EEQs			
	Bobwhite Quail		Meadow Vole		Woodcock		Short-Tailed Shrew	
	NOAEL-based	LOAEL-based	NOAEL-based	LOAEL-based	NOAEL-based	LOAEL-based	NOAEL-based	LOAEL-based
Polycyclic Aromatic Hydrocarbons								
BENZO(A)ANTHRACENE	5.0E-03	5.0E-04	6.1E-03	9.7E-05	1.1E-01	1.1E-02	2.4E-01	3.9E-03
BENZO(A)PYRENE	8.1E-03	8.1E-04	1.2E-02	1.9E-04	9.8E-02	9.8E-03	2.2E-01	3.6E-03
BENZO(B)FLUORANTHENE	2.2E-02	2.2E-03	3.7E-02	5.9E-04	2.6E-01	2.6E-02	6.0E-01	9.6E-03
BENZO(G,H,I)PERYLENE	1.4E-02	1.4E-03	2.5E-02	4.0E-04	1.6E-01	1.6E-02	3.8E-01	6.0E-03
BENZO(K)FLUORANTHENE	3.7E-03	3.7E-04	5.3E-03	8.6E-05	8.6E-02	8.6E-03	2.0E-01	3.2E-03
CHRYSENE	5.9E-03	5.9E-04	7.0E-03	1.1E-04	1.9E-01	1.9E-02	4.3E-01	6.9E-03
DIBENZO(A,H)ANTHRACENE	1.2E-03	1.2E-04	1.7E-03	2.7E-05	2.4E-02	2.4E-03	5.6E-02	8.9E-04
FLUORANTHENE	2.8E-02	2.8E-03	4.6E-04	8.5E-05	2.5E-01	2.5E-02	5.5E-03	1.0E-03
FLUORENE	2.9E-03	2.9E-04	5.2E-05	9.6E-06	2.2E-02	2.2E-03	4.8E-04	8.8E-05
INDENO(1,2,3-CD)PYRENE	5.5E-03	5.5E-04	7.6E-03	1.2E-04	1.5E-01	1.5E-02	3.6E-01	5.8E-03
PHENANTHRENE	1.9E-02	1.9E-03	3.4E-04	6.2E-05	4.3E-02	4.3E-03	9.3E-04	1.7E-04
PYRENE	4.0E-02	4.0E-03	7.2E-02	1.2E-03	1.5E-01	1.5E-02	3.5E-01	5.6E-03

Cells are shaded if the value is greater than 1.0

NOAEL - No Observed Adverse Effects Level
LOAEL - Lowest Observed Adverse Effects Level
EEQ - Ecological Effects Quotient

TABLE 5-7

TERRESTRIAL FOOD CHAIN MODEL - TIER 2, STEP 3A SCENARIO - EAST TRAP RANGE
INVERTIVOROUS AND HERBIVOROUS RECEPTORS
UXO 7 - RANGES (FORMER RIFLE/PISTOL AND TRAP RANGES)
NSA CRANE, INDIANA

Chemical	Herbivorous Receptors EEQs				Invertivorous Receptors EEQs			
	Bobwhite Quail		Meadow Vole		Woodcock		Short-Tailed Shrew	
	NOAEL-based	LOAEL-based	NOAEL-based	LOAEL-based	NOAEL-based	LOAEL-based	NOAEL-based	LOAEL-based
Polycyclic Aromatic Hydrocarbons								
BENZO(A)ANTHRACENE	2.1E-03	2.1E-04	2.9E-03	4.7E-05	3.4E-02	3.4E-03	7.8E-02	1.3E-03
BENZO(A)PYRENE	3.1E-03	3.1E-04	4.5E-03	7.3E-05	3.8E-02	3.8E-03	8.6E-02	1.4E-03
BENZO(B)FLUORANTHENE	8.1E-03	8.1E-04	1.4E-02	2.2E-04	9.6E-02	9.6E-03	2.2E-01	3.6E-03
BENZO(G,H,I)PERYLENE	3.8E-03	3.8E-04	6.4E-03	1.0E-04	5.1E-02	5.1E-03	1.2E-01	1.9E-03
BENZO(K)FLUORANTHENE	1.6E-03	1.6E-04	2.4E-03	3.8E-05	3.4E-02	3.4E-03	8.0E-02	1.3E-03
CHRYSENE	2.5E-03	2.5E-04	3.3E-03	5.3E-05	5.9E-02	5.9E-03	1.4E-01	2.2E-03
DIBENZO(A,H)ANTHRACENE	1.7E-04	1.7E-05	2.4E-04	3.8E-06	3.4E-03	3.4E-04	7.8E-03	1.3E-04
FLUORANTHENE	8.4E-03	8.4E-04	1.4E-04	2.6E-05	7.6E-02	7.6E-03	1.7E-03	3.1E-04
FLUORENE	1.2E-02	1.2E-03	2.2E-04	4.0E-05	4.0E-03	4.0E-04	9.0E-05	1.7E-05
INDENO(1,2,3-CD)PYRENE	1.7E-03	1.7E-04	2.3E-03	3.7E-05	4.6E-02	4.6E-03	1.1E-01	1.7E-03
PHENANTHRENE	6.5E-03	6.5E-04	1.2E-04	2.1E-05	7.7E-03	7.7E-04	1.7E-04	3.1E-05
PYRENE	1.2E-02	1.2E-03	2.2E-02	3.5E-04	4.6E-02	4.6E-03	1.1E-01	1.7E-03

Cells are shaded if the value is greater than 1.0

NOAEL - No Observed Adverse Effects Level
LOAEL - Lowest Observed Adverse Effects Level
EEQ - Ecological Effects Quotient

6.0 RISK REDUCTION AND MITIGATION

This section presents an evaluation of the steps necessary to reduce human health and ecological risk to acceptable levels. PAHs present human health risk in excess 1 X 10^{-4}. Acceptable risk is within the risk range 1 X 10^{-6} to 1 X 10^{-4}. The MCGs for PAHs are reduction of contaminant concentrations so that the risk from residual contamination in surface and subsurface soils is within the acceptable risk range for residential receptors. Ecological risks from lead were found to be unacceptable in the screening risk assessment. The MCGs for lead are reduction of lead concentrations to below and average of 192 mg/kg with no soils remaining with lead concentration above 652 mg/kg. The discrete areas where PAHs and lead contamination have been delineated in soil are located in different zones within UXO 7. Risk reduction strategies are discussed separately for PAHs and lead in this section.

6.1 PAHS

The risk-based screening level (RBSL) of 1 X 10^{-4} for residential human health exposure is used as the point of departure for evaluating total cancer risks in this assessment. Several PAHs are present. The total risk is presented as BaP equivalents. A discussion of BaP equivalent calculations is included in Appendix C. A RBSL corresponding to a risk level of 1 X 10^{-4} or 1.5 mg/kg, is used to evaluate the total BaP equivalent concentrations for this project. Based on the collected soil samples from the UXO 7 trap ranges and the BaP equivalent concentrations calculated for those soil samples, there is PAH contamination present within the footprints of the former East and West Trap Ranges above the human health screening level of 0.015 mg/kg BaP equivalents. Because the primary screening level of 0.015 mg/kg BaP equivalents for the human health screening level of 1 X 10^{-6} is particularly low (15 parts per billion), many of the soil samples collected from the former trap ranges that contain detectable levels of PAHs exceeded this screening level established for the human health risk level of 1 X 10^{-6}.

However, if all or most of the soil areas with BaP equivalent concentrations greater than the screening level established for the human health risk level of 1 X 10^{-5} (0.15 mg/kg) were removed from the former trap range areas, then the majority of the remaining soil areas should fall somewhere between the projected residential cancer risk levels 1 X 10^{-6} (0.015 mg/kg) and 1 X 10^{-5} (0.15 mg/kg) of BaP equivalents in the remaining trap range soil as shown in the table below.

BaP Equivalent Concentrations in Trap Range Soil Samples	Total Residential Cancer Risk Levels
< 0.015 mg/kg	$< 1 \times 10^{-6}$
0.015 mg/kg to 0.15 mg/kg	1×10^{-6} to 1×10^{-5}
0.15 mg/kg to 1.5 mg/kg	1×10^{-5} to 1×10^{-4}
> 1.5 mg/kg	$> 1 \times 10^{-4}$

Based on this approach, it is possible to delineate discrete soil areas with higher BaP equivalent concentrations and corresponding higher total residential cancer risks and target those specific soil areas for excavation and removal, which would reduce the overall residential cancer risk for the remaining range soil to levels between the residential cancer risk levels of 1×10^{-6} (0.015 mg/kg) and 1×10^{-5} (0.15 mg/kg) based on post-remedial action BaP equivalent concentrations in the former UXO 7 East Trap Range soil.

6.1.1 West Trap Range

The initial RFI sampling at the West Trap Range included samples from locations SB116, SB121, SB122, SB123, SB129, and SB136 and PAHs were detected in the central sector of the suspected maximum skeet fragment area. Supplemental soil sampling for PAHs at the West Trap Range was performed in 2011 and 2012 in the north, south, east, and west portions of the suspected maximum skeet accumulation area to delineate the lateral and vertical extent of BaP equivalent concentrations in soil. **Table 6-1** lists the BaP equivalent results for all samples collected at the UXO 7 West Trap Range during the RFI and the Round 1 and Round 2 supplemental investigations. **Table 6-2** ranks the BaP equivalent results from highest to lowest concentrations for soil samples collected on the West Trap Range.

Figure 3-2 identifies the soil samples with exceedances of the BaP human health screening criteria for the West Trap Range using colors to identify the general magnitudes of the detections. The vast majority of the BaP equivalent contamination identified in soil from the West Trap Range was present in samples collected from the surficial two feet of soil. Six discrete excavation subareas are proposed for excavation (**Figure 6-1**). The largest area (Subarea 1) covers approximately 9,800 square feet within the suspected maximum skeet fragment area and extends to a depth of one foot (approximately 363 cubic yards of soil for removal). Five other smaller removal areas (Subareas 2 through 6) are located inside the larger excavation and will extend down one additional foot to address deeper soil contamination. These smaller areas collectively cover 3,042 square feet (at a depth of one foot below the Subarea 1 excavation) and generate an additional 113 cubic yards of contaminated soil for removal. The excavation subareas are presented on **Figure 6-1** and in **Table F-1** (Appendix F).

The volume of range soil to be removed from the West Trap Range totals approximately 476 cubic yards. **Table 6-3** presents the West Trap Range sample locations with corresponding BaP concentrations remaining after removal actions. Subareas of soil with cancer risk levels in excess of 1×10^{-4} and areas of soil with cancer risk levels between 1×10^{-5} to 1×10^{-4} are proposed for removal. **Table 6-4** presents the upper confidence level (UCL) calculations with a 95 percent confidence level for the BaP equivalent concentrations in the West Trap Range soil. Before removal the 95% UCL for the BaP equivalent concentrations in the West Trap Range soil is 5.42 mg/kg (1.5 mg/kg BaP concentration for residential human receptor is equivalent to a cancer risk level of 1×10^{-4}). With the removal of the soil identified in the six removal areas, the 95% UCL for the BaP equivalent concentrations in the West Trap Range soil is reduced to 0.02 mg/kg, which is well within the acceptable risk range.

6.1.2 East Trap Range

The initial RFI sampling at the West Trap Range included samples SB071 and SB075 where PAHs were detected in the south central and northwestern sectors of the maximum suspected skeet fragment area. Additional supplemental soil sampling for PAHs at the East Trap Range was performed during 2011 and 2012 in the north, south, east, and west portions of the suspected maximum skeet accumulation area to delineate the lateral and vertical extent of BaP equivalent concentrations in soil. **Table 6-5** lists the BaP equivalent results for all samples collected at the UXO 7 East Trap Range during the RFI and the Round 1 and Round 2 supplemental investigations. **Table 6-6** ranks the BaP equivalent results from highest to lowest concentrations for soil samples collected on the East Trap Range.

Figure 3-4 identifies the soil samples with exceedances of the BaP human health screening criteria for the East Trap Range using colors to identify the general magnitudes of the detections. With only limited exceptions, the majority of the BaP equivalent contamination identified in soil from the East Trap Range was present in samples collected from the surficial two feet of soil. Seven discrete excavation subareas are proposed to address excess cancer risk to future residential human health receptors (**Figure 6-2**). The largest area (Subarea 6) covers approximately 2,900 square feet within the suspected maximum skeet fragment area and extends to a depth of two feet (approximately 212 cubic yards of soil for removal). One other smaller removal area (Subarea 7) is physically located inside this larger excavation and will extend down 4 additional feet to address deeper soil contamination (at a total depth of 6 feet bgs). This smaller area (Subarea 7) collectively covers 400 square feet (and at a depth of four more feet below the Area 6 excavation) generates an additional 60 cubic yards of contaminated soil for removal. Areas 1, 2, 3, 4, and 5 in the north central area of the East Trap Range cover approximately 4,563 square feet and while each subarea has a special excavation depth (identified on **Figure 6-2**), these northern

areas will produce an estimated 367 cubic yards of excavated soil. These excavation areas are presented on **Figure 6-2** and in **Table F-2** (Appendix F).

The volume of range soil to be removed from the East Trap Range totals approximately 640 cubic yards. **Table 6-7** presents the East Trap Range sample locations with corresponding BaP concentrations remaining after removal actions. Areas of soil with cancer risk levels in excess of 1×10^{-4} and areas of soil with cancer risk levels between 1×10^{-5} to 1×10^{-4} are proposed for removal.

Table 6-8 presents the upper confidence level (UCL) with a 95 percent confidence level for the BaP equivalent concentrations in the East Trap Range soil. Before removal the 95% UCL for the BaP equivalent concentrations in the East Trap Range soil is 1.96 mg/kg (1.5 mg/kg BaP concentration for residential human receptor is equivalent to a cancer risk level of 1×10^{-4}). With the removal of the soil identified in the seven removal areas, the 95% UCL for the BaP equivalent concentrations in the East Trap Range soil is reduced to 0.025 mg/kg, and is closer to the 0.015 mg/kg concentration which correlates to the residential human receptor cancer risk of 1×10^{-6}.

6.2 LEAD

Per an e-mail from Mr. Peter Ramanauskas, dated June 24, 2011, the EPA agreed upon a MCG of a concentration of 192 mg/kg as an acceptable benchmark to be applied as a site-wide arithmetic average soil lead concentration in the surface soil (0 to 2-feet bgs) for UXO 7. Additionally, a sample-specific lead concentration of 652 mg/kg was determined as the maximum allowable lead concentration to remain within the surface soil at the site while still meeting the 192 mg/kg lead concentration benchmark. Lead concentrations greater than the Navy/EPA agreed upon average concentration of 192 mg/kg, and the sample-specific lead concentration of 652 mg/kg in the surface soil remain in the northern zone of UXO 7. Specifically, these areas include the Northernmost Area, the Central Area, and the Southernmost Area, as presented on **Figure 2-3**, **Figure 2-4**, and **Figure 2-5**, respectively. Lead concentrations in deeper soil (greater than 2 feet bgs) are not regarded as biologically available to ecological receptors, but could serve as potential exposure sources to future human receptors for construction workers, etc. Consequently, deeper subsurface soil samples (below 2 feet bgs) were compared against the direct contact human health lead criteria of 400 mg/kg.

6.2.1 Northernmost Area of Northern Zone

The initial RFI sampling within the Northernmost Area of the Northern Zone which is located between the 400- and 500-yard firing berms, included samples from seven locations at a depth of 2-feet bgs. Of the initial seven samples, one location (SB055) presented a lead detection greater than 652 mg/kg. This

sample location, along with location SB174 presented lead concentrations in excess of the residential direct-contact screening criteria of 400 mg/kg. In an attempt to define the horizontal and vertical extent of the lead contamination, supplemental soil sampling was performed in 2011 and 2012. **Table 6-9** presents the lead results for all samples collected within the Northernmost Area and **Table 6-10** ranks those lead results based on lead concentrations for soil samples collected within the Northernmost Area. As shown in **Table 6-10**, the Northernmost Area overall average concentration of lead prior to any proposed soil excavation is 151 mg/kg with only three samples exceeding the sample-specific lead concentration of 652 mg/kg.

Figure 3-6 identifies the soil samples with exceedances of the lead human health and ecological screening criteria for the Northernmost Area using colors to identify the range of detections. The lead contamination within the Northernmost Area is mostly confined to the southwest portion of the site with the contamination limited to the upper 2-feet of soil. Two discrete excavation subareas are proposed to address the main risks to ecological receptors. Subarea 1 covers approximately 251 square feet to a depth of two feet bgs (approximately 19 cubic yards of soil). The excavation subarea is presented on **Figure 6-3**. Subarea 2 covers approximately 100 square feet to a depth of one foot bgs (approximately 4 cubic yards). This subarea, as shown on **Figure 6-3**, includes sample location SB569 which exhibited a lead concentration of 661 mg/kg at the 0 to 1-foot depth bgs.

The volume of range soil to be removed from the Northernmost Area to achieve reductions in risk to ecological receptors totals approximately 23 cubic yards. Upon removal of the two proposed excavation subareas and backfilled with clean soil, the overall average lead concentration within the Northernmost Area drops from 151 mg/kg to 80 mg/kg as presented in **Table 6-10**. Additionally, no sample-specific lead concentrations greater than 652 mg/kg would remain at the site.

6.2.2 Central Area

The initial RFI sampling within the Central Area of the Northern Zone, which consists of the 400-yard firing berm and surrounding area, included samples from 12 locations at a depth of 2-feet bgs. Of the initial 12 samples, one location (SB046) presented a lead detection greater than 652 mg/kg. This sample location was the only location which exhibited a lead concentration in excess of the residential direct-contact screening criteria of 400 mg/kg. In an attempt to define the horizontal and vertical extent of the lead contamination, supplemental soil sampling was performed in 2011 and 2012. **Table 6-11** presents the lead results for all samples collected within the Central Area of the Northern Zone of the Rifle Range, and **Table 6-12** ranks those lead results based on lead concentrations for soil samples collected within the Central Area. As shown in **Table 6-12**, the Central Area overall average concentration of lead prior to

any proposed soil excavation is 401 mg/kg. Numerous samples within the Central Area exhibited sample-specific lead concentrations greater than 652 mg/kg.

Figure 3-8 identifies the soil samples with exceedances of the lead human health and ecological screening criteria for the Central Area using colors to identify the range of detections. The lead contamination within the Central Area is mostly located on the southern face of the 400-yard firing berm as well as in the area located just to the west and southwest of the berm. Numerous bullets and bullet fragments were observed in the area just west and southwest of the firing berm. The lead contamination was found at various depths throughout the site. Ten discrete excavation subareas are proposed to address the main risks to ecological receptors. Following is a discussion of each of these subareas:

- The largest area is subarea 1 which covers the majority of the southern face of the 400-yard firing berm. Subarea 1 covers approximately 6,141 square feet to a depth of five feet bgs (approximately 1,137 cubic yards of soil). The excavation subarea is presented on **Figure 6-4**. Numerous site-specific samples in Subarea 1 exceeded a concentration of 652 mg/kg lead at various depths (**Table 6-12**).

- Subareas 2 and 3 each cover approximately 100 square feet to a depth of two feet bgs (approximately 7 cubic yards per subarea). These subareas, as shown on **Figure 6-4**, are located just to the south and southeast of the firing berm and include sample locations SB662 and SB660, respectively, which both exhibited sample-specific lead concentrations greater than 652 mg/kg. Sample location SB662 had a lead concentration of 779 mg/kg at the 0 to 1-foot depth bgs, while sample location SB660 had a lead concentration of 1,921 mg/kg at the 1 to 2-foot depth bgs.

- Subarea 4 covers approximately 1,891 square feet to a depth of four feet bgs (approximately 280 cubic yards). This subarea, as shown on **Figure 6-4**, is located along the southwest corner of the firing berm. Subarea 4 includes numerous site-specific samples that exceed a lead concentration of 652 mg/kg at various depths (**Table 6-12**).

- Subarea 5 covers approximately 2,916 square feet to a depth of five feet bgs (approximately 540 cubic yards). This subarea, as shown on **Figure 6-4**, is located to the west and southwest of the firing berm. Subarea 5 includes numerous site-specific samples that exceed a lead concentration of 652 mg/kg at various depths (**Table 6-12**).

- Subarea 6 covers approximately 4,067 square feet to a depth of two feet bgs (approximately 301 cubic yards). This subarea, as shown on **Figure 6-4**, is located to the west of the firing berm and

includes the area where the majority of bullets and bullet fragments were observed in the surface soil. Subarea 6 includes seven sample locations of which five contained site-specific samples that exceed 652 mg/kg at depths ranging from the ground surface down to 2-feet bgs (**Table 6-12**).

- Subareas 7, 9, and 10 each cover approximately 100 square feet to depths of two feet bgs for subareas 7 and 10 (approximately 7 cubic yards each) and 3-feet bgs for subarea 9 (approximately 11 cubic yards). These subareas, as shown on **Figure 6-4**, are located to the north and northwest of the firing berm and include sample locations SB692 (subarea 7), SB44 (subarea 9), and SB696 (subarea 10). All three subareas exhibited a sample-specific lead concentration greater than 652 mg/kg. Sample location SB692 (subarea 7) had a lead concentration of 1,915 mg/kg at the 0 to 1-foot depth bgs, sample location SB644 (subarea 9) had a lead concentration of 950 mg/kg at the 2 to 3-foot depth bgs, and sample location SB696 had a lead concentration of 853 mg/kg at the 1 to 2-foot depth bgs.

- Subarea 8 covers approximately 1,719 square feet to a depth of two feet bgs (approximately 191 cubic yards). This subarea, as shown on **Figure 6-4**, is located to the northwest of the firing berm. Subarea 8 includes five sample locations of which four contained site-specific samples that exceeded 652 mg/kg at depths ranging from the ground surface down to 3-feet bgs (**Table 6-12**).

The volume of range soil to be removed from the Central Area totals approximately 2,490 cubic yards. Upon removal of the 10 excavation subareas and backfilled with clean soil, the overall average lead concentration within the Central Area drops from 401 mg/kg to 49 mg/kg as presented in **Table 6-12**. Additionally, no sample-specific lead concentrations greater than 652 mg/kg would remain at the site.

6.2.3 Southernmost Area

As previously described, the Southernmost Area of the UXO 7 Northern Zone consists of a dirt mound whose origin is currently unknown. However, it is believed that the dirt mound, which sits upon thick plastic sheeting, was placed in its current location after the Rifle Range ceased operations since the dirt mound obstructs the view of the Rifle Ranges main target area from portions of the 400- and 500-yard firing berms.

The initial RFI sampling within the Southernmost Area of the Northern zone of the Rifle Range, which includes the dirt mound, included samples from six locations along the top of the dirt mound at a depth of 2-feet below the surface. Of the initial six samples, none of them exhibited a lead detection greater than 652 mg/kg, and only one sample (SB039) presented a lead concentration in excess of the residential

direct-contact screening criteria of 400 mg/kg. In an attempt to define the horizontal and vertical extent of the lead contamination, supplemental soil sampling was performed in 2011 and 2012. **Table 6-13** presents the lead results for all samples collected within the Southernmost Area of the Northern Zone and **Table 6-14** ranks the lead results based on lead concentrations for soil samples collected within the Southernmost Area. As shown in **Table 6-13**, the Southernmost Area overall average concentration of lead prior to removal of the dirt mound is 117 mg/kg.

Figure 3-10 identifies the soil samples with exceedances of the lead human health and ecological screening criteria for the Southernmost Area using colors to identify the range of detections. The lead contamination within the Southernmost Area was detected at few locations along the top of the dirt mound with the contamination limited to the upper 3-feet of soil. Since the origin of the dirt mound is unknown and since a few bullets were observed within the dirt mound, along with other metallic debris (i.e. nails, door hinge), the entire mound is proposed for removal (subarea 1). The dirt mound sits upon a layer of thick plastic sheeting covering approximately 1,776 square feet to an average height of six feet above the ground surface (approximately 395 cubic yards of soil). The dirt mound is presented on **Figure 6-5**. Since the entire Southernmost Area (dirt mound) is to be removed, all significant ecological risk will have been mitigated.

TABLE 6-1

PAH CONCENTRATIONS IN SOIL SAMPLES USED FOR BEBZO(a)PYRENE (BaP) EQUIVALENT CALCULATIONS - WEST TRAP RANGE,
UXO 7 RANGES
NSA CRANE, INDIANA

Sample Location	Sample ID	PAH Results (mg/Kg)														BaP equivalent (mg/Kg)
		Benzo(a)anthracene		Benzo(a)pyrene		Benzo(b)fluoranthene		Benzo(k)fluoranthene		Chrysene		Dibenzo(a,h)anthracene		Indeno(1,2,3-cd)pyrene		
	West Trap Range															
X7-SB116	X7-SB116-0204	0.0698		0.105		0.132		0.0457		0.0817		0.004995	U	0.0598		0.13669
	X7-SB116-0406	0.004995	U	0.00237		0.00316		0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00873
X7-SB121	X7-SB121-0204	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
	X7-SB121-0406	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB123	X7-SB123-0204	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
	X7-SB123-0406	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB203	X7-SB203-0204	0.004995	U	0.00266		0.00355		0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00906
	X7-SB203-0406	0.00691		0.00569		0.00854		0.00285		0.00447		0.004995	U	0.00325		0.01259
X7-SB227	X7-SB227-0204	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
	X7-SB227-0406	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB439	X7-SS439-0001	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
	X7-SS439-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB441	X7-SS441-0001	0.18		0.285		0.402		0.139		0.242		0.0119		0.161		0.37283
	X7-SS441-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB442	X7-SS442-0001	0.081		0.121		0.17		0.0596		0.0971		0.00247		0.0679		0.15605
	X7-SS442-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB443	X7-SS443-0001	0.0289		0.0351		0.0462		0.0206		0.0293		0.004995	U	0.0206		0.04990
	X7-SS443-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB445	X7-SS445-0001	0.0435		0.0435		0.0536		0.0207		0.0467		0.004995	U	0.0227		0.06073
	X7-SS445-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB446	X7-SS446-0001	1.77		2.43		3.17		0.968		2.29		0.004995	U	1.22		3.06297
	X7-SS446-0102	0.0216		0.0326		0.0399		0.0148		0.0254		0.004995	U	0.0209		0.04601
	X7-SB446-0204	0.00646		0.00485		0.00525		0.00283		0.00242		0.00283		0.00485		0.00937
	X7-SB446-0406	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00192		0.004995	U	0.00847
X7-SB447	X7-SS447-0001	0.202		0.28		0.33		0.134		0.232		0.004995	U	0.157		0.35547
	X7-SS447-0102	0.00569		0.00342		0.00379		0.004995	U	0.00228		0.004995	U	0.004995	U	0.00991
X7-SB448	X7-SS448-0001	0.101		0.156		0.197		0.0655		0.126		0.004995	U	0.0793		0.19951
	X7-SS448-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB449	X7-SS449-0001	0.0246		0.0346		0.0458		0.015		0.0279		0.004995	U	0.0225		0.04906
	X7-SS449-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB451	X7-SS451-0001	0.0103		0.0103		0.0141		0.00455		0.00703		0.004995	U	0.00621		0.01841
	X7-SS451-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB453	X7-SS453-0001	0.0112		0.0124		0.016		0.00521		0.01		0.004995	U	0.00682		0.02086
	X7-SS453-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00252		0.004995	U	0.004995	U	0.01154
X7-SB455	X7-SS455-0001	0.0123		0.0135		0.0181		0.00574		0.00944		0.004995	U	0.00862		0.02246
	X7-SS455-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB457	X7-SS457-0001	0.02		0.0285		0.0369		0.0131		0.0219		0.004995	U	0.0192		0.04126
	X7-SS457-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB459	X7-SS459-0001	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
	X7-SS459-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999
X7-SB460	X7-SS460-0001	0.0689		0.0834		0.136		0.0373		0.0677		0.004995	U	0.0485		0.11418
	X7-SS460-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.00999

TABLE 6-1

PAH CONCENTRATIONS IN SOIL SAMPLES USED FOR BEBZO(a)PYRENE (BaP) EQUIVALENT CALCULATIONS - WEST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA
PAGE 2 OF 2

Sample Location	Sample ID	PAH Results (mg/Kg)																BaP equivalent (mg/Kg)
		Benzo(a)anthracene		Benzo(a)pyrene		Benzo(b)fluoranthene		Benzo(k)fluoranthene		Chrysene		Dibenzo(a,h)anthracene		Indeno(1,2,3-cd)pyrene				
X7-SB462	X7-SS462-0001	0.0417		0.0506		0.0806		0.0264		0.057		0.04995	U	0.0311				0.11621
	X7-SS462-0102	0.00513		0.00257		0.0033		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00896
	X7-SB462-0204	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
	X7-SB462-0406	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB463	X7-SS463-0001	13.1		17.2		23.3		6.91		18.3		0.004995	U	8.84				21.81640
	X7-SS463-0102	0.0207		0.0267		0.0413		0.0109		0.0203		0.00495	U	0.0195				0.03993
	X7-SB463-0204	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
	X7-SB463-0406	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB464	X7-SS464-0001	1.21		1.47		1.97		0.651		1.45		0.004995	U	0.797				1.88066
	X7-SS464-0102	0.158		0.228		0.324		0.0972		0.204		0.004955	U	0.135				0.29583
	X7-SB464-0204	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
	X7-SB464-0406	0.00998		0.00799		0.0112		0.00399		0.00599		0.004995	U	0.00639				0.01579
X7-SB465	X7-SS465-0001	0.119		0.16		0.25		0.0667		0.146		0.004995	U	0.0951				0.21222
	X7-SS465-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB466	X7-SS466-0001	0.0586		0.0964		0.141		0.0382		0.0821		0.004995	U	0.0617				0.12799
	X7-SS466-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB469	X7-SS469-0001	0.341		0.451		0.579		0.202		0.425		0.00611		0.211				0.57266
	X7-SS469-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB470	X7-SS470-0001	1.3		1.85		2.33		0.697		1.51		0.0237		0.88				2.33318
	X7-SS470-0102	0.0255		0.0332		0.0441		0.0158		0.0274		0.004995	U	0.0178				0.04712
X7-SB471	X7-SS471-0001	0.127		0.18		0.256		0.0761		0.161		0.004995	U	0.105				0.23472
	X7-SS471-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB472	X7-SS472-0001	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
	X7-SS472-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
FIELD DUP	FD090712-01	0.0598		0.0866		0.122		0.0391		0.0751		0.004995	U	0.0521				0.11545
FIELD DUP	FD090712-02	0.054		0.0738		0.105		0.0346		0.0651		0.004995	U	0.0416				0.09927

Symbol for BaP Maps	Benzo(a)pyrene (BaP) equivalent concentrations in range soil samples (mg/kg)	Total Cancer Risk Level
	< 0.015 mg/kg	$< 10^{-6}$
	0.015 mg/kg to 0.15 mg/kg	10^{-6} to 10^{-5}
	0.15 mg/kg to 1.5 mg/kg	10^{-5} to 10^{-4}
	> 1.5 mg/kg	$> 10^{-4}$

TABLE 6-2

RANKED BaP EQUIVALEBT CONCENTRATIONS - SOIL REMOVAL SUMMARY - WEST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA

West Trap Range	BaP equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SS201-0001	85.2068	Round 1	Yes	3
X7-SS214-0001	35.0757	Round 1	Yes	1
X7-SS463-0001	21.816395	Round 2A	Yes	6
X7-SB121-0002	11.2544	Round 1	Yes	5
X7-SS232-0001	9.0937	Round 1	Yes	1
X7-SS229-0001	5.4938	Round 1	Yes	1
X7-SS446-0001	3.062965	Round 2A	Yes	2
X7-SS203-0001	2.3358	Round 1	Yes	3
X7-SS470-0001	2.33318	Round 2B	Yes	1
X7-SB123-0002	2.2173	Round 1	Yes	3
X7-SS464-0001	1.880655	Round 2A	Yes	6
X7-SS211-0001	1.7173	Round 1	Yes	1
X7-SS217-0001	1.4685	Round 1	Yes	1
X7-SS218-0001	1.4477	Round 1	Yes	1
X7-SS208-0001	1.3137	Round 1	Yes	1
X7-SB116-00002	1.2016	Round 1	Yes	3
X7-SS202-0001	0.8697	Round 1	Yes	3
X7-SS241-0001	0.6665	Round 1	Yes	2
X7-SS207-0001	0.6108	Round 1	Yes	3
X7-SS469-0001	0.572655	Round 2B	Yes	1
X7-SS210-0001	0.4863	Round 1	Yes	1
X7-SS441-0001	0.372832	Round 2B	Yes	1
X7-SS447-0001	0.355467	Round 2A	Yes	1
X7-SS226-0001	0.2964	Round 1	Yes	1
X7-SS464-0102	0.295831	Round 2A	Yes	6
X7-SS230-0001	0.2924	Round 1	Yes	1
X7-SS204-0001	0.2854	Round 1	Yes	3
X7-SS220-0001	0.2844	Round 1	Yes	1
X7-SS209-0001	0.2545	Round 1	Yes	3
X7-SS222-0001	0.2461	Round 1	Yes	2
X7-SS471-0001	0.234717	Round 2A	Yes	1
X7-SS465-0001	0.212218	Round 2A	Yes	1
X7-SS448-0001	0.199506	Round 2A	Yes	1
X7-SS203-0102	0.1940	Round 1	Yes	3
X7-SS227-0001	0.1679	Round 1	Yes	4
X7-SS442-0001	0.1560531	Round 2B	Yes	1

TABLE 6-2

RANKED BaP EQUIVALEBT CONCENTRATIONS - SOIL REMOVAL SUMMARY - WEST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA

West Trap Range	BaP equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SS234-0001	0.1377	Round 1	No	--
X7-SB116-0204	0.1367	Round 2A	No	3
X7-SS233-0001	0.1361	Round 1	Yes	1
X7-SS219-0001	0.1290	Round 1	Yes	1
X7-SS466-0001	0.1279891	Round 2A	No	--
X7-SS228-0001	0.1189	Round 1	Yes	1
X7-SS462-0001	0.116211	Round 2A	Yes	6
X7-SS460-0001	0.1141757	Round 2A	No	--
X7-SS129-0002	0.1115	Round 1	(Partial)	1
X7-SS223-0001	0.1068	Round 1	Yes	1
X7-SS240-0001	0.0726	Round 1	No	--
X7-SS200-0001	0.0707	Round 1	No	--
X7-SS445-0001	0.0607287	Round 2A	Yes	2
X7-SS225-0001	0.0563	Round 1	No	--
X7-SS443-0001	0.0499003	Round 2B	Yes	1
X7-SS217-0102	0.0498	Round 1	No	1
X7-SS449-0001	0.0490629	Round 2A	No	--
X7-SS470-0102	0.0471204	Round 2B	No	1
X7-SS446-0102	0.0460084	Round 2A	Yes	2
X7-SS457-0001	0.0412579	Round 2A	No	--
X7-SS463-0102	0.0399293	Round 2A	Yes	6
X7-SS205-0001	0.0330	Round 1	Yes	1
X7-SS241-0102	0.0328	Round 1	Yes	2
X7-SS213-0001	0.0300	Round 1	Yes	1
X7-SS234-0102	0.0285	Round 1	No	--
X7-SS200-0002	0.0254	Round 1	No	--
X7-SS455-0001	0.02246384	Round 2A	No	--
X7-SS224-0001	0.0211	Round 1	No	--
X7-SS453-0001	0.0208591	Round 2A	No	--
X7-SS451-0001	0.01840853	Round 2A	No	--
X7-SS122-0002	0.0181	Round 1	(Partial)	1
X7-SS209-0102	0.0169	Round 1	Yes	3
X7-SS238-0001	0.0163	Round 1	No	--
X7-SS230-0102	0.0161	Round 1	No	1
X7-SB464-0406	0.01587	Round 2A	No	6
X7-SS239-0001	0.0144	Round 1	No	--

TABLE 6-2

RANKED BaP EQUIVALEBT CONCENTRATIONS - SOIL REMOVAL SUMMARY - WEST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA

West Trap Range	BaP equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SS211-0102	0.0133	Round 1	No	1
X7-SS228-0102	0.0129	Round 1	No	1
X7-SB203-0406	0.0126	Round 2A	No	3
X7-SS453-0102	0.01154097	Round 2A	No	--
X7-SS208-0102	0.0111	Round 1	No	1
X7-SS220-0102	0.0100	Round 1	No	1
X7-SB121-0204	0.0100	Round 2A	No	5
X7-SB121-0406	0.0100	Round 2A	No	5
X7-SB123-0204	0.0100	Round 2A	No	3
X7-SB123-0406	0.0100	Round 2A	No	3
X7-SB227-0204	0.00999	Round 2A	No	4
X7-SB227-0406	0.00999	Round 2A	No	4
X7-SS439-0001	0.00999	Round 2A	No	--
X7-SS439-0102	0.00999	Round 2A	No	--
X7-SS441-0102	0.00999	Round 2B	No	1
X7-SS442-0102	0.00999	Round 2B	No	1
X7-SS443-0102	0.00999	Round 2B	No	1
X7-SS445-0102	0.00999	Round 2A	Yes	2
X7-SS448-0102	0.00999	Round 2A	No	1
X7-SS449-0102	0.00999	Round 2A	No	--
X7-SS451-0102	0.00999	Round 2A	No	--
X7-SS455-0102	0.00999	Round 2A	No	--
X7-SS457-0102	0.00999	Round 2A	No	--
X7-SS459-0001	0.00999	Round 2A	No	--
X7-SS459-0102	0.00999	Round 2A	No	--
X7-SS460-0102	0.00999	Round 2A	No	--
X7-SB462-0204	0.00999	Round 2A	No	6
X7-SB462-0406	0.00999	Round 2A	No	6
X7-SB463-0204	0.00999	Round 2A	No	6
X7-SB463-0406	0.00999	Round 2A	No	6
X7-SB464-0204	0.00999	Round 2A	No	6
X7-SS465-0102	0.00999	Round 2A	No	1
X7-SS466-0102	0.00999	Round 2A	No	--
X7-SS469-0102	0.00999	Round 2B	No	1
X7-SS471-0102	0.00999	Round 2A	No	1
X7-SS472-0001	0.00999	Round 2B	No	--
X7-SS472-0102	0.00999	Round 2B	No	--

TABLE 6-2

RANKED BaP EQUIVALEBT CONCENTRATIONS - SOIL REMOVAL SUMMARY - WEST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA

West Trap Range	BaP equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SS231-0001	0.0100	Round 1	Yes	1
X7-SS447-0102	0.00991473	Round 2A	No	1
X7-SS210-0102	0.0099	Round 1	No	1
X7-SS207-0102	0.0095	Round 1	Yes	3
X7-SB446-0204	0.00936672	Round 2A	No	2
X7-SS222-0102	0.0093	Round 1	Yes	2
X7-SS218-0102	0.0092	Round 1	No	1
X7-SB203-0204	0.0091	Round 2A	No	3
X7-SS462-0102	0.008962445	Round 2A	Yes	6
X7-SB116-0406	0.0087	Round 2A	No	3
X7-SS229-0102	0.0087	Round 1	No	1
X7-SB446-0406	0.008468445	Round 2A	No	2
X7-SS237-0001	0.0082	Round 1	No	--
X7-SS202-0102	0.0080	Round 1	Yes	3
X7-SS206-0102	0.0069	Round 1	No	--
X7-SS201-0102	0.0068	Round 1	Yes	3
X7-SS223-0102	0.0063	Round 1	No	1
X7-SS240-0102	0.0061	Round 1	No	--
X7-SS215-0001	0.0055	Round 1	No	--
X7-SS205-0102	0.0055	Round 1	No	1
X7-SS212-0001	0.0048	Round 1	Yes	1
X7-SS221-0001	0.0047	Round 1	Yes	1
X7-SS225-0102	0.0046	Round 1	No	--
X7-SS232-0102	0.0045	Round 1	No	1
X7-SS216-0001	0.0043	Round 1	No	--
X7-SS206-0001	0.0043	Round 1	No	--
X7-SS215-0102	0.0042	Round 1	No	--
X7-SS212-0102	0.0041	Round 1	No	1
X7-SS216-0102	0.0040	Round 1	No	--
X7-SS213-0102	0.0040	Round 1	No	1
X7-SS221-0102	0.0040	Round 1	No	1
X7-SS204-0102	0.0040	Round 1	Yes	3
X7-SS226-0102	0.0039	Round 1	No	1
X7-SS219-0102	0.0039	Round 1	No	1
X7-SS233-0102	0.0038	Round 1	No	1

TABLE 6-2

RANKED BaP EQUIVALEBT CONCENTRATIONS - SOIL REMOVAL SUMMARY - WEST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA

West Trap Range	BaP equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SS214-0102	0.0037	Round 1	No	1
X7-SS136-0002	0.0010	Round 1	No	--

Symbol for BaP Maps	Benzo(a)pyrene (BaP) equivalent concentrations in range soil samples (mg/kg)	Total Cancer Risk Level
	< 0.015 mg/kg	$< 10^{-6}$
	0.015 mg/kg to 0.15 mg/kg	10^{-6} to 10^{-5}
	0.15 mg/kg to 1.5 mg/kg	10^{-5} to 10^{-4}
	> 1.5 mg/kg	$> 10^{-4}$

TABLE 6-3

POST-REMOVAL ACTION BaP EQUIVALENT SUMMARY - WEST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA
PAGE 1 OF 3

West Trap Range	BaP equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SS234-0001	0.1377	Round 1	No	--
X7-SB116-0204	0.1367	Round 2A	No	3
X7-SS466-0001	0.1279891	Round 2A	No	--
X7-SS460-0001	0.1141757	Round 2A	No	--
X7-SS129-0002	0.1115	Round 1	(Partial)	1
X7-SS240-0001	0.0726	Round 1	No	--
X7-SS200-0001	0.0707	Round 1	No	--
X7-SS225-0001	0.0563	Round 1	No	--
X7-SS217-0102	0.0498	Round 1	No	1
X7-SS449-0001	0.0490629	Round 2A	No	--
X7-SS470-0102	0.0471204	Round 2B	No	1
X7-SS457-0001	0.0412579	Round 2A	No	--
X7-SS234-0102	0.0285	Round 1	No	--
X7-SS200-0002	0.0254	Round 1	No	--
X7-SS455-0001	0.02246384	Round 2A	No	--
X7-SS224-0001	0.0211	Round 1	No	--
X7-SS453-0001	0.0208591	Round 2A	No	--
X7-SS451-0001	0.01840853	Round 2A	No	--
X7-SS122-0002	0.0181	Round 1	(Partial)	1
X7-SS238-0001	0.0163	Round 1	No	--
X7-SS230-0102	0.0161	Round 1	No	1
X7-SB464-0406	0.01587	Round 2A	No	6
X7-SS239-0001	0.0144	Round 1	No	--
X7-SS211-0102	0.0133	Round 1	No	1
X7-SS228-0102	0.0129	Round 1	No	1
X7-SB203-0406	0.0126	Round 2A	No	3
X7-SS453-0102	0.01154097	Round 2A	No	--
X7-SS208-0102	0.0111	Round 1	No	1
X7-SS220-0102	0.0100	Round 1	No	1
X7-SB121-0204	0.0100	Round 2A	No	5
X7-SB121-0406	0.0100	Round 2A	No	5
X7-SB123-0204	0.0100	Round 2A	No	3
X7-SB123-0406	0.0100	Round 2A	No	3
X7-SB227-0204	0.00999	Round 2A	No	4
X7-SB227-0406	0.00999	Round 2A	No	4
X7-SS439-0001	0.00999	Round 2A	No	--

TABLE 6-3

POST-REMOVAL ACTION BaP EQUIVALENT SUMMARY - WEST TRAP RANGE,
UXO 7 RANGES
NSA CRANE, INDIANA

West Trap Range	BaP equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SS439-0102	0.00999	Round 2A	No	--
X7-SS441-0102	0.00999	Round 2B	No	1
X7-SS442-0102	0.00999	Round 2B	No	1
X7-SS443-0102	0.00999	Round 2B	No	1
X7-SS448-0102	0.00999	Round 2A	No	1
X7-SS449-0102	0.00999	Round 2A	No	--
X7-SS451-0102	0.00999	Round 2A	No	--
X7-SS455-0102	0.00999	Round 2A	No	--
X7-SS457-0102	0.00999	Round 2A	No	--
X7-SS459-0001	0.00999	Round 2A	No	--
X7-SS459-0102	0.00999	Round 2A	No	--
X7-SS460-0102	0.00999	Round 2A	No	--
X7-SB462-0204	0.00999	Round 2A	No	6
X7-SB462-0406	0.00999	Round 2A	No	6
X7-SB463-0204	0.00999	Round 2A	No	6
X7-SB463-0406	0.00999	Round 2A	No	6
X7-SB464-0204	0.00999	Round 2A	No	6
X7-SS465-0102	0.00999	Round 2A	No	1
X7-SS466-0102	0.00999	Round 2A	No	--
X7-SS469-0102	0.00999	Round 2B	No	1
X7-SS471-0102	0.00999	Round 2A	No	1
X7-SS472-0001	0.00999	Round 2B	No	--
X7-SS472-0102	0.00999	Round 2B	No	--
X7-SS447-0102	0.00991473	Round 2A	No	1
X7-SS210-0102	0.0099	Round 1	No	1
X7-SB446-0204	0.00936672	Round 2A	No	2
X7-SS218-0102	0.0092	Round 1	No	1
X7-SB203-0204	0.0091	Round 2A	No	3
X7-SB116-0406	0.0087	Round 2A	No	3
X7-SS229-0102	0.0087	Round 1	No	1
X7-SB446-0406	0.008468445	Round 2A	No	2
X7-SS237-0001	0.0082	Round 1	No	--
X7-SS206-0102	0.0069	Round 1	No	--
X7-SS223-0102	0.0063	Round 1	No	1
X7-SS240-0102	0.0061	Round 1	No	--
X7-SS215-0001	0.0055	Round 1	No	--
X7-SS205-0102	0.0055	Round 1	No	1
X7-SS225-0102	0.0046	Round 1	No	--

TABLE 6-3

POST-REMOVAL ACTION BaP EQUIVALENT SUMMARY - WEST TRAP RANGE,
UXO 7 RANGES
NSA CRANE, INDIANA

West Trap Range	BaP equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SS232-0102	0.0045	Round 1	No	1
X7-SS216-0001	0.0043	Round 1	No	--
X7-SS206-0001	0.0043	Round 1	No	--
X7-SS215-0102	0.0042	Round 1	No	--
X7-SS212-0102	0.0041	Round 1	No	1
X7-SS216-0102	0.0040	Round 1	No	--
X7-SS213-0102	0.0040	Round 1	No	1
X7-SS221-0102	0.0040	Round 1	No	1
X7-SS226-0102	0.0039	Round 1	No	1
X7-SS219-0102	0.0039	Round 1	No	1
X7-SS233-0102	0.0038	Round 1	No	1
X7-SS214-0102	0.0037	Round 1	No	1
X7-SS136-0002	0.0010	Round 1	No	--

Symbol for BaP Maps	Benzo(a)pyrene (BaP) equivalent concentrations in range soil samples (mg/kg)	Total Cancer Risk Level
	< 0.015 mg/kg	$< 10^{-6}$
	0.015 mg/kg to 0.15 mg/kg	10^{-6} to 10^{-5}
	0.15 mg/kg to 1.5 mg/kg	10^{-5} to 10^{-4}
	> 1.5 mg/kg	$> 10^{-4}$

TABLE 6-4

ProUCL STATISTICS - COMPARISON OF BaP EQUIVALENTS: CURRENT AND POST-REMOVAL CONDITIONS - WEST TRAP RANGE
UXO 7 RANGES
NSA CRANE, INDIANA

	General UCL Statistics for Data Sets with Non-Detects		
User Selected Options			
From File	C:\Work Folders\Projects\Crane\UXO 7\West Trap Range.xls.wst		
Full Precision	OFF		
Confidence Coefficient	95%		
Number of Bootstrap Operations	2000		
Bap_Eq			
General Statistics			
Number of Valid Data	146	Number of Detected Data	126
Number of Distinct Detected Data	115	Number of Non-Detect Data	20
		Percent Non-Detects	13.70%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.001	Minimum Detected	-6.908
Maximum Detected	85.21	Maximum Detected	4.445
Mean of Detected	1.56	Mean of Detected	-3.01
SD of Detected	8.458	SD of Detected	2.296
Minimum Non-Detect	0.00999	Minimum Non-Detect	-4.606
Maximum Non-Detect	0.00999	Maximum Non-Detect	-4.606
UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Lilliefors Test Statistic	0.427	Lilliefors Test Statistic	0.15
5% Lilliefors Critical Value	0.0789	5% Lilliefors Critical Value	0.0789
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	1.347	Mean	-3.324
SD	7.871	SD	2.273
95% DL/2 (t) UCL	2.425	95% H-Stat (DL/2) UCL	0.946
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-3.36
		SD in Log Scale	2.343
		Mean in Original Scale	1.347
		SD in Original Scale	7.871
		95% t UCL	2.425
		95% Percentile Bootstrap UCL	2.488
		95% BCA Bootstrap UCL	3.285
		95% H-UCL	1.112
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.211	Data do not follow a Discernable Distribution (0.05)	
Theta Star	7.376		
nu star	53.29		
A-D Test Statistic	16.62	Nonparametric Statistics	
5% A-D Critical Value	0.908	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.908	Mean	1.347
5% K-S Critical Value	0.0914	SD	7.844
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.652
		95% KM (t) UCL	2.426
Assuming Gamma Distribution		95% KM (z) UCL	2.419
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	2.425
Minimum	0.000001	95% KM (bootstrap t) UCL	5.094
Maximum	85.21	95% KM (BCA) UCL	2.631
Mean	1.346	95% KM (Percentile Bootstrap) UCL	2.486
Median	0.0131	95% KM (Chebyshev) UCL	4.188
SD	7.871	97.5% KM (Chebyshev) UCL	5.417

TABLE 6-4

ProUCL STATISTICS - COMPARISON OF BaP EQUIVALENTS: CURRENT AND POST-REMOVAL CONDITIONS - WEST TRAP RANGE
UXO 7 RANGES
NSA CRANE, INDIANA
PAGE 2 OF 3

k star	0.16	99% KM (Chebyshev) UCL	7.832
Theta star	8.39		
Nu star	46.85	**Potential UCLs to Use**	
AppChi2	32.14	97.5% KM (Chebyshev) UCL	5.417
95% Gamma Approximate UCL (Use when n >= 40)	1.962		
95% Adjusted Gamma UCL (Use when n < 40)	1.969		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006). For additional insight, the user may want to consult a statistician.

Ex_Bap_Eq

General Statistics

Number of Valid Data	146	Number of Detected Data	126
Number of Distinct Detected Data	56	Number of Non-Detect Data	20
		Percent Non-Detects	13.70%

Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.001	Minimum Detected	-6.908
Maximum Detected	0.138	Maximum Detected	-1.982
Mean of Detected	0.0187	Mean of Detected	-4.314
SD of Detected	0.023	SD of Detected	0.737
Minimum Non-Detect	0.00999	Minimum Non-Detect	-4.606
Maximum Non-Detect	0.015	Maximum Non-Detect	-4.2
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	66
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	80
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	45.21%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Lilliefors Test Statistic	0.405	Lilliefors Test Statistic	0.28
5% Lilliefors Critical Value	0.0789	5% Lilliefors Critical Value	0.0789
Data not Normal at 5% Significance Level		**Data not Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.0168	Mean	-4.446
SD	0.0219	SD	0.762
95% DL/2 (t) UCL	0.0198	95% H-Stat (DL/2) UCL	0.0178
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	0.0086	Mean in Log Scale	-4.438
SD	0.0296	SD in Log Scale	0.762
95% MLE (t) UCL	0.0127	Mean in Original Scale	0.0169
95% MLE (Tiku) UCL	0.0135	SD in Original Scale	0.0218
		95% t UCL	0.0199
		95% Percentile Bootstrap UCL	0.02
		95% BCA Bootstrap UCL	0.0206
		95% H UCL	0.0179

Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	1.618	**Data do not follow a Discernable Distribution (0.05)**	
Theta Star	0.0115		
nu star	407.8		
A-D Test Statistic	12.45	**Nonparametric Statistics**	
5% A-D Critical Value	0.769	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.769	Mean	0.0169
5% K-S Critical Value	0.0841	SD	0.0218
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.00181
		95% KM (t) UCL	0.0199

TABLE 6-4

ProUCL STATISTICS - COMPARISON OF BaP EQUIVALENTS: CURRENT AND POST-REMOVAL CONDITIONS - WEST TRAP RANGE
UXO 7 RANGES
NSA CRANE, INDIANA
PAGE 3 OF 3

Assuming Gamma Distribution		95% KM (z) UCL	0.0199
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.0199
Minimum	0.000001	95% KM (bootstrap t) UCL	0.0211
Maximum	0.138	95% KM (BCA) UCL	0.02
Mean	0.0165	95% KM (Percentile Bootstrap) UCL	0.0198
Median	0.015	95% KM (Chebyshev) UCL	0.0248
SD	0.0221	97.5% KM (Chebyshev) UCL	0.0282
k star	0.709	99% KM (Chebyshev) UCL	0.0349
Theta star	0.0233		
Nu star	206.9	Potential UCLs to Use	
AppChi2	174.7	95% KM (BCA) UCL	0.02
95% Gamma Approximate UCL (Use when n >= 40)	0.0196		
95% Adjusted Gamma UCL (Use when n < 40)	0.0196		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

TABLE 6-5

PAH CONCENTRATIONS IN SOIL SAMPLES USED FOR BENZO(a)PYRENE (BaP) EQUIVALENT CALCULATIONS - EAST TRAP RANGE,
UXO 7 RANGES
NSA CRANE, INDIANA

Sample Location	Sample ID	PAH Results (mg/Kg)																BaP equivalent (mg/Kg)
		Benzo(a)anthracene		Benzo(a)pyrene		Benzo(b)fluoranthene		Benzo(k)fluoranthene		Chrysene		Dibenzo(a,h)anthracene		Indeno(1,2,3-cd)pyrene				
	East Trap Range																	
X7-SB075	X7-SB075-0204	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
	X7-SB075-0406	0.004995	U	0.00198		0.00238		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00827
X7-SB242	X7-SB242-0204	0.0326		0.0427		0.0505		0.0199		0.0334		0.004995	U	0.0256				0.05880
	X7-SB242-0406	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB243	X7-SB243-0204	10.3		14.7		18.4		6.16		12.6		0.004995	U	7.92				18.44120
	X7-SB243-0406	0.0471		0.0649		0.0843		0.0289		0.057		0.00495	U	0.0368				0.08702
X7-SB247	X7-SB247-0204	0.004995	U	0.00289		0.00289		0.004995	U	0.004995	U	0.00217		0.00325				0.00623
	X7-SB247-0406	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB254	X7-SB254-0204	0.0417		0.058		0.0731		0.0244		0.0517		0.004995	U	0.0369				0.07846
	X7-SB254-0406	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB255	X7-SB255-0001	1.12		1.22		1.58		0.689		1.21		0.16		0.795				1.73760
	X7-SB255-0102	5.88		6.55		8.08		3.2		7.1		1.03		4.7				9.48510
	X7-SB255-0204	0.729		1.18		1.45		0.467		0.964		0.004995	U	0.72				1.48053
	X7-SB255-0406	0.004995	U	0.00257		0.00343		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00896
X7-SB256	X7-SB256-0204	0.144		0.218		0.281		0.08		0.18		0.004995	U	0.138				0.28028
	X7-SB256-0406	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB261	X7-SB261-0204	0.004995	U	0.00189		0.00227		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00817
	X7-SB261-0406	0.0193		0.0225		0.0278		0.00966		0.0181		0.004995	U	0.0137				0.03369
X7-SB491	X7-SS491-0001	0.00995		0.00875		0.0119		0.00398		0.00637		0.004995	U	0.00517				0.01649
	X7-SS491-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB492	X7-SS492-0001	0.0373		0.0458		0.062		0.0186		0.0417		0.004995	U	0.0267				0.06362
	X7-SS492-0102	0.00548		0.00365		0.00475		0.004995	U	0.00256		0.004995	U	0.00219				0.00994
X7-SB493	X7-SS493-0001	0.0751		0.0916		0.13		0.0422		0.0715		0.004995	U	0.0559				0.12319
	X7-SS493-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB494	X7-SS494-0001	0.0157		0.0161		0.0226		0.00847		0.0133		0.004995	U	0.00927				0.02595
	X7-SS494-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB497	X7-SS497-0001	0.0136		0.0122		0.0166		0.00656		0.00962		0.004995	U	0.007				0.02099
	X7-SS497-0102	0.0219		0.0251		0.0353		0.0105		0.0231		0.004995	U	0.0126				0.03720
X7-SB498	X7-SS498-0001	0.004995	U	0.00244		0.00325		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00881
	X7-SS498-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB502	X7-SS502-0001	0.0212		0.0258		0.0349		0.0121		0.0212		0.004995	U	0.015				0.03805
	X7-SS502-0102	0.00655		0.00437		0.00618		0.00218		0.00327		0.004995	U	0.00255				0.01092

TABLE 6-5

PAH CONCENTRATIONS IN SOIL SAMPLES USED FOR BENZO(a)PYRENE (BaP) EQUIVALENT CALCULATIONS - EAST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA

Sample Location	Sample ID	PAH Results (mg/Kg)																BaP equivalent (mg/Kg)
		Benzo(a)anthracene		Benzo(a)pyrene		Benzo(b)fluoranthene		Benzo(k)fluoranthene		Chrysene		Dibenzo(a,h)anthracene		Indeno(1,2,3-cd)pyrene				
X7-SB503	X7-SS503-0001	0.0906		0.128		0.167		0.0591		0.112		0.004995	U	0.0693				0.16639
	X7-SS503-0102	0.00897		0.00734		0.0102		0.00326		0.00571		0.004995	U	0.00367				0.01466
X7-SB504	X7-SS504-0001	0.00744		0.00372		0.00579		0.00248		0.00331		0.004995	U	0.00248				0.01031
	X7-SS504-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB505	X7-SS505-0001	0.00979		0.00775		0.011		0.00408		0.00571		0.004995	U	0.00408				0.01528
	X7-SS505-0102	10.6		15.4		20.9		6.93		13.4		0.004995	U	7.51				19.38870
	X7-SB505-0204	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
	X7-SB505-0406	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB506	X7-SS506-0001	0.004995	U	0.004995	U	0.00205		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.01125
	X7-SS506-0102	0.00564		0.00201		0.00322		0.004995	U	0.00201		0.004995	U	0.004995	U			0.00844
X7-SB507	X7-SS507-0001	0.004995	U	0.004995	U	0.00244		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.01129
	X7-SS507-0102	0.004995	U	0.00192		0.00307		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00828
X7-SB510	X7-SS510-0001	0.00835		0.00676		0.00954		0.00358		0.00477		0.004995	U	0.00398				0.01398
	X7-SS510-0102	0.0316		0.0411		0.0545		0.0204		0.0352		0.004995	U	0.0229				0.05723
X7-SB511	X7-SS511-0001	0.272		0.4		0.494		0.185		0.328		0.004995	U	0.209				0.50467
	X7-SS511-0102	0.00776		0.00582		0.00854		0.00349		0.00466		0.004995	U	0.00349				0.01283
X7-SB513	X7-SS513-0001	0.00692		0.00326		0.00448		0.004995	U	0.00285		0.004995	U	0.00204				0.00965
	X7-SS513-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB518	X7-SS518-0001	0.0234		0.0283		0.0388		0.0121		0.023		0.004995	U	0.0166				0.04132
	X7-SS518-0102	0.00702		0.00517		0.00738		0.00295		0.00369		0.004995	U	0.00295				0.01193
X7-SB519	X7-SS519-0001	0.0179		0.0214		0.0288		0.00974		0.0171		0.004995	U	0.0136				0.03254
	X7-SS519-0102	0.0161		0.0161		0.0212		0.00769		0.0132		0.004995	U	0.00988				0.02590
X7-SB521	X7-SS521-0001	0.0102		0.00788		0.0114		0.00394		0.0067		0.004995	U	0.00551				0.01563
	X7-SS521-0102	0.004995	U	0.00228		0.0038		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00871
X7-SB522	X7-SS522-0001	0.00945		0.00657		0.0103		0.00329		0.00616		0.004995	U	0.00452				0.01403
	X7-SS522-0102	0.004995	U	0.00193		0.00309		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00829
X7-SB525	X7-SS525-0001	0.004995	U	0.00287		0.00369		0.004995	U	0.004995	U	0.004995	U	0.00205				0.00899
	X7-SS525-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB526	X7-SS526-0001	0.004995	U	0.00487		0.0069		0.00284		0.00365		0.004995	U	0.00325				0.01141
	X7-SS526-0102	0.168		0.237		0.325		0.116		0.213		0.004995	U	0.129				0.30557
	X7-SB526-0204	0.00632		0.00409		0.00521		0.00223		0.00298		0.004995	U	0.0026				0.01052
	X7-SB526-0406	0.004995	U	0.00353		0.00432		0.004995	U	0.00235		0.004995	U	0.00235				0.00974
X7-SB527	X7-SS527-0001	0.004995	U	0.00247		0.00329		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00885
	X7-SS527-0102	0.106		0.144		0.182		0.0762		0.13		0.004995	U	0.0789				0.18658
	X7-SB527-0204	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
	X7-SB527-0406	0.00857		0.00623		0.00818		0.00351		0.00506		0.004995	U	0.00428				0.01337
X7-SB528	X7-SS528-0001	0.00864		0.00785		0.011		0.00471		0.00668		0.004995	U	0.00432				0.01529
	X7-SS528-0102	10.2		13.8		19.1		6.72		12.8		0.004995	U	7.63				17.57800
	X7-SB528-0204	1.17		1.51		2.03		0.726		1.24		0.004995	U	0.982				1.94170
	X7-SB528-0406	0.764		1.08		1.41		0.568		0.936		0.004995	U	0.688				1.37781
X7-SB529	X7-SS529-0001	0.0221		0.0243		0.0328		0.0149		0.0226		0.004995	U	0.0132				0.03628
	X7-SS529-0102	0.0505		0.0681		0.0919		0.0337		0.062		0.004995	U	0.0379				0.09152

TABLE 6-5

PAH CONCENTRATIONS IN SOIL SAMPLES USED FOR BENZO(a)PYRENE (BaP) EQUIVALENT CALCULATIONS - EAST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA

Sample Location	Sample ID	PAH Results (mg/Kg)																BaP equivalent (mg/Kg)
		Benzo(a)anthracene		Benzo(a)pyrene		Benzo(b)fluoranthene		Benzo(k)fluoranthene		Chrysene		Dibenzo(a,h)anthracene		Indeno(1,2,3-cd)pyrene				
X7-SB530	X7-SS530-0001	0.0103		0.00827		0.0124		0.00538		0.00786		0.004995	U	0.00538				0.01613
	X7-SS530-0102	0.0732		0.103		0.14		0.0483		0.0896		0.004995	U	0.0531				0.13520
X7-SB531	X7-SS531-0001	0.00955		0.00676		0.00995		0.00318		0.00597		0.004995	U	0.00358				0.01410
	X7-SS531-0102	0.004995	U	0.0324		0.0365		0.004995	U	0.00495	U	0.004995	U	0.0243				0.04403
X7-SB533	X7-SS533-0001	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
	X7-SS533-0102	0.0741		0.092		0.123		0.0421		0.0849		0.00874		0.0446				0.12542
X7-SB535	X7-SS535-0001	0.0214		0.0266		0.0373		0.0159		0.0218		0.004995	U	0.0143				0.03908
	X7-SS535-0102	1.99		2.46		3.05		1.13		2.05		0.004995	U	1.14				3.09635
	X7-SB535-0204	0.0768		0.0961		0.12		0.0437		0.0867		0.004995	U	0.0586				0.12716
	X7-SB535-0406	0.004995	U	0.00368		0.0045		0.004995	U	0.00245		0.004995	U	0.00245				0.00992
X7-SB536	X7-SS536-0001	0.00928		0.00548		0.00886		0.00211		0.00464		0.004995	U	0.00337				0.01265
	X7-SS536-0102	0.004995	U	0.00196		0.00314		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00832
X7-SB540	X7-SS540-0001	0.00573		0.00327		0.00532		0.00287		0.00205		0.00205		0.00327				0.00678
	X7-SS540-0102	0.00844		0.00643		0.00924		0.00321		0.00522		0.004995	U	0.00402				0.01363
X7-SB541	X7-SS541-0001	1.36		1.74		2.22		0.824		1.5		0.004995	U	0.78				2.19074
	X7-SS541-0102	0.434		0.631		0.732		0.277		0.485		0.004995	U	0.346				0.79045
	X7-SB541-0204	0.0166		0.0146		0.0187		0.00893		0.0142		0.004995	U	0.00853				0.02408
	X7-SB541-0406	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
X7-SB542	X7-SS542-0001	0.00612		0.00367		0.00571		0.004995	U	0.00326		0.004995	U	0.00286				0.01019
	X7-SS542-0102	0.004995	U	0.004995	U	0.00231		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.01127
X7-SB546	X7-SS546-0001	0.00184		0.02		0.0298		0.00898		0.0171		0.00204		0.0122				0.02653
	X7-SS546-0102	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999
FIELD DUP	FD090612-01	0.004995	U	0.004995	U	0.00266		0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.01131
FIELD DUP	FD090612-02	0.0123		0.0127		0.0174		0.00578		0.00964		0.004995	U	0.00617				0.02135
FIELD DUP	FD090612-03	0.17		0.267		0.35		0.13		0.206		0.004995	U	0.154				0.34090
FIELD DUP	FD1000312-07	0.0504		0.0689		0.0959		0.0318		0.0548		0.00282	U	0.0411				0.09083
FIELD DUP	FD100213-08	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U	0.004995	U			0.00999

Symbol for BaP Maps	Benzo(a)pyrene (BaP) equivalent concentrations in range soil samples (mg/kg)	Total Cancer Risk Level
	< 0.015 mg/kg	$< 10^{-6}$
	0.015 mg/kg to 0.15 mg/kg	10^{-6} to 10^{-5}
	0.15 mg/kg to 1.5 mg/kg	10^{-5} to 10^{-4}
	> 1.5 mg/kg	$> 10^{-4}$

TABLE 6-6

RANKED BaP EQUIVALENT CONCENTRATIONS - SOIL REMOVAL SUMMARY - EAST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA

East Trap Range	BaP Equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SS505-0102	19.3887	Round 2A	Yes	5
X7-SB243-0204	18.4412	Round 2A	Yes	3
X7-SS528-0102	17.5780	Round 2A	Yes	7
X7-SS255-0102	9.4851	Round 1	Yes	3
X7-SS247-0102	5.6961	Round 1	Yes	2
X7-SS535-0102	3.0963	Round 2A	Yes	6
X7-SS541-0001	2.1907	Round 2A	Yes	6
X7-SB528-0204	1.9417	Round 2A	Yes	7
X7-SS255-0001	1.7376	Round 1	Yes	3
X7-SB255-0204	1.4805	Round 2A	Yes	3
X7-SB528-0406	1.3778	Round 2A	Yes	7
X7-SS541-0102	0.7905	Round 2A	Yes	6
X7SS254-0001	0.6998	Round 1	Yes	2
X7-SS511-0001	0.5047	Round 2A	Yes	4
X7-SS262-0001	0.4981	Round 1	Yes	1
X7-SS263-0001	0.4152	Round 1	Yes	1
X7-SS257-0102	0.3454	Round 1	Yes	3
X7SS243-0102	0.3438	Round 1	Yes	3
X7-SS526-0102	0.3056	Round 2A	Yes	6
X7SS261-0102	0.2931	Round 1	Yes	2
X7-SB256-0204	0.2803	Round 2A	Yes	3
X7SS254-0102	0.2654	Round 1	Yes	2
X7SS242-0001	0.2570	Round 1	Yes	2
X7SS075-0002	0.2321	Round 1	Yes	2
X7SS242-0102	0.2163	Round 1	Yes	2
X7-SS527-0102	0.1866	Round 2A	Yes	6
X7SS256-0102	0.1665	Round 1	Yes	3
X7-SS503-0001	0.1664	Round 2A	Yes	4
X7-SS271-0102	0.1533	Round 1	Yes	6
X7-SS247-0001	0.1532	Round 1	Yes	2
X7-SS260-0102	0.1475	Round 1	No	--
X7-SS272-0001	0.1396	Round 1	Yes	6
X7-SS530-0102	0.1352	Round 2A	No	--
X7-SS250-0102	0.1319	Round 1	No	--
X7-SS533-0102	0.1254	Round 2B	No	--
X7-SS493-0001	0.1232	Round 2A	No	--
X7-SS246-0102	0.1050	Round 1	No	--
X7-SS529-0102	0.0915	Round 2A	Yes	6
X7-SS262-0102	0.0902	Round 1	No	1

TABLE 6-6

RANKED BaP EQUIVALENT CONCENTRATIONS - SOIL REMOVAL SUMMARY - EAST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA

East Trap Range	BaP Equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SB243-0406	0.0870	Round 2A	No	3
X7-SS271-0001	0.0834	Round 1	Yes	6
X7-SB254-0204	0.0785	Round 2A	No	2
X7-SS492-0001	0.0636	Round 2A	Yes	1
X7-SS253-0102	0.0629	Round 1	No	--
X7-SB242-0204	0.0588	Round 2A	No	2
X7-SS244-0001	0.0585	Round 1	No	--
X7-SS510-0102	0.0572	Round 2A	No	--
X7-SS245-0102	0.0492	Round 1	No	--
X7-SS531-0102	0.0440	Round 2A	No	--
X7-SS266-0102	0.0428	Round 1	No	--
X7-SS248-0102	0.0414	Round 1	No	--
X7-SS518-0001	0.0413	Round 2A	No	--
X7-SS246-0001	0.0404	Round 1	No	--
X7-SS535-0001	0.0391	Round 2A	Yes	6
X7-SS502-0001	0.0380	Round 2A	No	--
X7-SS497-0102	0.0372	Round 2B	No	--
X7-SS529-0001	0.0363	Round 2A	Yes	6
X7-SS252-0102	0.0362	Round 1	No	--
X7-SS257-0001	0.0359	Round 1	Yes	3
X7-SB261-0406	0.0337	Round 2A	No	2
X7-SS519-0001	0.0325	Round 2A	No	--
X7-SS244-0102	0.0313	Round 1	No	--
X7SS261-0001	0.0298	Round 1	Yes	2
X7-SS245-0001	0.0269	Round 1	No	--
X7SS256-0001	0.0269	Round 1	Yes	3
X7-SS249-0102	0.0266	Round 1	No	--
X7-SS546-0001	0.0265	Round 2B	No	--
X7-SS494-0001	0.0260	Round 2A	No	--
X7-SS519-0102	0.0259	Round 2A	No	--
X7-SB541-0204	0.0241	Round 2A	No	6
X7-SS267-0102	0.0222	Round 1	No	--
X7SS071-0002	0.0213	Round 1	No	--
X7SS243-0001	0.0210	Round 1	Yes	3
X7-SS497-0001	0.0210	Round 2B	No	--
X7-SS251-0102	0.0196	Round 1	No	--
X7-SS251-0001	0.0189	Round 1	No	--
X7-SS265-0001	0.0184	Round 1	No	--
X7-SS491-0001	0.0165	Round 2A	No	--

TABLE 6-6

RANKED BaP EQUIVALENT CONCENTRATIONS - SOIL REMOVAL SUMMARY - EAST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA

East Trap Range	BaP Equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SS530-0001	0.0161	Round 2A	No	--
X7-SS521-0001	0.0156	Round 2A	No	--
X7-SS528-0001	0.0153	Round 2A	Yes	7
X7-SS505-0001	0.0153	Round 2A	Yes	5
X7-SS503-0102	0.0147	Round 2A	No	--
X7-SS531-0001	0.0141	Round 2A	No	4
X7-SS522-0001	0.0140	Round 2A	No	--
X7-SS510-0001	0.0140	Round 2A	No	--
X7-SS267-0001	0.0139	Round 1	No	--
X7-SS540-0102	0.0136	Round 2B	No	--
X7-SS266-0001	0.0135	Round 1	No	--
X7-SB527-0406	0.0134	Round 2A	No	6
X7-SS249-0001	0.0130	Round 1	No	--
X7-SS511-0102	0.0128	Round 2A	No	4
X7-SS536-0001	0.0127	Round 2A	No	--
X7-SS260-0001	0.0122	Round 1	No	--
X7-SS518-0102	0.0119	Round 2A	No	--
X7-SS270-0001	0.0118	Round 1	No	--
X7-SS252-0001	0.0117	Round 1	No	--
X7-SS526-0001	0.0114	Round 2A	Yes	6
X7-SS507-0001	0.0113	Round 2A	No	--
X7-SS542-0102	0.0113	Round 2A	No	--
X7-SS506-0001	0.0112	Round 2B	No	--
X7-SS502-0102	0.0109	Round 2A	No	--
X7-SB526-0204	0.0105	Round 2A	No	6
X7-SS504-0001	0.0103	Round 2B	No	--
X7-SS258-0001	0.0103	Round 1	No	--
X7-SS542-0001	0.0102	Round 2A	No	--
X7-SB075-0204	0.0100	Round 2A	No	2
X7-SB242-0406	0.0100	Round 2A	No	2
X7-SB247-0406	0.0100	Round 2A	No	2
X7-SB254-0406	0.0100	Round 2A	No	2
X7-SB256-0406	0.0100	Round 2A	No	3
X7-SS491-0102	0.0100	Round 2A	No	--
X7-SS493-0102	0.0100	Round 2A	No	--
X7-SS494-0102	0.0100	Round 2A	No	--
X7-SS498-0102	0.0100	Round 2A	No	--
X7-SS504-0102	0.0100	Round 2B	No	--
X7-SB505-0204	0.0100	Round 2A	No	5

TABLE 6-6

RANKED BaP EQUIVALENT CONCENTRATIONS - SOIL REMOVAL SUMMARY - EAST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA

East Trap Range	BaP Equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SB505-0406	0.0100	Round 2A	No	5
X7-SS513-0102	0.0100	Round 2B	No	--
X7-SS525-0102	0.0100	Round 2A	No	--
X7-SB527-0204	0.0100	Round 2A	No	6
X7-SS533-0001	0.0100	Round 2B	No	--
X7-SB541-0406	0.0100	Round 2A	No	6
X7-SS546-0102	0.0100	Round 2B	No	--
X7-SS492-0102	0.0099	Round 2A	No	1
X7-SB535-0204	0.0099	Round 2A	No	6
X7-SB535-0406	0.0099	Round 2A	No	6
X7-SB526-0406	0.0097	Round 2A	No	6
X7-SS513-0001	0.0097	Round 2B	No	--
X7-SS253-0001	0.0094	Round 1	No	--
X7-SS525-0001	0.0090	Round 2A	No	--
X7-SB255-0406	0.0090	Round 2A	No	3
X7-SS250-0001	0.0089	Round 1	No	--
X7-SS527-0001	0.0088	Round 2A	Yes	6
X7-SS498-0001	0.0088	Round 2A	No	--
X7-SS521-0102	0.0087	Round 2A	No	--
X7-SS248-0001	0.0085	Round 1	No	--
X7-SS506-0102	0.0084	Round 2B	No	--
X7-SS536-0102	0.0083	Round 2A	No	--
X7-SS522-0102	0.0083	Round 2A	No	--
X7-SS507-0102	0.0083	Round 2A	No	--
X7-SB075-0406	0.0083	Round 2A	No	2
X7-SB261-0204	0.0082	Round 2A	No	2
X7-SS540-0001	0.0068	Round 2B	No	--
X7-SB247-0204	0.0062	Round 2A	No	2
X7-SS265-0102	0.0058	Round 1	No	--
X7-SS263-0102	0.0058	Round 1	Yes	2
X7-SS259-0001	0.0044	Round 1	Yes	6
X7-SS259-0102	0.0042	Round 1	Yes	6
X7-SS258-0102	0.0042	Round 1	No	--
X7-SS270-0102	0.0040	Round 1	No	--
X7SS086-0002	0.0010	Round 1	No	--

TABLE 6-6

RANKED BaP EQUIVALENT CONCENTRATIONS - SOIL REMOVAL SUMMARY - EAST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA

East Trap Range	BaP Equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7SS081-0002	0.0010	Round 1	No	--
X7SS079-0002	0.0010	Round 1	No	--

Symbol for BaP Maps	Benzo(a)pyrene (BaP) equivalent concentrations in range soil samples (mg/kg)	Total Cancer Risk Level
🟢	< 0.015 mg/kg	$< 10^{-6}$
🟡	0.015 mg/kg to 0.15 mg/kg	10^{-6} to 10^{-5}
🟠	0.15 mg/kg to 1.5 mg/kg	10^{-5} to 10^{-4}
🔴	> 1.5 mg/kg	$> 10^{-4}$

TABLE 6-7

POST-REMOVAL ACTION BaP EQUIVALENT SUMMARY - EAST TRAP RANGE,
UXO 7 RANGES
NSA CRANE, INDIANA
PAGE 1 OF 3

East Trap Range	BaP Equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SS260-0102	0.1475	Round 1	No	--
X7-SS530-0102	0.1352	Round 2A	No	--
X7-SS250-0102	0.1319	Round 1	No	--
X7-SS533-0102	0.1254	Round 2B	No	--
X7-SS493-0001	0.1232	Round 2A	No	--
X7-SS246-0102	0.1050	Round 1	No	--
X7-SS262-0102	0.0902	Round 1	No	1
X7-SB243-0406	0.0870	Round 2A	No	3
X7-SB254-0204	0.0785	Round 2A	No	2
X7-SS253-0102	0.0629	Round 1	No	--
X7-SB242-0204	0.0588	Round 2A	No	2
X7-SS244-0001	0.0585	Round 1	No	--
X7-SS510-0102	0.0572	Round 2A	No	--
X7-SS245-0102	0.0492	Round 1	No	--
X7-SS531-0102	0.0440	Round 2A	No	--
X7-SS266-0102	0.0428	Round 1	No	--
X7-SS248-0102	0.0414	Round 1	No	--
X7-SS518-0001	0.0413	Round 2A	No	--
X7-SS246-0001	0.0404	Round 1	No	--
X7-SS502-0001	0.0380	Round 2A	No	--
X7-SS497-0102	0.0372	Round 2B	No	--
X7-SS252-0102	0.0362	Round 1	No	--
X7-SB261-0406	0.0337	Round 2A	No	2
X7-SS519-0001	0.0325	Round 2A	No	--
X7-SS244-0102	0.0313	Round 1	No	--
X7-SS245-0001	0.0269	Round 1	No	--
X7-SS249-0102	0.0266	Round 1	No	--
X7-SS546-0001	0.0265	Round 2B	No	--
X7-SS494-0001	0.0260	Round 2A	No	--
X7-SS519-0102	0.0259	Round 2A	No	--
X7-SB541-0204	0.0241	Round 2A	No	6
X7-SS267-0102	0.0222	Round 1	No	--
X7SS071-0002	0.0213	Round 1	No	--
X7-SS497-0001	0.0210	Round 2B	No	--
X7-SS251-0102	0.0196	Round 1	No	--
X7-SS251-0001	0.0189	Round 1	No	--
X7-SS265-0001	0.0184	Round 1	No	--
X7-SS491-0001	0.0165	Round 2A	No	--
X7-SS530-0001	0.0161	Round 2A	No	--

TABLE 6-7

POST-REMOVAL ACTION BaP EQUIVALENT SUMMARY - EAST TRAP RANGE,
UXO 7 RANGES
NSA CRANE, INDIANA

East Trap Range	BaP Equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SS521-0001	0.0156	Round 2A	No	--
X7-SS503-0102	0.0147	Round 2A	No	--
X7-SS531-0001	0.0141	Round 2A	No	4
X7-SS522-0001	0.0140	Round 2A	No	--
X7-SS510-0001	0.0140	Round 2A	No	--
X7-SS267-0001	0.0139	Round 1	No	--
X7-SS540-0102	0.0136	Round 2B	No	--
X7-SS266-0001	0.0135	Round 1	No	--
X7-SB527-0406	0.0134	Round 2A	No	6
X7-SS249-0001	0.0130	Round 1	No	--
X7-SS511-0102	0.0128	Round 2A	No	4
X7-SS536-0001	0.0127	Round 2A	No	--
X7-SS260-0001	0.0122	Round 1	No	--
X7-SS518-0102	0.0119	Round 2A	No	--
X7-SS270-0001	0.0118	Round 1	No	--
X7-SS252-0001	0.0117	Round 1	No	--
X7-SS507-0001	0.0113	Round 2A	No	--
X7-SS542-0102	0.0113	Round 2A	No	--
X7-SS506-0001	0.0112	Round 2B	No	--
X7-SS502-0102	0.0109	Round 2A	No	--
X7-SB526-0204	0.0105	Round 2A	No	6
X7-SS504-0001	0.0103	Round 2B	No	--
X7-SS258-0001	0.0103	Round 1	No	--
X7-SS542-0001	0.0102	Round 2A	No	--
X7-SB075-0204	0.0100	Round 2A	No	2
X7-SB242-0406	0.0100	Round 2A	No	2
X7-SB247-0406	0.0100	Round 2A	No	2
X7-SB254-0406	0.0100	Round 2A	No	2
X7-SB256-0406	0.0100	Round 2A	No	3
X7-SS491-0102	0.0100	Round 2A	No	--
X7-SS493-0102	0.0100	Round 2A	No	--
X7-SS494-0102	0.0100	Round 2A	No	--
X7-SS498-0102	0.0100	Round 2A	No	--
X7-SS504-0102	0.0100	Round 2B	No	--
X7-SB505-0204	0.0100	Round 2A	No	5
X7-SB505-0406	0.0100	Round 2A	No	5
X7-SS513-0102	0.0100	Round 2B	No	--
X7-SS525-0102	0.0100	Round 2A	No	--
X7-SB527-0204	0.0100	Round 2A	No	6

TABLE 6-7

POST-REMOVAL ACTION BaP EQUIVALENT SUMMARY - EAST TRAP RANGE, UXO 7 RANGES
NSA CRANE, INDIANA
PAGE 3 OF 3

East Trap Range	BaP Equivalent (mg/Kg)	Comments	Selected for Removal	Area No.
X7-SS533-0001	0.0100	Round 2B	No	--
X7-SB541-0406	0.0100	Round 2A	No	6
X7-SS546-0102	0.0100	Round 2B	No	--
X7-SS492-0102	0.0099	Round 2A	No	1
X7-SB535-0204	0.0099	Round 2A	No	6
X7-SB535-0406	0.0099	Round 2A	No	6
X7-SB526-0406	0.0097	Round 2A	No	6
X7-SS513-0001	0.0097	Round 2B	No	--
X7-SS253-0001	0.0094	Round 1	No	--
X7-SS525-0001	0.0090	Round 2A	No	--
X7-SB255-0406	0.0090	Round 2A	No	3
X7-SS250-0001	0.0089	Round 1	No	--
X7-SS498-0001	0.0088	Round 2A	No	--
X7-SS521-0102	0.0087	Round 2A	No	--
X7-SS248-0001	0.0085	Round 1	No	--
X7-SS506-0102	0.0084	Round 2B	No	--
X7-SS536-0102	0.0083	Round 2A	No	--
X7-SS522-0102	0.0083	Round 2A	No	--
X7-SS507-0102	0.0083	Round 2A	No	--
X7-SB075-0406	0.0083	Round 2A	No	2
X7-SB261-0204	0.0082	Round 2A	No	2
X7-SS540-0001	0.0068	Round 2B	No	--
X7-SB247-0204	0.0062	Round 2A	No	2
X7-SS265-0102	0.0058	Round 1	No	--
X7-SS258-0102	0.0042	Round 1	No	--
X7-SS270-0102	0.0040	Round 1	No	--
X7SS086-0002	0.0010	Round 1	No	--
X7SS081-0002	0.0010	Round 1	No	--
X7SS079-0002	0.0010	Round 1	No	--

Symbol for BaP Maps	Benzo(a)pyrene (BaP) equivalent concentrations in range soil samples (mg/kg)	Total Cancer Risk Level
🟢	< 0.015 mg/kg	$< 10^{-6}$
🟡	0.015 mg/kg to 0.15 mg/kg	10^{-6} to 10^{-5}
🟠	0.15 mg/kg to 1.5 mg/kg	10^{-5} to 10^{-4}
🔴	> 1.5 mg/kg	$> 10^{-4}$

TABLE 6-8

ProUCL STATISTICS - COMPARISON OF BaP EQUIVALENTS: CURRENT AND POST-REMOVAL CONDITOINS - EAST TRAP RANGE
UXO 7 RANGES
NSA CRANE, INDIANA
PAGE 1 OF 3

	General UCL Statistics for Data Sets with Non-Detects		
User Selected Options			
From File	C:\Work Folders\Projects\Crane\UXO 7\East Trap Range.xls.wst		
Full Precision	OFF		
Confidence Coefficient	95%		
Number of Bootstrap Operations	2000		
Bap_Eq			
General Statistics			
Number of Valid Data	154	Number of Detected Data	138
Number of Distinct Detected Data	127	Number of Non-Detect Data	16
		Percent Non-Detects	10.39%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	0.00096	Minimum Detected	-6.949
Maximum Detected	19.39	Maximum Detected	2.965
Mean of Detected	0.664	Mean of Detected	-3.233
SD of Detected	2.852	SD of Detected	1.936
Minimum Non-Detect	0.004	Minimum Non-Detect	-5.521
Maximum Non-Detect	0.153	Maximum Non-Detect	-1.875
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	126
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	28
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	81.82%
UCL Statistics			
Normal Distribution Test with Detected Values Only		Lognormal Distribution Test with Detected Values Only	
Lilliefors Test Statistic	0.429	Lilliefors Test Statistic	0.15
5% Lilliefors Critical Value	0.0754	5% Lilliefors Critical Value	0.0754
Data not Normal at 5% Significance Level		Data not Lognormal at 5% Significance Level	
Assuming Normal Distribution		Assuming Lognormal Distribution	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.596	Mean	-3.414
SD	2.707	SD	1.933
95% DL/2 (t) UCL	0.957	95% H-Stat (DL/2) UCL	0.353
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-3.49
		SD in Log Scale	2.016
		Mean in Original Scale	0.596
		SD in Original Scale	2.707
		95% t UCL	0.956
		95% Percentile Bootstrap UCL	0.98
		95% BCA Bootstrap UCL	1.1
		95% H-UCL	0.4
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.251	Data do not follow a Discernable Distribution (0.05)	
Theta Star	2.648		
nu star	69.19		
A-D Test Statistic	20.94	Nonparametric Statistics	
5% A-D Critical Value	0.89	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.89	Mean	0.596
5% K-S Critical Value	0.0873	SD	2.698
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.218
		95% KM (t) UCL	0.957
Assuming Gamma Distribution		95% KM (z) UCL	0.955
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.957
Minimum	0.000001	95% KM (bootstrap t) UCL	1.205
Maximum	19.39	95% KM (BCA) UCL	0.999
Mean	0.595	95% KM (Percentile Bootstrap) UCL	0.971
Median	0.0153	95% KM (Chebyshev) UCL	1.547
SD	2.707	97.5% KM (Chebyshev) UCL	1.958

TABLE 6-8

ProUCL STATISTICS - COMPARISON OF BaP EQUIVALENTS: CURRENT AND POST-REMOVAL CONDITOINS - EAST TRAP RANGE
UXO 7 RANGES
NSA CRANE, INDIANA

k star	0.194	99% KM (Chebyshev) UCL	2.767
Theta star	3.059		
Nu star	59.89	**Potential UCLs to Use**	
AppChi2	43.1	97.5% KM (Chebyshev) UCL	1.958
95% Gamma Approximate UCL (Use when n >= 40)	0.827		
95% Adjusted Gamma UCL (Use when n < 40)	0.829		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL. These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006). For additional insight, the user may want to consult a statistician.

Ex_Bap_Eq

General Statistics

Number of Valid Data	154	Number of Detected Data	138
Number of Distinct Detected Data	84	Number of Non-Detect Data	16
		Percent Non-Detects	10.39%

Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.00096	Minimum Detected	-6.949
Maximum Detected	0.147	Maximum Detected	-1.914
Mean of Detected	0.0227	Mean of Detected	-4.14
SD of Detected	0.0265	SD of Detected	0.79
Minimum Non-Detect	0.004	Minimum Non-Detect	-5.521
Maximum Non-Detect	0.0902	Maximum Non-Detect	-2.405
Note: Data have multiple DLs - Use of KM Method is recommended		Number treated as Non-Detect	148
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	6
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	96.10%

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Lilliefors Test Statistic	0.346	Lilliefors Test Statistic	0.262
5% Lilliefors Critical Value	0.0754	5% Lilliefors Critical Value	0.0754
Data not Normal at 5% Significance Level		**Data not Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	0.0212	Mean	-4.236
SD	0.0256	SD	0.832
95% DL/2 (t) UCL	0.0247	95% H-Stat (DL/2) UCL	0.0235
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	-4.239
		SD in Log Scale	0.817
		Mean in Original Scale	0.021
		SD in Original Scale	0.0255
		95% t UCL	0.0244
		95% Percentile Bootstrap UCL	0.0244
		95% BCA Bootstrap UCL	0.025
		95% H-UCL	0.0231
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	1.529	**Data do not follow a Discernable Distribution (0.05)**	
Theta Star	0.0148		
nu star	421.9		
A-D Test Statistic	12.23	**Nonparametric Statistics**	
5% A-D Critical Value	0.77	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.77	Mean	0.0212
5% K-S Critical Value	0.0811	SD	0.0254
Data not Gamma Distributed at 5% Significance Level		SE of Mean	0.00206
		95% KM (t) UCL	0.0246

TABLE 6-8

ProUCL STATISTICS - COMPARISON OF BaP EQUIVALENTS: CURRENT AND POST-REMOVAL CONDITOINS - EAST TRAP RANGE
UXO 7 RANGES
NSA CRANE, INDIANA
PAGE 3 OF 3

Assuming Gamma Distribution		95% KM (z) UCL	0.0245
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.0246
Minimum	0.000001	95% KM (bootstrap t) UCL	0.0252
Maximum	0.147	95% KM (BCA) UCL	0.0246
Mean	0.0208	95% KM (Percentile Bootstrap) UCL	0.0246
Median	0.015	95% KM (Chebyshev) UCL	0.0301
SD	0.0257	97.5% KM (Chebyshev) UCL	0.034
k star	0.686	99% KM (Chebyshev) UCL	0.0417
Theta star	0.0304		
Nu star	211.2	Potential UCLs to Use	
AppChi2	178.6	95% KM (BCA) UCL	0.0246
95% Gamma Approximate UCL (Use when n >= 40)	0.0246		
95% Adjusted Gamma UCL (Use when n < 40)	0.0247		
Note: DL/2 is not a recommended method.			

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.

TABLE 6-9

LEAD SUMMARY - NORTHERNMOST AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
Northernmost Area of Northern Zone			
X7-SS055-0002	RFI-2007	1160.00	FBL
X7-SB055-0203	2	3.50	Calc
X7-SB055-0304	2	10.00	Calc
X7-SS173-0002	RFI-2007	125.00	FBL
X7-SS174-0002	RFI-2007	430.00	FBL
X7-SB174-0203	2	8.10	Calc
X7-SB174-0304	2	10.00	Calc
X7-SS175-0002	RFI-2007	170.00	FBL
X7-SS176-0002	RFI-2007	143.00	Calc
X7-SS189-0002	RFI-2007	151.00	FBL
X7-SS190-0002	RFI-2007	347.00	Calc
X7-SB190-0203	2	10.00	Calc
X7-SB190-0304	2	10.00	Calc
X7-SS274-0001	1	670.00	Calc
X7-SS274-0102	1	397.00	Calc
X7-SB274-0203	2	28.42	Calc
X7-SB274-0304	2	11.93	Calc
X7-SS275-0001	1	413.00	Calc
X7-SS275-0102	1	616.00	Calc
X7-SB275-0203	2	46.43	Calc
X7-SB275-0304	2	1.58	Calc
X7-SS276-0001	1	128.00	Calc
X7-SS276-0102	1	90.90	Calc
X7-SS277-0001	1	382.00	Calc
X7-SS277-0102	1	315.00	Calc
X7-SB277-0203	2	10.00	Calc
X7-SB277-0304	2	10.00	Calc
X7-SS278-0001	1	464.00	Calc
X7-SS278-0102	1	315.00	Calc
X7-SB278-0203	2	10.00	Calc
X7-SB278-0304	2	10.00	Calc
X7-SS279-0001	1	408.00	Calc
X7-SS279-0102	1	376.00	Calc
X7-SB279-0203	1	20.10	FBL
X7-SS280-0001	1	603.00	Calc

TABLE 6-9

LEAD SUMMARY - NORTHERNMOST AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS280-0102	1	94.30	FBL
X7-SS281-0001	1	611.00	Calc
X7-SS281-0102	1	96.60	Calc
X7-SS282-0001	1	559.00	Calc
X7-SS282-0102	1	303.00	Calc
X7-SB282-0203	1	88.80	Calc
X7-SS283-0001	1	534.00	Calc
X7-SS283-0102	1	522.00	Calc
X7-SB283-0203	2	39.92	Calc
X7-SB283-0304	2	10.00	Calc
X7-SS284-0001	1	503.00	Calc
X7-SS284-0102	1	87.30	Calc
X7-SS285-0001	1	392.00	Calc
X7-SB285-0203	2	10.00	Calc
X7-SB285-0304	2	10.00	Calc
X7-SS286-0001	1	189.00	Calc
X7-SS287-0001	1	44.80	FBL
X7-SS288-0001	1	63.80	FBL
X7-SS289-0001	1	78.00	Calc
X7-SS290-0001	1	143.00	Calc
X7-SS290-0102	1	29.00	Calc
X7-SS321-0001	1	156.00	FBL
X7-SS321-0102	1	40.00	Calc
X7-SS323-0001	1	448.00	FBL
X7-SS323-0102	1	50.20	Calc
X7-SS325-0001	1	419.00	Calc
X7-SS325-0102	1	37.30	Calc
X7-SS327-0001	1	66.40	FBL
X7-SS329-0001	1	46.30	FBL
X7-SS331-0001	1	138.00	FBL
X7-SS331-0102	1	39.40	Calc
X7-SS333-0001	1	198.00	FBL
X7-SS333-0102	1	39.40	Calc
X7-SS336-0001	1	236.00	FBL
X7-SS336-0102	1	71.00	Calc
X7-SS337-0001	1	63.10	FBL

TABLE 6-9

LEAD SUMMARY - NORTHERNMOST AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS342-0102	1	263.00	FBL
X7-SB342-0203	2	10.00	Calc
X7-SB342-0304	2	10.00	Calc
X7-SS344-0001	1	111.00	FBL
X7-SS344-0102	1	22.80	Calc
X7-SS423-0001	1	340.00	FBL
X7-SS423-0102	1	25.80	Calc
X7-SS424-0001	1	193.00	FBL
X7-SS424-0102	1	91.00	FBL
X7-SS425-0001	1	160.00	FBL
X7-SS425-0102	1	16.50	Calc
X7-SB426-0304	1	16.20	Calc
X7-SB427-0304	1	22.70	FBL
X7-SB428-0304	1	26.70	Calc
X7-SS429-0001	1	125.00	FBL
X7-SB567-0001	2	99.33	Calc
X7-SB567-0102	2	12.70	Calc
X7-SB568-0001	2	256.12	Calc
X7-SB568-0102	2	88.20	FBL
X7-SB568-0203	2	10.00	Calc
X7-SB568-0304	2	10.00	Calc
X7-SB569-0001	2	660.92	Calc
X7-SB569-0102	2	93.10	FBL
X7-SB569-0203	2	10.00	Calc
X7-SB569-0304	2	10.00	Calc
X7-SB570-0001	2	262.25	Calc
X7-SB570-0102	2	11.93	Calc
X7-SB570-0203	2	10.00	Calc
X7-SB570-0304	2	10.00	Calc
X7-SB571-0001	2	82.08	Calc
X7-SB571-0102	2	10.00	Calc
X7-SB572-0001	2	17.30	Calc
X7-SB572-0102	2	38.00	Calc
X7-SB573-0001	2	47.97	Calc
X7-SB573-0102	2	46.82	Calc
X7-SB574-0001	2	59.47	Calc

TABLE 6-9

LEAD SUMMARY - NORTHERNMOST AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SB574-0102	2	16.92	Calc
X7-SB575-0001	2	90.52	Calc
X7-SB575-0102	2	10.00	Calc
X7-SB576-0001	2	94.35	Calc
X7-SB576-0102	2	4.65	Calc
X7-SB577-0001	2	95.30	FBL
X7-SB577-0102	2	1.96	Calc
X7-SS607-0001	2	11.93	Calc
X7-SS607-0102	2	5.00	Calc
X7-SS608-0001	2	166.00	FBL
X7-SS608-0102	2	14.23	Calc
X7-SS609-0001	2	10.78	Calc
X7-SS609-0102	2	10.00	Calc
AVG LEAD CONCENTRATION		**151.43**	

Indicates lead concentration greater than 400 mg/kg

bkg = background
Calc = lead calculated value
FBL = Fixed-base laboratory
XRF = X-Ray fluorescence

TABLE 6-10

LEAD RANKED - NORTHERNMOST AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Bkg	Source
Northernmost Area of Northern Zone				
X7-SS055-0002	RFI-2007	1160.00	27.00	FBL
X7-SB055-0203	2	3.50	3.50	Calc
X7-SB055-0304	2	10.00	10.00	Calc
X7-SS173-0002	RFI-2007	125.00	125.00	FBL
X7-SS174-0002	RFI-2007	430.00	27.00	FBL
X7-SB174-0203	2	8.10	8.10	Calc
X7-SB174-0304	2	10.00	10.00	Calc
X7-SS175-0002	RFI-2007	170.00	170.00	FBL
X7-SS176-0002	RFI-2007	143.00	143.00	Calc
X7-SS189-0002	RFI-2007	151.00	151.00	FBL
X7-SS190-0002	RFI-2007	347.00	347.00	Calc
X7-SB190-0203	2	10.00	10.00	Calc
X7-SB190-0304	2	10.00	10.00	Calc
X7-SS274-0001	1	670.00	27.00	Calc
X7-SS274-0102	1	397.00	397.00	Calc
X7-SB274-0203	2	28.42	28.42	Calc
X7-SB274-0304	2	11.93	11.93	Calc
X7-SS275-0001	1	413.00	27.00	Calc
X7-SS275-0102	1	616.00	27.00	Calc
X7-SB275-0203	2	46.43	46.43	Calc
X7-SB275-0304	2	1.58	1.58	Calc
X7-SS276-0001	1	128.00	128.00	Calc
X7-SS276-0102	1	90.90	90.90	Calc
X7-SS277-0001	1	382.00	382.00	Calc
X7-SS277-0102	1	315.00	315.00	Calc
X7-SB277-0203	2	10.00	10.00	Calc
X7-SB277-0304	2	10.00	10.00	Calc
X7-SS278-0001	1	464.00	27.00	Calc
X7-SS278-0102	1	315.00	315.00	Calc
X7-SB278-0203	2	10.00	10.00	Calc
X7-SB278-0304	2	10.00	10.00	Calc
X7-SS279-0001	1	408.00	27.00	Calc
X7-SS279-0102	1	376.00	376.00	Calc
X7-SB279-0203	1	20.10	20.10	FBL
X7-SS280-0001	1	603.00	27.00	Calc

TABLE 6-10

LEAD RANKED - NORTHERNMOST AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Bkg	Source
X7-SS280-0102	1	94.30	94.30	FBL
X7-SS281-0001	1	**611.00**	**27.00**	Calc
X7-SS281-0102	1	96.60	96.60	Calc
X7-SS282-0001	1	**559.00**	**27.00**	Calc
X7-SS282-0102	1	**303.00**	303.00	Calc
X7-SB282-0203	1	88.80	88.80	Calc
X7-SS283-0001	1	**534.00**	**27.00**	Calc
X7-SS283-0102	1	**522.00**	**27.00**	Calc
X7-SB283-0203	2	39.92	39.92	Calc
X7-SB283-0304	2	10.00	10.00	Calc
X7-SS284-0001	1	**503.00**	**27.00**	Calc
X7-SS284-0102	1	87.30	87.30	Calc
X7-SS285-0001	1	**392.00**	392.00	Calc
X7-SB285-0203	2	10.00	10.00	Calc
X7-SB285-0304	2	10.00	10.00	Calc
X7-SS286-0001	1	189.00	189.00	Calc
X7-SS287-0001	1	44.80	44.80	FBL
X7-SS288-0001	1	63.80	63.80	FBL
X7-SS289-0001	1	78.00	78.00	Calc
X7-SS290-0001	1	143.00	143.00	Calc
X7-SS290-0102	1	29.00	29.00	Calc
X7-SS321-0001	1	156.00	156.00	FBL
X7-SS321-0102	1	40.00	40.00	Calc
X7-SS323-0001	1	**448.00**	**448.00**	FBL
X7-SS323-0102	1	50.20	50.20	Calc
X7-SS325-0001	1	**419.00**	**419.00**	Calc
X7-SS325-0102	1	37.30	37.30	Calc
X7-SS327-0001	1	66.40	66.40	FBL
X7-SS329-0001	1	46.30	46.30	FBL
X7-SS331-0001	1	138.00	138.00	FBL
X7-SS331-0102	1	39.40	39.40	Calc
X7-SS333-0001	1	**198.00**	198.00	FBL
X7-SS333-0102	1	39.40	39.40	Calc
X7-SS336-0001	1	**236.00**	236.00	FBL
X7-SS336-0102	1	71.00	71.00	Calc
X7-SS337-0001	1	63.10	63.10	FBL
X7-SS342-0102	1	**263.00**	263.00	FBL

TABLE 6-10

LEAD RANKED - NORTHERNMOST AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Bkg	Source
X7-SB342-0203	2	10.00	10.00	Calc
X7-SB342-0304	2	10.00	10.00	Calc
X7-SS344-0001	1	111.00	111.00	FBL
X7-SS344-0102	1	22.80	22.80	Calc
X7-SS423-0001	1	**340.00**	340.00	FBL
X7-SS423-0102	1	25.80	25.80	Calc
X7-SS424-0001	1	193.00	193.00	FBL
X7-SS424-0102	1	91.00	91.00	FBL
X7-SS425-0001	1	160.00	160.00	FBL
X7-SS425-0102	1	16.50	16.50	Calc
X7-SB426-0304	1	16.20	16.20	Calc
X7-SB427-0304	1	22.70	22.70	FBL
X7-SB428-0304	1	26.70	26.70	Calc
X7-SS429-0001	1	125.00	125.00	FBL
X7-SB567-0001	2	99.33	99.33	Calc
X7-SB567-0102	2	12.70	12.70	Calc
X7-SB568-0001	2	**256.12**	256.12	Calc
X7-SB568-0102	2	88.20	88.20	FBL
X7-SB568-0203	2	10.00	10.00	Calc
X7-SB568-0304	2	10.00	10.00	Calc
X7-SB569-0001	2	**660.92**	**660.92**	Calc
X7-SB569-0102	2	93.10	93.10	FBL
X7-SB569-0203	2	10.00	10.00	Calc
X7-SB569-0304	2	10.00	10.00	Calc
X7-SB570-0001	2	**262.25**	262.25	Calc
X7-SB570-0102	2	11.93	11.93	Calc
X7-SB570-0203	2	10.00	10.00	Calc
X7-SB570-0304	2	10.00	10.00	Calc
X7-SB571-0001	2	82.08	82.08	Calc
X7-SB571-0102	2	10.00	10.00	Calc
X7-SB572-0001	2	17.30	17.30	Calc
X7-SB572-0102	2	38.00	38.00	Calc
X7-SB573-0001	2	47.97	47.97	Calc
X7-SB573-0102	2	46.82	46.82	Calc
X7-SB574-0001	2	59.47	59.47	Calc
X7-SB574-0102	2	16.92	16.92	Calc
X7-SB575-0001	2	90.52	90.52	Calc

TABLE 6-10

LEAD RANKED - NORTHERNMOST AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Bkg	Source
X7-SB575-0102	2	10.00	10.00	Calc
X7-SB576-0001	2	94.35	94.35	Calc
X7-SB576-0102	2	4.65	4.65	Calc
X7-SB577-0001	2	95.30	95.30	FBL
X7-SB577-0102	2	1.96	1.96	Calc
X7-SS607-0001	2	11.93	11.93	Calc
X7-SS607-0102	2	5.00	5.00	Calc
X7-SS608-0001	2	166.00	166.00	FBL
X7-SS608-0102	2	14.23	14.23	Calc
X7-SS609-0001	2	10.78	10.78	Calc
X7-SS609-0102	2	10.00	10.00	Calc
AVG LEAD CONCENTRATION		**151.43**	**91.92**	

Indicates lead concentration greater than 400 mg/kg
Indicates lead concentration between 192 and 400 mg/kg
Indicates sample location selected for removal and backfilled

bkg = background
Calc = lead calculated value
FBL = Fixed-base laboratory
XRF = X-Ray fluorescence

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
Central Area of Northern Zone - 400-yard Firing Berm			
X7-SS043-0002	RFI-2007	56.00	Calc
X7-SS044-0002	RFI-2007	199.00	FBL
X7-SS044-0102	2	263.40	Calc
X7-SB044-0203	2	10.40	Calc
X7-SS045-0002	RFI-2007	286.00	FBL
X7-SB045-0203	2	261.87	Calc
X7-SB045-0304	2	397.18	Calc
X7-SB045-0405	2	76.33	Calc
X7-SB045-0506	2	56.02	Calc
X7-SS046-0002	RFI-2007	1100.00	FBL
X7-SB046-0203	2	768.25	Calc
X7-SB046-0304	2	440.50	Calc
X7-SB046-0405	2	568.15	Calc
X7-SB046-0506	2	42.60	Calc
X7-SS047-0002	RFI-2007	63.00	Calc
X7-SS048-0002	RFI-2007	190.00	FBL
X7-SS177-0002	RFI-2007	115.00	FBL
X7-SS178-0002	RFI-2007	40.90	FBL
X7-SS179-0002	RFI-2007	83.60	FBL
X7-SS180-0002	RFI-2007	89.00	FBL
X7-SS181-0002	RFI-2007	212.00	FBL
X7-SB181-0203	2	59.08	Calc
X7-SB181-0304	2	4.65	Calc
X7-SS182-0002	RFI-2007	95.10	FBL
X7-SS291-0001	1	1186.00	Calc
X7-SS291-0102	1	365.00	Calc
X7-SB291-0203	1	203.00	FBL
X7-SB291-0304	2	366.90	Calc
X7-SB291-0405	2	18.07	Calc
X7-SS292-0001	1	226.00	Calc
X7-SS292-0102	1	90.60	Calc
X7-SS293-0001	1	71.60	Calc
X7-SS294-0001	1	148.00	Calc
X7-SS294-0102	1	61.70	Calc
X7-SS295-0001	1	339.00	Calc

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS295-0102	1	386.00	Calc
X7-SB295-0203	1	477.00	Calc
X7-SB295-0304	2	246.00	FBL
X7-SB295-0405	2	10.00	Calc
X7-SS296-0001	1	818.00	Calc
X7-SS296-0102	1	304.00	Calc
X7-SB296-0203	1	280.00	Calc
X7-SB296-0304	2	551.28	Calc
X7-SB296-0405	2	16.92	Calc
X7-SB296-0506	2	10.00	Calc
X7-SB296-0607	2	10.00	Calc
X7-SS297-0001	1	646.00	Calc
X7-SS297-0102	1	366.00	Calc
X7-SB297-0203	1	232.00	Calc
X7-SB297-0304	2	16.15	Calc
X7-SB297-0405	2	10.00	Calc
X7-SS298-0001	1	356.00	Calc
X7-SS298-0102	1	414.00	Calc
X7-SB298-0203	2	180.60	Calc
X7-SB298-0304	2	806.58	Calc
X7-SB298-0405	2	142.00	FBL
X7-SB298-0506	2	24.20	Calc
X7-SS299-0001	1	338.00	Calc
X7-SS299-0102	1	478.00	Calc
X7-SB299-0203	1	122.00	Calc
X7-SS300-0001	1	230.00	Calc
X7-SS300-0102	1	228.00	Calc
X7-SB300-0203	2	85.53	Calc
X7-SB300-0304	2	190.18	Calc
X7-SB300-0405	2	630.63	Calc
X7-SB300-0506	2	10.00	Calc
X7-SS301-0001	1	164.00	Calc
X7-SS301-0102	1	357.00	Calc
X7-SB301-0203	1	517.00	Calc
X7-SB301-0304	2	299.43	Calc
X7-SB301-0405	2	0.43	Calc

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS302-0001	1	159.00	Calc
X7-SS302-0102	1	76.20	Calc
X7-SS303-0001	1	261.00	Calc
X7-SS303-0102	1	532.00	Calc
X7-SB303-0203	2	19.98	Calc
X7-SB303-0304	2	10.00	Calc
X7-SS304-0001	1	87.90	Calc
X7-SS305-0001	1	311.00	Calc
X7-SS305-0102	1	68.00	Calc
X7-SS306-0001	1	484.00	Calc
X7-SS306-0102	1	160.00	Calc
X7-SB306-0203	1	82.50	Calc
X7-SS307-0001	1	568.00	Calc
X7-SS307-0102	1	47.50	Calc
X7-SS308-0001	1	469.00	Calc
X7-SS308-0102	1	235.00	Calc
X7-SB308-0203	1	23.70	Calc
X7-SS345-0001	1	518.00	Calc
X7-SS345-0102	1	78.40	FBL
X7-SS347-0001	1	541.00	Calc
X7-SS347-0102	1	91.50	FBL
X7-SS349-0001	1	166.00	Calc
X7-SS349-0102	1	601.00	Calc
X7-SB349-0203	2	40.30	Calc
X7-SB349-0304	2	9.25	Calc
X7-SS351-0001	1	191.00	FBL
X7-SS351-0102	1	290.00	FBL
X7-SB351-0203	2	541.70	Calc
X7-SB351-0304	2	114.00	FBL
X7-SB351-0405	2	10.00	Calc
X7-SB351-0506	2	128.00	FBL
X7-SB351-0607	2	10.00	Calc
X7-SB351-0708	2	10.00	Calc
X7-SS353-0001	1	157.00	FBL
X7-SS355-0001	1	136.00	FBL
X7-SS355-0102	1	110.00	Calc

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS357-0001	1	408.00	Calc
X7-SS357-0102	1	69.20	Calc
X7-SS358-0001	1	370.00	Calc
X7-SS358-0102	1	455.00	Calc
X7-SB358-0203	2	343.13	Calc
X7-SB358-0304	2	158.75	Calc
X7-SB358-0405	2	284.48	Calc
X7-SB358-0506	2	283.00	FBL
X7-SB358-0607	2	10.00	Calc
X7-SB358-0708	2	10.00	Calc
X7-SS360-0001	1	232.00	Calc
X7-SS360-0102	1	302.00	Calc
X7-SB360-0203	2	2044.80	Calc
X7-SB360-0304	2	88.22	Calc
X7-SS361-0001	1	299.00	Calc
X7-SS361-0102	1	291.00	Calc
X7-SB361-0203	2	10.00	Calc
X7-SB361-0304	2	105.47	Calc
X7-SS363-0001	1	180.00	FBL
X7-SS363-0102	1	10.20	Calc
X7-SS365-0001	1	412.00	Calc
X7-SS365-0102	1	403.00	Calc
X7-SB365-0203	2	10.00	Calc
X7-SB365-0304	2	10.00	Calc
X7-SS368-0001	1	187.00	Calc
X7-SS368-0102	1	660.00	Calc
X7-SB368-0203	2	87.50	FBL
X7-SB368-0304	2	10.00	Calc
X7-SS369-0001	1	869.00	Calc
X7-SS369-0102	1	245.00	FBL
X7-SB369-0203	2	555.88	Calc
X7-SB369-0304	2	675.48	Calc
X7-SB369-0405	2	19.98	Calc
X7-SB369-0506	2	14.62	Calc
X7-SS391-0001	1	152.00	Calc
X7-SS391-0102	1	566.00	Calc

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SB391-0203	1	52.30	Calc
X7-SS392-0001	1	107.00	FBL
X7-SS393-0001	1	147.00	Calc
X7-SS393-0102	1	226.00	FBL
X7-SB393-0203	1	186.00	Calc
X7-SS394-0001	1	142.00	Calc
X7-SS394-0102	1	285.00	Calc
X7-SB394-0203	1	35.50	Calc
X7-SS395-0001	1	246.00	Calc
X7-SS395-0102	1	535.00	Calc
X7-SB395-0203	1	321.00	Calc
X7-SB395-0304	2	537.87	Calc
X7-SB395-0405	2	160.00	FBL
X7-SB395-0506	2	10.00	Calc
X7-SB395-0607	2	10.00	Calc
X7-SS396-0001	1	145.00	Calc
X7-SS396-0102	1	384.00	Calc
X7-SB396-0203	1	303.00	Calc
X7-SS398-0001	1	293.00	Calc
X7-SS398-0102	1	458.00	Calc
X7-SB398-0203	2	555.88	Calc
X7-SB398-0304	2	294.07	Calc
X7-SB398-0405	2	69.43	Calc
X7-SB398-0506	2	3.50	Calc
X7-SS400-0001	1	104.00	Calc
X7-SS401-0001	1	97.40	FBL
X7-SS401-0102	1	337.00	Calc
X7-SB401-0203	2	10.00	Calc
X7-SB401-0304	2	10.00	Calc
X7-SS402-0001	1	89.70	FBL
X7-SS404-0001	1	292.00	Calc
X7-SS404-0102	1	83.40	Calc
X7-SS406-0001	1	80.40	Calc
X7-SS407-0001	1	73.70	FBL
X7-SS408-0001	1	246.00	FBL
X7-SS408-0102	1	31.90	Calc

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SB409-0304	1	1087.00	Calc
X7-SB409-0405	2	406.00	Calc
X7-SB409-0506	2	10.00	Calc
X7-SS410-0001	1	12.30	FBL
X7-SB411-0304	1	52.00	Calc
X7-SS412-0001	1	189.00	FBL
X7-SS412-0102	1	31.90	Calc
X7-SB413-0304	1	869.00	Calc
X7-SS414-0001	1	199.00	FBL
X7-SS414-0102	1	104.00	Calc
X7-SS415-0001	1	105.00	FBL
X7-SS415-0102	1	36.40	Calc
X7-SS416-0001	1	78.20	FBL
X7-SB417-0304	1	194.00	Calc
X7-SB417-0405	1	159.00	Calc
X7-SB417-0506	2	107.77	Calc
X7-SB417-0607	2	10.00	Calc
X7-SB417-0708	2		
X7-SS418-0001	1	48.40	Calc
X7-SS420-0001	1	119.00	Calc
X7-SS420-0102	1	445.00	Calc
X7-SS420-0203	1	76.50	Calc
X7-SS421-0001	1	681.00	Calc
X7-SS421-0102	1	19.80	Calc
X7-SS422-0001	1	399.00	Calc
X7-SS422-0102	1	343.00	FBL
X7-SS422-0203	1	49.00	Calc
X7-SS551-0001	2	432.83	Calc
X7-SS551-0102	2	172.17	Calc
X7-SB551-0203	2	169.48	Calc
X7-SB551-0304	2	248.83	Calc
X7-SB551-0405	2	452.38	Calc
X7-SB551-0506	2	10.00	Calc
X7-SS552-0001	2	22.28	Calc
X7-SS552-0102	2	252.67	Calc
X7-SB552-0203	2	123.87	Calc

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LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SB552-0304	2	262.63	Calc
X7-SB552-0405	2	1074.50	Calc
X7-SB552-0506	2	10.00	Calc
X7-SS553-0001	2	399.10	Calc
X7-SS553-0102	2	128.85	Calc
X7-SB553-0203	2	107.00	Calc
X7-SB553-0304	2	26.50	Calc
X7-SS554-0001	2	136.52	Calc
X7-SS554-0102	2	116.58	Calc
X7-SB554-0203	2	1337.50	Calc
X7-SB554-0304	2	129.62	Calc
X7-SB554-0405	2	31.87	Calc
X7-SB554-0506	2	10.00	Calc
X7-SS555-0001	2	87.83	Calc
X7-SS555-0102	2	536.33	Calc
X7-SB555-0203	2	108.53	Calc
X7-SB555-0304	2	10.00	Calc
X7-SS556-0001	2	373.03	Calc
X7-SS556-0102	2	2242.20	Calc
X7-SB556-0203	2	312.47	Calc
X7-SB556-0304	2	289.08	Calc
X7-SB556-0405	2	192.87	Calc
X7-SB556-0506	2	700.78	Calc
X7-SB556-0607	2	108.15	Calc
X7-SB556-0708	2	23.05	Calc
X7-SS557-0001	2	295.22	Calc
X7-SS557-0102	2	416.35	Calc
X7-SB557-0203	2	823.83	Calc
X7-SB557-0304	2	1935.10	Calc
X7-SB557-0405	2	10.40	Calc
X7-SB557-0506	2	2.35	Calc
X7-SS558-0001	2	547.07	Calc
X7-SS558-0102	2	220.08	Calc
X7-SB558-0203	2	72.12	Calc
X7-SB558-0304	2	1868.80	Calc
X7-SB558-0405	2	10.00	Calc

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LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SB558-0506	2	217.00	FBL
X7-SB558-0607	2	15.00	Calc
X7-SB558-0708	2	10.00	Calc
X7-SS559-0001	2	465.80	Calc
X7-SS559-0102	2	1027.80	Calc
X7-SB559-0203	2	39.15	Calc
X7-SB559-0304	2	10.00	Calc
X7-SS560-0001	2	365.37	Calc
X7-SS560-0102	2	823.83	Calc
X7-SB560-0203	2	131.15	Calc
X7-SB560-0304	2	37.62	Calc
X7-SS561-0001	2	215.10	Calc
X7-SS561-0102	2	99.33	Calc
X7-SB561-0203	2	144.00	FBL
X7-SB561-0304	2	10.00	Calc
X7-SB561-0405	2	10.00	Calc
X7-SS562-0001	2	392.97	Calc
X7-SS562-0102	2	385.68	Calc
X7-SB562-0203	2	173.32	Calc
X7-SB562-0304	2	10.00	Calc
X7-SS563-0001	2	195.00	FBL
X7-SS563-0102	2	10.00	Calc
X7-SB563-0203	2	10.00	Calc
X7-SB563-0304	2	10.00	Calc
X7-SS564-0001	2	221.62	Calc
X7-SS564-0102	2	36.08	Calc
X7-SB564-0203	2	10.00	Calc
X7-SB564-0304	2	10.00	Calc
X7-SS565-0001	2	2057.80	Calc
X7-SS565-0102	2	5081.90	Calc
X7-SB565-0203	2	966.05	Calc
X7-SB565-0304	2	10.00	Calc
X7-SB565-0405	2	8.48	Calc
X7-SB565-0506	2	10.00	Calc
X7-SS566-0001	2	796.23	Calc
X7-SS566-0102	2	338.15	Calc

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SB566-0203	2	1727.00	Calc
X7-SB566-0304	2	52.18	Calc
X7-SB566-0405	2	3.12	Calc
X7-SS581-0001	2	377.63	Calc
X7-SS581-0102	2	10.00	Calc
X7-SS582-0001	2	1037.40	Calc
X7-SS582-0102	2	4003.20	Calc
X7-SB582-0203	2	2313.50	Calc
X7-SB582-0304	2	207.05	Calc
X7-SB582-0405	2	7.72	Calc
X7-SB582-0506	2	10.00	Calc
X7-SS583-0001	2	4092.10	Calc
X7-SS583-0102	2	2425.80	Calc
X7-SB583-0203	2	1847.70	Calc
X7-SB583-0304	2	10.00	Calc
X7-SB583-0405	2	10.00	Calc
X7-SB583-0506	2	10.00	Calc
X7-SS584-0001	2	242.00	FBL
X7-SS584-0102	2	10.00	Calc
X7-SB584-0203	2	10.00	Calc
X7-SB584-0304	2	10.00	Calc
X7-SS585-0001	2	175.23	Calc
X7-SS585-0102	2	10.00	Calc
X7-SS586-0001	2	386.07	Calc
X7-SS586-0102	2	204.00	FBL
X7-SS587-0001	2	138.00	FBL
X7-SS587-0102	2	100.48	Calc
X7-SS588-0001	2	129.62	Calc
X7-SS588-0102	2	100.48	Calc
X7-SB588-0203	2	62.33	XRF
X7-SS589-0001	2	409.45	Calc
X7-SS589-0102	2	3.88	Calc
X7-SB589-0203	2	239.63	Calc
X7-SB589-0304	2	293.30	Calc
X7-SS590-0001	2	163.35	Calc
X7-SS590-0102	2	10.02	Calc

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS591-0001	2	173.32	Calc
X7-SS591-0102	2	865.23	Calc
X7-SB591-0203	2	322.43	Calc
X7-SB591-0304	2	355.02	Calc
X7-SS592-0001	2	231.20	Calc
X7-SS592-0102	2	302.50	Calc
X7-SB592-0203	2	416.35	Calc
X7-SB592-0304	2	519.47	Calc
X7-SB592-0405	2	1400.80	Calc
X7-SB592-0506	2	240.00	FBL
X7-SB592-0607	2	23.05	Calc
X7-SB592-0708	2	10.00	Calc
X7-SS593-0001	2	531.35	Calc
X7-SS593-0102	2	393.73	Calc
X7-SB593-0203	2	10.00	Calc
X7-SB593-0304	2	19.60	FBL
X7-SS594-0001	2	272.60	Calc
X7-SS594-0102	2	477.30	Calc
X7-SB594-0203	2	699.25	Calc
X7-SB594-0304	2	78.25	Calc
X7-SS595-0001	2	157.00	FBL
X7-SS595-0102	2	10.00	Calc
X7-SS596-0001	2	10.00	Calc
X7-SS596-0102	2	10.00	Calc
X7-SS597-0001	2	89.37	Calc
X7-SS597-0102	2	10.00	Calc
X7-SS598-0001	2	21.13	Calc
X7-SS598-0102	2	10.00	Calc
X7-SS599-0001	2	10.00	Calc
X7-SS599-0102	2	10.00	Calc
X7-SS600-0001	2	6.57	Calc
X7-SS600-0102	2	10.00	Calc
X7-SS601-0001	2	1638.40	Calc
X7-SS601-0102	2	2139.40	Calc
X7-SB601-0203	2	571.60	Calc
X7-SB601-0304	2	7.33	Calc

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS602-0001	2	113.52	Calc
X7-SS602-0102	2	281.80	Calc
X7-SB602-0203	2	128.85	Calc
X7-SB602-0304	2	49.50	Calc
X7-SS603-0001	2	70.58	Calc
X7-SS603-0102	2	272.60	Calc
X7-SB603-0203	2	305.57	Calc
X7-SB603-0304	2	512.18	Calc
X7-SB603-0405	2	10.00	Calc
X7-SB603-0506	2	10.00	Calc
X7-SS604-0001	2	52.18	Calc
X7-SS604-0102	2	369.58	Calc
X7-SB604-0203	2	368.05	Calc
X7-SB604-0304	2	10.00	Calc
X7-SS605-0001	2	2420.40	Calc
X7-SS605-0102	2	5270.10	Calc
X7-SB605-0203	2	7741.50	Calc
X7-SB605-0304	2	34.55	Calc
X7-SS606-0001	2	10.00	Calc
X7-SS606-0102	2	10.00	Calc
X7-SS610-0001	2	1654.10	Calc
X7-SS610-0102	2	108.92	Calc
X7-SB610-0203	2	4.65	Calc
X7-SS611-0001	2	1813.20	Calc
X7-SS611-0102	2	2332.30	Calc
X7-SB611-0203	2	207.00	FBL
X7-SB611-0304	2	14.23	Calc
X7-SB611-0405	2	33.40	Calc
X7-SS612-0001	2	317.45	Calc
X7-SS612-0102	2	314.38	Calc
X7-SB612-0203	2	520.62	Calc
X7-SB612-0304	2	10.00	Calc
X7-SS613-0001	2	199.77	Calc
X7-SS613-0102	2	272.98	Calc
X7-SB613-0203	2	10.00	Calc
X7-SB613-0304	2	10.00	Calc

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LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS614-0001	2	108.15	Calc
X7-SS614-0102	2	21.52	Calc
X7-SS615-0001	2	335.85	Calc
X7-SS615-0102	2	119.27	Calc
X7-SB615-0203	2	23.43	Calc
X7-SB615-0304	2	123.00	FBL
X7-SS616-0001	2	218.17	Calc
X7-SS616-0102	2	297.90	Calc
X7-SB616-0203	2	10.00	Calc
X7-SB616-0304	2	10.00	Calc
X7-SS617-0001	2	107.00	Calc
X7-SS617-0102	2	10.00	Calc
X7-SS618-0001	2	10.00	Calc
X7-SS618-0102	2	10.00	Calc
X7-SS618-0203	2	10.00	Calc
X7-SS619-0001	2	895.13	Calc
X7-SS619-0102	2	2532.70	Calc
X7-SB619-0203	2	2972.40	Calc
X7-SB619-0304	2	1075.30	Calc
X7-SB619-0405	2	10.00	Calc
X7-SB619-0506	2	4.65	Calc
X7-SS620-0001	2	2384.00	Calc
X7-SS620-0102	2	986.37	Calc
X7-SB620-0203	2	161.00	FBL
X7-SB620-0304	2	10.00	Calc
X7-SS621-0001	2	323.97	Calc
X7-SS621-0102	2	154.00	FBL
X7-SB621-0203	2	507.97	Calc
X7-SB621-0304	2	10.00	Calc
X7-SS622-0001	2	98.95	Calc
X7-SS622-0102	2	392.97	Calc
X7-SB622-0203	2	372.27	Calc
X7-SB622-0304	2	13.85	Calc
X7-SS623-0001	2	40.30	Calc
X7-SS623-0102	2	10.00	Calc
X7-SS624-0001	2	334.00	FBL

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LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS624-0102	2	1145.10	Calc
X7-SB624-0203	2	4628.00	Calc
X7-SB624-0304	2	2821.00	Calc
X7-SB624-0405	2	2144.40	Calc
X7-SB624-0506	2	10.00	Calc
X7-SB624-0607	2	10.00	Calc
X7-SB624-0708	2	10.00	Calc
X7-SS625-0001	2	455.45	Calc
X7-SS625-0102	2	1126.30	Calc
X7-SB625-0203	2	483.43	Calc
X7-SB625-0304	2	677.02	Calc
X7-SB625-0405	2	13.08	Calc
X7-SB625-0506	2	10.00	Calc
X7-SB625-0607	2	10.00	Calc
X7-SS626-0001	2	148.00	FBL
X7-SS626-0102	2	10.00	Calc
X7-SB626-0203	2	10.00	Calc
X7-SB626-0304	2	10.00	Calc
X7-SS627-0001	2	105.85	Calc
X7-SS627-0102	2	142.00	FBL
X7-SB627-0203	2	10.00	Calc
X7-SB627-0304	2	10.00	Calc
X7-SS628-0001	2	35.32	Calc
X7-SS628-0102	2	44.13	Calc
X7-SS629-0001	2	440.88	Calc
X7-SS629-0102	2	818.85	Calc
X7-SB629-0203	2	1113.60	Calc
X7-SB629-0304	2	1636.50	Calc
X7-SB629-0405	2	10.00	Calc
X7-SB629-0506	2	10.00	Calc
X7-SS630-0001	2	3499.10	Calc
X7-SS630-0102	2	33.40	Calc
X7-SB630-0203	2	10.00	Calc
X7-SB630-0304	2	10.00	Calc
X7-SS631-0001	2	10.00	Calc
X7-SS631-0102	2	10.00	Calc

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SB631-0203	2	10.00	Calc
X7-SS632-0001	2	1758.00	Calc
X7-SS632-0102	2	3246.10	Calc
X7-SB632-0203	2	2917.60	Calc
X7-SB632-0304	2	4735.80	Calc
X7-SB632-0405	2	376.48	Calc
X7-SB632-0506	2	10.00	Calc
X7-SS633-0001	2	6003.40	Calc
X7-SS633-0102	2	67.52	Calc
X7-SB633-0203	2	30.33	Calc
X7-SB633-0304	2	10.78	Calc
X7-SS634-0001	2	1531.90	Calc
X7-SS634-0102	2	2338.40	Calc
X7-SB634-0203	2	3986.70	Calc
X7-SB634-0304	2	10.00	Calc
X7-SS635-0001	2	2572.60	Calc
X7-SS635-0102	2	4946.20	Calc
X7-SB635-0203	2	5808.70	Calc
X7-SB635-0304	2	69.05	Calc
X7-SB635-0405	2	4005.10	Calc
X7-SB635-0506	2	10.00	Calc
X7-SS636-0001	2	942.28	Calc
X7-SS636-0102	2	3714.90	Calc
X7-SB636-0203	2	2442.70	Calc
X7-SB636-0304	2	159.52	Calc
X7-SS637-0001	2	2063.50	Calc
X7-SS637-0102	2	594.60	Calc
X7-SB637-0203	2	1804.40	Calc
X7-SB637-0304	2	189.80	Calc
X7-SB637-0405	2	10.00	Calc
X7-SB637-0506	2	10.00	Calc
X7-SS638-0001	2	310.55	Calc
X7-SS638-0102	2	250.37	Calc
X7-SB638-0203	2	463.50	Calc
X7-SB638-0304	2	571.60	Calc
X7-SB638-0405	2	328.00	FBL

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SB638-0506	2	13.47	Calc
X7-SS639-0001	2	979.47	Calc
X7-SS639-0102	2	1879.90	Calc
X7-SB639-0203	2	1672.50	Calc
X7-SB639-0304	2	55.25	Calc
X7-SS640-0001	2	312.85	Calc
X7-SS640-0102	2	1517.70	Calc
X7-SB640-0203	2	433.98	Calc
X7-SB640-0304	2	10.00	Calc
X7-SS641-0001	2	76.33	Calc
X7-SS641-0102	2	395.65	Calc
X7-SB641-0203	2	275.28	Calc
X7-SB641-0304	2	10.00	Calc
X7-SS642-0001	2	230.82	Calc
X7-SS642-0102	2	125.78	Calc
X7-SB642-0203	2	331.25	Calc
X7-SB642-0304	2	10.00	Calc
X7-SS643-0001	2	166.00	FBL
X7-SS643-0102	2	112.75	Calc
X7-SB643-0203	2	62.92	Calc
X7-SB643-0304	2	10.00	Calc
X7-SS644-0001	2	259.95	Calc
X7-SS644-0102	2	264.55	Calc
X7-SB644-0203	2	950.33	Calc
X7-SB644-0304	2	10.00	Calc
X7-SS645-0001	2	103.55	Calc
X7-SS645-0102	2	318.98	Calc
X7-SB645-0203	2	15.38	Calc
X7-SB645-0304	2	10.00	Calc
X7-SS646-0001	2	90.13	Calc
X7-SS646-0102	2	178.00	FBL
X7-SB646-0203	2	5.80	Calc
X7-SB646-0304	2	10.00	Calc
X7-SS647-0001	2	122.33	Calc
X7-SS647-0102	2	594.60	Calc
X7-SB647-0203	2	10.00	Calc

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SB647-0304	2	10.00	Calc
X7-SS648-0001	2	155.30	Calc
X7-SS648-0102	2	425.55	Calc
X7-SB648-0203	2	1.58	Calc
X7-SB648-0304	2	10.00	Calc
X7-SS649-0001	2	146.10	Calc
X7-SS649-0102	2	318.60	Calc
X7-SB649-0203	2	1.20	Calc
X7-SB649-0304	2	10.00	Calc
X7-SS650-0001	2	112.37	Calc
X7-SS650-0102	2	10.78	Calc
X7-SB650-0203	2	10.00	Calc
X7-SS651-0001	2	102.78	Calc
X7-SS651-0102	2	116.00	FBL
X7-SB651-0203	2	33.40	Calc
X7-SB651-0304	2	10.00	Calc
X7-SS652-0001	2	189.00	FBL
X7-SS652-0102	2	10.00	Calc
X7-SB652-0203	2	10.00	Calc
X7-SS653-0001	2	120.03	Calc
X7-SS653-0102	2	44.90	Calc
X7-SB653-0203	2	97.42	Calc
X7-SB653-0304	2	10.00	Calc
X7-SS654-0001	2	44.13	Calc
X7-SS654-0102	2	93.58	Calc
X7-SB654-0203	2	12.32	Calc
X7-SB654-0304	2	10.00	Calc
X7-SS655-0001	2	185.97	Calc
X7-SS655-0102	2	679.70	Calc
X7-SB655-0203	2	95.88	Calc
X7-SB655-0304	2	10.00	Calc
X7-SS656-0001	2	128.00	FBL
X7-SS656-0102	2	137.00	FBL
X7-SB656-0203	2	10.00	Calc
X7-SB656-0304	2	10.00	Calc
X7-SS657-0001	2	445.87	Calc

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS657-0102	2	166.80	Calc
X7-SB657-0203	2	281.42	Calc
X7-SB657-0304	2	367.28	Calc
X7-SB657-0405	2	51.42	Calc
X7-SB657-0506	2	10.00	Calc
X7-SS658-0001	2	669.73	Calc
X7-SS658-0102	2	1409.60	Calc
X7-SB658-0203	2	32.63	Calc
X7-SB658-0304	2	36.08	Calc
X7-SS659-0001	2	227.00	FBL
X7-SS659-0102	2	80.17	Calc
X7-SB659-0203	2	10.00	Calc
X7-SS660-0001	2	272.22	Calc
X7-SS660-0102	2	1920.60	Calc
X7-SB660-0203	2	10.00	Calc
X7-SB660-0304	2	10.00	Calc
X7-SS661-0001	2	164.00	FBL
X7-SS661-0102	2	10.00	Calc
X7-SB661-0203	2	10.00	Calc
X7-SS662-0001	2	779.00	FBL
X7-SS662-0102	2	10.00	Calc
X7-SB662-0203	2	10.00	Calc
X7-SS663-0001	2	228.90	Calc
X7-SS663-0102	2	10.00	Calc
X7-SB663-0203	2	10.00	Calc
X7-SS664-0001	2	10.00	Calc
X7-SS664-0102	2	10.00	Calc
X7-SS665-0001	2	10.00	Calc
X7-SS665-0102	2	10.00	Calc
X7-SS666-0001	2	10.00	Calc
X7-SS666-0102	2	10.00	Calc
X7-SS667-0001	2	38.00	Calc
X7-SS667-0102	2	950.33	Calc
X7-SB667-0203	2	10.00	Calc
X7-SB667-0304	2	10.00	Calc
X7-SS668-0001	2	225.00	FBL

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS668-0102	2	182.00	FBL
X7-SB668-0203	2	10.00	Calc
X7-SB668-0304	2	10.00	Calc
X7-SS669-0001	2	348.12	Calc
X7-SS669-0102	2	1.97	Calc
X7-SB669-0203	2	10.00	Calc
X7-SB669-0304	2	10.00	Calc
X7-SS670-0001	2	2814.50	Calc
X7-SS670-0102	2	3418.60	Calc
X7-SB670-0203	2	10.00	Calc
X7-SB670-0304	2	10.00	Calc
X7-SS671-0001	2	2961.70	Calc
X7-SS671-0102	2	3.50	Calc
X7-SB671-0203	2	10.00	Calc
X7-SS672-0001	2	461.58	Calc
X7-SS672-0102	2	10.00	Calc
X7-SB672-0203	2	10.00	Calc
X7-SS673-0001	2	1959.30	Calc
X7-SS673-0102	2	10.00	Calc
X7-SB673-0203	2	10.00	Calc
X7-SS674-0001	2	846.45	Calc
X7-SS674-0102	2	15.77	Calc
X7-SB674-0203	2	10.00	Calc
X7-SS675-0001	2	865.62	Calc
X7-SS675-0102	2	532.50	Calc
X7-SB675-0203	2	5.42	Calc
X7-SB675-0304	2	10.00	Calc
X7-SS676-0001	2	977.55	Calc
X7-SS676-0102	2	411.37	Calc
X7-SB676-0203	2	10.00	Calc
X7-SB676-0304	2	10.00	Calc
X7-SS677-0001	2	391.05	Calc
X7-SS677-0102	2	744.10	Calc
X7-SB677-0203	2	1104.40	Calc
X7-SB677-0304	2	9.25	Calc
X7-SS678-0001	2	107.38	Calc

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS678-0102	2	488.80	Calc
X7-SB678-0203	2	10.00	Calc
X7-SB678-0304	2	10.00	Calc
X7-SS679-0001	2	236.18	Calc
X7-SS679-0102	2	568.53	Calc
X7-SB679-0203	2	18.83	Calc
X7-SB679-0304	2	10.00	Calc
X7-SS680-0001	2	159.00	FBL
X7-SS680-0102	2	249.00	FBL
X7-SB680-0203	2	10.00	Calc
X7-SB680-0304	2	10.00	Calc
X7-SS681-0001	2	152.00	FBL
X7-SS681-0102	2	29.57	Calc
X7-SB681-0203	2	10.00	Calc
X7-SS682-0001	2	161.00	FBL
X7-SS682-0102	2	10.00	Calc
X7-SB682-0203	2	10.00	Calc
X7-SS683-0001	2	70.58	Calc
X7-SS683-0102	2	10.00	Calc
X7-SS684-0001	2	10.00	Calc
X7-SS684-0102	2	10.00	Calc
X7-SS685-0001	2	10.00	Calc
X7-SS685-0102	2	10.00	Calc
X7-SS686-0001	2	448.93	Calc
X7-SS686-0102	2	80.17	Calc
X7-SB686-0203	2	7.33	Calc
X7-SS687-0001	2	262.00	FBL
X7-SS687-0102	2	92.05	Calc
X7-SB687-0203	2	10.00	Calc
X7-SS688-0001	2	10.00	Calc
X7-SS688-0102	2	3.50	Calc
X7-SS689-0001	2	10.00	Calc
X7-SS689-0102	2	10.00	Calc
X7-SB689-0203	2	10.00	Calc
X7-SS690-0001	2	10.00	Calc
X7-SS690-0102	2	29.57	Calc

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS691-0001	2	10.00	Calc
X7-SS691-0102	2	320.52	Calc
X7-SB691-0203	2	117.00	FBL
X7-SB691-0304	2	10.00	Calc
X7-SS692-0001	2	1914.80	Calc
X7-SS692-0102	2	451.23	Calc
X7-SB692-0203	2	10.00	Calc
X7-SB692-0304	2	10.00	Calc
X7-SS693-0001	2	29.18	Calc
X7-SS693-0102	2	10.00	Calc
X7-SS694-0001	2	142.00	FBL
X7-SS694-0102	2	15.38	Calc
X7-SB694-0203	2	10.00	Calc
X7-SS695-0001	2	70.20	Calc
X7-SS695-0102	2	11.17	Calc
X7-SS696-0001	2	74.03	Calc
X7-SS696-0102	2	853.35	Calc
X7-SB696-0203	2	148.00	FBL
X7-SB696-0304	2	10.00	Calc
X7-SS697-0001	2	80.93	Calc
X7-SS697-0102	2	10.00	Calc
X7-SS698-0001	2	10.00	Calc
X7-SS698-0102	2	10.00	Calc
X7-SS699-0001	2	23.82	Calc
X7-SS699-0102	2	5.80	Calc
X7-SS700-0001	2	10.00	Calc
X7-SS700-0102	2	10.00	Calc
X7-SS701-0001	2	3444.70	Calc
X7-SS701-0102	2	346.58	Calc
X7-SB701-0203	2	10.00	Calc
X7-SB701-0304	2	17.68	Calc
X7-SS702-0001	2	24.20	Calc
X7-SS702-0102	2	16.53	Calc
X7-SS703-0001	2	51.03	Calc
X7-SS703-0102	2	10.00	Calc
AVG LEAD CONCENTRATION		**400.95**	

TABLE 6-11

LEAD SUMMARY - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source

Indicates lead concentration greater than 400 mg/kg

bkg = background
Calc = lead calculated value
FBL = Fixed-base laboratory
XRF = X-Ray fluorescence

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
Central Area of Northern Zone - 400-yard Firing Berm						
X7-SS043-0002	RFI-2007	56	Calc	No	---	56
X7-SS044-0002	RFI-2007	199	FBL	Yes	1	27
X7-SS044-0102	2	263	Calc	Yes	1	27
X7-SB044-0203	2	10	Calc	Yes	1	27
X7-SS045-0002	RFI-2007	286	FBL	Yes	1	27
X7-SB045-0203	2	262	Calc	Yes	1	27
X7-SB045-0304	2	397	Calc	Yes	1	27
X7-SB045-0405	2	76	Calc	Yes	1	27
X7-SB045-0506	2	56	Calc	No	1	56
X7-SS046-0002	RFI-2007	1100	FBL	Yes	1	27
X7-SB046-0203	2	768	Calc	Yes	1	27
X7-SB046-0304	2	441	Calc	Yes	1	27
X7-SB046-0405	2	568	Calc	Yes	1	27
X7-SB046-0506	2	43	Calc	No	1	43
X7-SS047-0002	RFI-2007	63	Calc	Yes	1	27
X7-SS048-0002	RFI-2007	190	FBL	Yes	1	27
X7-SS177-0002	RFI-2007	115	FBL	Yes	1	27
X7-SS178-0002	RFI-2007	41	FBL	No	---	41
X7-SS179-0002	RFI-2007	84	FBL	No	---	84
X7-SS180-0002	RFI-2007	89	FBL	Yes	1	27
X7-SS181-0002	RFI-2007	212	FBL	Yes	1	27
X7-SB181-0203	2	59	Calc	Yes	1	27
X7-SB181-0304	2	5	Calc	Yes	1	27
X7-SS182-0002	RFI-2007	95	FBL	Yes	1	27
X7-SS291-0001	1	1186	Calc	Yes	1	27
X7-SS291-0102	1	365	Calc	Yes	1	27
X7-SB291-0203	1	203	FBL	Yes	1	27
X7-SB291-0304	2	367	Calc	Yes	1	27
X7-SB291-0405	2	18	Calc	Yes	1	27
X7-SS292-0001	1	226	Calc	Yes	1	27
X7-SS292-0102	1	91	Calc	Yes	1	27
X7-SS293-0001	1	72	Calc	Yes	1	27
X7-SS294-0001	1	148	Calc	Yes	1	27
X7-SS294-0102	1	62	Calc	Yes	1	27
X7-SS295-0001	1	339	Calc	Yes	1	27
X7-SS295-0102	1	386	Calc	Yes	1	27
X7-SB295-0203	1	477	Calc	Yes	1	27
X7-SB295-0304	2	246	FBL	Yes	1	27

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SB295-0405	2	10	Calc	Yes	1	27
X7-SS296-0001	1	818	Calc	Yes	1	27
X7-SS296-0102	1	304	Calc	Yes	1	27
X7-SB296-0203	1	280	Calc	Yes	1	27
X7-SB296-0304	2	551	Calc	Yes	1	27
X7-SB296-0405	2	17	Calc	Yes	1	27
X7-SB296-0506	2	10	Calc	No	1	10
X7-SB296-0607	2	10	Calc	No	1	10
X7-SS297-0001	1	646	Calc	Yes	1	27
X7-SS297-0102	1	366	Calc	Yes	1	27
X7-SB297-0203	1	232	Calc	Yes	1	27
X7-SB297-0304	2	16	Calc	Yes	1	27
X7-SB297-0405	2	10	Calc	Yes	1	27
X7-SS298-0001	1	356	Calc	Yes	1	27
X7-SS298-0102	1	414	Calc	Yes	1	27
X7-SB298-0203	2	181	Calc	Yes	1	27
X7-SB298-0304	2	807	Calc	Yes	1	27
X7-SB298-0405	2	142	FBL	Yes	1	27
X7-SB298-0506	2	24	Calc	No	1	24
X7-SS299-0001	1	338	Calc	Yes	1	27
X7-SS299-0102	1	478	Calc	Yes	1	27
X7-SB299-0203	1	122	Calc	Yes	1	27
X7-SS300-0001	1	230	Calc	Yes	1	27
X7-SS300-0102	1	228	Calc	Yes	1	27
X7-SB300-0203	2	86	Calc	Yes	1	27
X7-SB300-0304	2	190	Calc	Yes	1	27
X7-SB300-0405	2	631	Calc	Yes	1	27
X7-SB300-0506	2	10	Calc	No	1	10
X7-SS301-0001	1	164	Calc	Yes	1	27
X7-SS301-0102	1	357	Calc	Yes	1	27
X7-SB301-0203	1	517	Calc	Yes	1	27
X7-SB301-0304	2	299	Calc	Yes	1	27
X7-SB301-0405	2	0	Calc	Yes	1	27
X7-SS302-0001	1	159	Calc	Yes	1	27
X7-SS302-0102	1	76	Calc	Yes	1	27
X7-SS303-0001	1	261	Calc	Yes	1	27
X7-SS303-0102	1	532	Calc	Yes	1	27
X7-SB303-0203	2	20	Calc	Yes	1	27
X7-SB303-0304	2	10	Calc	Yes	1	27

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SS304-0001	1	88	Calc	Yes	1	27
X7-SS305-0001	1	311	Calc	Yes	1	27
X7-SS305-0102	1	68	Calc	Yes	1	27
X7-SS306-0001	1	484	Calc	Yes	1	27
X7-SS306-0102	1	160	Calc	Yes	1	27
X7-SB306-0203	1	83	Calc	Yes	1	27
X7-SS307-0001	1	568	Calc	Yes	1	27
X7-SS307-0102	1	48	Calc	Yes	1	27
X7-SS308-0001	1	469	Calc	Yes	1	27
X7-SS308-0102	1	235	Calc	Yes	1	27
X7-SB308-0203	1	24	Calc	Yes	1	27
X7-SS345-0001	1	518	Calc	Yes	1	27
X7-SS345-0102	1	78	FBL	Yes	1	27
X7-SS347-0001	1	541	Calc	Yes	1	27
X7-SS347-0102	1	92	FBL	Yes	1	27
X7-SS349-0001	1	166	Calc	Yes	1	27
X7-SS349-0102	1	601	Calc	Yes	1	27
X7-SB349-0203	2	40	Calc	Yes	1	27
X7-SB349-0304	2	9	Calc	Yes	1	27
X7-SS351-0001	1	191	FBL	Yes	1	27
X7-SS351-0102	1	290	FBL	Yes	1	27
X7-SB351-0203	2	542	Calc	Yes	1	27
X7-SB351-0304	2	114	FBL	Yes	1	27
X7-SB351-0405	2	10	Calc	Yes	1	27
X7-SB351-0506	2	128	FBL	No	1	128
X7-SB351-0607	2	10	Calc	No	1	10
X7-SB351-0708	2	10	Calc	No	1	10
X7-SS353-0001	1	157	FBL	Yes	1	27
X7-SS355-0001	1	136	FBL	Yes	1	27
X7-SS355-0102	1	110	Calc	Yes	1	27
X7-SS357-0001	1	408	Calc	Yes	1	27
X7-SS357-0102	1	69	Calc	Yes	1	27
X7-SS358-0001	1	370	Calc	Yes	1	27
X7-SS358-0102	1	455	Calc	Yes	1	27
X7-SB358-0203	2	343	Calc	Yes	1	27
X7-SB358-0304	2	159	Calc	Yes	1	27
X7-SB358-0405	2	284	Calc	Yes	1	27
X7-SB358-0506	2	283	FBL	No	1	283
X7-SB358-0607	2	10	Calc	No	1	10

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SB358-0708	2	10	Calc	No	1	10
X7-SS360-0001	1	232	Calc	Yes	1	27
X7-SS360-0102	1	302	Calc	Yes	1	27
X7-SB360-0203	2	2045	Calc	Yes	1	27
X7-SB360-0304	2	88	Calc	Yes	1	27
X7-SS361-0001	1	299	Calc	Yes	1	27
X7-SS361-0102	1	291	Calc	Yes	1	27
X7-SB361-0203	2	10	Calc	Yes	1	27
X7-SB361-0304	2	105	Calc	Yes	1	27
X7-SS363-0001	1	180	FBL	No	---	180
X7-SS363-0102	1	10	Calc	No	---	10
X7-SS365-0001	1	412	Calc	Yes	1	27
X7-SS365-0102	1	403	Calc	Yes	1	27
X7-SB365-0203	2	10	Calc	Yes	1	27
X7-SB365-0304	2	10	Calc	Yes	1	27
X7-SS368-0001	1	187	Calc	Yes	1	27
X7-SS368-0102	1	660	Calc	Yes	1	27
X7-SB368-0203	2	88	FBL	Yes	1	27
X7-SB368-0304	2	10	Calc	Yes	1	27
X7-SS369-0001	1	869	Calc	Yes	1	27
X7-SS369-0102	1	245	FBL	Yes	1	27
X7-SB369-0203	2	556	Calc	Yes	1	27
X7-SB369-0304	2	675	Calc	Yes	1	27
X7-SB369-0405	2	20	Calc	Yes	1	27
X7-SB369-0506	2	15	Calc	No	1	15
X7-SS391-0001	1	152	Calc	Yes	1	27
X7-SS391-0102	1	566	Calc	Yes	1	27
X7-SB391-0203	1	52	Calc	Yes	1	27
X7-SS392-0001	1	107	FBL	Yes	1	27
X7-SS393-0001	1	147	Calc	Yes	1	27
X7-SS393-0102	1	226	FBL	Yes	1	27
X7-SB393-0203	1	186	Calc	Yes	1	27
X7-SS394-0001	1	142	Calc	Yes	1	27
X7-SS394-0102	1	285	Calc	Yes	1	27
X7-SB394-0203	1	36	Calc	Yes	1	27
X7-SS395-0001	1	246	Calc	Yes	1	27
X7-SS395-0102	1	535	Calc	Yes	1	27
X7-SB395-0203	1	321	Calc	Yes	1	27
X7-SB395-0304	2	538	Calc	Yes	1	27

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SB395-0405	2	160	FBL	Yes	1	27
X7-SB395-0506	2	10	Calc	No	1	10
X7-SB395-0607	2	10	Calc	No	1	10
X7-SS396-0001	1	145	Calc	Yes	1	27
X7-SS396-0102	1	384	Calc	Yes	1	27
X7-SB396-0203	1	303	Calc	Yes	1	27
X7-SS398-0001	1	293	Calc	Yes	1	27
X7-SS398-0102	1	458	Calc	Yes	1	27
X7-SB398-0203	2	556	Calc	Yes	1	27
X7-SB398-0304	2	294	Calc	Yes	1	27
X7-SB398-0405	2	69	Calc	Yes	1	27
X7-SB398-0506	2	4	Calc	No	1	4
X7-SS400-0001	1	104	Calc	Yes	1	27
X7-SS401-0001	1	97	FBL	Yes	1	27
X7-SS401-0102	1	337	Calc	Yes	1	27
X7-SB401-0203	2	10	Calc	Yes	1	27
X7-SB401-0304	2	10	Calc	Yes	1	27
X7-SS402-0001	1	90	FBL	Yes	1	27
X7-SS404-0001	1	292	Calc	Yes	1	27
X7-SS404-0102	1	83	Calc	Yes	1	27
X7-SS406-0001	1	80	Calc	Yes	1	27
X7-SS407-0001	1	74	FBL	Yes	---	27
X7-SS408-0001	1	246	FBL	Yes	1	27
X7-SS408-0102	1	32	Calc	Yes	1	27
X7-SB409-0304	1	1087	Calc	Yes	1	27
X7-SB409-0405	2	406	Calc	Yes	1	27
X7-SB409-0506	2	10	Calc	No	1	10
X7-SS410-0001	1	12	FBL	No	---	12
X7-SB411-0304	1	52	Calc	Yes	1	27
X7-SS412-0001	1	189	FBL	No	---	189
X7-SS412-0102	1	32	Calc	No	---	32
X7-SB413-0304	1	869	Calc	Yes	1	27
X7-SS414-0001	1	199	FBL	No	---	199
X7-SS414-0102	1	104	Calc	No	---	104
X7-SS415-0001	1	105	FBL	No	---	105
X7-SS415-0102	1	36	Calc	No	---	36
X7-SS416-0001	1	78	FBL	No	---	78
X7-SB417-0304	1	194	Calc	Yes	1	27
X7-SB417-0405	1	159	Calc	Yes	1	27

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SB417-0506	2	108	Calc	No	1	108
X7-SB417-0607	2	10	Calc	No	1	10
X7-SS418-0001	1	48	Calc	Yes	1	27
X7-SS420-0001	1	119	Calc	Yes	1	27
X7-SS420-0102	1	445	Calc	Yes	1	27
X7-SS420-0203	1	77	Calc	Yes	1	27
X7-SS421-0001	1	681	Calc	Yes	1	27
X7-SS421-0102	1	20	Calc	Yes	1	27
X7-SS422-0001	1	399	Calc	Yes	1	27
X7-SS422-0102	1	343	FBL	Yes	1	27
X7-SS422-0203	1	49	Calc	Yes	1	27
X7-SS551-0001	2	433	Calc	Yes	1	27
X7-SS551-0102	2	172	Calc	Yes	1	27
X7-SB551-0203	2	169	Calc	Yes	1	27
X7-SB551-0304	2	249	Calc	Yes	1	27
X7-SB551-0405	2	452	Calc	Yes	1	27
X7-SB551-0506	2	10	Calc	No	1	10
X7-SS552-0001	2	22	Calc	Yes	1	27
X7-SS552-0102	2	253	Calc	Yes	1	27
X7-SB552-0203	2	124	Calc	Yes	1	27
X7-SB552-0304	2	263	Calc	Yes	1	27
X7-SB552-0405	2	1075	Calc	Yes	1	27
X7-SB552-0506	2	10	Calc	No	1	10
X7-SS553-0001	2	399	Calc	Yes	1	27
X7-SS553-0102	2	129	Calc	Yes	1	27
X7-SB553-0203	2	107	Calc	Yes	1	27
X7-SB553-0304	2	27	Calc	Yes	1	27
X7-SS554-0001	2	137	Calc	Yes	1	27
X7-SS554-0102	2	117	Calc	Yes	1	27
X7-SB554-0203	2	1338	Calc	Yes	1	27
X7-SB554-0304	2	130	Calc	Yes	1	27
X7-SB554-0405	2	32	Calc	Yes	1	27
X7-SB554-0506	2	10	Calc	No	1	10
X7-SS555-0001	2	88	Calc	Yes	1	27
X7-SS555-0102	2	536	Calc	Yes	1	27
X7-SB555-0203	2	109	Calc	Yes	1	27
X7-SB555-0304	2	10	Calc	Yes	1	27
X7-SS556-0001	2	373	Calc	Yes	1	27
X7-SS556-0102	2	2242	Calc	Yes	1	27

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SB556-0203	2	312	Calc	Yes	1	27
X7-SB556-0304	2	289	Calc	Yes	1	27
X7-SB556-0405	2	193	Calc	Yes	1	27
X7-SB556-0506	2	701	Calc	No	1	701
X7-SB556-0607	2	108	Calc	No	1	108
X7-SB556-0708	2	23	Calc	No	1	23
X7-SS557-0001	2	295	Calc	Yes	1	27
X7-SS557-0102	2	416	Calc	Yes	1	27
X7-SB557-0203	2	824	Calc	Yes	1	27
X7-SB557-0304	2	1935	Calc	Yes	1	27
X7-SB557-0405	2	10	Calc	Yes	1	27
X7-SB557-0506	2	2	Calc	No	1	2
X7-SS558-0001	2	547	Calc	Yes	1	27
X7-SS558-0102	2	220	Calc	Yes	1	27
X7-SB558-0203	2	72	Calc	Yes	1	27
X7-SB558-0304	2	1869	Calc	Yes	1	27
X7-SB558-0405	2	10	Calc	Yes	1	27
X7-SB558-0506	2	217	FBL	No	1	217
X7-SB558-0607	2	15	Calc	No	1	15
X7-SB558-0708	2	10	Calc	No	1	10
X7-SS559-0001	2	466	Calc	Yes	1	27
X7-SS559-0102	2	1028	Calc	Yes	1	27
X7-SB559-0203	2	39	Calc	Yes	1	27
X7-SB559-0304	2	10	Calc	Yes	1	27
X7-SS560-0001	2	365	Calc	Yes	1	27
X7-SS560-0102	2	824	Calc	Yes	1	27
X7-SB560-0203	2	131	Calc	Yes	1	27
X7-SB560-0304	2	38	Calc	Yes	1	27
X7-SS561-0001	2	215	Calc	Yes	1	27
X7-SS561-0102	2	99	Calc	Yes	1	27
X7-SB561-0203	2	144	FBL	Yes	1	27
X7-SB561-0304	2	10	Calc	Yes	1	27
X7-SB561-0405	2	10	Calc	Yes	1	27
X7-SS562-0001	2	393	Calc	Yes	1	27
X7-SS562-0102	2	386	Calc	Yes	1	27
X7-SB562-0203	2	173	Calc	Yes	1	27
X7-SB562-0304	2	10	Calc	Yes	1	27
X7-SS563-0001	2	195	FBL	No	---	195
X7-SS563-0102	2	10	Calc	No	---	10

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SB563-0203	2	10	Calc	No	---	10
X7-SB563-0304	2	10	Calc	No	---	10
X7-SS564-0001	2	222	Calc	No	---	222
X7-SS564-0102	2	36	Calc	No	---	36
X7-SB564-0203	2	10	Calc	No	---	10
X7-SB564-0304	2	10	Calc	No	---	10
X7-SS565-0001	2	2058	Calc	Yes	4	27
X7-SS565-0102	2	5082	Calc	Yes	4	27
X7-SB565-0203	2	966	Calc	Yes	4	27
X7-SB565-0304	2	10	Calc	Yes	4	27
X7-SB565-0405	2	8	Calc	No	4	8
X7-SB565-0506	2	10	Calc	No	4	10
X7-SS566-0001	2	796	Calc	Yes	4	27
X7-SS566-0102	2	338	Calc	Yes	4	27
X7-SB566-0203	2	1727	Calc	Yes	4	27
X7-SB566-0304	2	52	Calc	Yes	4	27
X7-SB566-0405	2	3	Calc	No	4	3
X7-SS581-0001	2	378	Calc	Yes	1	27
X7-SS581-0102	2	10	Calc	Yes	1	27
X7-SS582-0001	2	1037	Calc	Yes	4	27
X7-SS582-0102	2	4003	Calc	Yes	4	27
X7-SB582-0203	2	2314	Calc	Yes	4	27
X7-SB582-0304	2	207	Calc	Yes	4	27
X7-SB582-0405	2	8	Calc	No	4	8
X7-SB582-0506	2	10	Calc	No	4	10
X7-SS583-0001	2	4092	Calc	Yes	4	27
X7-SS583-0102	2	2426	Calc	Yes	4	27
X7-SB583-0203	2	1848	Calc	Yes	4	27
X7-SB583-0304	2	10	Calc	Yes	4	27
X7-SB583-0405	2	10	Calc	No	4	10
X7-SB583-0506	2	10	Calc	No	4	10
X7-SS584-0001	2	242	FBL	No	---	242
X7-SS584-0102	2	10	Calc	No	---	10
X7-SB584-0203	2	10	Calc	No	---	10
X7-SB584-0304	2	10	Calc	No	---	10
X7-SS585-0001	2	175	Calc	No	---	175
X7-SS585-0102	2	10	Calc	No	---	10
X7-SS586-0001	2	386	Calc	No	---	386
X7-SS586-0102	2	204	FBL	No	---	204

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LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SS587-0001	2	138	FBL	No	---	138
X7-SS587-0102	2	100	Calc	No	---	100
X7-SS588-0001	2	130	Calc	No	---	130
X7-SS588-0102	2	100	Calc	No	---	100
X7-SB588-0203	2	62	XRF	No	---	62
X7-SS589-0001	2	409	Calc	Yes	1	27
X7-SS589-0102	2	4	Calc	Yes	1	27
X7-SB589-0203	2	240	Calc	Yes	1	27
X7-SB589-0304	2	293	Calc	Yes	1	27
X7-SS590-0001	2	163	Calc	Yes	1	27
X7-SS590-0102	2	10	Calc	Yes	1	27
X7-SS591-0001	2	173	Calc	Yes	1	27
X7-SS591-0102	2	865	Calc	Yes	1	27
X7-SB591-0203	2	322	Calc	Yes	1	27
X7-SB591-0304	2	355	Calc	Yes	1	27
X7-SS592-0001	2	231	Calc	Yes	1	27
X7-SS592-0102	2	303	Calc	Yes	1	27
X7-SB592-0203	2	416	Calc	Yes	1	27
X7-SB592-0304	2	519	Calc	Yes	1	27
X7-SB592-0405	2	1401	Calc	Yes	1	27
X7-SB592-0506	2	240	FBL	No	1	240
X7-SB592-0607	2	23	Calc	No	1	23
X7-SB592-0708	2	10	Calc	No	1	10
X7-SS593-0001	2	531	Calc	Yes	1	27
X7-SS593-0102	2	394	Calc	Yes	1	27
X7-SB593-0203	2	10	Calc	Yes	1	27
X7-SB593-0304	2	20	FBL	Yes	1	27
X7-SS594-0001	2	273	Calc	Yes	1	27
X7-SS594-0102	2	477	Calc	Yes	1	27
X7-SB594-0203	2	699	Calc	Yes	1	27
X7-SB594-0304	2	78	Calc	Yes	1	27
X7-SS595-0001	2	157	FBL	No	---	157
X7-SS595-0102	2	10	Calc	No	---	10
X7-SS596-0001	2	10	Calc	No	---	10
X7-SS596-0102	2	10	Calc	No	---	10
X7-SS597-0001	2	89	Calc	No	---	89
X7-SS597-0102	2	10	Calc	No	---	10
X7-SS598-0001	2	21	Calc	No	---	21
X7-SS598-0102	2	10	Calc	No	---	10

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SS599-0001	2	10	Calc	No	---	10
X7-SS599-0102	2	10	Calc	No	---	10
X7-SS600-0001	2	7	Calc	Yes	4	27
X7-SS600-0102	2	10	Calc	Yes	4	27
X7-SS601-0001	2	**1638**	Calc	Yes	4	27
X7-SS601-0102	2	**2139**	Calc	Yes	4	27
X7-SB601-0203	2	**572**	Calc	Yes	4	27
X7-SB601-0304	2	7	Calc	Yes	4	27
X7-SS602-0001	2	114	Calc	No	---	114
X7-SS602-0102	2	**282**	Calc	No	---	282
X7-SB602-0203	2	129	Calc	No	---	129
X7-SB602-0304	2	50	Calc	No	---	50
X7-SS603-0001	2	71	Calc	Yes	1	27
X7-SS603-0102	2	**273**	Calc	Yes	1	27
X7-SB603-0203	2	**306**	Calc	Yes	1	27
X7-SB603-0304	2	**512**	Calc	Yes	1	27
X7-SB603-0405	2	10	Calc	Yes	1	27
X7-SB603-0506	2	10	Calc	No	1	10
X7-SS604-0001	2	52	Calc	Yes	1	27
X7-SS604-0102	2	**370**	Calc	Yes	1	27
X7-SB604-0203	2	**368**	Calc	Yes	1	27
X7-SB604-0304	2	10	Calc	Yes	1	27
X7-SS605-0001	2	**2420**	Calc	Yes	4	27
X7-SS605-0102	2	**5270**	Calc	Yes	4	27
X7-SB605-0203	2	**7742**	Calc	Yes	4	27
X7-SB605-0304	2	35	Calc	Yes	4	27
X7-SS606-0001	2	10	Calc	No	---	10
X7-SS606-0102	2	10	Calc	No	---	10
X7-SS610-0001	2	**1654**	Calc	Yes	4	27
X7-SS610-0102	2	109	Calc	Yes	4	27
X7-SB610-0203	2	5	Calc	Yes	4	27
X7-SS611-0001	2	**1813**	Calc	Yes	4	27
X7-SS611-0102	2	**2332**	Calc	Yes	4	27
X7-SB611-0203	2	**207**	FBL	Yes	4	27
X7-SB611-0304	2	14	Calc	Yes	4	27
X7-SB611-0405	2	33	Calc	No	4	33
X7-SS612-0001	2	**317**	Calc	No	---	**317**
X7-SS612-0102	2	**314**	Calc	No	---	**314**
X7-SB612-0203	2	**521**	Calc	No	---	**521**

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LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SB612-0304	2	10	Calc	No	---	10
X7-SS613-0001	2	200	Calc	No	---	200
X7-SS613-0102	2	273	Calc	No	---	273
X7-SB613-0203	2	10	Calc	No	---	10
X7-SB613-0304	2	10	Calc	No	---	10
X7-SS614-0001	2	108	Calc	No	---	108
X7-SS614-0102	2	22	Calc	No	---	22
X7-SS615-0001	2	336	Calc	Yes	1	27
X7-SS615-0102	2	119	Calc	Yes	1	27
X7-SB615-0203	2	23	Calc	Yes	1	27
X7-SB615-0304	2	123	FBL	Yes	1	27
X7-SS616-0001	2	218	Calc	No	---	218
X7-SS616-0102	2	298	Calc	No	---	298
X7-SB616-0203	2	10	Calc	No	---	10
X7-SB616-0304	2	10	Calc	No	---	10
X7-SS617-0001	2	107	Calc	No	---	107
X7-SS617-0102	2	10	Calc	No	---	10
X7-SS618-0001	2	10	Calc	No	---	10
X7-SS618-0102	2	10	Calc	No	---	10
X7-SS618-0203	2	10	Calc	No	---	10
X7-SS619-0001	2	895	Calc	Yes	5	27
X7-SS619-0102	2	2533	Calc	Yes	5	27
X7-SB619-0203	2	2972	Calc	Yes	5	27
X7-SB619-0304	2	1075	Calc	Yes	5	27
X7-SB619-0405	2	10	Calc	Yes	5	27
X7-SB619-0506	2	5	Calc	No	5	5
X7-SS620-0001	2	2384	Calc	Yes	4	27
X7-SS620-0102	2	986	Calc	Yes	4	27
X7-SB620-0203	2	161	FBL	Yes	4	27
X7-SB620-0304	2	10	Calc	Yes	4	27
X7-SS621-0001	2	324	Calc	No	---	324
X7-SS621-0102	2	154	FBL	No	---	154
X7-SB621-0203	2	508	Calc	No	---	508
X7-SB621-0304	2	10	Calc	No	---	10
X7-SS622-0001	2	99	Calc	No	---	99
X7-SS622-0102	2	393	Calc	No	---	393
X7-SB622-0203	2	372	Calc	No	---	372
X7-SB622-0304	2	14	Calc	No	---	14
X7-SS623-0001	2	40	Calc	No	---	40

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SS623-0102	2	10	Calc	No	---	10
X7-SS624-0001	2	334	FBL	Yes	5	27
X7-SS624-0102	2	1145	Calc	Yes	5	27
X7-SB624-0203	2	4628	Calc	Yes	5	27
X7-SB624-0304	2	2821	Calc	Yes	5	27
X7-SB624-0405	2	2144	Calc	Yes	5	27
X7-SB624-0506	2	10	Calc	No	5	10
X7-SB624-0607	2	10	Calc	No	5	10
X7-SB624-0708	2	10	Calc	No	5	10
X7-SS625-0001	2	455	Calc	Yes	5	27
X7-SS625-0102	2	1126	Calc	Yes	5	27
X7-SB625-0203	2	483	Calc	Yes	5	27
X7-SB625-0304	2	677	Calc	Yes	5	27
X7-SB625-0405	2	13	Calc	Yes	5	27
X7-SB625-0506	2	10	Calc	No	5	10
X7-SB625-0607	2	10	Calc	No	5	10
X7-SS626-0001	2	148	FBL	No	---	148
X7-SS626-0102	2	10	Calc	No	---	10
X7-SB626-0203	2	10	Calc	No	---	10
X7-SB626-0304	2	10	Calc	No	---	10
X7-SS627-0001	2	106	Calc	No	---	106
X7-SS627-0102	2	142	FBL	No	---	142
X7-SB627-0203	2	10	Calc	No	---	10
X7-SB627-0304	2	10	Calc	No	---	10
X7-SS628-0001	2	35	Calc	No	---	35
X7-SS628-0102	2	44	Calc	No	---	44
X7-SS629-0001	2	441	Calc	Yes	5	27
X7-SS629-0102	2	819	Calc	Yes	5	27
X7-SB629-0203	2	1114	Calc	Yes	5	27
X7-SB629-0304	2	1637	Calc	Yes	5	27
X7-SB629-0405	2	10	Calc	No	5	10
X7-SB629-0506	2	10	Calc	No	5	10
X7-SS630-0001	2	3499	Calc	Yes	4	27
X7-SS630-0102	2	33	Calc	Yes	4	27
X7-SB630-0203	2	10	Calc	Yes	4	27
X7-SB630-0304	2	10	Calc	Yes	4	27
X7-SS631-0001	2	10	Calc	Yes	5	27
X7-SS631-0102	2	10	Calc	Yes	5	27
X7-SB631-0203	2	10	Calc	Yes	5	27

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SS632-0001	2	1758	Calc	Yes	5	27
X7-SS632-0102	2	3246	Calc	Yes	5	27
X7-SB632-0203	2	2918	Calc	Yes	5	27
X7-SB632-0304	2	4736	Calc	Yes	5	27
X7-SB632-0405	2	376	Calc	Yes	5	27
X7-SB632-0506	2	10	Calc	No	5	10
X7-SS633-0001	2	6003	Calc	Yes	5	27
X7-SS633-0102	2	68	Calc	Yes	5	27
X7-SB633-0203	2	30	Calc	Yes	5	27
X7-SB633-0304	2	11	Calc	Yes	5	27
X7-SS634-0001	2	1532	Calc	Yes	5	27
X7-SS634-0102	2	2338	Calc	Yes	5	27
X7-SB634-0203	2	3987	Calc	Yes	5	27
X7-SB634-0304	2	10	Calc	Yes	5	27
X7-SS635-0001	2	2573	Calc	Yes	5	27
X7-SS635-0102	2	4946	Calc	Yes	5	27
X7-SB635-0203	2	5809	Calc	Yes	5	27
X7-SB635-0304	2	69	Calc	Yes	5	27
X7-SB635-0405	2	4005	Calc	Yes	5	27
X7-SB635-0506	2	10	Calc	No	5	10
X7-SS636-0001	2	942	Calc	Yes	5	27
X7-SS636-0102	2	3715	Calc	Yes	5	27
X7-SB636-0203	2	2443	Calc	Yes	5	27
X7-SB636-0304	2	160	Calc	Yes	5	27
X7-SS637-0001	2	2064	Calc	Yes	5	27
X7-SS637-0102	2	595	Calc	Yes	5	27
X7-SB637-0203	2	1804	Calc	Yes	5	27
X7-SB637-0304	2	190	Calc	Yes	5	27
X7-SB637-0405	2	10	Calc	Yes	5	27
X7-SB637-0506	2	10	Calc	No	5	10
X7-SS638-0001	2	311	Calc	Yes	5	27
X7-SS638-0102	2	250	Calc	Yes	5	27
X7-SB638-0203	2	464	Calc	Yes	5	27
X7-SB638-0304	2	572	Calc	Yes	5	27
X7-SB638-0405	2	328	FBL	Yes	5	27
X7-SB638-0506	2	13	Calc	No	5	13
X7-SS639-0001	2	979	Calc	Yes	5	27
X7-SS639-0102	2	1880	Calc	Yes	5	27
X7-SB639-0203	2	1673	Calc	Yes	5	27

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SB639-0304	2	55	Calc	Yes	5	27
X7-SS640-0001	2	313	Calc	Yes	8	27
X7-SS640-0102	2	1518	Calc	Yes	8	27
X7-SB640-0203	2	434	Calc	Yes	8	27
X7-SB640-0304	2	10	Calc	Yes	8	27
X7-SS641-0001	2	76	Calc	Yes	8	27
X7-SS641-0102	2	396	Calc	Yes	8	27
X7-SB641-0203	2	275	Calc	Yes	8	27
X7-SB641-0304	2	10	Calc	Yes	8	27
X7-SS642-0001	2	231	Calc	No	---	231
X7-SS642-0102	2	126	Calc	No	---	126
X7-SB642-0203	2	331	Calc	No	---	331
X7-SB642-0304	2	10	Calc	No	---	10
X7-SS643-0001	2	166	FBL	No	---	166
X7-SS643-0102	2	113	Calc	No	---	113
X7-SB643-0203	2	63	Calc	No	---	63
X7-SB643-0304	2	10	Calc	No	---	10
X7-SS644-0001	2	260	Calc	Yes	9	27
X7-SS644-0102	2	265	Calc	Yes	9	27
X7-SB644-0203	2	950	Calc	Yes	9	27
X7-SB644-0304	2	10	Calc	Yes	9	27
X7-SS645-0001	2	104	Calc	No	---	104
X7-SS645-0102	2	319	Calc	No	---	319
X7-SB645-0203	2	15	Calc	No	---	15
X7-SB645-0304	2	10	Calc	No	---	10
X7-SS646-0001	2	90	Calc	No	---	90
X7-SS646-0102	2	178	FBL	No	---	178
X7-SB646-0203	2	6	Calc	No	---	6
X7-SB646-0304	2	10	Calc	No	---	10
X7-SS647-0001	2	122	Calc	No	---	122
X7-SS647-0102	2	595	Calc	No	---	595
X7-SB647-0203	2	10	Calc	No	---	10
X7-SB647-0304	2	10	Calc	No	---	10
X7-SS648-0001	2	155	Calc	No	---	155
X7-SS648-0102	2	426	Calc	No	---	426
X7-SB648-0203	2	2	Calc	No	---	2
X7-SB648-0304	2	10	Calc	No	---	10
X7-SS649-0001	2	146	Calc	No	---	146
X7-SS649-0102	2	319	Calc	No	---	319

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SB649-0203	2	1	Calc	No	---	1
X7-SB649-0304	2	10	Calc	No	---	10
X7-SS650-0001	2	112	Calc	No	---	112
X7-SS650-0102	2	11	Calc	No	---	11
X7-SB650-0203	2	10	Calc	No	---	10
X7-SS651-0001	2	103	Calc	No	---	103
X7-SS651-0102	2	116	FBL	No	---	116
X7-SB651-0203	2	33	Calc	No	---	33
X7-SB651-0304	2	10	Calc	No	---	10
X7-SS652-0001	2	189	FBL	No	---	189
X7-SS652-0102	2	10	Calc	No	---	10
X7-SB652-0203	2	10	Calc	No	---	10
X7-SS653-0001	2	120	Calc	No	---	120
X7-SS653-0102	2	45	Calc	No	---	45
X7-SB653-0203	2	97	Calc	No	---	97
X7-SB653-0304	2	10	Calc	No	---	10
X7-SS654-0001	2	44	Calc	No	---	44
X7-SS654-0102	2	94	Calc	No	---	94
X7-SB654-0203	2	12	Calc	No	---	12
X7-SB654-0304	2	10	Calc	No	---	10
X7-SS655-0001	2	186	Calc	Yes	1	27
X7-SS655-0102	2	**680**	Calc	Yes	1	27
X7-SB655-0203	2	96	Calc	Yes	1	27
X7-SB655-0304	2	10	Calc	Yes	1	27
X7-SS656-0001	2	128	FBL	No	---	128
X7-SS656-0102	2	137	FBL	No	---	137
X7-SB656-0203	2	10	Calc	No	---	10
X7-SB656-0304	2	10	Calc	No	---	10
X7-SS657-0001	2	**446**	Calc	Yes	1	27
X7-SS657-0102	2	167	Calc	Yes	1	27
X7-SB657-0203	2	**281**	Calc	Yes	1	27
X7-SB657-0304	2	**367**	Calc	Yes	1	27
X7-SB657-0405	2	51	Calc	Yes	1	27
X7-SB657-0506	2	10	Calc	No	1	10
X7-SS658-0001	2	**670**	Calc	Yes	1	27
X7-SS658-0102	2	**1410**	Calc	Yes	1	27
X7-SB658-0203	2	33	Calc	Yes	1	27
X7-SB658-0304	2	36	Calc	Yes	1	27
X7-SS659-0001	2	**227**	FBL	No	---	227

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SS659-0102	2	80	Calc	No	---	80
X7-SB659-0203	2	10	Calc	No	---	10
X7-SS660-0001	2	272	Calc	Yes	2	27
X7-SS660-0102	2	1921	Calc	Yes	2	27
X7-SB660-0203	2	10	Calc	No	2	10
X7-SB660-0304	2	10	Calc	No	2	10
X7-SS661-0001	2	164	FBL	No	---	164
X7-SS661-0102	2	10	Calc	No	---	10
X7-SB661-0203	2	10	Calc	No	---	10
X7-SS662-0001	2	779	FBL	Yes	3	27
X7-SS662-0102	2	10	Calc	Yes	3	27
X7-SB662-0203	2	10	Calc	Yes	3	27
X7-SS663-0001	2	229	Calc	No	---	229
X7-SS663-0102	2	10	Calc	No	---	10
X7-SB663-0203	2	10	Calc	No	---	10
X7-SS664-0001	2	10	Calc	No	---	10
X7-SS664-0102	2	10	Calc	No	---	10
X7-SS665-0001	2	10	Calc	No	---	10
X7-SS665-0102	2	10	Calc	No	---	10
X7-SS666-0001	2	10	Calc	No	---	10
X7-SS666-0102	2	10	Calc	No	---	10
X7-SS667-0001	2	38	Calc	Yes	6	27
X7-SS667-0102	2	950	Calc	Yes	6	27
X7-SB667-0203	2	10	Calc	No	6	10
X7-SB667-0304	2	10	Calc	No	6	10
X7-SS668-0001	2	225	FBL	No	---	225
X7-SS668-0102	2	182	FBL	No	---	182
X7-SB668-0203	2	10	Calc	No	---	10
X7-SB668-0304	2	10	Calc	No	---	10
X7-SS669-0001	2	348	Calc	No	---	348
X7-SS669-0102	2	2	Calc	No	---	2
X7-SB669-0203	2	10	Calc	No	---	10
X7-SB669-0304	2	10	Calc	No	---	10
X7-SS670-0001	2	2815	Calc	Yes	5	27
X7-SS670-0102	2	3419	Calc	Yes	5	27
X7-SB670-0203	2	10	Calc	Yes	5	27
X7-SB670-0304	2	10	Calc	Yes	5	27
X7-SS671-0001	2	2962	Calc	Yes	6	27
X7-SS671-0102	2	4	Calc	Yes	6	27

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SB671-0203	2	10	Calc	No	6	10
X7-SS672-0001	2	462	Calc	Yes	6	27
X7-SS672-0102	2	10	Calc	Yes	6	27
X7-SB672-0203	2	10	Calc	No	6	10
X7-SS673-0001	2	1959	Calc	Yes	6	27
X7-SS673-0102	2	10	Calc	Yes	6	27
X7-SB673-0203	2	10	Calc	No	6	10
X7-SS674-0001	2	846	Calc	Yes	6	27
X7-SS674-0102	2	16	Calc	Yes	6	27
X7-SB674-0203	2	10	Calc	No	6	10
X7-SS675-0001	2	866	Calc	Yes	8	27
X7-SS675-0102	2	533	Calc	Yes	8	27
X7-SB675-0203	2	5	Calc	No	8	5
X7-SB675-0304	2	10	Calc	No	8	10
X7-SS676-0001	2	978	Calc	Yes	8	27
X7-SS676-0102	2	411	Calc	Yes	8	27
X7-SB676-0203	2	10	Calc	No	8	10
X7-SB676-0304	2	10	Calc	No	8	10
X7-SS677-0001	2	391	Calc	Yes	8	27
X7-SS677-0102	2	744	Calc	Yes	8	27
X7-SB677-0203	2	1104	Calc	No	8	1104
X7-SB677-0304	2	9	Calc	No	8	9
X7-SS678-0001	2	107	Calc	No	---	107
X7-SS678-0102	2	489	Calc	No	---	489
X7-SB678-0203	2	10	Calc	No	---	10
X7-SB678-0304	2	10	Calc	No	---	10
X7-SS679-0001	2	236	Calc	No	---	236
X7-SS679-0102	2	569	Calc	No	---	569
X7-SB679-0203	2	19	Calc	No	---	19
X7-SB679-0304	2	10	Calc	No	---	10
X7-SS680-0001	2	159	FBL	No	---	159
X7-SS680-0102	2	249	FBL	No	---	249
X7-SB680-0203	2	10	Calc	No	---	10
X7-SB680-0304	2	10	Calc	No	---	10
X7-SS681-0001	2	152	FBL	No	---	152
X7-SS681-0102	2	30	Calc	No	---	30
X7-SB681-0203	2	10	Calc	No	---	10
X7-SS682-0001	2	161	FBL	No	---	161
X7-SS682-0102	2	10	Calc	No	---	10

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SB682-0203	2	10	Calc	No	---	10
X7-SS683-0001	2	71	Calc	No	---	71
X7-SS683-0102	2	10	Calc	No	---	10
X7-SS684-0001	2	10	Calc	No	---	10
X7-SS684-0102	2	10	Calc	No	---	10
X7-SS685-0001	2	10	Calc	No	---	10
X7-SS685-0102	2	10	Calc	No	---	10
X7-SS686-0001	2	449	Calc	No	---	449
X7-SS686-0102	2	80	Calc	No	---	80
X7-SB686-0203	2	7	Calc	No	---	7
X7-SS687-0001	2	262	FBL	No	---	262
X7-SS687-0102	2	92	Calc	No	---	92
X7-SB687-0203	2	10	Calc	No	---	10
X7-SS688-0001	2	10	Calc	No	---	10
X7-SS688-0102	2	4	Calc	No	---	4
X7-SS689-0001	2	10	Calc	No	---	10
X7-SS689-0102	2	10	Calc	No	---	10
X7-SB689-0203	2	10	Calc	No	---	10
X7-SS690-0001	2	10	Calc	No	---	10
X7-SS690-0102	2	30	Calc	No	---	30
X7-SS691-0001	2	10	Calc	No	---	10
X7-SS691-0102	2	321	Calc	No	---	321
X7-SB691-0203	2	117	FBL	No	---	117
X7-SB691-0304	2	10	Calc	No	---	10
X7-SS692-0001	2	1915	Calc	Yes	7	27
X7-SS692-0102	2	451	Calc	Yes	7	27
X7-SB692-0203	2	10	Calc	No	7	10
X7-SB692-0304	2	10	Calc	No	7	10
X7-SS693-0001	2	29	Calc	No	---	29
X7-SS693-0102	2	10	Calc	No	---	10
X7-SS694-0001	2	142	FBL	No	---	142
X7-SS694-0102	2	15	Calc	No	---	15
X7-SB694-0203	2	10	Calc	No	---	10
X7-SS695-0001	2	70	Calc	No	---	70
X7-SS695-0102	2	11	Calc	No	---	11
X7-SS696-0001	2	74	Calc	Yes	10	27
X7-SS696-0102	2	853	Calc	Yes	10	27
X7-SB696-0203	2	148	FBL	No	10	148
X7-SB696-0304	2	10	Calc	No	10	10

TABLE 6-12

LEAD RANKED - CENTRAL AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	Sample Round	Lead Concentration	Source	Selected for Removal?	Subarea No.	Post Removal Lead Concentration
X7-SS697-0001	2	81	Calc	No	---	81
X7-SS697-0102	2	10	Calc	No	---	10
X7-SS698-0001	2	10	Calc	No	---	10
X7-SS698-0102	2	10	Calc	No	---	10
X7-SS699-0001	2	24	Calc	No	---	24
X7-SS699-0102	2	6	Calc	No	---	6
X7-SS700-0001	2	10	Calc	Yes	6	27
X7-SS700-0102	2	10	Calc	Yes	6	27
X7-SS701-0001	2	**3445**	Calc	Yes	6	27
X7-SS701-0102	2	**347**	Calc	Yes	6	27
X7-SB701-0203	2	10	Calc	No	6	10
X7-SB701-0304	2	18	Calc	No	6	18
X7-SS702-0001	2	24	Calc	No	---	24
X7-SS702-0102	2	17	Calc	No	---	17
X7-SS703-0001	2	51	Calc	No	---	51
X7-SS703-0102	2	10	Calc	No	---	10
AVG LEAD CONCENTRATION		**401**				**49**

Indicates lead concentration greater than 400 mg/kg
Indicates lead concentration between 192 and 400 mg/kg
Sample location selected for removal and backfilled

TABLE 6-13

LEAD SUMMARY - SOUTHERNMOST AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
Southernmost Area of Northern Zone - Dirt Mound			
X7-SS038-0002	RFI-2007	213.00	Calc
X7-SB038-0203	2	74.42	Calc
X7-SB038-0304	2	15.00	Calc
X7-SS039-0002	RFI-2007	495.00	FBL
X7-SB039-0203	2	152.00	FBL
X7-SB039-0304	2	162.58	Calc
X7-SS040-0002	RFI-2007	119.00	Calc
X7-SS041-0002	RFI-2007	26.00	Calc
X7-SS042-0002	RFI-2007	0.00	XRF
X7-SS184-0002	RFI-2007	25.30	FBL
X7-SS309-0001	1	65.90	Calc
X7-SS310-0001	1	374.00	Calc
X7-SS310-0102	1	374.00	FBL
X7-SB310-0203	1	209.00	FBL
X7-SB310-0304	2	186.35	Calc
X7-SB310-0405	2	145.00	FBL
X7-SS311-0001	1	88.50	Calc
X7-SS312-0001	1	143.00	Calc
X7-SS312-0102	1	249.00	FBL
X7-SS312-0203	2	35.32	Calc
X7-SS312-0304	2	10.00	Calc
X7-SS313-0001	1	187.00	FBL
X7-SS313-0102	1	201.00	Calc
X7-SB313-0203	1	466.00	Calc
X7-SB313-0304	2	10.00	Calc
X7-SB313-0405	2	10.00	Calc
X7-SS314-0001	1	126.00	Calc
X7-SS314-0102	1	179.00	Calc
X7-SS315-0001	1	220.00	FBL
X7-SS315-0102	1	64.70	Calc
X7-SS316-0001	1	322.00	Calc
X7-SS316-0102	1	34.00	Calc
X7-SS317-0001	1	74.90	Calc
X7-SS318-0001	1	90.90	Calc
X7-SS319-0001	1	70.70	Calc
X7-SS320-0001	1	279.00	Calc
X7-SS320-0102	1	162.00	Calc
X7-SB320-0203	1	24.90	Calc

TABLE 6-13

LEAD SUMMARY - SOUTHERNMOST AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Source
X7-SS371-0001	1	244.00	FBL
X7-SS371-0102	2	110.00	FBL
X7-SB371-0203	2	10.00	Calc
X7-SS373-0001	1	50.80	Calc
X7-SS376-0001	1	184.00	Calc
X7-SS376-0102	1	136.00	FBL
X7-SS377-0001	1	380.00	Calc
X7-SS377-0102	1	98.60	FBL
X7-SS379-0001	1	49.60	Calc
X7-SS383-0001	1	64.40	Calc
X7-SS385-0001	1	200.00	FBL
X7-SS385-0102	1	60.80	Calc
X7-SS387-0001	1	77.40	Calc
X7-SB430-0304	1	15.30	Calc
X7-SB430-0405	1	10.20	Calc
X7-SB430-0506	1	10.20	Calc
X7-SB431-0304	1	47.20	Calc
X7-SB431-0405	1	21.30	FBL
X7-SB432-0304	1	23.40	Calc
X7-SB432-0405	1	10.20	Calc
X7-SS434-0001	1	162.00	FBL
X7-SS434-0102	1	29.40	Calc
X7-SB578-0001	2	10.00	Calc
X7-SB578-0102	2	10.00	Calc
X7-SB579-0001	2	10.00	Calc
X7-SB579-0102	2	10.00	Calc
X7-SB580-0001	2	10.00	Calc
X7-SB580-0102	2	10.00	Calc
AVG CONCENTRATION		**117.26**	

Indicates lead concentration greater than 400 mg/kg

bkg = background
Calc = lead calculated value
FBL = Fixed-base laboratory
XRF = X-Ray fluorescence

TABLE 6-14

LEAD RANKED - SOUTHERNMOST AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Bkg	Source
Southernmost Area of Northern Zone - Dirt Mound				
X7-SS038-0002	RFI-2007	**213.00**	0.00	Calc
X7-SB038-0203	2	74.42	0.00	Calc
X7-SB038-0304	2	15.00	0.00	Calc
X7-SS039-0002	RFI-2007	**495.00**	0.00	FBL
X7-SB039-0203	2	152.00	0.00	FBL
X7-SB039-0304	2	162.58	0.00	Calc
X7-SS040-0002	RFI-2007	119.00	0.00	Calc
X7-SS041-0002	RFI-2007	26.00	0.00	Calc
X7-SS042-0002	RFI-2007	0.00	0.00	XRF
X7-SS184-0002	RFI-2007	25.30	0.00	FBL
X7-SS309-0001	1	65.90	0.00	Calc
X7-SS310-0001	1	**374.00**	0.00	Calc
X7-SS310-0102	1	**374.00**	0.00	FBL
X7-SB310-0203	1	**209.00**	0.00	FBL
X7-SB310-0304	2	186.35	0.00	Calc
X7-SB310-0405	2	145.00	0.00	FBL
X7-SS311-0001	1	88.50	0.00	Calc
X7-SS312-0001	1	143.00	0.00	Calc
X7-SS312-0102	1	**249.00**	0.00	FBL
X7-SS312-0203	2	35.32	0.00	Calc
X7-SS312-0304	2	10.00	0.00	Calc
X7-SS313-0001	1	187.00	0.00	FBL
X7-SS313-0102	1	**201.00**	0.00	Calc
X7-SB313-0203	1	466.00	0.00	Calc
X7-SB313-0304	2	10.00	0.00	Calc
X7-SB313-0405	2	10.00	0.00	Calc
X7-SS314-0001	1	126.00	0.00	Calc
X7-SS314-0102	1	179.00	0.00	Calc
X7-SS315-0001	1	**220.00**	0.00	FBL
X7-SS315-0102	1	64.70	0.00	Calc
X7-SS316-0001	1	**322.00**	0.00	Calc
X7-SS316-0102	1	34.00	0.00	Calc
X7-SS317-0001	1	74.90	0.00	Calc
X7-SS318-0001	1	90.90	0.00	Calc
X7-SS319-0001	1	70.70	0.00	Calc
X7-SS320-0001	1	**279.00**	0.00	Calc

TABLE 6-14

LEAD RANKED - SOUTHERNMOST AREA
UXO 07 - RFI REPORT ADDENDUM
NSA CRANE
CRANE, INDIANA

SAMPLE ID	SAMPLE ROUND	Lead	Bkg	Source
X7-SS320-0102	1	162.00	0.00	Calc
X7-SB320-0203	1	24.90	0.00	Calc
X7-SS371-0001	1	**244.00**	0.00	FBL
X7-SS371-0102	2	110.00	0.00	FBL
X7-SB371-0203	2	10.00	0.00	Calc
X7-SS373-0001	1	50.80	0.00	Calc
X7-SS376-0001	1	184.00	0.00	Calc
X7-SS376-0102	1	136.00	0.00	FBL
X7-SS377-0001	1	**380.00**	0.00	Calc
X7-SS377-0102	1	98.60	0.00	FBL
X7-SS379-0001	1	49.60	0.00	Calc
X7-SS383-0001	1	64.40	0.00	Calc
X7-SS385-0001	1	**200.00**	0.00	FBL
X7-SS385-0102	1	60.80	0.00	Calc
X7-SS387-0001	1	77.40	0.00	Calc
X7-SB430-0304	1	15.30	0.00	Calc
X7-SB430-0405	1	10.20	0.00	Calc
X7-SB430-0506	1	10.20	0.00	Calc
X7-SB431-0304	1	47.20	0.00	Calc
X7-SB431-0405	1	21.30	0.00	FBL
X7-SB432-0304	1	23.40	0.00	Calc
X7-SB432-0405	1	10.20	0.00	Calc
X7-SS434-0001	1	162.00	0.00	FBL
X7-SS434-0102	1	29.40	0.00	Calc
X7-SB578-0001	2	10.00	0.00	Calc
X7-SB578-0102	2	10.00	0.00	Calc
X7-SB579-0001	2	10.00	0.00	Calc
X7-SB579-0102	2	10.00	0.00	Calc
X7-SB580-0001	2	10.00	0.00	Calc
X7-SB580-0102	2	10.00	0.00	Calc
AVG CONCENTRATION		**117.26**	**0.00**	

Indicates lead concentration greater than 400 mg/kg
Indicates lead concentration between 192 and 400 mg/kg
Indicates sample location selected for removal with no backfill

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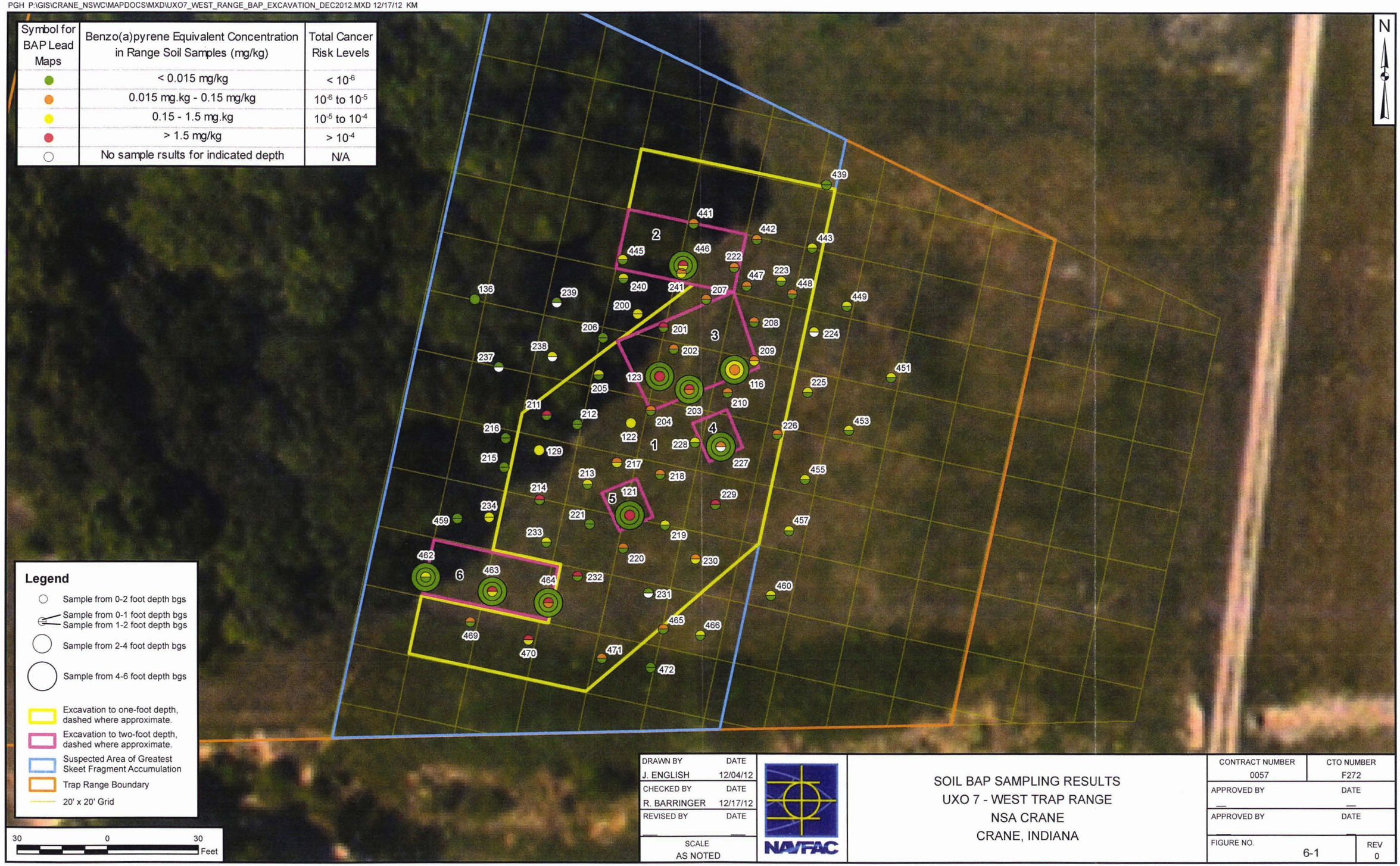

Symbol for BAP Lead Maps	Benzo(a)pyrene Equivalent Concentration in Range Soil Samples (mg/kg)	Total Cancer Risk Levels
●	< 0.015 mg/kg	$< 10^{-6}$
●	0.015 mg.kg - 0.15 mg/kg	10^{-6} to 10^{-5}
●	0.15 - 1.5 mg.kg	10^{-5} to 10^{-4}
●	> 1.5 mg/kg	$> 10^{-4}$
○	No sample rsults for indicated depth	N/A

Legend

- Sample from 0-2 foot depth bgs
- Sample from 0-1 foot depth bgs
- Sample from 1-2 foot depth bgs
- Sample from 2-4 foot depth bgs
- Sample from 4-6 foot depth bgs
- Excavation to one-foot depth, dashed where approximate.
- Excavation to two-foot depth, dashed where approximate.
- Suspected Area of Greatest Skeet Fragment Accumulation
- Trap Range Boundary
- 20' x 20' Grid

DRAWN BY	DATE
J. ENGLISH	12/04/12
CHECKED BY	DATE
R. BARRINGER	12/17/12
REVISED BY	DATE
—	—
SCALE	
AS NOTED	

NAVFAC

SOIL BAP SAMPLING RESULTS
UXO 7 - WEST TRAP RANGE
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
0057	F272
APPROVED BY	DATE
—	—
APPROVED BY	DATE
FIGURE NO. 6-1	REV 0

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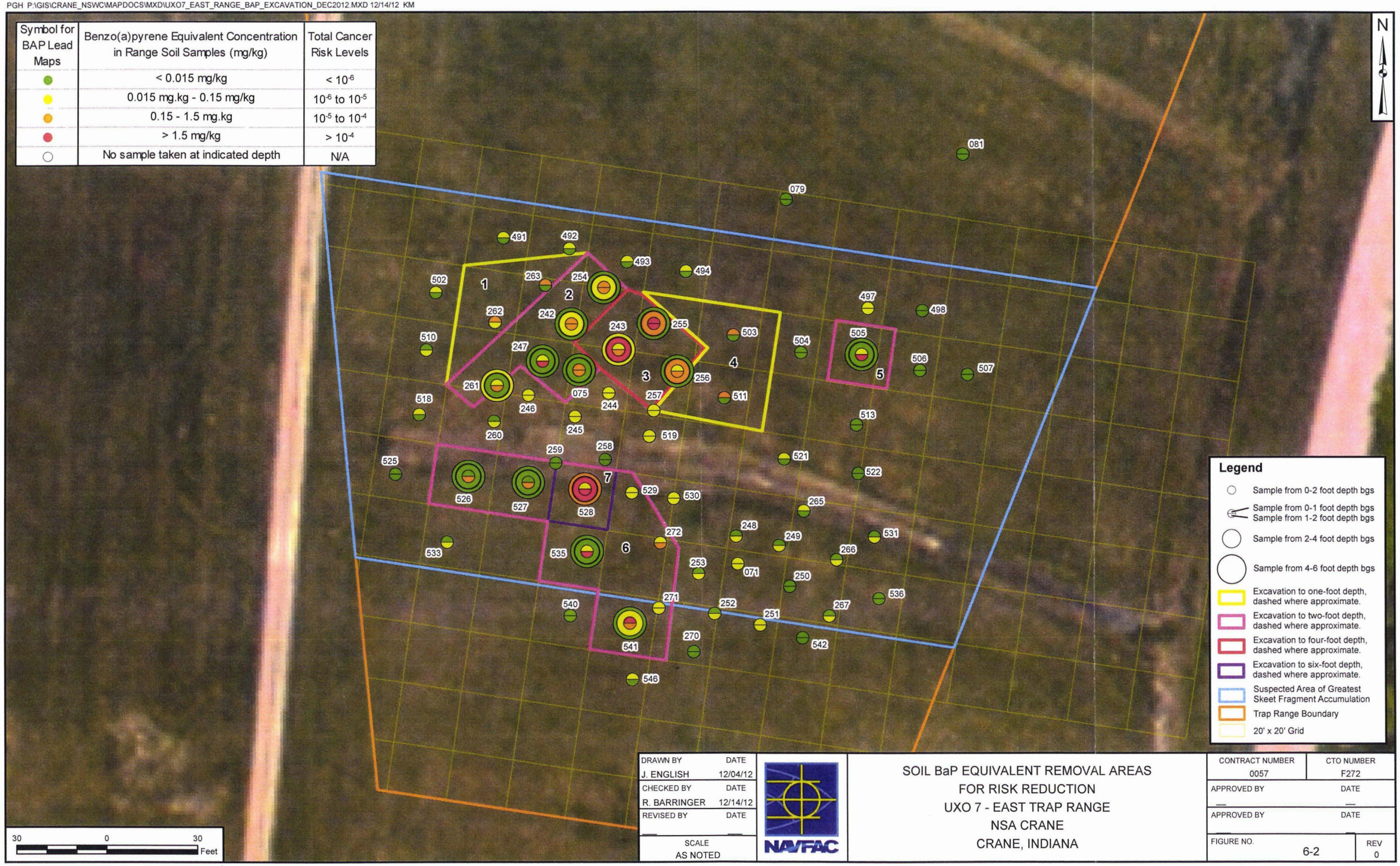

Symbol for BAP Lead Maps	Benzo(a)pyrene Equivalent Concentration in Range Soil Samples (mg/kg)	Total Cancer Risk Levels
●	< 0.015 mg/kg	$< 10^{-6}$
●	0.015 mg.kg - 0.15 mg/kg	10^{-6} to 10^{-5}
●	0.15 - 1.5 mg.kg	10^{-5} to 10^{-4}
●	> 1.5 mg/kg	$> 10^{-4}$
○	No sample taken at indicated depth	N/A

Legend

- Sample from 0-2 foot depth bgs
- Sample from 0-1 foot depth bgs
- Sample from 1-2 foot depth bgs
- Sample from 2-4 foot depth bgs
- Sample from 4-6 foot depth bgs
- Excavation to one-foot depth, dashed where approximate.
- Excavation to two-foot depth, dashed where approximate.
- Excavation to four-foot depth, dashed where approximate.
- Excavation to six-foot depth, dashed where approximate.
- Suspected Area of Greatest Skeet Fragment Accumulation
- Trap Range Boundary
- 20' x 20' Grid

DRAWN BY	DATE
J. ENGLISH	12/04/12
CHECKED BY	DATE
R. BARRINGER	12/14/12
REVISED BY	DATE
—	—
SCALE	
AS NOTED	

NAVFAC

SOIL BaP EQUIVALENT REMOVAL AREAS
FOR RISK REDUCTION
UXO 7 - EAST TRAP RANGE
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
0057	F272
APPROVED BY	DATE
—	—
APPROVED BY	DATE
—	—
FIGURE NO. 6-2	REV 0

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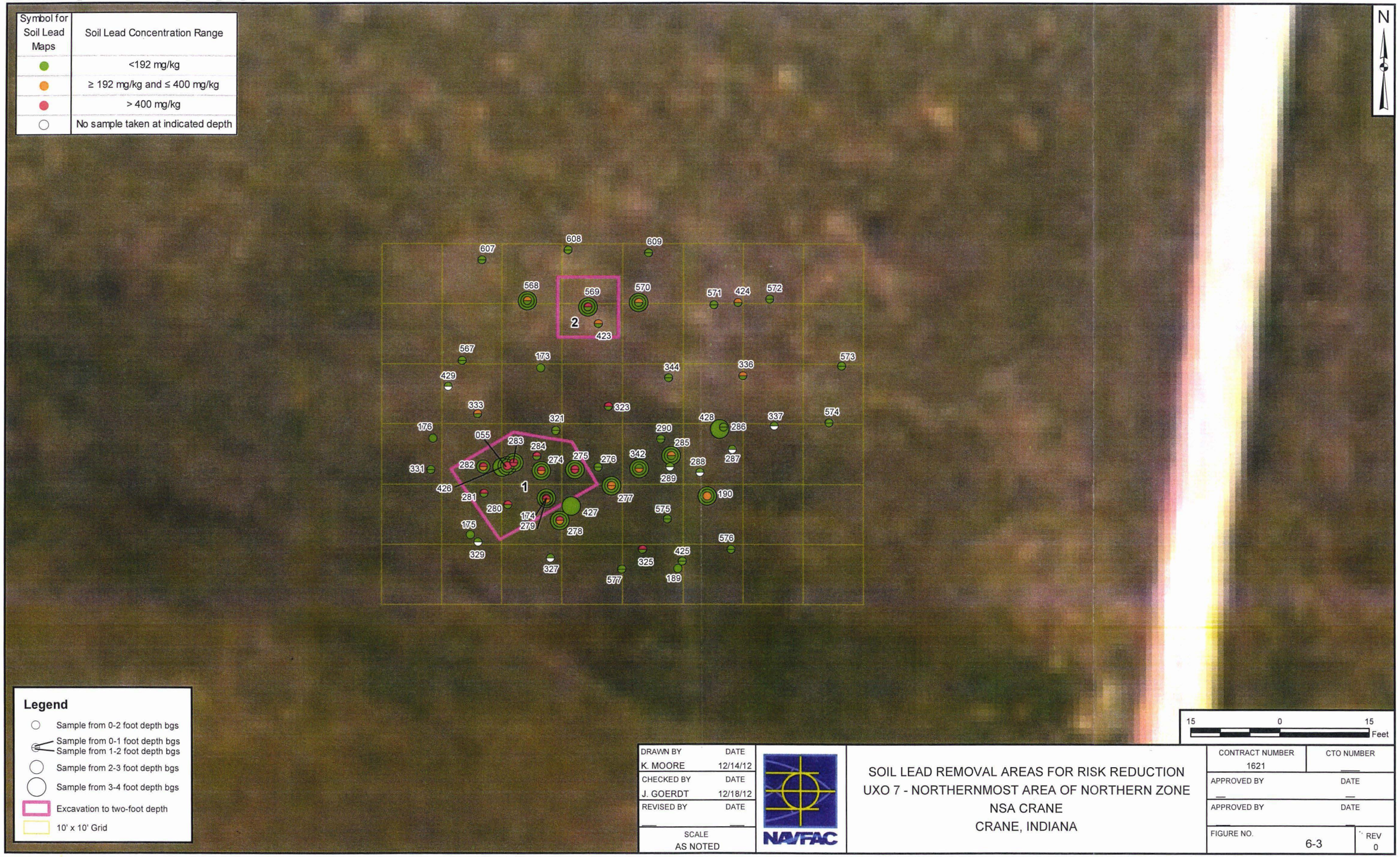

DRAWN BY	DATE
K. MOORE	12/14/12
CHECKED BY	DATE
J. GOERDT	12/18/12
REVISED BY	DATE
SCALE	
AS NOTED	

NAVFAC

SOIL LEAD REMOVAL AREAS FOR RISK REDUCTION
UXO 7 - NORTHERNMOST AREA OF NORTHERN ZONE
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
1621	
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. 6-3	REV 0

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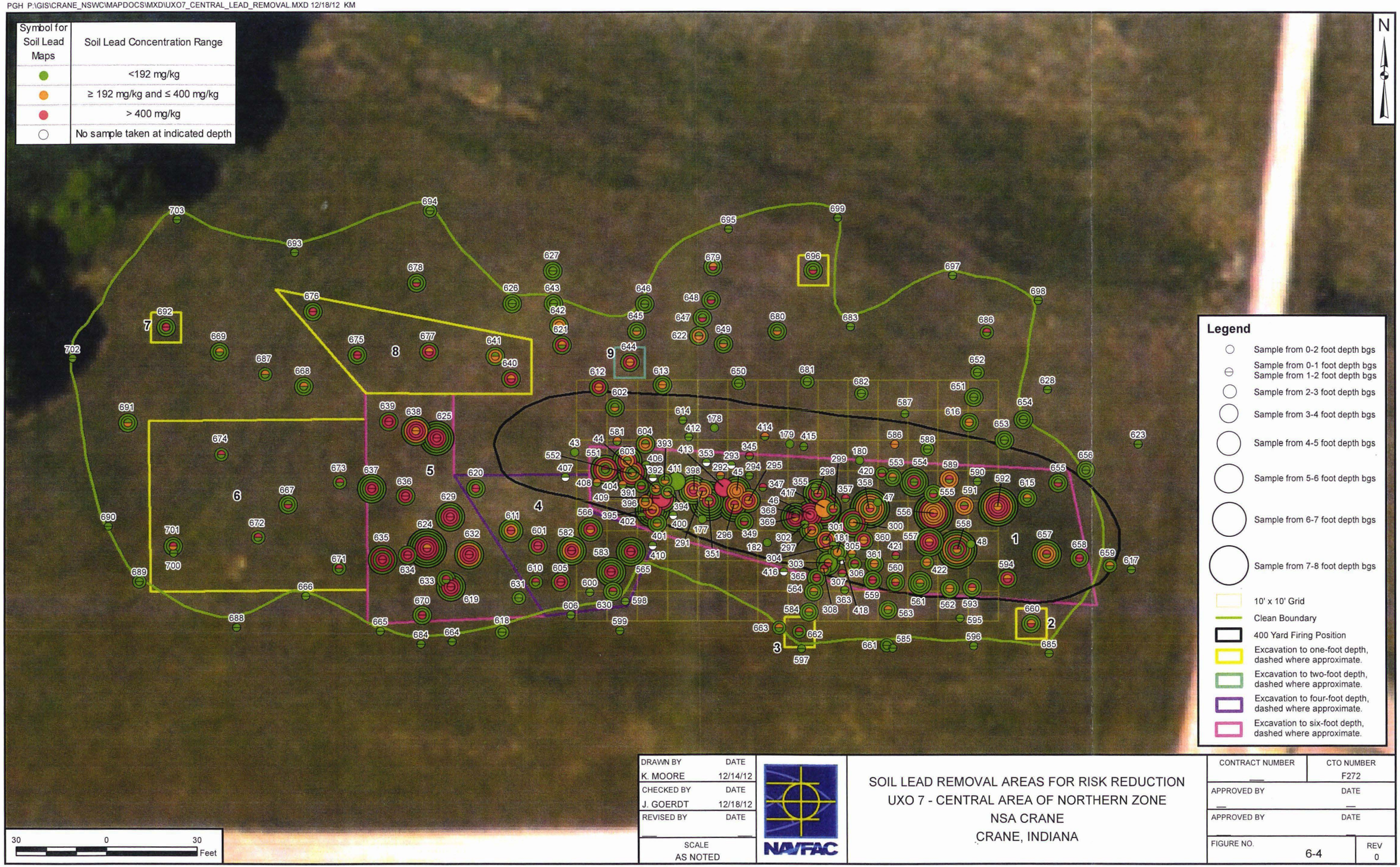

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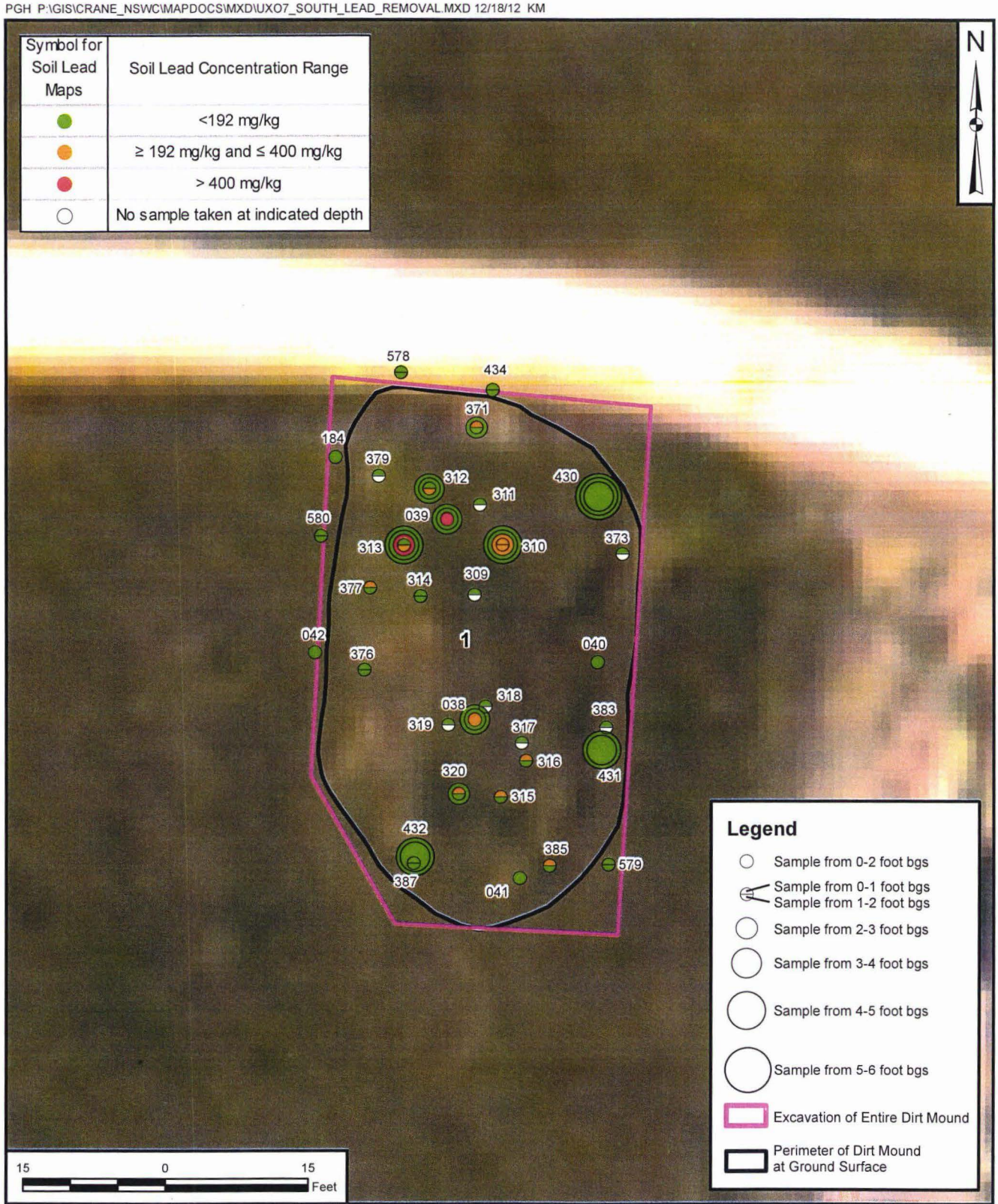
K. MOORE	12/14/12
CHECKED BY	DATE
J. GOERDT	12/18/12
REVISED BY	DATE
SCALE AS NOTED	

NAVFAC

SOIL LEAD REMOVAL AREAS FOR RISK REDUCTION
UXO 7 - CENTRAL AREA OF NORTHERN ZONE
NSA CRANE
CRANE, INDIANA

CONTRACT NUMBER	CTO NUMBER
	F272
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. 6-4	REV 0

PGH P:\GIS\CRANE_NSWC\MAPDOCS\MXD\UXO7_SOUTH_LEAD_REMOVAL.MXD 12/18/12 KM



DRAWN BY	DATE			CONTRACT NUMBER	CTO NUMBER
K. MOORE	12/14/12	NAVFAC	SOIL LEAD REMOVAL AREAS FOR RISK REDUCTION UXO 7 - SOUTHERNMOST AREA OF NORTHERN ZONE NSA CRANE CRANE, INDIANA	—	F272
CHECKED BY	DATE			APPROVED BY	DATE
J. GOERDT	12/18/12			—	—
REVISED BY	DATE			APPROVED BY	DATE
—	—			—	—
SCALE AS NOTED				FIGURE NO. 6-5	REV 0

REFERENCES

CCME (Canadian Council of Ministers of the Environment), 2010. Canadian Soil Quality Guidelines for Carcinogenic and Other Polycyclic Aromatic Hydrocarbons (Environmental and Human Health Effects). Scientific Criteria Document (revised). 216 pp.

Efroymson, R.A., M.E. Will, and G.W. Suter II. 1997a. Toxicological Benchmarks for Contaminants of Potential Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process: 1997 Revision. Oak Ridge National Laboratory. November. ES/ER/TM-126/R2.

Efroymson, R.A., M.E. Will, G.W. Suter II, and A.C. Wooten. 1997b. Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Terrestrial Plants: 1997 Revision. Oak Ridge National Laboratory. November. ES/ER/TM-85/R3.

LANL (Los Alamos National Laboratory), 2011. ECORISK Database (Release 3.1). LA-UR-11-5460. ER ID 206473. Environmental Programs Directorate, Los Alamos National Laboratory, Los Alamos, NM. October.
Tetra Tech, Inc. (Tetra Tech), 2011. Resource Conservation and Recovery Act Technical Memorandum – NSA Crane UXO 7 – Small Arms Ranges – Supplemental Work Plan. Naval Support Activity Crane, Crane, Indiana. October.

Tetra Tech, 2009. Resource Conservation and Recovery Act Facility Investigation for UXO 7 Ranges. Naval Surface Warfare Center, Crane Division, Crane, Indiana. July.

Tetra Tech, 2007. Resource Conservation and Recovery Act Facility Investigation Addendum No. 2 to the QAPP for SWMUs 8, 15, 18, 19, 20 and the Old Gun Tub Storage Lot for UXO 5 and UXO 7. Naval Surface Warfare Center, Crane Division, Crane, Indiana. August.

USEPA (U.S. Environmental Protection Agency), 1993. Wildlife Exposure Factors Handbook. EPA/600/R-93/187a. Office of Research and Development. Washington, DC, 1993.

USEPA, 2007a. Guidance for Developing Ecological Soil Screening Level, Attachment 4-1, Exposure Factors and Bioaccumulation Models for Derivation of Wildlife Eco-SSLs. Office of Solid Waste and Emergency and Response. OSWER Directive 9285.7-55. April.

USEPA, 2007b. Ecological Soil Screening Level for PAHs, Interim Final. Office of Emergency and Remedial Response. OSWER Directive 9285.7-78. June.

List of Appendices

A – Soil Sample Log Sheets, Chains-of-Custody, Field Activity Logs

B – Project Site Photographs

C – Analytical Data Presentation (includes Tables 3-1 through 3-5)

D – Correlation of X-Ray Fluorescence (XRF) Field-Based Soil-Lead Data with Laboratory Soil-Lead Data

E – Human Health / Ecological Risk Discussion Supporting Data

F – Soil Removals to Support Risk Reduction and Mitigation Supporting Data

**The electronic files for the Appendix materials noted above are included on the Compact Disk with this document.