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ACTION MEMORANDUM FOR TIME CRITICAL REMOVAL ACTION TSA RANGES SITE
NSTC GREAT LAKES IL
11/1/2012
TETRA TECH

Action Memorandum Time Critical Removal Action for TSA Ranges Site

Naval Station Great Lakes Great Lakes, Illinois



**Naval Facilities Engineering Command
Midwest**

Contract Number N62472-03-D-0057

Contract Task Order F274

November 2012

**ACTION MEMORANDUM
TIME CRITICAL REMOVAL ACTION FOR
TSA RANGES SITE**

**NAVAL STATION GREAT LAKES
GREAT LAKES, ILLINOIS**

**COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:
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**CONTRACT NUMBER N62472-03-D-0057
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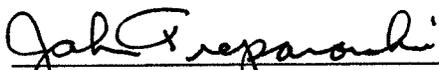
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This Action Memorandum documents the time-critical removal action to be conducted under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 40 Code of Federal Regulations (CFR) 300.415, for a Removal Action at the TSA Ranges at Naval Station Great Lakes, Great Lakes, Illinois.

Approved:  Date: 17 DEC 2012
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ACRONYMS AND ABBREVIATIONS

AA	anti-aircraft
ARAR	Applicable or relevant and appropriate requirement
bgs	below ground surface
BMP	best management practice
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DOT	Department of Transportation
EE/CA	Engineering Evaluation/Cost Analysis
HMR	Hazardous Materials Regulation
HMTA	Hazardous Materials Transportation Act
IAC	Illinois Administrative Code
Illinois EPA	Illinois Environmental Protection Agency
LDRs	Land Disposal Restrictions
MC	munitions constituents
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
NSGL	Naval Station Great Lakes
NTC	Naval Training Center
OSHA	Occupational Safety and Health Administration
PA	Preliminary Assessment
PAH	polynuclear aromatic hydrocarbon
PAL	project action limit
RAO	remedial action objective
RCRA	Resource Conservation and Recovery Act
RV	recreational vehicle
SI	Site Inspection
SSI	Supplemental Site Inspection
TACO	Tiered Approach to Corrective Action Objectives
TBC	to be considered
TCRA	Time Critical Removal Action
TSA	trap, skeet, and archery
USEPA	United States Environmental Protection Agency
UXO	unexploded ordinance
XRF	x-ray fluorescence

1.0 PURPOSE

This Action Memorandum documents the time-critical removal action (TCRA) to be conducted under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 40 Code of Federal Regulations (CFR) 300.415, for the soil removal action at the trap and skeet range portion of the Trap, Skeet, and Archery (TSA) Ranges Site at Naval Station Great Lakes (NSGL) in Great Lakes, Illinois. This soil removal action is identified as time critical because observed releases of contaminants from this site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health.

The objectives of the time-critical removal action for soil at the TSA Ranges Site are as follows:

- Prevent and/or minimize the direct contact threat associated with contaminants in soil remaining on the ground surface and in the shallow subsurface.
- Ensure that the TSA Ranges Site is safe for use as a recreational vehicle (RV) park and camp ground, and for potential future residential use.

These objectives will be accomplished during the TCRA by removing surface and shallow subsurface soil within the TSA Ranges Site.

2.0 SITE CONDITIONS AND BACKGROUND

The following sections: provide a brief description of the site and establish the conditions for the TCRA; identify the physical location of the site; define site characteristics; identify conditions that may result in a release or threatened release into the environment of a hazardous substance, pollutant, or contaminant at the site; and define the National Priorities List (NPL) status of the TSA Ranges Site.

2.1 Site Description

The former TSA Ranges (including the land and water portions) encompasses approximately 30.5 acres. The land portion of the TSA Ranges is a small area (approximately 1.1 acres), located east of the bluff on the beachfront of Lake Michigan. The site consisted of a trap range, a skeet range, and an archery range. Only the skeet and trap ranges are the subject of this TCRA. Fill material was placed at the site to extend the shoreline for the addition of the skeet range to the installation. Structures associated with the skeet and trap ranges and firing lines were located on the land. The shotfall zone, which is defined as the maximum extent that lead shot would travel, extends into Lake Michigan. The site topography was leveled on the western portion of the site prior to the installation of the RV park but slopes moderately to

the east towards Lake Michigan. Possible migration pathways for contaminated surface and subsurface soils include erosion into Lake Michigan along the coast line. In addition, contaminants may migrate via leaching from surface and subsurface soil into shallow groundwater which discharges to surface water due to the sites close proximity to Lake Michigan. This encompasses an area of approximately 29.4 acres [consisting of overlapping areas for the skeet range (29 acres) and the trap range (6.6 acres)] located over Lake Michigan, as shown on Figure 1.

2.2 Site History

The TSA Range Site originally consisted of only the trap range (constructed in the early 1940s), where Navy personnel first experienced targeting a moving object before handling the large caliber anti-aircraft (AA) guns. The use of the trap range in conjunction with the AA training center ended with the closing of the Naval Training Center (NTC) Lakefront site in October 1945; however, the trap range was likely used recreationally afterward, because it was common practice to allow enthusiasts to utilize these ranges to offset costs for maintenance. Based on the construction drawings for the site, the skeet and archery ranges were added to the site in 1968, and were likely used for recreational purposes and for military practice sessions.

The equipment storage building and trap/skeet houses that were originally located at the site were demolished, and the ranges were decommissioned. In July 2000, during construction of a RV park (RV sites, ten tent sites, and one group camping site) within the TSA Ranges Site, all visible signs of the ranges and associated structures, such as the trap house, were removed.

Figure 2 depicts the TSA Ranges Site and associated range features. Facility background and regional geology/hydrology information is presented in the Site Inspection (SI) Report for the Munitions Response Program Ranges (Tetra Tech, 2010).

Munitions use was limited to small arms ammunitions, primarily shotgun ammunition. Archival data for ammunition orders from the 1940s and 1950s, identified in the Preliminary Assessment (PA) Report (Malcolm Pirnie, 2008) included the following munitions-related items that may have been used at the site:

- Shotguns, 12-gauge with slide repeating action and modified choke, 26-inch or 28-inch barrel.
- Shells, shotgun, 12-gauge, No. 7 ½ shot.
- Targets, clay pigeon.

During the 2008 visual survey of the site by Malcolm Pirnie, no physical evidence of the skeet range firing arc and trap range firing points/stations was visible because of the construction of the RV Park. Additionally, no evidence of broken clay targets was observed during the site walk. However, during the 2010 SI sampling activities (Tetra Tech, 2010), broken clay targets and shotgun shell wadding were observed in the surface soils of the erosional surface near the shoreline of the Trap Range. The TSA Ranges were dedicated to the use of small arms, which are non-explosive; therefore, unexploded ordnance (UXO) is not expected to be present at the site. In addition, based on the information obtained during the data collection process, no special consideration munitions are known or suspected to have been used at the site. Therefore, the TSA Ranges site is not suspected to contain chemical warfare material-filled munitions, electrically fuzed munitions, or depleted uranium associated munitions.

2.3 Previous Investigations

A PA was conducted by Malcolm Pirnie (Malcolm Pirnie, 2008) and identified the potential for munitions constituents (MC) (e.g., lead) to be present at the land portion of the TSA Ranges Site. Tetra Tech, Inc. (Tetra Tech) conducted a SI in April through May 2010 to determine if MC were present. The focused SI sampling activities for the TSA Ranges characterized the local site conditions in surface soils [0 to 0.5 feet below ground surface (bgs)] from a limited surface area. Soil samples were collected and analyzed on-site for lead using X-ray fluorescence (XRF), and off-site for polynuclear aromatic hydrocarbons (PAHs) and select metals (lead, antimony, and arsenic). MCs (lead and PAHs) were detected at concentrations that exceeded project action limits (PALs), and Illinois Environmental Protection Agency (EPA) background concentrations.

In September 2011, Tetra Tech conducted additional SI sampling activities as part of a Supplemental Site Inspection (SSI). In order to support the final site recommendations, the collected data were used to approximate the extent of soils contaminated with lead and PAHs, and to assess the potential hazards posed by MC remaining at the site. The SSI identified human receptors as Navy personnel, construction workers, recreational users or authorized visitors. Ecological receptors were limited to soil invertebrates, small mammals, and birds based on the poor quality habitat at the site. Complete exposure pathways for surface soil were identified for all human and ecological receptors at the TSA Ranges site via all exposure routes [i.e., dermal contact, inhalation of dust, and ingestion (via hand to mouth behavior for humans and via foraging or feeding for biota in surface soil)]. In subsurface soil, there is also a potentially complete pathway for construction workers and a complete pathway for potential future residents. Because there is no groundwater use on site, an exposure pathway is potentially complete for construction workers only (ingestion, dermal contact). A soil removal action was recommended for the TSA Ranges Site in the SI Addendum report (Tetra Tech, 2012).

2.4 Release or Threatened Release into the Environment of a Hazardous Substance, Pollutant, or Contaminant

The results of the SI and SSI show that the TSA Ranges Site is known to contain MC consisting of lead and PAHs present at concentrations above regulatory limits.

2.5 NPL Status

NSGL is not listed on the NPL and is not proposed to be listed on the NPL. The Navy, as the lead agency, has made the determination that the removal action is necessary.

2.6 Maps, Pictures, and Other Graphic Representations

Maps depicting the facility and site location, and removal action areas are presented in Figures 1, 2, and 3.

2.7 Other Actions to Date

No other actions have been conducted at the TSA Ranges Site other than the previous investigations summarized above.

2.8 State and Local Authorities' Roles to Date

Executive Order 12580 delegates to the Department of Defense the President's authority to undertake CERCLA response actions at military facilities. Congress further outlined this authority in the Defense Environmental Restoration Program Amendments under 10 United States Code, Sections 2701 through 2705. CERCLA Section 120 requires the Navy to enter into an interagency agreement with the State and the United States Environmental Protection Agency (USEPA), and outlines the requirements for investigation and cleanup of environmental contamination at the installation; it also provides the process for the State and USEPA to follow in carrying out their oversight roles.

The Illinois EPA has been involved in planning and reviewing the SI and this Action Memorandum. Comments on this Action Memorandum were solicited from the Illinois EPA. Oversight of the TCRA activities by the Illinois EPA will occur through participation in meetings and correspondences, as well as inspections in the field.

To date, local authorities or the general public have not been involved.

3.0 THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT AND STATUTORY AND REGULATORY AUTHORITIES

Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) lists the factors to be considered in determining the appropriateness of a TCRA. Paragraph (b)(2) of Section 300.415 applies to the conditions at the TSA Ranges Site as follows:

Section 300.415(b)(2)(i): “Actual or potential exposures to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.”

Section 300.415(b)(2)(iv): “High levels of hazardous substances or pollutants or contaminants in soils largely near the surface, that may migrate.”

The lead and PAH-contaminated soil at the TSA Ranges Site presents potential risks to public health. By removing the contaminated soil, the contaminant concentrations will be reduced to an acceptable level, below the removal objective outlined in the SI Addendum (Tetra Tech, 2012); effectively eliminating the threat to the public health, welfare, or the environment.

4.0 ENDANGERMENT DETERMINATION

A screening health risk assessment was conducted as part of the SSI. Comparisons of contaminant concentrations were made to Illinois Tiered Approach to Corrective Action Objectives (TACO) criteria. TACO criteria were exceeded for several contaminants. In addition, complete exposure pathways for surface soil were identified for all human and ecological receptors via all exposure routes [i.e., dermal contact, inhalation of dust, and ingestion (via hand to mouth behavior for humans and via foraging or feeding for biota in surface soil)]. In subsurface soil, a potentially complete exposure pathway exists for construction workers and a complete pathway exists for potential future residents. Since groundwater is not used for onsite, a potentially complete exposure pathway only exists for construction workers. Actual releases of pollutants and contaminants from this site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health.

5.0 PROPOSED ACTION

5.1 Proposed Action

The following subsections describe the proposed removal action and its ability to achieve compliance with Applicable or Relevant and Appropriate Requirements (ARARs), and to meet removal action objectives.

5.1.1 Proposed Action Description

A prescriptive removal of contaminated surface and shallow subsurface soils shown to exceed PALs will mitigate the risk to human health by reducing the overall risk to human receptors on site to acceptable levels (risks to ecological receptors are already acceptable, as described below). Specific areas where soils are proposed to be removed are shown on Figure 3. Soil will be excavated by mechanical means. Excavated soils will be removed to offsite disposal facilities.

Along the shoreline of the TSA Ranges Site, removal of contaminated soil and replacement with clean fill are proposed for approximately 13,500 square feet of soil from depths of 0 to 2 feet bgs; and 5,650 square feet from depths of 2 to 4 feet bgs (approximately 1,400 cubic yards total).

Within the RV Park, concentrations of PAHs with a benzo(a)pyrene (BaP) equivalent exceeding the TACO background screening criteria are present near the western portion of the Trap Range at a depth of 2 to 4 feet bgs. A removal of contaminated subsurface soil from a depth of 2 to 4 feet bgs from an area that is approximately 2,000 square feet (150 cubic yards) is proposed within the RV Park.

For isolated areas of contaminated soils at 2 to 4 feet bgs (as in the RV Park), surface soil (0 to 2 feet bgs) was not included in the volume calculations for removal. It is assumed that the shallow soil will be scraped off to access the deeper interval, and stockpiled for replacement. Figure 3 shows the areas to be removed from the surface (outlined in dashed black line) and subsurface (hatch pattern).

The area located on the northeastern corner of the site outside of the fence along the northern boundary of the RV Park is not included because the removal of soil from this area would require removal of mature trees which provide erosional control for the shoreline.

Potential risks to ecological wildlife receptors (birds and mammals) at the TSA Ranges Site, were evaluated by food chain modeling, using average chemical concentrations, and Tier 2, Step 3a exposure parameters; this resulted in a finding of no potential risk for mammals or birds related to on-site contamination. Potential risks to soil invertebrates were evaluated by comparing chemical concentrations in the surface soil samples to invertebrate screening levels. This resulted in a finding of no potential risk for soil invertebrates related to on-site contamination.

The removal of selected lead and PAH-contaminated soil across the site from 0 to 2 and 2 to 4 feet bgs would reduce the potential risk to human receptors to acceptable risk levels (between 10^{-4} to 10^{-6}), and support a no further action determination for the site.

Excavated areas will be backfilled with certified clean backfill material as necessary to restore the area to grade. Following backfilling, the TSA Ranges Site will be graded and restored to the desired use or pre-excavation site conditions. Excavation areas will be backfilled with common fill to a depth of 6 inches below final grade and 6 inches of topsoil to achieve final grade. Clean fill will be used to restore soil-covered areas to their former elevations. A combination of clean fill and gravel will be used in areas covered by gravel. Following backfilling, the disturbed area will be vegetated using a permanent seed mixture.

This removal action will meet the remedial action objectives (RAOs) to:

- Mitigate human health risk through removal of soil containing concentrations of lead- and PAHs that are above levels suitable for unrestricted use and unlimited exposure.
- Mitigate potential leaching of contaminants in soil to groundwater through removal of contaminated soil.

Soils will be managed as hazardous or non-hazardous waste and disposed of in Subtitle C or D landfills. Soil that is considered hazardous waste (D004 and/or D008) because of its toxicity characteristics must meet the Resource Conservation and Recovery Act (RCRA) Land Disposal Restrictions (LDRs) alternative treatment standards for soil, and will require stabilization prior to land disposal in an offsite landfill.

5.1.2 Contribution to Remedial Performance

Excavation and off-site disposal of the contaminated soil are expected to achieve the RAOs and meet the cleanup levels that will allow for unrestricted use and unlimited exposure. The TCRA for the TSA Ranges Site is expected to be the final response action for the contaminated soils.

5.1.3 Description of Alternative Technologies

The selected TCRA was considered the most effective technology for the soil removal action work at the TSA Ranges Site. Alternative technologies were not considered for the removal action.

5.1.4 Engineering Evaluation/Cost Analysis

An Engineering Evaluation/Cost Analysis (EE/CA) is not required for a time-critical removal action. However, the estimated cost for the recommended removal action is approximately \$814,125.

5.1.5 Applicable or Relevant and Appropriate Requirements

In accordance with Title 40 CFR § 300.415(j) of the NCP, on-site removal actions conducted under CERCLA of 1980, as amended, are required to attain 'applicable' or 'relevant and appropriate' requirements to the extent practicable considering the exigencies of the situation. In determining whether compliance with ARARs is practicable, the lead agency may consider appropriate factors, including: 1) the urgency of the situation; and 2) the scope of the removal action. ARARs include only federal and state environmental or facility siting laws/regulations; they do not include occupational safety or worker protection requirements. Compliance with Occupational Safety and Health Administration (OSHA) standards is required by 40 CFR § 300.150. Additionally, per 40 CFR § 300.405(g)(3), other advisories, criteria, or guidance may be considered in determining remedies [to-be-considered (TBC) category].

For purposes of ease of identification, the EPA has created three categories of ARARs: Chemical-, Location- and Action-specific. Chemical-specific ARARs are usually health or risk-based numerical values limiting the amount or concentration of a chemical that may be found in, or discharged to, the environment. There is no Chemical-specific ARARs/TBC guidance for this TCRA. Location-specific requirements establish restrictions on permissible concentrations of hazardous substances or establish requirements for how activities will be conducted because they are in special locations (e.g., wetlands, floodplains, critical habitats, streams). There is no Location-specific ARARs/TBC guidance for this TCRA. Action-specific requirements often include performance, design and controls, or restrictions on particular kinds of activities related to management of hazardous substances. Action-specific ARARs are triggered by the types of remedial activities and types of wastes that are generated, stored, treated, disposed, emitted, discharged, or otherwise managed. The primary action-specific ARARs for this removal action are listed in Table 1, and include USEPA and Illinois EPA requirements related to characterization, temporary storage, treatment, disposal, and preparation for transportation of waste (i.e., excavated contaminated soil). In addition, Illinois EPA regulations related to control of stormwater and fugitive dust emissions, as well as installation and abandonment of groundwater monitoring wells are ARARs for this TCRA. All material disposed of off-site will be disposed of as specified in Illinois EPA environmental regulation Title 35 of the Illinois Administrative Code (Part 722, subpart C).

The Navy has determined that ARARs compliance is practicable, and it will comply with ARARs guidance as set forth in Table 1 when conducting this TCRA.

5.1.6 To Be Considered (TBC)

Action-specific TBCs are those regulations, criteria, and guidance that must be taken into consideration during on-site implementation of remedial actions. TBC criteria are technology- or activity-based controls

or restrictions on activities related to management of hazardous substances. Action-specific TBCs are presented in Table 2.

5.1.7 Project Schedule

The time-critical removal action at the TSA Ranges Site is scheduled to be conducted during the Fall of 2012.

6.0 EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If no action is taken or the action is delayed, the lead and PAH-contaminated soil at the TSA Ranges Site will continue to pose a potential threat to human health. The potential for direct contact with contaminants and the threat of migration of contaminants from the site into Lake Michigan via erosional processes will remain.

7.0 OUTSTANDING POLICY ISSUES

No outstanding policy issues have been identified.

8.0 ENFORCEMENT

The Navy is the lead agency responsible for the investigation and cleanup of contaminated Installation Restoration sites at NSGL. The Navy will provide all funding for the removal action; therefore, enforcement actions do not apply to this removal action.

9.0 RECOMMENDATION

This decision document presents the proposed removal action for the TSA Ranges Site at NSGL, developed in accordance with CERCLA, as amended, and is consistent with the NCP.

Conditions at the site continue to meet NCP Section 300.415(b)(2) criteria for a removal; therefore, Naval Facilities Engineering Command Mid-Atlantic recommends approval of the proposed remedial action.

10.0 REFERENCES

Illinois Urban Manual, 2012. Association of Illinois Soil and Water Conservation Districts.

Malcolm Pirnie, Inc., 2008. Draft Final Preliminary Assessment Report, Naval Station Great Lakes, Illinois, NTC Lakefront and TSA Ranges. Prepared by Malcolm Pirnie, Inc., White Plains, New York. February.

Tetra Tech, 2010. Site Inspection Report Munition Response Program Ranges Naval Station Great Lakes Great Lakes, Illinois. November.

Tetra Tech, 2012. Addendum to: Site Inspection Report Munition Response Program Ranges Naval Station Great Lakes Great Lakes, Illinois. May.

TABLE 1

ACTION-SPECIFIC ARARS FOR THE TSA RANGES SITE
 NAVAL STATION GREAT LAKES, ILLINOIS
 PAGE 1 OF 4

Action	Requirements	Prerequisite	Citation
General Construction Standards – All Land-disturbing Activities (i.e., excavation, clearing, grading, etc.)			
Coastal Zone Management	Illinois Coastal Management Program (ICMP) – Chapter 11, Federal Consistency and the National Interest	Activities within the facility - relevant and appropriate	<p>On January 31, 2012, the ICMP received federal approval under the Coastal Zone Management Act (CZMA). The ICMP will work to preserve, protect, restore, and where possible, enhance coastal resources. The ICMP document identifies a framework of existing programs, laws, and policies that brings state agencies into a comprehensive network. The coastal zone is defined in the ICMP.</p> <p>Per the CZMA, the ICMP excludes lands that are owned by the federal government. The exclusion of federally owned does not exempt activities occurring on those lands from CZMA federal consistency requirements.</p>

TABLE 1

ACTION-SPECIFIC ARARS FOR THE TSA RANGES SITE
 NAVAL STATION GREAT LAKES, ILLINOIS
 PAGE 2 OF 4

Action	Requirements	Prerequisite	Citation
Managing storm water runoff from land-disturbing activities	The standards and associated materials describe best management practices for controlling non-point source pollution impacts that affect ecosystems in existing communities and developing areas. The manual includes BMPs for soil erosion and sediment control; stormwater management; and special area protection.	Excavation activities within the facility boundary – relevant and appropriate	Illinois Urban Manual (2012)
Fugitive particulate dust	No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source. Control of dust during excavation and handling of soil would be implemented to prevent material from becoming airborne.	Activities within facility boundary that will generate fugitive dust emissions – relevant and appropriate	35 IAC 212 Subpart K
Remediation Objectives – Contaminated Soils			
Characterization of soil	Determines the chemicals which require remediation. Benchmark values for assessing the need for soil, groundwater, and air remedial action/corrective measures. The remediation objectives assess ingestion of soil, inhalation of chemicals from soil, migration of chemicals from soil to groundwater, and ingestion of groundwater.	Excavation activities within the facility boundary – relevant and appropriate	Illinois EPA Tiered Approach to Corrective Action; residential soil remediation objectives. IAC 742 Tiered Approach to Corrective Action Objectives

TABLE 1

ACTION-SPECIFIC ARARS FOR THE TSA RANGES SITE
 NAVAL STATION GREAT LAKES, ILLINOIS
 PAGE 3 OF 4

Action	Requirements	Prerequisite	Citation
Waste Characterization and Storage – Primary Wastes (i.e., excavated contaminated soils)			
Characterization of solid waste	Must determine if solid waste is hazardous waste or if waste is excluded under 40 CFR 261.4(b); and	Generation of solid waste as defined in 40 CFR 261.2 – applicable	40 CFR 262.11(a) 35 IAC 721 Subparts C and D
	Must determine if waste is listed under 40 CFR Part 261; or	Generation of solid waste which is not excluded under 40 CFR 261.4(a)– applicable	40 CFR 262.11(b) 35 IAC 721 Subparts C and D
	Must determine whether the waste is (characteristic waste) identified in subpart C of 40 CFR part 261 by either: (1) Testing the waste according to the methods set forth in subpart C of 40 CFR part 261, or according to an equivalent method approved by the Administrator under 40 CFR 260.21; or (2) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.	Generation of solid waste which is not excluded under 40 CFR 261.4(a)– applicable	40 CFR 262.11(c) 35 IAC 721 Subparts C and D
	Must refer to Parts 261, 262, 264, 265, 266, 268, and 273 of Chapter 40 for possible exclusions or restrictions pertaining to management of the specific waste.	Generation of solid waste which is determined to be hazardous – applicable	40 CFR 262.11(d) 35 IAC 721 Subparts C and D

TABLE 1

ACTION-SPECIFIC ARARS FOR THE TSA RANGES SITE
 NAVAL STATION GREAT LAKES, ILLINOIS
 PAGE 4 OF 4

Action	Requirements	Prerequisite	Citation
Characterization of hazardous waste	Must obtain a detailed chemical and physical analysis on a representative sample of the waste(s), which at a minimum contains all the information that must be known to treat, store, or dispose of the waste in accordance with pertinent sections of 40 CFR 264 and 268.	Generation of RCRA-hazardous waste for storage, treatment or disposal – applicable	40 CFR 264.13(a)(1) 35 IAC 722.111 and 722 Subpart C
Determinations for management of hazardous waste	Must determine each EPA Hazardous Waste Number (waste code) applicable to the waste in order to determine the applicable treatment standards under 40 CFR 268 <i>et seq.</i> <i>Note:</i> This determination may be made concurrently with the hazardous waste determination required in Sec. 262.11 of this chapter.	Generation of hazardous waste for storage, treatment or disposal – applicable	40 CFR 268.9(a) 35 IAC 722.111 and 722 Subpart C
	Must determine the underlying hazardous constituents [as defined in 40 CFR 268.2(i)] in the characteristic waste.	Generation of RCRA characteristic hazardous waste (and is not D001 non-wastewaters) for storage, treatment or disposal – applicable	40 CFR 268.9(a) 35 IAC 722.111 and 722 Subpart C

ARAR = applicable or relevant and appropriate requirement
 CFR = Code of Federal Regulations
 BMP=best management practice

EPA = U.S. Environmental Protection Agency
 IAC = Illinois Administrative Code
 RCRA = Resource Conservation and Recovery Act of 1976

TABLE 2

**ACTION-SPECIFIC TBCs FOR THE TSA RANGES SITE
NAVAL STATION GREAT LAKES, ILLINOIS
PAGE 1 OF 2**

Action	Requirements	Prerequisite	Citation
General Construction Standards – All Land-disturbing Activities (i.e., excavation, clearing, grading, etc.)			
Transportation of Wastes			
Transportation of hazardous materials	Shall be subject to and must comply with all applicable provisions of the HMTA and DOT HMR at 49 CFR 171-180.	Any person who, under contract with a department or agency of the federal government, transports “in commerce,” or causes to be transported or shipped, a hazardous material – To Be Considered	49 CFR 171.1(c); Illinois Solid Waste and Special Waste Hauling, 35 Illinois Administrative Code (IAC) 809
Transportation of hazardous waste <i>off-site</i>	Must comply with the generator requirements of 40 CFR 262.20–23 for manifesting, Sect. 262.30 for packaging, Sect. 262.31 for labeling, Sect. 262.32 for marking, Sect. 262.33 for placarding, Sect. 262.40, 262.41(a) for record keeping requirements, and Sect. 262.12 to obtain EPA ID number.	Preparation and initiation of shipment of RCRA-hazardous waste off-site – To Be Considered	40 CFR 262.10(h); Illinois Solid Waste and Special Waste Hauling, 35 Illinois Administrative Code (IAC) 809
Transportation of hazardous waste <i>on-site</i>	The generator manifesting requirements of 40 CFR 262.20–262.32(b) do not apply. Generator or transporter must comply with the requirements set forth in 40 CFR 263.30 and 263.31 in the event of a discharge of hazardous waste on a private or public right-of-way.	Transportation of hazardous wastes on a public or private right-of-way within or along the border of contiguous property under the control of the same person, even if such contiguous property is divided by a public or private right-of-way – To Be Considered	40 CFR 262.20(f); Illinois Solid Waste and Special Waste Hauling, 35 Illinois Administrative Code (IAC) 809

TABLE 2

**ACTION-SPECIFIC TBCs FOR THE TSA RANGES SITE
NAVAL STATION GREAT LAKES, ILLINOIS
PAGE 2 OF 2**

Action	Requirements	Prerequisite	Citation
Transportation of samples (i.e. contaminated soils)	Are not subject to any requirements of 40 CFR Parts 261 through 268 or 270 when: <ul style="list-style-type: none"> • the sample is being transported to a laboratory for the purpose of testing; or • the sample is being transported back to the sample collector after testing. • the sample is being stored by sample collector before transport to a lab for testing 	Samples of solid waste <u>or</u> a sample of water, soil for purpose of conducting testing to determine its characteristics or composition – To Be Considered	40 CFR 261.4(d)(1)(i)-(iii); Illinois Solid Waste and Special Waste Hauling, 35 Illinois Administrative Code (IAC) 809
	In order to qualify for the exemption in paragraphs (d)(1)(i) and (ii), a sample collector shipping samples to a laboratory must: <ul style="list-style-type: none"> • Comply with U.S. DOT, U.S. Postal Service, or any other applicable shipping requirements • Assure that the information provided in (1) thru (5) of this section accompanies the sample. • Package the sample so that it does not leak, spill, or vaporize from its packaging. 		40 CFR 261.4(d)(2)(i)(A) and (B) Illinois Solid Waste and Special Waste Hauling, 35 Illinois Administrative Code (IAC) 809

TBC = to be considered
 CFR = Code of Federal Regulations
 IAC = Illinois Administrative Code
 DOT = U.S. Department of Transportation

EPA = U.S. Environmental Protection Agency
 HMR = Hazardous Materials Regulations
 HMTA = Hazardous Materials Transportation Act
 RCRA = Resource Conservation and Recovery Act of 1976



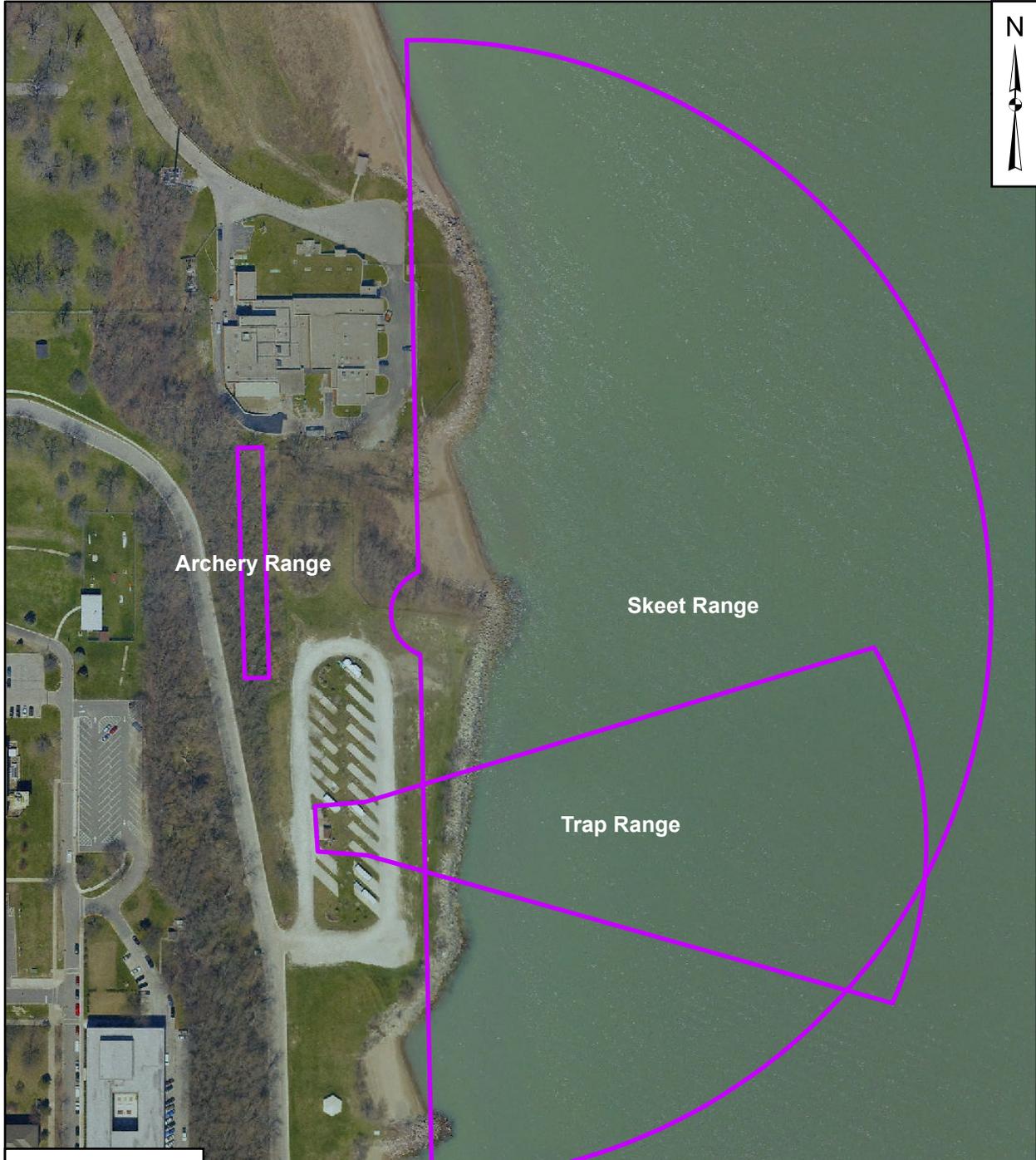
Legend	
	Installation Area
DRAWN BY	DATE
K. MOORE	7/26/10
CHECKED BY	DATE
J. DUCAR	8/10/10
REVISED BY	DATE
SCALE AS NOTED	



FACILITY LOCATION
 NAVAL STATION GREAT LAKES
 GREAT LAKES, ILLINOIS

CONTRACT NUMBER	
CTO F274	
OWNER NUMBER	

APPROVED BY	DATE
---	---
FIGURE NO.	REV
FIGURE 1	0



Legend

Range Boundary

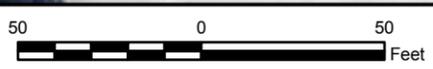
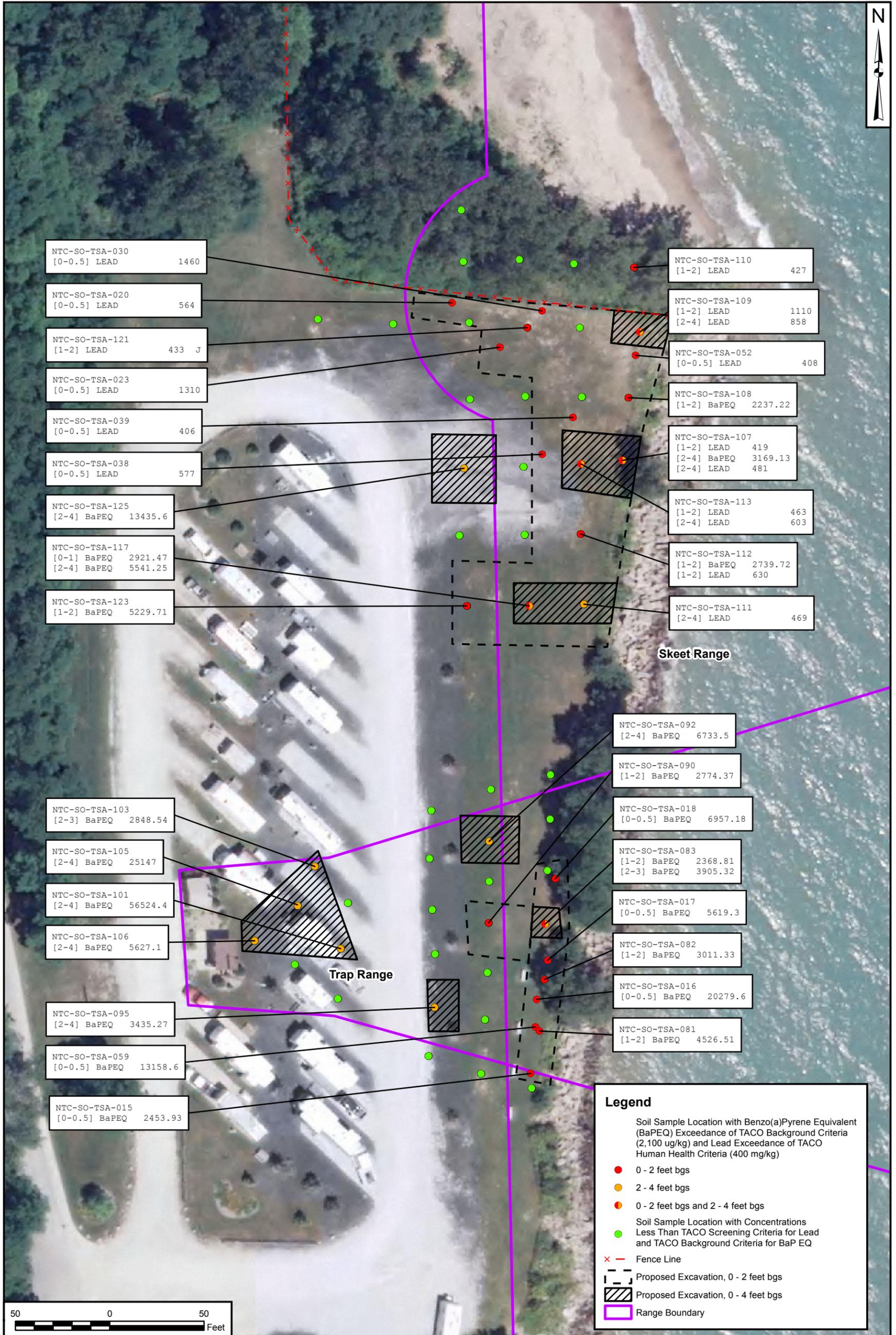


DRAWN BY	DATE
K. MOORE	11/12/09
CHECKED BY	DATE
J. DUCAR	08/23/12
REVISED BY	DATE
J. NOVAK	08/23/12
SCALE AS NOTED	



SITE LOCATION
TSA RANGES
NAVAL STATION GREAT LAKES
GREAT LAKES, ILLINOIS

CONTRACT NUMBER CTO F274	
OWNER NUMBER —	
APPROVED BY	DATE
—	—
FIGURE NO. FIGURE 2	REV 0



DRAWN BY	DATE
J. ENGLISH	01/16/12
CHECKED BY	DATE
J. DUCAR	08/23/12
REVISED BY	DATE
J. NOVAK	08/23/12
SCALE	
AS NOTED	



**PROPOSED SOIL EXCAVATION AREAS WITH TACO EXCEEDANCES
TSA RANGES
NAVAL STATION GREAT LAKES
GREAT LAKES, ILLINOIS**

CONTRACT NUMBER	CTO NUMBER
	F274
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO.	REV
FIGURE 3	0