FINDING OF SUITABILITY TO TRANSFER
(FOST)

Newport Chemical Depot

Category 1, 2, 3, and 4 Parcels

Vermillion County, Indiana

March 2011

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1. PURPOSE

The purpose of this Finding of Suitability to Transfer (FOST) is to document the environmental suitability of certain parcels or property at Newport Chemical Depot (NECD) for transfer to the Newport Chemical Depot Reuse Authority (NeCDRA) consistent with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 120(h) and Department of Defense (DOD) policy. In addition, the FOST includes the CERCLA Notice, Covenant, and Access Provisions and other Deed Provisions and the Environmental Protection Provisions (EPPs) necessary to protect human health or the environment after such transfer.

2. PROPERTY DESCRIPTION

The property to be transferred consists of Community Environmental Response Facilitation Act (CERFA) Category 1 to 4 parcels and consists of 6,665.2 acres, which includes 108 buildings and undeveloped areas. The property was previously used for production of explosives 1,3,5-Trinitro-1,3,5-triazine (RDX) and 2,4,6-Trinitrotoluene (TNT), the production of heavy water, as well as the production and storage of chemical weapons. VX nerve agent (O-ethyl-S-(2-diisopropylaminoethyl) Methyl Phosphonothiolate) was manufactured and stored at NECD. NECD's most recent mission is the safe storage and disposal of chemical weapons. The property is intended to be transferred for a combination of agricultural, industrial, and public recreation purposes and is consistent with the intended reuse of the property as set forth in the NeCDRA's Reuse Plan, dated December 2009. A site map of the property is attached (Enclosure 1).

3. ENVIRONMENTAL DOCUMENTATION

A determination of the environmental condition of the property was made based upon the U.S. Army BRAC [Base Realignment and Closure] 2005, Environmental Condition of Property Report, Newport Chemical Depot, Newport, Indiana, October 2008; the U.S. Army BRAC 2005 Environmental Condition of Property Report Update for FOST 1, Newport Chemical Depot – Indiana, January 2011; and the U.S. Army BRAC 2005, Site Inspection Report, Newport Chemical Depot, Newport, Indiana, November 2009. The information provided is a result of a complete search of agency files during the development of these environmental surveys.

A complete list of documents providing information on environmental conditions of the property is attached (Enclosure 2).

4. ENVIRONMENTAL CONDITION OF PROPERTY

The DOD Environmental Condition of Property (ECP) categories for the property are as follows:

ECP Category 1: 6425 acres (Enclosure 3).

ECP Category 2: 0.2 acres, consisting of an area of removed underground storage tanks located in the east central portion of the installation.

ECP Category 3: 128 acres (Enclosure 3).

ECP Category 4: 112 acres (Enclosure 3).

A summary of the ECP categories for specific buildings, parcels, or operable units and the ECP category definitions is provided in Table 1 – Description of Property (Enclosure 3).

4.1. Environmental Remediation Sites

There were 17 remediation sites located on the property to be transferred under this FOST (FOST 1).

Installation Restoration Program (IRP) Sites FOST 1

Study Section	NFA Per RCRA Permit	Site Description	SWMU Number	AEDB-R Number
1	Y	NSPs	NAAP-1, NAAP-2	NAAP-038
3	Y	Hazardous Waste Storage Building 729A	NAAP-55	N/A
4	Y	RDX-BG and Old Chemical Munitions Component Detonation Area	NAAP-33, NAAP-64	NAAP-023
4	Y	GSBs/PCCRP	NAAP-34 to NAAP-36, NAAP-49	NAAP-032
4	Y	RWABs	NAAP-29 to NAAP-32	NAAP-037
4	N	Present Sanitary Landfill	NAAP-51	N/A
5	Y	TNT-MA Acid Area	NAAP-56 to NAAP-63	N/A
7	Y	CSL	NAAP-27	NAAP-033
7	N	STP	NAAP-52	N/A
7	N	DI/SY (including “vanadium dump”) area	NAAP-65	N/A
7	Y	MCD	NAAP-28A	N/A
8	Y	Former UST Sites (5)	NAAP-66	NAAP-039
8	Y	RDX-MA Acid Facility	NAAP-3A	NAAP-040
8	N	Basins 30007, 30008, & 30009	NAAP-10 thru NAAP-12	NAAP-016
8	N	Coal Ash Basin	NAAP-67	NAAP-0166
8	N	Former Coal Pile	NAAP-69	N/A
8	Y	Waste Oil Tank (near Building 716A)	NAAP-53	N/A

AEDB-R – Army Environmental Data Base – Restoration
BG – burning ground
CSL – closed sanitary land fill
DI/SY – Demilitarization Incineration/Scrap Yard
GSB – gypsum sludge basin

MA – manufacturing area
MCD – Memorial Chapel RDX Dump
N/A – not applicable
NAAP – Newport Army Ammunition Plant (former designation for the NECD)
NFA – No further action
NSP – night soil pit
PCCRP – Pollution Control Center Retention Pond
RCRA – Resource Conservation and Recovery Act
RWAB – red water ash basins
STP – sewage treatment plant
SWMU – Solid Waste Management Unit
UST – underground storage tank

Areas of Concern (AOC) at NECD FOST 1

Study Section	AOC	AOC Name	NFA per RCRA Permit
4	AOC B	Drainage Ditch Near the RDX Purification Process	TBD
8	AOC L	Building 714A	Y
7 & 3	AOC N	Little Raccoon Creek	TBD

A summary of the environmental remediation sites on the property to be transferred is as follows:

4.1.1 Night Soil Pits (NSP)

The NSPs are designated as SWMUs NAAP-1 and NAAP-2. They are in the northwest corner of NECD and consist of a 250- by 250-foot fenced burial area containing two pits. The site is fairly level with elevations ranging from approximately 629 to 635 feet above msl. The site slopes to the west/southwest toward creeks south and west of the site. Prior to closure of the pits, they were the dominant topographic feature at the site. Currently, there are no visible topographic features to identify the pit locations. The site was used in the 1940s to bury "night soils" from privies. In 1968, these pits were used for disposing of decontaminated solid waste from the VX manufacturing process. The decontaminated waste included decontaminated sludge from Chemical Plant settling basin 30025. In 1977, rubble and other burned materials resulting from the razing of the RDX manufacturing facility also were disposed of in the NSPs. There is no record of when or how much "night soils" were placed in these pits.

Facility-wide RCRA Facility Investigation (RFI) groundwater sampling results from one up gradient and two down gradient wells indicate that site-related metals concentrations that were an order of magnitude higher than their background mean were detected only in down gradient well NSP-03. No VX-related compounds were detected in the groundwater during the Facility-wide RFI or during earlier Site Investigation (SI) activities. The reported disposal of decontaminated solid waste from the VX manufacturing process at the NSPs has not impacted the groundwater at this SWMU. A deed notice indicates the presence of the NSPs in this area. Based on these findings, the Army recommended no further action (NFA), other than implementation of land use controls (LUCs) for the NSPs. This recommendation was reviewed and accepted by Indiana Department of Environmental Management (IDEM).

The NSP Area was not remediated to levels suitable for unrestricted use. The deed will include the

following land use restrictions: excavation of soil or buried waste in the pit areas is prohibited and agricultural use of the areas is prohibited. See:

A. *NFA Memorandum, Final, Newport Chemical Depot, Newport, Indiana*, Scientific Applications International Corporation (SAIC), June 2004.

B. Correspondence from IDEM regarding the NFA Memorandum for NECD SWMUs, Newport Chemical Depot, Newport, Indiana, IDEM, January 9, 2004.

C. *Newport Chemical Depot, Land Use Control Implementation Plan*, SAIC, October 2005.

for additional information.

4.1.2 Hazardous Waste Storage Building 729A

The Hazardous Waste Storage Building (Building 729A) is designated as SWMU NAAP-55. The site is a container storage area that was in operation from 1981 to 2006. This SWMU is listed as NFA in the 2006 RCRA permit. All environmental activities at Building 729A have been completed. The building received a clean closure in 2009. The site is ready for unrestricted use. See:

A. NECD RCRA permit for facility ID #IN1210022272, November 2006 for additional information

B. IDEM correspondence dated January 6, 2010 indicating closure certification, and NFA.

for additional information.

4.1.3 RDX-Burning Ground (RDX-BG) and Old Chemical Munitions Component Detonation Area (OCMCDA)

The RDX-BG and OCMCDA are designated as SWMUs NAAP-33 and NAAP-64, respectively. The RDX-BG occupies an area of 14.92 acres in the southwestern portion of NECD and consists of contiguous rectangles measuring 500 by 1,000 feet and 300 by 500 feet. The site reportedly was used sporadically from 1942 to 1946, 1951 to 1957, and 1968 to 1976. Materials burned at the site included waste RDX and waste explosives components of M23 land mines and M55 rockets. The land mine and rocket waste explosives components were disposed of by the U.S. Army Technical Escort Detachment at the RDX-BG.

In addition to the RDX-BG, destruction of component parts from old chemical munitions was reported at the OCMCDA. These parts were not contaminated by agent VX and were destroyed either by burning, detonation, or a combination of the two. The OCMCDA is considered to be the area where the explosives components from land mines and rockets were disposed of. Mines and rockets that were identified as leaking during their filling with chemical agent were decontaminated with chlorine water followed by neutralization with sodium hydroxide; decontamination occurred in Building 144. Leaking M23 mines and M55 rockets with explosive components were shipped to Edgewood Arsenal, Maryland for disposal. Based on this information, it is not believed that chemical agent-contaminated M23 mines and M55 rockets were disposed of at the OCMCDA.

In general, a comprehensive history is not available for the RDX-BG or OCMCDA. There is a lack

of documentation on the previous site activities and the specific location at the site for activities that were conducted. The specific location of activities in the OCMCDA is thought to be either inside the RDX-BG itself or just north of the formerly fenced perimeter of the RDX-BG; however, no visual (aerial photographs) or analytical evidence of such activity was noted either during the initial reconnaissance of the area or after subsequent media sampling.

The Remedial Investigation (RI) was completed in December 1991 by Dames & Moore. A limited geophysical survey was conducted to find the trenches at the RDX-BG. During the RI, carbon tetrachloride and trichloroethene (TCE) were detected in groundwater at concentrations that would present cancer risks over the 1×10^{-6} benchmark if groundwater onsite were used for drinking purposes. However, cancer risks under this unlikely scenario were still below 1×10^{-5} at that time.

This site is now covered by grass. In July 1997, a Facility-wide RFI Work Plan that included a Phase III Release Characterization for Groundwater was submitted. The RFI implementation began in 1998 and was completed in 2000. As noted in the Final RFI Report, in the human health risk assessment, cancer risks, non-cancer hazard indices (HIs), and blood lead levels were below regulatory targets for all receptors evaluated. Although the combined non-cancer HIs for the residents were at or below the target of 1, the target organ HIs did not exceed 1 after segregation according to target organ.

Onsite soil screening of surface soil samples was conducted to delineate the OCMCDA (located either inside or just north of the fenced perimeter of the RDX-BG). Ten percent of the surface soil samples were analyzed by the offsite laboratory to confirm onsite screening results. No explosives were detected during the soil screening and confirmation program.

Test pits were dug in the trench area and did not detect evidence of burial of munitions debris. An 82 foot long and 11 foot deep trench and a 53 foot long and 10 foot deep trench were excavated in the area. Small quantities of shallow debris including pipe, nails, brick, and a deteriorated drum were found near the surface. No evidence to support burial of munitions and explosives of concern (MEC) was detected.

All environmental activities on the RDX-BG and OCMCDA site have been completed. SWMUs NAAP-33 and NAAP-64 are included in the NECD NFA Memorandum. IDEM concurred with NFA for this site on January 9, 2004. These sites do not require any LUCs. See:

A. *NECD RCRA permit for facility ID #IN1210022272,* NECD, November 2006.

B. *NFA Memorandum, Final, Newport Chemical Depot, Newport, Indiana*, SAIC, June 2004.

C. *Correspondence from IDEM regarding the NFA Memorandum for NECD SWMUs, Newport Chemical Depot, Newport, Indiana,* IDEM, January 9, 2004.

for additional information.

4.1.4 Gypsum Sludge Basins (GSBs)/Pollution Control Center Retention Pond (PCCRP)

The GSBs (SWMUs NAAP-34 through NAAP-36) and PCCRP (SWMU NAAP-49) are in the south-central area of NECD. Because of their close proximity to each other and similar functional

relationships, these two SWMUs have been addressed as one SWMU group during the RI and Facility-wide RFI. The GSBs include three above-grade basins, each 10 feet deep and covering an area of 400 by 400 feet (3.67 acres). The basins are constructed with compacted native clay earthen berms with no membrane liner. They were intended to be used to contain settled gypsum sludge produced by the neutralization of acidic wastewaters associated with TNT production in 1973/74. Drainage occurs through a central overflow standpipe in each basin that flows by gravity through underground pipes to the PCCRP. The EPIC study identified standing liquid in all three basins in 1975. Visual inspection of the basins in 1986 identified only the northernmost basin of the GSBs as containing gypsum sludge.

The PCCRP is an in-ground basin constructed of clay, sand, and gravel, and is lined with fiber-reinforced asphaltic panels. The panels are separating and allowing the basin sides to erode. The PCCRP is 5 feet deep and covers an area of 275 by 275 feet (1.74 acres). During active operations in 1973/74, the PCCRP received wastewater from the PCC clarifiers, as well as the GSBs' effluent. The PCCRP also received water from the Red Water Ash Basins (RWABs) during the 1974 TNT plant shutdown. In 1984, the water that had been collected in the RWABs since 1974 (when the TNT plant shut down) was pumped to the PCCRP. The pond currently (1984 to present) accepts storm water drainage from the RWABs, as well as the GSBs, providing a final settling point before the clarified effluent is pumped to Little Raccoon Creek.

Soil and groundwater sampling activities were conducted at the GSBs and PCCRP during three investigations at NECD: the 1991 RI, 1997/98 RFI, and 2000 Follow-on RFI. Sampling locations and analytical parameters were selected based on the history of the SWMUs and identified data gaps. Groundwater, surface/subsurface soil, sediment, and surface water samples were analyzed for the parameters most likely to be present at the SWMUs: VOCs, base/neutral and acid extractables (BNAs)/SVOCs, metals, and explosives. VOCs, BNAs/SVOCs, and explosives were not detected in the soil at either SWMU during the 1987 U.S. Army Environmental Hygiene Agency (USAEHA) study, the 1991 RI, or the 1997/98 RFI. The concentrations of metals detected in the GSBs and PCCRP during the 1991 RI are consistent with background concentrations. Metals concentrations detected in soil in the northernmost GSB during the 2000 Follow-on RFI were all below their associated IDEM migration to groundwater criteria. Hexavalent chromium was not detected in the GSBs groundwater, GSBs soil, or PCCRP sediment samples during the 2000 Follow-on RFI, and all metals concentrations were below IDEM default closure levels.

Elevated metals concentrations were detected in the groundwater during the 1997/98 RFI at concentrations that pose a potential future risk to human health. Human health risk assessment for the GSBs indicates cancer risks and non-cancer HIs exceeding targets for the exposure of residents to groundwater in the shallow unsaturated zone. However, there is neither current nor future feasible use of the sampled shallow groundwater due to poor yield and low transmissivity. Groundwater modeling results indicate that iron and manganese would not be present in the nearest creek at concentrations above background for up to 500 years. In addition, the combined non-cancer HI for the produce consumer is above the target. No risks were calculated for soil at the PCCRP and the risks due to groundwater exposure at the PCCRP are the same as for the GSBs because the groundwater underlying these two areas was treated as a single exposure unit. Based on the rational presented above, NFA, other than implementation of LUCs to restrict residential and agricultural land use at the GSBs and residential land use at the PCCRP, is recommended.

SWMUs NAAP-34 through NAAP-36 and NAAP-49 are included in the NECD NFA

Memorandum. IDEM concurred with NFA for these SWMUs on January 9, 2004. SWMUs NAAP-34 through NAAP-36 are included in the NECD LUCIP. LUCs are in place at the GSBs and the PCCRP.

The GSBs and PCCRP areas were not remediated to levels suitable for unrestricted use. The deed will include the following land use restrictions: The GSBs area cannot be used for residential or agricultural purposes and the PCCRP cannot be used for residential purposes. See:

A. *NFA Memorandum, Final, Newport Chemical Depot, Newport, Indiana,* SAIC, June 2004.

B. *Correspondence from IDEM regarding the NFA Memorandum for NECD SWMUs, Newport Chemical Depot, Newport, Indiana,* IDEM, January 9, 2004.

C. *Newport Chemical Depot, Land Use Control Implementation Plan,* SAIC, October 2005.

for additional information.

4.1.5 Red Water Ash Basins (RWABs)

The RWABs are designated as SWMUs NAAP-29 through NAAP-32. The RWABs are located in the south central area of NECD. The facility consists of three adjacent basins, each measuring approximately 250 by 300 by 18 feet, with a combined capacity of approximately 30 million gallons. Each basin is surrounded by a berm constructed of native clay, sand and gravel, with lower berms between basins. A gap approximately 20 feet wide exists in the western berm at each basin to allow access. The lowest portions of these berm gaps remain several feet higher than the interior areas of the basin. The basins are lined with 2 feet of compacted soil and an approximately ½ inch thick, asphalt impregnated, felt panel liner. A concrete sump in the northeast corner of each basin drains to the holding sump located northeast of the RWADs (SWMU NAAP-32). This holding sump is constructed below grade of native clay, sand, and gravel, and lined with a synthetic membrane liner. The holding sump measures 60 by 60 feet and the capacity is approximately 135,000 gallons. Discharges from the holding sump are piped south to the PCCRP (SMWU NAAP-49).

The RWABs were used to contain wastewater, ash, and sludges resulting from the treatment of red water associated with TNT production in 1973/74. When the TNT plant was put on layaway status in 1974, the sumps in each basin were plugged to prevent runoff to the holding sump. Water was allowed to accumulate in the ash basins and stood at an average depth of 6 feet. In 1984, NECD was permitted to drain accumulated water to the holding sump from where it was pumped to the PCCRP. The sumps currently remain open, allowing conveyance of any accumulated rainwater to the holding sump and finally to the PCCRP.

Residual waste ash from the red water destruction process remains in the two southernmost basins. The north basin was not used for direct disposal of waste; however, all basin soils may have been exposed to the contaminated water from the south and middle basins because accumulated rainwater overflowed the intermediate berms between the basins.

The RWABs no longer contain surface water and were reclassified by EPA, Region 5, as landfill units. A Remedial Investigation (RI) was completed in December 1991. Low levels of contamination (VOCs and explosives) were detected in the sediment contents of the RWAB and in groundwater at the site; however, this does not represent a human or environmental threat. In July

1997, the ENTECH/SAIC team submitted a Facility-wide RFI Work Plan that included a Phase III Release Characterization for groundwater and a Phase II Release Assessment for Surface Water. The RFI implementation began in 1998 and was completed in 2000. The human health risk assessment determined that soil, sediment and surface water risks do not exceed regulatory targets under all scenarios evaluated. SWMUs NAAP-29 through NAAP-32 are included in the NECD NFA Memorandum. IDEM concurred with NFA for these SWMUs on January 9, 2004. These SWMUs do not require LUCs.

All environmental activities in the RWABs Area have been completed. See:

A. *NFA Memorandum, Final, Newport Chemical Depot, Newport, Indiana*, SAIC, June 2004.

B. *Correspondence from IDEM regarding the NFA Memorandum for NECD SWMUs, Newport Chemical Depot, Newport, Indiana,* IDEM, January 9, 2004.

for additional information.

4.1.6 Present Sanitary Landfill

The Sanitary Landfill (SWMU NAAP-51) was permitted and was in operation from 1981 to 1987. The site encompasses approximately 30 acres, but only a small portion, 0.67 acres, was used. This site was closed in 1997 in accordance with Closure and Post-Closure Plans. Groundwater monitoring was to continue for 10 years after closure. On July 3, 2001, IDEM issued a letter to Mason and Hanger stating that the groundwater monitoring requirements for the 10-year post closure period had been met and no further monitoring was necessary. The groundwater monitoring wells have been abandoned.

All environmental activities at the Sanitary Landfill have been completed. IDEM has imposed deed restrictions on the Sanitary Landfill site, no excavation or well installation is permitted on the 0.67 acres per the notice in the deed on the site. The site can be used in accordance with the landfill permit. See:

A. *NECD RCRA permit for facility ID #IN1210022272,* NECD, November 2006.

for additional information.

4.1.7 TNT-MA Acid Production Area

The TNT Acid Production Area is within the TNT-Manufacturing Area (MA). The SWMUs associated with the TNT Acid Production Area are SWMUs NAAP-56 to NAAP-63, which are drains connected to a process sewer system that flows to SWMU NAAP-48, the Pollution Control Center (PCC). These sites were in operation from 1971 to 1974 and included an Acid Tank Farm Drain, a Sulfur and Ammonia Unloading Area Drain, a Utilities and Shop Area Drain, TNT Laboratory Drains, TNT Acid Laboratory Drains, Nitric Acid Concentration (NAC) and Dinitration (DN) Drains, Ammonia Oxidation Plant (AOP) Facility Drain and Sulfuric Acid Regeneration (SAR) Drains. There is no history of releases from these areas. In January 2006, IDEM issued the RCRA permit renewal including this site as NFA.

All Environmental activities at the TNT-MA have been completed. Buildings in the TNT-MA contain asbestos. A TNT cooling tower sump where concrete was buried following clean closure of the sump is located on the site. There are no other environmental restrictions or LUCs on the area. The TNT-MA Acid Production Area can be used in accordance with the RCRA Permit for the site.

4.1.8 Closed Sanitary Landfill (CSL)

The CSL is designated as SWMU NAAP-27 and occupies approximately 4 acres on the southeastern boundary of the installation. The topography at the CSL ranges from 600 to 630 feet above mean sea level (msl). The CSL is bordered to the east by federally leased agricultural land, to the north by a wooded area that separates the site from the former VX production plant, to the south by South Boulevard, and to the west by the Demilitarization Incinerator/Scrap Yard (DI/SY).

Facility operation records indicate that between 1970 and 1977, the CSL was used to dispose of nonhazardous construction debris from the TNT plant, office and shop waste with no salvage value. No records of the materials that were disposed of in this area prior to 1970 are available. Aerial photographs taken of this area from 1940 through 1981 show disposal trenches excavated in a northwest-southeast direction. The waste disposal trenches within the landfill area were each approximately 8 to 10 feet long and 5 feet wide. The landfill was closed in 1977 and topped with cover material consisting of 3 feet of graded soil. The activities related to the CSL were confirmed during interviews with installation personnel.

Soil and groundwater investigations were conducted at the CSL to determine if past operations at the landfill had introduced chemical constituents in the soil and groundwater. Results from the groundwater investigation indicate that explosives, SVOCs, site-related metals, PAHs, and VOCs were detected in multiple wells during more than one sampling event. The organic compounds in groundwater were detected at low concentrations (near the reporting limits [RLs]), and no clear patterns or trends were evident. Metals were detected at concentrations exceeding background during all sampling events. Metals concentrations exceeding background were randomly distributed across the site. RDX was detected in the down gradient wells; however, no trend or source area was identified. Groundwater modeling results indicated that the predicted concentration of RDX after mixing with the creek surface water was less than all applicable comparison criteria. No identifiable relationship exists between chemicals detected in the groundwater and those detected in the surface water/sediment sampling locations along Little Raccoon Creek, immediately down gradient from the CSL. Explosives, SVOCs, and a majority of the VOCs (31 of 34 samples) were detected at concentrations below the RL. Metals in soil generally were detected at varying concentrations across the site and identified inconsistently with depth. There is no trend evident to support identification of a contaminant source.

Although risks to future residential receptors and produce consumers were identified in the risk assessment, no further investigation or remediation is required to address human health risks based on the assumption that future land use would remain nonresidential.

The CSL was not remediated to levels suitable for unrestricted use. The deed will include the following land use restrictions: LUCs will be implemented to prevent contact with groundwater, prohibit excavation of/contact with waste materials, and residential and agricultural land use. SWMU NAAP-27 is included in the NECD LUCIP and LUCs are being implemented. See:

A. *Correspondence from IDEM regarding the NFA Memorandum for NECD SWMUs, Newport Chemical Depot, Newport, Indiana,* IDEM, January 9, 2004.

B. *Newport Chemical Depot, Land Use Control Implementation Plan,* SAIC, October 2005.

for additional information.

4.1.9 Sewage Treatment Plant

The NECD Sewage Treatment Plant (STP) is currently permitted under National Pollution Discharge Elimination System (NPDES) permit (IN 0003506) and has been in operation since the 1940s. The STP consists of a primary settling tank, three aeration tanks, a secondary settling tank, a chlorine contact tank, and four sludge drying beds. The integrity of the sludge beds is not known.

The STP has not been the subject of environmental investigation/remediation and is under a NPDES permit. There is no evidence of groundwater contamination associated with the STP.

4.1.10 Demilitarization Incinerator/Scrap Yard (DI/SY)

The DI/SY (SWMU NAAP-65) borders the western boundary of the CSL and covers approximately 5 acres. The topography at the DI/SY ranges from 600 to 630 feet above mean sea level (msl). The DI/SY maintains the same northern and southern borders as the CSL, but is bordered directly to the west by Little Raccoon Creek. Seeps and springs in the northwestern and southwestern portions of the SWMU produce water that is introduced into Little Raccoon Creek through surface runoff.

A demilitarization incinerator formerly was located within the physical boundaries of SWMU NAAP-65 and along its southern boundary within a fenced area. According to personnel reports, demilitarization/decontamination items, such as defective, empty land mines once filled with chemical agent, were decontaminated in the early 1970s using a bleach wash (3X decontamination) at another site on the installation and then transferred to the incinerator. These empty mines were heated to 5X decontamination, leaving the casings intact, and then deposited in a landfill on the installation. No records are available that indicate whether the casings were disposed of at the CSL or when operations were conducted. A 2003 personnel interview indicated that empty mine casings may have been buried onsite at the DI/SY. The western boundary of the DI/SY is still used on a limited basis as a scrap yard. The demilitarization incinerator was removed from the facility in 2004, and the majority of the area has been overgrown with native grasses.

An RI was completed in December 1991. Contamination by organics, inorganics, and explosives was detected at moderate concentrations in the groundwater. COCs were identified as heavy metals, explosives, and volatiles in the soil and groundwater. A Phase II Release Assessment for Soil and a Phase III Release Characterization for Groundwater were conducted at SWMU NAAP-65, a report was issued in March 1997.

Results from the groundwater RFI indicated that explosives, SVOCs, site-related metals, polynuclear aromatic hydrocarbons (PAHs), and VOCs were detected in multiple wells during more than one sampling event. The organic compounds detected in groundwater were detected at low concentrations (near the RLs), and no clear patterns or trends were evident. Metals concentrations exceeding background were randomly distributed across the site. RDX was detected in the

groundwater, but no trend or source area was identified. Explosives, SVOCs, site-related metals, and VOCs were detected in Scrap Yard soils. Three of the four detected explosives were detected at concentrations below their RLs. SVOCs were identified at low concentrations with no vertical migration and inconsistent spatial distribution and a limited number. VOCs were also detected at low concentrations in the soils in the DI/SY area. Twenty-two metals were detected in the DI/SY soil samples at concentrations exceeding background.

Additional soil sampling activities were conducted at the DI/SY in November and December 2002 to determine whether lead contamination at the site was significant or widespread. The sampling locations were selected based on the history of the SWMU and identified data gaps. The sampling program was designed to determine the presence or absence of elevated lead concentrations in the surface soils. The lead X-ray fluorescence (XRF) and laboratory analysis results were well below the protective closure levels for construction and industrial workers.

SWMU NAAP-65 was included in the NFA Memorandum. IDEM concurred with NFA for this SWMU in January 2004. The DI/SY is included in the NECD LUCIP. LUCs have been implemented.

The DI/SY site was not remediated to levels suitable for unrestricted use. The deed will include the following land use restrictions no soil excavation, and no residential, agricultural or groundwater use. See:

A. *NFA Memorandum, Final, Newport Chemical Depot, Newport, Indiana*, SAIC, June 2004.

B. *Correspondence from IDEM regarding the NFA Memorandum for NECD SWMUs, Newport Chemical Depot, Newport, Indiana,* IDEM, January 9, 2004.

C. *Newport Chemical Depot, Land Use Control Implementation Plan*, SAIC, October 2005.

for additional information.

4.1.11 Memorial Chapel RDX Dump (MCD)

The Memorial Chapel RDX Dump (MCD) (SWMU NAAP-28A) contains various types of construction debris. Ecological risks to terrestrial species from exposure to metals COCs in soil were low. Human health risks did not exceed targets identified for soil or groundwater at the MCD, with the exception of produce consumer exposure to copper. Although copper was identified as the COC for the produce consumer, no further investigation or remediation was recommended to address this risk based on the assumption that future use of land for crop growing is unlikely, and LUCs would be implemented to ensure that the use of the land for agricultural purposes is prevented. The U.S. Army's recommendation was reviewed and approved by IDEM. SWMU NAAP-28A is included in the NFA Memorandum and IDEM concurred with NFA for the MCD in January 2004. SWMU NAAP-28A also is included in the NECD LUCIP and LUCs, including no intrusive activities or agricultural use, have been implemented.

The MCD site was not remediated to levels suitable for unrestricted use. The deed will include the following land use restrictions no soil excavation, and no agricultural use. See:

A. *NFA Memorandum, Final, Newport Chemical Depot, Newport, Indiana*, SAIC, June 2004.

B. *Correspondence from IDEM regarding the NFA Memorandum for NECD SWMUs, Newport Chemical Depot, Newport, Indiana,* IDEM, January 9, 2004.

C. *Newport Chemical Depot, Land Use Control Implementation Plan,* SAIC, October 2005.

for additional information.

4.1.12 Former Underground Storage Tanks (UST) Sites (5)

The Underground Storage Tanks (USTs) (SWMU NAAP-66) were in operation from 1941 to 1990. This SWMU represents four different locations throughout the installation where five USTs were formerly located. The tanks were removed by the installation in 1990, under the oversight of IDEM. During the process of removal of the tanks, it was discovered that the tanks had leaked, thus requiring remedial action of contaminated soil and groundwater at each site. Most of the tanks had not been in use since the early 1970s, and some not since the late 1950s. The COCs were petroleum, oils, and lubricants (POL) in the soil and groundwater. A Final SI for Risk Based Corrective Action for the RCRA RFI Release Assessment was completed in January 1998 and submitted to IDEM and EPA, Region 5. Region 5 approved the assessment report in October 1998. According to the 2005 NECD RCRA permit, a determination of NFA was granted to this site.

All environmental soil and groundwater remediation activities on the Removed UST sites have been completed or are in place and operating properly and successfully. There are no LUCs associated with the four former UST locations.

4.1.13 RDX Manufacturing Area (MA) Acid Facility

The RDX-MA Acid Facility (SWMU NAAP-3A) was in operation between 1942 and 1946, and 1951 and 1957. The site consisted of buildings and chemical process equipment comprising the acid production support facilities of the RDX-MA, and is located in the north-central portion of NECD. This area was identified in the Preliminary Assessment (PA) as potential requiring investigation.

In December 1991, Dames & Moore completed a SI. Based on the completed SI, there were no COCs in the groundwater. Additional surface samples were collected and no COCs were indentified. According to the 2005 NECD RCRA permit, a determination of NFA was granted to the site.

All environmental activities on the property have been completed and the site has been granted NFA status. See:

A. *RCRA Facility Investigation Report, Final, Volumes 1 & 2, Newport Chemical Depot, Newport, Indiana,* SAIC, July 2003.
B. *NECD RCRA permit for facility ID #IN1210022272,* NECD, November 2006.

for additional information.

4.1.14 Basins 30007, 30008, and 30009

Basins 30007, 30008, and 30009 (SWMU-016) were located directly south of the Chemical Plant and were established circa 1950 to accept wastewater from the Heavy Water Plant. After heavy water production was halted and the facility was converted for VX production, basins 30007 and 30008 served as VX waste retention ponds. These same basins were later reutilized to accept wastewater from boiler drains and the Chemical Plant Step III cooling water system. According to Mason & Hanger, Basins 30007 and 30008 received wastewater generated as part of the hydrogen sulfide method of heavy water production from 1950 to 1957, and received wastewater from the Chemical Plant from 1961 to 1968. These two basins measured 192 feet by 436 feet by 10 feet deep and were capable of accepting 7,000 gpm with a retention time of 4.75 hours.

Basin 30009, the easternmost and smallest of the three basins was operational from approximately 1950 to 1980. The basin measured 138 feet by 208 feet by 10 feet deep and was capable of accepting 1,600 gpm with a retention time of 4 hours. It received wastewater from all Chemical Plant boiler blow down activity, Chemical Plant cooling water, and wastewater from regeneration of zeolite water softeners with brine. All three basins were unlined and have been filled in with borrow soil from an unknown location that was not associated with the past practices at these units.

The basins were backfilled in the 1970s and are now covered with grass. Media of concern are in the soil and groundwater. A July 1997 Facility RFI Work Plan, included a Phase III Release Characterization for Groundwater. The RFI implementation began in 1998 and completed in 2002.

During the Site Wide RFI a groundwater sample was collected using a Hydropunch® at the north end of basin 30009; 4 VOCs, 4 SVOCs, and 14 metals were detected in the sample. Soil and sediment samples were collected from nine Geoprobe® holes collected in the basins. Six of the eight organic chemicals detected in the groundwater sample also were detected in the soil/basin sediment samples. Ten site-related metals were detected in the soil/basin sediment samples. Eight VOCs and three SVOCs were detected in the basin sediment samples. VX breakdown products were not detected in any of the samples from the nine borings. The pH of the samples was close to neutral (7.1 to 7.9). In the human health risk assessment, cancer risk fell below the target of 1×10^{-4} and non-cancer HIs fell below the target of 1. Exposures to constituents at the CPRBs are expected to be minimal for ecological receptors as all soil samples were collected from below 4 feet BLS. As a result, no unacceptable human health or ecological risks exist at the basins.

SWMU NAAP-4 was demolished on September 28, 2000. Only samples from the liquid and sediment from inside the basin were taken. The NECD Report of the Destruction of SWMU NAAP-4 was issued in November 2001. SWMU NAAP-4 will require additional soil sampling for SVOCs. SWMUs NAAP-10 through NAAP-12 are included in the NECD NFA Memorandum. IDEM concurred with NFA for these SWMUs on January 9, 2004. SWMUs NAAP-10 through NAAP-12 are included in the NECD LUCIP.

The basins were not remediated to levels suitable for unrestricted use. The deed will include the following land use restrictions no residential, agricultural or groundwater use of the site. See:

A. *NFA Memorandum, Final, Newport Chemical Depot, Newport, Indiana*, SAIC, June 2004.

B. *Newport Chemical Depot, Land Use Control Implementation Plan*, SAIC, October 2005.

for additional information.

4.1.15 Chemical Plant Coal Ash Basin

The Chemical Plant Coal Ash Basin (CPAB) (SWMU NAAP-67) was constructed in 1941 to accept coal ash from Building 401A Power House operations. The basin is approximately 100 feet east of SWMU NAAP-12 and measures approximately 250 by 300 by 6 feet deep. The basin accepted sluiced coal ash, a mixture of coal ash and water from Power House operations, and water that was pumped from Building 401A south to the basin. These discharged residual materials formed a sediment layer at the bottom of the basin. The Power House operated continuously between February 1942 and September 1946 and intermittently between August 1951 and March 1957.

During the 2001 RFI, 2 VOCs, 3 semi-volatile organic compounds (SVOCs), and 15 site-related metals were detected in the soil/sediment samples. Ecological risk to terrestrial receptors from soil exposure to metal ecological chemicals of potential concern (ecoCOPCs) was determined to be low. In the human health risk assessment, cancer risks were below regulatory targets for all receptors evaluated. The non-cancer HIs were below regulatory targets for all receptors except the resident child exposed to subsurface soil in the future. Although resident exposure to iron in the subsurface soil is responsible for human health risks exceeding regulatory targets, the ingestion HQ for the residential child only slightly exceeds the target of 1, and the iron risk is uncertain and likely conservative because the reference dose (RfD) is provisional and based on nutritional requirements. SWMU NAAP-67 is included in the NECD NFA Memorandum. IDEM concurred with NFA for this SWMU on January 9, 2004. SWMU NAAP-67 is included in the NECD LUCIP. LUCs are being implemented including no agricultural, residential, or groundwater use.

The property was not remediated to levels suitable for unrestricted use. The deed will include the following land use restrictions, no agricultural, residential or groundwater use shall take place at the site. See:

A. *NFA Memorandum, Final, Newport Chemical Depot, Newport, Indiana*, SAIC, June 2004.
B. *Correspondence from IDEM regarding the NFA Memorandum for NECD SWMUs, Newport Chemical Depot, Newport, Indiana,* IDEM, January 9, 2004.
C. *Newport Chemical Depot, Land Use Control Implementation Plan*, SAIC, October 2005.

for additional information.

4.1.16 Former Power House Coal Pile

The Former Power House Coal Pile (PHCP) likely supported the Power House activities and was in use during the same period as the Power House (February 1942 through September 1946 and intermittently between August 1951 and March 1957). Installation blueprints show a coal storage area approximately 300 by 300 feet due west of the Power House. There is no record of this area being lined or paved for coal storage. Exposed coal piles have the potential to release inorganic contaminants, such as arsenic, copper, lead, nickel, and zinc to the environment. However, during the 2001 RFI, the concentrations of metals in the soil were within the range of background soil concentrations. SWMU NAAP-69 is included in the NECD NFA Memorandum. IDEM concurred with the NFA for this SWMU in a letter dated January 9, 2004. LUCs are not required for SWMU

NAAP-69.

All environmental investigation activities on the PHCP site have been completed and no land use restrictions are needed at the site.

4.1.17 Waste Oil Tank (Near Building 716A)

The Waste Oil Tank near Building 716A is an above ground storage tank (AST). The site was in operation from the 1970s to 1993. The 1,000-gallon tank contained used oil; solvents and PCBs were introduced into the tank, and the tank was managed as a hazardous waste tank until it underwent clean-closure in 1993. An IDEM letter dated October 14, 1993 states that IDEM received NECD's certification dated April 23, 1993, for partial closure for the 1,000-gallon waste oil tank. With the receipt of this certification, partial closure was completed as required by 40 Code of Federal Regulation (CFR) 265 Subpart G. According to the 2005 NECD RCRA permit, a determination of NFA was granted to this site.

All environmental remediation activities at the Waste Oil Tank (near Building 716A) have been completed. This site is cleared for unrestricted use.

A summary of the environmental remediation sites is provided in Table 1 - Description of the Property and Table 2 – Notification of Hazardous Substance Storage, Release, or Disposal (Enclosure 3 and 4).

4.2 2009 Site Inspection

As part of the preparation for transfer, a Site Inspection (SI) was conducted at 31 sites at NECD. The SI Report recommended NFA for the sites listed in the table below. IDEM concurred with the NECD SI NFA recommendations. Property categories changed from the 2008 ECP for each of the sites recommended for NFA; the updated categories are listed below.

Summary of the SI NFA Recommendations

ECP Study Section	Building/Site	Source of Contamination	SI Sampling	Site Recommendation	ECP Update Property Category
1	Richmond Magazines 33 and 47	Magazine 33 – white, powdery residue (possible explosives) Magazine 47 – explosives storage	Drilled 2 soil borings at each magazine at the gutter outfalls; collected 1 surface and 1 subsurface sample from each boring; analyzed for explosives and metals; conducted colorimetric field test of white powdery residue in Magazine 33 to determine if explosives are present	NFA (White powdery substance removed from magazine in October 2010)	3
	West Pine Tree Area	Burial of unknown materials	Drilled 5 borings; collected 5 subsurface soil samples; analyzed for VOCs, SVOCs, explosives, VX-related products, and metals	NFA	3

ECP Study Section	Building/Site	Source of Contamination	SI Sampling	Site Recommendation	ECP Update Property Category
3	RDX Manufacturing Area – Area F Parking Lot	Ton container (TC) storage	Drilled 5 borings; collected 5 surface and 5 subsurface soil samples; analyzed for VX-related products	NFA	1
	Former Skeet Range	Lead bullets	**Stage 1:** Divided the area into grids; collected 5 soil samples from each grid and composited samples; conducted XRF analysis for lead **Stage 2:** Sent 3 samples to laboratory for lead, antimony, arsenic, copper, tin, zinc, iron, pH, and redox analysis	NFA	3
	Mason & Hanger Hazardous Waste Storage (Building 729B)	Hazardous waste	Collected one 4-point composite surface soil sample; analyzed for SVOCs, metals, explosives, and PCBs; collected 4 discrete samples and analyzed for VOCs	NFA	3
5	Red Water Spill at the TNT Manufacturing Area	Red water	Drilled 10 borings; collected 10 surface and 10 subsurface soil samples analyzed for explosives	NFA is recommended based on future industrial use	3
	Toluene Spill at TNT Manufacturing Area	Toluene	Drilled 9 borings; collected 9 surface and 9 subsurface soil samples; analyzed for VOCs	NFA	3
	Water Tower – South (Structure 4261)	Lead paint	**Stage 1:** Conducted XRF analysis to delineate the site; divided the area into grids and collected surface soil samples and composited samples; analyzed for lead **Stage 2:** Sent 3 samples to laboratory for lead analysis	NFA	3
6	Drum Located North of Cull Avenue, West of 12th Street, Containing Black Tarry Material	Drum with unknown contents	Removed drum; collected 1 sample form the soil directly beneath the drum; analyzed for VOCs, SVOCs, explosives, and metals	NFA	3
	Drum Located on West Bank of Little Raccoon Creek, South of South Boulevard, containing black tarry	Drum with unknown contents	Removed drum; collected 1 sample form the soil directly beneath the drum; analyzed for VOCs, SVOCs, explosives, and metals	NFA	3

ECP Study Section	Building/Site	Source of Contamination	SI Sampling	Site Recommendation	ECP Update Property Category
	material				
6 (cont.)	Mine Burial Area at Scrap Yard	Formerly filled mines	Drilled 5 borings; collected 5 subsurface soil samples; analyzed for explosives, VX-related products, and metals	NFA	3
	Closed Sanitary Landfill	Pesticide container burial	Collected 3 samples from existing wells; analyzed for pesticides	NFA	3
	Sewage Treatment Plant Sludge Beds	Sewage	Collected 5 soil samples adjacent to the sludge beds; analyzed for VOCs, SVOCs, and metals	NFA	3
	Decontaminated Waste Burial Ground Pine Tree Area	Burial of unknown materials	Drilled 5 borings; collected 5 subsurface soil samples; analyzed for VOCs, SVOCs, explosives, VX-related products, and metals	NFA	3
	Asbestos Burial Area West of the Sewage Treatment Plant	Burial of construction debris	Drilled 3 borings; collected 3 subsurface soil samples; analyzed for VOCs, SVOCs, explosives, VX-related products, and metals	No further investigation or remediation is recommended based on future industrial use; a LUC restricting intrusive activity is recommended	4
	Asbestos Burial Area East of the Pine Trees and West of 1st Street	Burial of construction debris	Drilled 5 borings; collected 5 subsurface soil samples; analyzed for VOCs, SVOCs, explosives, VX-related products, and metals	A LUC restricting intrusive activity is recommended	4
8	Fire Training Pit	Waste POL, wood with LBP	Drilled 5 borings; collected 5 surface and 5 subsurface soil samples; analyzed for VOCs, SVOCs, and lead	NFA	3
	Former Locomotive House (Former Building 718A) and Surrounding Area	POL, solvents	Drilled 5 borings; collected 5 subsurface soil samples; analyzed for VOCs, SVOCs, and metals	NFA	3
	Water Tower – North (Structure 510)	Lead paint	**Stage 1:** Conducted XRF analysis to delineate the site; divided the area into grids and collected surface soil samples and composited samples; analyzed for lead **Stage 2:** Sent 3 samples to laboratory for lead analysis	NFA	3
	Building 716D	POL, solvents	Drilled 5 borings; collected 1 soil sample adjacent to each of	NFA	3

ECP Study Section	Building/Site	Source of Contamination	SI Sampling	Site Recommendation	ECP Update Property Category
			3 floor drains, 1 adjacent to the outdoor drain, and 1 adjacent to the outdoor sewer drain; analyzed for VOCs, SVOCs, and metals		
8 (cont.)	Building 722A	Pesticides and herbicides	Collected one 4-point composite surface soil sample; analyzed for pesticides and herbicides	NFA	3
	Building 723A	Pesticides and herbicides	Collected one 4-point composite surface soil sample; analyzed for pesticides and herbicides	NFA	3
	Asbestos Burial Area West of Building 401A	Burial of construction debris	Drilled 2 borings; collected 2 subsurface soil samples; analyzed for VOCs, SVOCs, explosives, VX-related products, PCBs, and metals	No further investigation or remediation is recommended based on future industrial use; a LUC restricting intrusive activity is recommended	4
	Asbestos Burial Area North of Building 401A	Burial of construction debris	Drilled 2 borings; collected 2 subsurface soil samples; analyzed for VOCs, SVOCs, explosives, VX-related products, PCBs, and metals	A LUC for area is recommended	4
	Former Fuel Oil Tanks at RDX Manufacturing Area Acid Manufacturing Area	Fuel oil	Drilled 2 borings; collected 2 subsurface soil samples; analyzed for VOCs (1) and SVOCs (2)	NFA	2

Notes: POL = petroleum, oil and lubricant

In addition, Building 401A is not being transferred as part of this FOST. The area around Building 401A is suspected to be contaminated with PCBs. As a result of the SI work the area of potential PCB contamination was expanded 300 feet to the west and 300 feet to the north of the former boundary. This area will not be transferred as part of this FOST.

The determination was made as part of the ECP update that, based on review of the NECD Phase II Recommendations Report, the Sulfuric Acid Spill in the TNT Acid Area and the Oleum Spill Near Cull Avenue were spills of virgin product and no sampling is recommended. This will result in a change to the property categorization of these two sites from Category 7 to Category 3. These areas are included in the property transfer.

Hazardous materials stored under permit in Buildings 1401A, 1401B, igloos, Intermodal Storage Containers, PAB Tank Storage, and TMA Container Storage have been removed. The permitted hazardous materials storage closure has been approved by IDEM. This has resulted in a change to

the property categorization of these buildings from Category 7 to Category 1. These buildings are included in the property transfer.

4.3. Storage, Release, or Disposal of Hazardous Substances

Hazardous substances were stored for one year or more and released or disposed of on the property in excess of reportable quantities specified in 40 CFR Part 373. All hazardous substance storage operations have been terminated on the property. Hazardous substances were released in excess of the 40 CFR 373 reportable quantities at the following sites:

- A Waste Oil Above Ground Storage Tank near Building 716A is designated as SWMU NAAP-53. The 1,000-gallon tank contained used oil. However, solvents and polychlorinated biphenyls (PCBs) were introduced into the tank, and the tank was managed as a hazardous waste tank until it underwent clean-closure in 1993. Tank removal and contaminated soil excavation were completed in February 1993. An IDEM letter dated October 14, 1993 states that IDEM received NECD's certification dated April 23, 1993, for partial closure for the 1,000-gallon waste oil tank. With the receipt of this certification, partial closure was completed as required by 40 CFR 265 Subpart G. According to the 2005 NECD RCRA permit, a determination of NFA was granted to this site.

The release or disposal of these hazardous substances was remediated at the time of the release or as part of the Installation Restoration Program (IRP). See Section 4.1 Environmental Remediation Sites for additional information. A summary of the buildings or areas in which hazardous substance activities occurred is provided in Table 2 – Notification of Hazardous Substance Storage, Release, or Disposal (Enclosure 4). The CERCLA 120(h)(3) Notice, Description, and Covenant at Enclosure 7 will be included in the Deed.

4.4. Petroleum and Petroleum Products

4.3.1. UNDERGROUND AND ABOVE-GROUND STORAGE TANKS (UST/AST)

Current UST/AST Sites - There are four underground and three above-ground petroleum storage tanks (UST/AST) on the property. There is no evidence of petroleum releases from these sites.

Former UST/AST Sites - There were twenty underground and/or fourteen above-ground petroleum storage tanks (UST/AST) on the property that have been removed or closed in place. Petroleum product releases occurred at the following sites:

During USTs removals in the 1990's leaks were detected from five UST locations:

Leaking UST Locations

Tank Designation	Contents	Capacity
Tank 144-1	Diesel	550 gallon

Tank Designation	Contents	Capacity
Tank 716A-1	Gasoline	1,000 gallon
Tank 718A-1	Diesel	12,000 gallon
Tank 710-1	Gasoline	8,000 gallon
Tank 710-2	Diesel	3,000 gallon

During the process of removing the tanks, it was discovered that the tanks had leaked, thus requiring remedial action of the contaminated soil and groundwater at each site. The tanks were designated SWMU-66. The COCs were petroleum, oils, and lubricants (POL) in the soil and groundwater. A Final SI for Risk Based Corrective Action for the RCRA RFI Release Assessment for SWMU NAAP-66 was completed in January 1998 and submitted to IDEM and EPA, Region 5. Region 5 approved the assessment report in October 1998. According to the 2005 NECD RCRA permit, a determination of NFA was granted to these sites.

A 1,000-gallon petroleum UST in the southern portion of the RDX acid area was removed in January 2007. The tank was used during RDX production. A crack in the return pipe was found. At the time of the tank removal, soil was discolored and there was a petroleum odor. Soil and groundwater sampling was conducted; IDEM approved leaving the contaminated soil in place. This UST site was granted NFA by IDEM.

Two 500,000-gallon above-ground storage tanks containing fuel oil were located at the TNT acid area. No releases were reported from the tanks, but in 1992 a release of approximately 150 gallons from a corroded pipe was reported. The pipeline area associated with the tanks is not part of this FOST. The ASTs have been removed. The area was addressed in the 2009 Site Inspection (SI) and does not warrant further investigation; however, for housekeeping purposes, removal of the piping should be considered.

The release of these petroleum products was remediated at the time of the release or as part of UST/AST closure. See: NFA Memorandum, Final, Newport Chemical Depot, Newport, Indiana, SAIC, June 2004; Correspondence from IDEM regarding the NFA Memorandum for NECD SWMUs, Newport Chemical Depot, Newport, Indiana, IDEM, January 9, 2004; U.S. Army BRAC 2005 Site Inspection Report, Newport Chemical Depot, Newport, Indiana, SAIC, November 2009; and U.S. Army BRAC 2005 Environmental Condition of Property Report, Newport Chemical Depot – Indiana, SAIC, October 2008 for additional information.

A summary of the UST/AST petroleum product activities is provided in Table 3 – Notification of Petroleum Products Storage, Release, or Disposal (Enclosure 5).

4.3.2. NON-UST/AST STORAGE, RELEASE, OR DISPOSAL OF PETROLEUM PRODUCTS

There was non-UST/AST storage of petroleum products in excess of 55 gallons for one year or more on the property. The petroleum was used for the following types of activities: Oil filled electrical transformers, hydraulic oil in equipment, day tanks of diesel fuel at emergency generators, waste oil drums, vehicle maintenance operations, industrial operations, and small quantities of other petroleum products were stored and used at NECD.

Petroleum product release or disposal in excess of 55 gallons occurred at the following buildings or areas:

1. Based on an interview with a NECD Fire Department employee, a fire training pit in Study Section 6 was used in the late 1960s. There is a depression in the ground at the former location south of Building 710 and west of the sand pit. Diesel and gasoline were burned during training exercises. The site was investigated as part of the 2009 SI, NFA was recommended.
2. Motor pool/repair shops at the Chemical Plant (Study Section 8) include Buildings 715A, 716A, and 716D. Buildings 715A and 716A have been used for vehicle maintenance and Building 716D has been used as a wash rack. Minor oil spills were noted on the floors during a visual site inspection; however, there was no evidence of releases to the environment. Buildings 716A and 716D were investigated as part of the 2009 SI. Further investigation of benzo(a)pyrene, antimony, and lead in the soil south of Building 716A was recommended. NFA was recommended for Building 716D. Buildings 716A and 716D will not be transferred under the current FOST but will be transferred under a subsequent FOST.
3. Oil/water separators (OWSs) were discovered during construction of the NECDF in Study Section 8. Three unlined basins and a Former Locomotive House also were in this location. Petroleum-contaminated soil was removed before construction was completed in 2003.

The release or disposal of these petroleum products was remediated at the time of the release or as part of the installation restoration program. See U.S. Army BRAC 2005 Site Inspection Report, Newport Chemical Depot, Newport, Indiana, SAIC, November 2009 for additional information.

A summary of the non-UST/AST petroleum activities is provided in Table 3 – Notification of Petroleum Products Storage, Release, or Disposal (Enclosure 5).

4.4. Polychlorinated Biphenyls (PCB)

According to a 2004 PCB equipment survey, there is no evidence of current use of PCBs or PCB-contaminated equipment on the property. However, in October 1994, a 55-gallon drum containing transformer oil ruptured while personnel were attempting to move the drum onto a pallet in Building 729A. The concentration of PCBs in the oil was between 50 ppm and 500 ppm. Approximately five gallons of oil spilled onto the floor. The floor was concrete with an epoxy coating and was impervious. The spill was cleaned up and confirmation samples showed that the cleanup operations were sufficient to comply with 40 CFR Part 761.

PCB contamination was also detected at the former cooling tower in the TNT area (TNT-CTS). PCBs were the only COC in the sump water at the TNT-CTS. The water was treated using a granular activated carbon (GAC) filter system. Approximately 428,600 gallons of water were treated. Wood debris was removed from the sump. Sludge remaining in the bottom of the sump was consolidated and sampled. Approximately 480 cubic yards of wood debris and 30 cubic yards of sludge were removed from the sump and disposed of at an appropriate landfill. The concrete

walls and floor of the sump were cleaned. The soil beneath the sump was sampled and was not contaminated. The walls of the sump were broken up and buried in the sump excavation and the excavation was back filled to grade with clean soil.

The PCBs were remediated at the time of the release or as part of the installation restoration program. See SAIC. 2008, *U.S. Army BRAC 2005, Environmental Condition of Property Report, Newport Chemical Depot – Indiana*, October; 2003, IDEM Low-Level PCB Certification No. 00021 for the TNT cooling tower, October; 2005, SAIC, Draft *Newport Chemical Depot TNT Cooling Tower Removal Action Completion Report*, April; and Mason & Hanger, 2010, 2009 PCB Annual Report, Newport Chemical Depot, Newport, Indiana, June for additional information.

4.5. Asbestos

An asbestos survey was completed in 1992. A substantial amount of asbestos was removed and a subsequent survey was conducted in 2003. The 2003 survey results are presented in the following table:

Asbestos Survey Status of and ACM identified in NECD Buildings

Study Section / Building Number	Building Name	Asbestos Status	Location if Present
1 / 14171	Richmond Magazine 1	Present	Sheeting, siding, and between roof rafters
1 / 14172	Richmond Magazine 2	Present	Sheeting, siding, and between roof rafters
1 / 14173	Richmond Magazine 3	Present	Sheeting, siding, and between roof rafters
1 / 14174	Richmond Magazine 4	Present	Sheeting, siding, and between roof rafters
1 / 14175	Richmond Magazine 5	Present	Sheeting, siding, and between roof rafters
1 / 14176	Richmond Magazine 6	Present	Sheeting, siding, and between roof rafters
1 / 14177	Richmond Magazine 7	Present	Sheeting, siding, and between roof rafters
1 / 14178	Richmond Magazine 8	Present	Sheeting, siding, and between roof rafters
1 / 14179	Richmond Magazine 9	Present	Sheeting, siding, and between roof rafters
1 / 141710	Richmond Magazine 10	Present	Sheeting, siding, and between roof rafters
1 / 141711	Richmond Magazine 11	Present	Sheeting, siding, and between roof rafters
1 / 141712	Richmond Magazine 12	Present	Sheeting, siding, and between roof rafters
1 / 141713	Richmond Magazine 13	Present	Sheeting, siding, and between roof rafters
1 / 141714	Richmond Magazine 14	Present	Sheeting, siding, and between roof rafters
1 / 141715	Richmond Magazine 15	Present	Sheeting, siding, and between roof rafters
1 / 141716	Richmond Magazine 16	Present	Sheeting, siding, and between roof rafters
1 / 141717	Richmond Magazine 17	Present	Sheeting, siding, and between roof rafters
1 / 141718	Richmond Magazine 18	Present	Sheeting, siding, and between roof rafters
1 / 141719	Richmond Magazine 19	Present	Sheeting, siding, and between roof rafters
1 / 141720	Richmond Magazine 20	Present	Sheeting, siding, and between roof rafters
1 / 141721	Richmond Magazine 21	Present	Sheeting, siding, and between roof rafters
1 / 141722	Richmond Magazine 22	Present	Sheeting, siding, and between roof rafters
1 / 141723	Richmond Magazine 23	Present	Sheeting, siding, and between roof rafters
1 / 141724	Richmond Magazine 24	Present	Sheeting, siding, and between roof rafters
1 / 141725	Richmond Magazine 25	Present	Sheeting, siding, and between roof rafters
1 / 141726	Richmond Magazine 26	Present	Sheeting, siding, and between roof rafters
1 / 141727	Richmond Magazine 27	Present	Sheeting, siding, and between roof rafters
1 / 141728	Richmond Magazine 28	Present	Sheeting, siding, and between roof rafters
1 / 141729	Richmond Magazine 29	Present	Sheeting, siding, and between roof rafters

Study Section / Building Number	Building Name	Asbestos Status	Location if Present
1 / 141730	Richmond Magazine 30	Present	Sheeting, siding, and between roof rafters
1 / 141731	Richmond Magazine 31	Present	Sheeting, siding, and between roof rafters
1 / 141732	Richmond Magazine 32	Present	Sheeting, siding, and between roof rafters
1 / 141733	Richmond Magazine 33	Present	Sheeting, siding, and between roof rafters
1 / 141734	Richmond Magazine 34	Present	Sheeting, siding, and between roof rafters
1 / 141735	Richmond Magazine 35	Present	Sheeting, siding, and between roof rafters
1 / 141736	Richmond Magazine 36	Present	Sheeting, siding, and between roof rafters
1 / 141737	Richmond Magazine 37	Present	Sheeting, siding, and between roof rafters
1 / 141738	Richmond Magazine 38	Present	Sheeting, siding, and between roof rafters
1 / 141739	Richmond Magazine 39	Present	Sheeting, siding, and between roof rafters
1 / 141740	Richmond Magazine 40	Present	Sheeting, siding, and between roof rafters
1 / 141741	Richmond Magazine 41	Present	Sheeting, siding, and between roof rafters
1 / 141742	Richmond Magazine 42	Present	Sheeting, siding, and between roof rafters
1 / 141743	Richmond Magazine 43	Present	Sheeting, siding, and between roof rafters
1 / 141744	Richmond Magazine 44	Present	Sheeting, siding, and between roof rafters
1 / 141745	Richmond Magazine 45	Present	Sheeting, siding, and between roof rafters
1 / 141746	Richmond Magazine 46	Present	Sheeting, siding, and between roof rafters
1 / 141747	Richmond Magazine 47	Present	Sheeting, siding, and between roof rafters
1 / 141748	Richmond Magazine 48	Present	Sheeting, siding, and between roof rafters
1 / 141749	Richmond Magazine 49	Present	Sheeting, siding, and between roof rafters
1 / 141750	Richmond Magazine 50	Present	Sheeting, siding, and between roof rafters
1 / 141751	Richmond Magazine 51	Present	Sheeting, siding, and between roof rafters
1 / 141752	Richmond Magazine 52	Present	Sheeting, siding, and between roof rafters
3 / 729A	Hazardous Waste Storage	Present	Coating on metal siding; galbestos
3 / 729B	Hazardous Waste Storage	Present	Coating on metal siding; galbestos
3 / 729C	Warehouse	Present	Coating on metal siding; galbestos
3 / 729D	Warehouse	Present	Coating on metal siding; galbestos
3 / 729E	Warehouse	Present	Coating on metal siding; galbestos
3 / 1401A	Warehouse	All ACM removed	NA
3 / 1401B	Warehouse	Not surveyed	NA
3 / 1401C	Warehouse	Not surveyed	NA
3 / A3200	Access Control Facility	Not surveyed	NA
3 / A3301	Igloo	Not surveyed	NA
3 / A3302	Igloo	Not surveyed	NA
3 / A3303	Igloo	Not surveyed	NA
3 / A3304	Igloo	Not surveyed	NA
3 / A3305	Igloo	Not surveyed	NA
3 / A3306	Igloo	Not surveyed	NA
3 / A3307	Igloo	Not surveyed	NA
3 / A3308	Igloo	Not surveyed	NA
4 / 224B	Warehouse	All ACM removed	NA
5 / 729	TNT Pollution Control Area Maintenance Shop	Not surveyed	NA
5 / 3001	Acid QA Lab & Office (TNT Lab/Office)	All ACM removed	NA
5 / 3005	Maintenance Warehouse	Present	Hot water storage tank in Utility Room
5 / 3022	Acid Manufacturing Plant	All ACM removed	NA
5 / 3063	Acid Manufacturing Plant	All ACM removed	NA
5 / 4011	Heat Plant Building	All ACM removed	NA
5 / 4123	Water Supply Building	All ACM removed	NA
5 / 4261	Water Tank	Not surveyed	NA
5 / 6192	Acid Manufacturing Plant	No ACM present	NA

Study Section / Building Number	Building Name	Asbestos Status	Location if Present
6 / 104G	Warehouse	Not surveyed	NA
6 / 121A	Warehouse	All ACM removed	NA
6 / 121B	Warehouse	Present	Mastic, Galbestos coating on metal siding
6 / 121C	Warehouse	Present	Coating on metal siding; galbestos
6 / 223A	Warehouse	Present	Roofing
6 / 227A	Warehouse (Tool Crib)	No ACM present	NA
6 / 227B	Warehouse	No ACM present	NA
6 / 227C	Warehouse	No ACM present	NA
6 / 227D	Warehouse	No ACM present	NA
6 / 255A	Warehouse	No ACM present	NA
6 / 7700	Administration	Present	Floor Tile
6 / 7702	Vehicle Storage	No ACM present	NA
7 / 6053	Sewage Treatment Plant (STP)	No ACM present	NA
8 / 146	Magazine	No ACM present	NA
8 / 147	Magazine	No ACM present	NA
8 / 510	Water Tower	Not surveyed	NA
8 / 706	Maintenance Shop	All ACM removed	NA
8 / 710	Warehouse	No ACM present	NA
8 / 713	Warehouse	No ACM present	NA
8 / 715	Maintenance Shop	All ACM removed	NA
8 / 716	Warehouse	No ACM present	NA
8 / 401A	Power House	Present	Boilers
8 / 402A	Reservoir	No ACM present	NA
8 / 412A	Reservoir Pump House	All ACM removed	NA
8 / 704A	Eng Service Office	All ACM removed	NA
8 / 707C	Change House	Present	Shingles and floor tile
8 / 707E	Boiler Room	No ACM present	NA
8 / 709A	Fire Headquarters Building	No ACM present	NA
8 / 713B	Warehouse	No ACM present	NA
8 / 714A	Material Shed	All ACM removed	NA
8 / 715A	Engineering/Housing Maintenance Shop	Present	Transite siding
8 / 716A	Vehicle Maintenance Shop	No ACM present	NA
8 / 716D	Vehicle Maintenance Shop	Present	Shingles
8 / 716F	Boiler House	No ACM present	NA
8 / 722A	Pesticide Storage Building	Present	Shingles
8 / 723A	Chemical Operations	All ACM removed	NA
8 / 725A	Vehicle Parking and Storage	Present	Siding
8 / 726A	Storage Shed	No ACM present	NA
8 / 726B	Storage Shed	No ACM present	NA
8 / 726C	Storage Shed	No ACM present	NA
8 / 726D	Storage Shed	Not surveyed	NA
8 / 733K	Emergency Vehicle Storage & Training Building	No ACM present	NA
8 / 739A	Warehouse	Present	Siding
8 / 707BB	Office Building	Present	Shingles
8 / 707CC	Guard Headquarters	All ACM removed	NA

The ACM includes: sheeting, siding, coatings, insulation, mastic, Galbestos, roofing, floor tile, and shingles. As a general rule the ACM materials listed that would be friable would be thermal system

insulation (TSI). Buildings 3005 Maintenance Warehouse hot water storage tank in utility room and Building 401A Power House boilers could be insulated with friable TSI. The remaining materials listed would not be friable unless damaged. The friable ACM is encapsulated.

Galbestos has been identified in selected buildings. Galbestos contains low levels of PCBs. Sampling was conducted around building 729B and no PCBs were detected even though Region 5 typically does not request soil sampling when Galbestos siding is present. The composite sample taken was focused on areas of runoff from the building.

The 2003 asbestos survey also included a Disposal Report table including data from non-intrusive asbestos building inspections. The table is reproduced here:

Disposal Report

Building No.	ACM Type/Location	Condition	ACM Control Measures
717A, Combined Shops	Category II, non friable Transite exterior siding	Poor	ACM enclosed within metal siding
717A, Combined Shops	Category I, non friable Floor Tile, Offices at north and south ends of building	Good	Non-abrasive floor polishing used, Maintenance restricted to licensed asbestos workers
713A, General Stores	Category II, non friable Transite exterior siding	Poor	ACM enclosed within metal siding
713A, General Stores	Category I, non friable Floor Tile, General Offices throughout the building	Good	Non-abrasive floor polishing used, Maintenance restricted to licensed asbestos workers
726D Cylinder Dock	Category II, non friable Transite exterior siding	Good	Maintenance restricted to licensed asbestos workers
704A, Storage Bldg.	Category II, non friable Transite exterior siding	Good	Maintenance restricted to licensed asbestos workers
707C, Change House	Category II, non friable Transite exterior siding	Good	Maintenance restricted to licensed asbestos workers
707BB, Change House (un-occupied)	Category II, non friable Transite exterior siding	Good	Maintenance restricted to licensed asbestos workers
707BB, Change House (un-occupied)	Category I, non friable Floor Tile, General Offices throughout the building	Good	Non-abrasive floor polishing used, Maintenance restricted to licensed asbestos workers
714A, Warehouse	Category II, non friable Transite exterior siding	Good	Maintenance restricted to licensed asbestos workers
739A, Warehouse	Category II, non friable Transite exterior siding	Poor	Maintenance restricted to licensed asbestos workers
707CC, Guard HQ	Category II, non friable Transite exterior siding	Good	Maintenance restricted to licensed asbestos workers
707CC, Guard HQ	Category I, non friable Floor Tile, General Offices throughout the building	Good	Non-abrasive floor polishing used, Maintenance restricted to licensed asbestos workers
716D, Vehicle Wash and Grease Shop	Category II, non friable Transite exterior siding	Poor	Maintenance restricted to licensed asbestos workers
716A, Vehicle Garage	Category II, non friable Transite exterior siding	Poor	Maintenance restricted to licensed asbestos workers
716A, Vehicle	Category I, non friable Floor Tile,	Good	Non-abrasive floor polishing used,

Building No.	ACM Type/Location	Condition	ACM Control Measures
Garage	General Offices throughout the building		Maintenance restricted to licensed asbestos workers
725A, Vehicle Shed	Category II, non friable Transite exterior siding	Fair	Maintenance restricted to licensed asbestos workers
709A, Fire Station	Category II, non friable Transite exterior siding	Fair	Maintenance restricted to licensed asbestos workers
103-B6, Electrical Switchgear Bldg.	Category II, non friable Transite exterior siding	Good	ACM encapsulated with urethane foam insulation.
706, Garage	Category II, non friable Transite exterior siding	Good	Maintenance restricted to licensed asbestos workers
1401A, Warehouse	Category II, non friable Transite exterior siding	Good	Maintenance restricted to licensed asbestos workers
1401B, Warehouse	Category II, non friable Transite exterior siding	Fair	Maintenance restricted to licensed asbestos workers
1401C, Warehouse	Category II, non friable Transite exterior siding	Fair	Maintenance restricted to licensed asbestos workers
729B, Warehouse	Category I, non-friable Galbestos (mastic impregnated with ACM and PCB) coating over metal siding.	Fair	Maintenance restricted to licensed asbestos workers
729C, Warehouse	Category I, non-friable Galbestos (mastic impregnated with ACM and PCB) coating over metal siding.	Poor	Maintenance restricted to licensed asbestos workers
729D, Warehouse	Category I, non-friable Galbestos (mastic impregnated with ACM and PCB) coating over metal siding.	Poor	Maintenance restricted to licensed asbestos workers
729E, Warehouse	Category I, non-friable Galbestos (mastic impregnated with ACM and PCB) coating over metal siding.	Poor	Maintenance restricted to licensed asbestos workers
7700, Administration	Category I, non friable Floor Tile, General Offices throughout the building	Good	Non-abrasive floor polishing used, Maintenance restricted to licensed asbestos workers
121B, Warehouse	Category I, non-friable Galbestos (mastic impregnated with ACM and PCB) coating over metal siding.	Fair	Maintenance restricted to licensed asbestos workers
121C, Warehouse	Category I, non-friable Galbestos (mastic impregnated with ACM and PCB) coating over metal siding.	Poor	Maintenance restricted to licensed asbestos workers
617A, Sewage Treatment Plant	OSHA Class I, TSI material Pipe insulation, ~30 LF located in basement	Good	Enclosed in metal jacket
3005, Office Bldg.	OSHA Class I, TSI material Thermal insulation. HW stg. Tank located in Mech. Rm.	Fair	Maintenance restricted to licensed asbestos workers
3005, Office Bldg.	Category I, non friable Floor Tile, General offices throughout bldg.	Fair	Non-abrasive floor polishing used, Maintenance restricted to licensed asbestos workers
401A, Coal Powerhouse	OSHA Class I, TSI material Thermal insulation on boiler tube	Fair	Limited access to interior of boilers

Building No.	ACM Type/Location	Condition	ACM Control Measures
	joints inside boilers (each of 3 boilers)		
4011, TNT Powerhouse	OSHA Class II, Other matl. Block insulation located between boiler stack and edge of roof cutout	Fair	Not accessible Located approx. 30 ft. above floor
715A, Warehouse	Category II, non friable Transite exterior siding	Good	Maintenance restricted to licensed asbestos workers
722A, Storage Bldg.	Category II, non friable Transite exterior siding	Good	Maintenance restricted to licensed asbestos workers
1471-1 thru 1471-52 Richmond Magazines	OSHA Class II, Other matl. Lightweight concrete and vermiculite located between rafters and bearing plate	Fair	Not accessible under normal conditions

ACM – asbestos containing material
TSI – thermal system insulation
OSHA – Occupational Safety and Health Administration
PCB – polychlorinated biphenyl

See the asbestos surveys completed in 1992 and 2003 for additional information. The ACM does not currently pose a threat to human health or the environment because all friable asbestos that posed an unacceptable risk to human health has been removed or encapsulated.

The deed will include an asbestos warning and covenant (Enclosure 7).

4.6. Lead-Based Paint (LBP)

The majority of facilities and buildings at NECD are presumed to contain lead-based paint (LBP) because they were constructed before 1978. In addition, some facilities constructed immediately after the ban also may contain LBP because inventories of such paints that were in the supply network were likely to have been used up at these facilities. No comprehensive sampling and analysis has been conducted for LBP; however, the following buildings have documented LBP:

•Building 729A

• Building 3005

• Building 121A, 7700, and 7702

• Building 412A, 704A, 707C, 707CC, 715A, 716A, 716D, 723A, 725A and 739A.

The property was not used for residential purposes and the transferee does not intend to use the property for residential purposes in the future. The deed will include a lead-based paint warning and covenant (Enclosure 7).

4.7. Radiological Materials

NECD does not hold any current Nuclear Regulatory Commission (NRC) licenses. However, NECD contractors held NRC licenses in the past and radioactive commodities licensed by the Army

Materiel Command (AMC) were possessed on the installation. No evidence has been identified to date of the existence of unsealed radioactive materials on NECD.

An investigation of NRC license documents failed to reveal use of any cesium-137 or other radioactive materials by U.S. Army Corps of Engineers (USACE), although such use is plausible given that instruments containing sealed radiation sources are commonly used in soil moisture density testers, lead paint analyzers, and in laboratories in gas chromatographs. Based on telephone interviews with the NECD Radiation Safety Officer, sealed cesium-137 radiation sources were used within the VX Production Facility for three fill lines (M55 Rocket, M23 Land Mine, and M121A1/M256 Projectile) to verify compliance with applicable fill requirements for these munitions. It also was confirmed that cesium-137 sources were not used in the TNT or RDX facilities.

Documentation from 1968 notes that "The four Cesium 137 radioisotope sources were transferred to Mr. Robert Dean, Edgewood Arsenal. The Byproduct Licenses issued to Food Machinery Corporation (FMC), NAAP, have been cancelled." (Inter-Office memorandum, Subject: Munitions Control Section Activities for the Month of August, 1968 dated September 6, 1968). Other documentation from 1968 confirms this information (Inter-Office memorandum, Subject: Monthly Report for August, 1968 Production Department, dated September 9, 1968). These sources were possessed under the authority of Atomic Energy Commission (AEC) Byproduct Material License 13-07499-01 and were assessed on June 27, 1967, and confirmed to not exhibit leakage.

NRC Byproduct Material License 13-24726-02 was issued to Mason & Hanger Corporation pursuant to applications dated June 23, 1986 and January 8, 1992 to authorize possession of radioactive materials (americium-241 and nickel-63) contained within sealed sources in Army Chemical Agent Monitors and Improved Chemical Agent Monitors. The last inspection of activities conducted under this license was in 1992. This license was terminated on May 22, 2002 because duplicate licensing applied, as the items involved also were authorized by centralized Army Byproduct Material License 19-30563-01 issued by NRC Region I to the U.S. Army Soldier and Biological Chemical Command (SBCCOM), Aberdeen Proving Ground, Maryland.

Leak testing of sealed sources is mandated by Federal (and Army) regulations at the time of source manufacture and at 3- or 6-month intervals throughout their operational lives. This testing is to confirm that the sources are of the appropriate initial quality and do not degrade over time such that they present a potential contamination hazard. Routine periodic license compliance inspections performed by NRC and its predecessor, AEC, include reviews of leak test results to ensure that required testing has been performed and that sealed sources are not leaking. In addition, the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) and its predecessor agency, the U.S. Army Environmental Hygiene Agency (USAEHA), have routinely performed radiological surveys of Army activities possessing radioactive material for at least 40 years. Reviews of leak testing records are also an integral part of these radiation safety program evaluations.

Any sources determined to be leaking would be removed from service, investigated to find the reason for the leak, assessed to determine whether the leaking source resulted in contamination, and decontaminated as appropriate. The incident would be documented and formal notice of the

incident would be provided through command channels to regulatory agencies such as NRC/AEC and EPA. Licenses (and DA permits and authorizations for items not subject to licensing by NRC/AEC) are not terminated until appropriate surveys have confirmed that all contamination has been remediated to applicable standards.

Given the requirements for leak testing of sealed sources, the relative rarity of leakage as evidenced by the FMC leak test confirming that sources were not leaking in 1967, and the absence of historical documentation to indicate that any sources leaked, it is highly unlikely that the sealed sources utilized at NECD resulted in contamination of the facility.

Activities of DOE and its predecessor agencies (Manhattan Engineer District [MED], AEC, and Energy Research and Development Administration [ERDA]) have not generally been subject to regulation by NRC or the associated licensing requirements. In addition, operations involving radium-226 and accelerator produced radionuclides were not subject to the authority of NRC until 2005 and 11(e)(2) byproduct materials (i.e., uranium mill tailings) were not subject to control by NRC until 1978. As such, NRC historical information would not be expected to include these types of activities. The Army controlled operations that were not subject to regulation by NRC were regulated using Department of the Army Radiation Permits (DARPs) and Department of the Army Radiation Authorizations (DARAs) issued pursuant to Army Regulation (AR) 385-11 and AMC Regulation 385-25.

Available evidence involving the use of radioactive materials at NECD was evaluated as part of the ECP preparation. Based on the Historical Radiological Site Assessment, radioactive materials possessed at NECD are known to include sealed sources containing cesium 137, nickel-63 and americium-241. There is no record to indicate that any such sealed sources exhibited leakage exceeding the regulatory threshold that could reasonably contribute to the potential for radiological contamination of the facility. X-ray devices used at NECD would not result in residual radioactivity. All sources will be removed from the property prior to transfer.

A BRAC activity that needs to be completed before transfer:

- **Radiation Decommissioning (NAAP-BRAC-03):** There were four circuit breakers containing low level radioactive (naturally occurring material) material that were disposed of prior to closure of NECD.

The following buildings were used for radiological activities: sealed cesium-137 radiation sources were used within the VX Production Facility for three fill lines (M55 Rocket, M23 Land Mine, and M121A1/M256 Projectile) to verify compliance with applicable fill requirements for these munitions. It also was confirmed that cesium-137 sources were not used in the TNT or RDX facilities. There is no evidence of any release of radiological materials at these buildings. A radiological field survey was conducted at those sites having radiological activities and the survey concluded these areas are suitable for unrestricted use. See *Radiological Historical Site Assessment – April 11, 2007* (contained in Appendix F of SAIC's *Environmental Condition of the Property Report, Newport Chemical Depot, Newport, Indiana*, October 2008) for additional information.

4.8. RADON

NECD conducted radon surveys in various buildings on the property in 1990, 1992, 2004, and 2005. Radon was not detected at or above the EPA residential action level of 4 picocuries per liter (pCi/L) in these buildings. One of the surveys was completed as part of the Environmental Baseline Survey completed in 2004.

4.9. MUNITIONS AND EXPLOSIVES OF CONCERN (MEC)

Based on a review of existing records and available information, there is no evidence that Munitions and Explosives of Concern (MEC) are present on the portions of property included in this FOST. The explosives manufacturing lines, and some of the disposal sites may have MEC issues but are not included in this FOST, these areas are being cleaned up as part of the IRP program. Although the areas to be transferred include the RDX Burning Ground (RDX-BG) which may contain MEC, the RDX-BG has been investigated and NFA was approved. There are no LUCs in place at the RDX-BG. MEC has not been detected on any of the property to be transferred under this FOST during several rounds of inspection. The term "MEC" means military munitions that may pose unique explosives safety risks, including: (A) unexploded ordnance (UXO), as defined in 10 U.S.C. §101(e)(5); (B) discarded military munitions (DMM), as defined in 10 U.S.C. §2710(e)(2); or (C) munitions constituents (e.g., TNT, RDX), as defined in 10 U.S.C. §2710(e)(3), present in high enough concentrations to pose an explosive hazard.

4.10. OTHER PROPERTY CONDITIONS

There are no other hazardous conditions on the property that present an unacceptable risk to human health and the environment.

5. ADJACENT PROPERTY CONDITIONS

None of the properties adjacent to and outside the NECD facility boundary were found to have hazardous conditions that might impact the NECD property. Since portions of the NECD are being transferred under this FOST and portions are to be transferred under a subsequent FOST, some of the areas at NECD are considered "adjacent property" to the areas being transferred under this FOST. The following other potentially hazardous conditions exist on adjacent properties:

5.1 RDX Manufacturing Area

The RDX Manufacturing area (study section 2) (RDX-MA) is designated as SWMU NAAP-3. The RDX-MA comprises approximately 275 acres and is in the north-central portion of NECD where RDX was produced. In March 1977, the entire RDX-MA complex was declared surplus and the buildings were burned. However, concrete building foundations, sewer ditches, and underground piping were left in place.

Based on results of the baseline human health risk assessment presented in the Phase III RFI, RDX was identified as the chemical of concern in soil. Remediation activities have been completed, a total of 6,699 cubic yards of loose soil was treated for composting and backfilled at the RDX-MA.

LUCs were placed on the RDX-MA restricting residential use of the area and the use of groundwater in the area. These restrictions are presented in the 2005 LUCIP.

5.2 Decontaminated Waste Burial Grounds

The Decontaminated Waste Burial Grounds (DWBG) (SWMUs NAAP-23 through NAAP-26, NAAP-26A, and NAAP-54) is on approximately 23 acres south of Little Raccoon Creek in the eastern portion of NECD and approximately 0.25 miles south of the Chemical Plant. The DWBG was split into east and west exposure units for risk assessment purposes. The DWBG contains at least four specific burial sites and three additional areas, including burn cages, Pit A, and an area reportedly containing a 300-gallon buried tank. These individual features account for the several SWMUs associated with the general DWBG area. The DWBG was reported to be active on a sporadic basis; documented use of the area was indicated in 1963, 1968, and 1974.

Of the SWMUs identified at the DWBG, the four burial sites are the best documented. The burial sites, which are identified as Burial Areas 1 through 4 (SWMUs NAAP-23 through NAAP-26, respectively), are composed of a series of trenches within which various production wastes and structural debris were deposited. The following discussion provides a brief overview of the known configuration and contents of each of the four areas.

Burial Area 1 (SWMU NAAP-23) is in the southern portion of the DWBG and includes six known trenches. The five northernmost trenches were used in 1968 to dispose of decontaminated wastes associated with the production of agent VX. These wastes included pipes, valves, gas masks, gloves, drums, and sample bottles. Other wastes, including weapons components, also may be present. The sixth, southernmost trench was used to dispose of drums containing polymerized urea from the decomposed agent VX stabilizer dicyclohexyl carbodiimide. These drums, however, reportedly were removed in the early 1970s and shipped to Edgewood Arsenal in Aberdeen Proving Ground, Maryland.

Burial Area 2 (SWMU NAAP-24) consists of two east-west burial trenches east of the burning cages. Posted signs at the foot of the trenches, dated June 1974, state that asbestos from Lines 1 and 2 of the TNT-MA are buried in these trenches. In addition, nitrobody-contaminated gaskets reportedly were buried in Burial Area 2. No records were available concerning the volume of waste in this unit.

Burial Area 3 (SWMU NAAP-25) is east of Burial Area 2 and consists of one north-south oriented trench that was used in 1974 to dispose of “sulfur wastes” that originated from the TNT-MA. No additional specifics concerning the waste were reported.

Burial Area 4 (SWMU NAAP-26) is in the northeastern corner of the DWBG and consists of one large trench. The waste reportedly placed into this area contained residues of a 1966-67 binary program (including VX production) that was terminated by fire and deflagration. In addition,

asbestos waste from the heavy water production facility also reportedly was disposed of in this trench in 1963.

The remaining features identified within the DWBG are not well-documented. The two burning cages at the center of the site were known to have been used to burn administrative wastes prior to 1970; subsequent usage, if any, is not documented. In addition, Pit A (SWMU NAAP-26A), which was identified in an historical aerial photographic interpretation survey, never was identified clearly as a disposal area. The final unit, the 300-gallon chemical tank (SWMU NAAP-54), never has been located, but it is reported to have been filled with phosphorus compounds, including potentially pyrophoric solids, that sometimes clogged the process equipment. The tank was reported to have been buried somewhere in the western portion of the site in approximately March 1961. Previous geophysical survey results indicate that a substantial amount of scrap metal, concrete rubble, compressed gas cylinders, and other debris were buried in this general area of the DWBG. SAIC conducted an interview with a former employee involved with the tank burial to further refine the tank's location. In December 2003, a supplemental geophysical survey was conducted and five potential anomalies were found in the surveyed area. Historical information and the interpretation of the electromagnetic (EM) data refined the potential tank location to two of the anomalies, both of which are in the western portion of the DWBG (SAIC 2004b). Intrusive investigation to locate the tank was conducted in the spring of 2008; however, the tank was not found.

The surface soil in the western portion of the DWBG was identified as being contaminated with mercury. Mercury was identified as a COC for ecological receptors. No human health COCs were identified for future industrial land use at the DWBG (SAIC 2003b).

A CMS for soil at the DWBG was completed in May 2003. The CMS considered the corrective measure objectives and the physical site conditions and constraints (i.e., presence of surface and subsurface debris) in order to develop corrective measure alternatives for the DWBG. Following a detailed analysis of the corrective measure alternatives, the CMS proposed limited actions as the recommended corrective action measure alternative. A decision document for the preferred corrective measure alternative (i.e., limited actions) for the DWBG was reviewed and accepted by IDEM on June 27, 2003. As a result, a 1-foot-thick soil barrier, which is an engineering control to prevent ecological receptors from being exposed to the contaminated soil, was placed at the DWBG. Clearing for barrier placement began in September 2003 and final seeding occurred in May 2004. The grass on the cap must be maintained and mowed as appropriate.

To address groundwater and surface water VOC concentrations at the West DWBG, the long-term monitoring (LTM) program at the DWBG was implemented in accordance with the recommendations provided in the Groundwater Technical Memorandum. Groundwater underlying the area of the West DWBG and vicinity currently is impacted by chlorinated solvents. Buried sources of the chlorinated solvents south of Pit A have not been definitively characterized. Historical groundwater data indicate that concentrations of TCE and chlorinated breakdown products have remained fairly consistent since 1997 and these chemicals continue to affect the groundwater quality south of the area of Pit A. In addition, the detection of TCE, dichloroethene (DCE), and vinyl chloride in surface water adjacent to the site confirms that groundwater COCs are discharging to Little Raccoon Creek. Because the historical groundwater and surface water data indicate the presence of solvent contamination, continued monitoring of the groundwater and

surface water at the West DWBG is ongoing. How long groundwater and surface water monitoring will be required at the site has not been determined. Following the investigation to find the suspected 300 gallon chemical tank (SWMU 54), IDEM has given a verbal concurrence with due diligence and NFA with LUCs for SWMU 54, even though the tank was not found. Future investigation work is planned for the DWBG.

SWMUs NAAP-23 through NAAP-26, NAAP-26A, and NAAP-54 are included in the NECD LUCIP. LUCs at the DWBG have been implemented including no intrusive activities; and no residential, agricultural, and groundwater use.

5.3 TNT Manufacturing Area

The TNT-MA consists of SWMUs NAAP-37 through NAAP-47. This site was in operation from 1973 to 1974 and consists of TNT Production Lines 1, 2, 3, 4, and 5; TNT Wastewater and Handling Areas #1, #2, #3, #4, and #5; and the TNT Wastewater Treatment Facility. Media of concern included the soil and groundwater. Ground elevation is nearly flat. During operation, a toluene spill occurred once, and was reportedly cleaned up. Elevated concentrations of toluene have not been detected during groundwater monitoring at the TNT-MA.

In December 1991, a Site Inspection (SI) report was completed. According to the SI report, no analytes (excluding total metals) exceeded the health-based comparison values and there were no analytes selected as COCs in the soil. Low concentrations of explosives compounds, below health based comparison values, were detected in groundwater during the SI. It has been concluded, however, that no significant impact from past operations at this site have occurred.

The explosive part of the facility was cleaned by hot gas decontamination, which was concluded in January 1999 by TVA. The liquidation project was concluded in November 1999 by Earth Tech. No contaminated process equipment remains. In January 2006, IDEM issued the RCRA permit renewal including this site as NFA.

The TNT-MA has been remediated per the facility RCRA permit and is suitable for reuse as specified in the permit. See: NECD RCRA permit for facility ID #IN1210022272, November 2006 for additional information.

5.4 Construction Debris Dump (CDD)

The Construction Debris Dump (CDD) (SWMU NAAP-28) is on approximately 4.2 acres east of Little Raccoon Creek in the eastern portion of NECD and approximately 500 feet south of the CSL. Little is known about this disposal area, but various types of construction debris, particularly large chunks of broken concrete, were on and projecting from beneath the surface. Mounding in this area may have been the result of various waste materials being pushed together and consolidated by earth-moving equipment.

Surface and subsurface soil at this SWMU were identified as being contaminated with metals (arsenic and lead) and a poly-aromatic hydrocarbon (PAH) (benzo[a]pyrene). Lead, arsenic, and benzo(a)pyrene were detected at concentrations that pose risks to human health under future industrial land use, while lead also was identified as a COC for ecological receptors.

A Corrective Measures Study (CMS) for the CDD was completed in May 2003. The CMS considered the corrective measure objectives and the physical site conditions and constraints (i.e., presence of surface and subsurface debris and the need for creek bank stabilization) in order to develop corrective measure alternative for the CDD. Following a detailed analysis of the corrective measure alternatives, the CMS proposed capping as the recommended corrective measure alternative. The cap would prevent potential human and ecological exposures to the contaminated material and reduce contaminant migration through dispersion and transport by infiltrating rainwater. A decision document for the preferred corrective measure alternative (i.e., capping) for the CDD was reviewed and accepted by IDEM on June 26, 2003.

As part of the CMI at the CDD, a cap was placed over approximately 1.2 acres of contaminated soil. Clearing of the area for the cap construction began in September 2003. The last soil was placed in April 2004. Initial seeding of the cap was completed in April 2004 and final seeding occurred in August 2004 after minor deficiencies were corrected. The grass on the cap must be maintained and mowed as appropriate. The CDD Corrective Measures Implementation (CMI) Completion Report was finalized in March 2005. SWMU NAAP-28 is included in the LUCIP and LUCs have been implemented. Long Term Monitoring (LTM) of the surface water was required at the CDD to monitor impacts due to potential storm water/sediment runoff to Little Raccoon Creek. After collection of nine rounds of quarterly sampling, the Army and IDEM agreed to discontinue LTM at the CDD and all required remedial action at this SWMU is complete.

The property was not remediated to levels suitable for unrestricted use. The deed will include the following land use restrictions no intrusive activities, or residential or agricultural use. See:

A. *Correspondence from IDEM regarding the RCRA Corrective Action Construction Debris Dump Remedial Decision Document, Newport Chemical Depot, Newport, Indiana,* IDEM, June 26, 2003.
B. *Newport Chemical Depot, Land Use Control Implementation Plan*, SAIC, October 2005.

for additional information.

5.5 Chemical Plant

Chemical Agent VX was manufactured at the chemical plant from 1962 to 1968. The chemical plant area contains the following SWMUs 4 (Detox holding tank), 5 (Waste surge tank), NAAP 6 and 7 (K9 Basins), NAAP 10, 11, and 12. Three rounds of groundwater monitoring have been conducted at the chemical plant along with soil sampling. One polyaromatic hydrocarbon soil sample exceeded residential screening criteria. Elevated concentrations of methylphosphonic acid that exceed residential and industrial screening criteria have been detected in groundwater samples at the chemical plant. Groundwater monitoring at this location is ongoing.

The presence of these hazards on adjacent property does not present an unacceptable risk to human health and the environment because these sites are being monitored and cleaned up under the IRP and manufacturing and storage of explosives and chemical weapons in these areas has been discontinued.

6. ENVIRONMENTAL REMEDIATION AGREEMENTS

The following environmental orders/agreements are applicable to the property:

RCRA Hazardous Waste Permit, issued on January 5, 2006 (IDEM Hazardous Waste Management Permit; EPA identification number IN1210022272). All remediation activities on the property are complete or in place and operating properly and successfully (See Section 4.1 Environmental Remediation Sites). An Agreed Order shall be issued to replace the RCRA Hazardous Waste Permit prior to transfer. The deed will include a provision reserving the Army's right to conduct further remediation activities (Enclosure 7).

7. REGULATORY/PUBLIC COORDINATION

The U.S. EPA Region 5, the Indiana Department of Environmental Management (IDEM), and the public were notified of the initiation of this FOST. Regulatory/public comments received during the public comment period will be reviewed and incorporated, as appropriate. A copy of the regulatory/public comments and the Army Response will be included at Enclosures 10 & 11.

8. NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE

The environmental impacts associated with the proposed transfer of the property have been analyzed in accordance with the National Environmental Policy Act (NEPA). The results of this analysis are documented in the Environmental Assessment, Newport Chemical Depot, TetraTech, 2011 (in preparation). The NEPA analysis identified the following encumbrances: asbestos-containing material, easements and rights-of-way, groundwater use prohibition, historic resources, land use restrictions, lead-based paint, remedial activities, and wetlands.

9. FINDING OF SUITABILITY TO TRANSFER

Based on the above information, I conclude that all removal or remedial actions necessary to protect human health and the environment have been taken and the property is transferable under CERCLA Section 120(h)(3). In addition, all Department of Defense requirements to reach a finding of suitability to transfer have been met, subject to the terms and conditions set forth in the attached Environmental Protection Provisions that shall be included in the deed for the property. The deed will also include the CERCLA 120(h)(3) Notice, Covenant, and Access Provisions and Other Deed Provisions . Finally, the hazardous substance notification (Table 2) shall be included in the deed as required under the CERCLA Section 120(h) and DOD FOST Guidance.

Thomas E. Lederle
Chief, Industrial Branch
Base Realignment and Closure Division

Enclosures

Encl 1 -- Site Map of Property
Encl 2 -- Environmental Documentation
Encl 3 -- Table 1 -- Description of Property
Encl 4 -- Table 2 -- Notification of Hazardous Substance Storage, Release, or Disposal
Encl 5 -- Table 3 -- Notification of Petroleum Product Storage, Release, or Disposal
Encl 6 – CERCLA Notice, Covenant, and Access Provisions and Other Deed Provisions
Encl 7 -- Environmental Protection Provisions
Encl 8 -- Public Notice
Encl 9 – Responsiveness Summary

ENCLOSURE 1

Site Map of Property

ENCLOSURE 2

Environmental Documentation

Previous Relevant Environmental Investigations

Investigation	Reference
Water Quality Study	USAEHA 1975
Installation Assessment	USATHAMA 1979
Environmental Assessment of NAAP Operations	AARCOM 1980
Army Pollution Abatement Study	USAEHA 1981a
Management Plan for RCRA Ground Water Monitoring and Assessment Program	USAEHA 1981b
Delisting Petition	NAAP 1983
Hazardous Waste Management Special Study	USAEHA 1983
Investigation of Soil Contamination at the Open Burning Ground	USAEHA 1984
Geohydrologic Study	USAEHA 1985
Installation Assessment	EPIC 1985
Evaluation of Solid Wastes Management Units at NAAP	USAEHA 1986
Explosive Reactivity Testing Program	USAEHA 1987
SI Report-Night Soils Pits, TNT Manufacturing Area, Chemical Plant Decontaminated Waste Burial Ground, Little Raccoon Creek	Dames & Moore 1991b
RI Report – Red Water Ash Basins, Gypsum Sludge Basins/Pollution Control Center Retention Pond, RDX Burning Ground, RDX Manufacturing Area, Closed Sanitary Landfill	Dames & Moore 1991a
RI Report TNT Burning Ground	Dames& Moore 1991c
Inventory of Natural Areas and Rare Plant Species	Hedge & Bacone 1994
Endangered, Threatened, and Special Concern Fishes, Amphibians, Reptiles, and Mammals of NAAP	ISU 1994
Phase III RFI Report – RDX Manufacturing Area Surficial Soils	Versar 1998
RFI for SWMUs NAAP-27, NAAP-65 and Little Raccoon Creek	SAIC 2001b
Facility-wide RFI	SAIC 2003a
Long-term Monitoring at the TNT, BG, RDX-MA, DWBG	SAIC on-going
SWMU NAAP 6/7, Follow-on RFI	SAIC 2007
Final Historical Records Review	TLI 2007

ENCLOSURE 2 (cont.)

Environmental Documentation

Additional Environmental Documentation

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8. EDR (Environmental Database Resources, Inc.). 2006a. Radius Atlas with GeoCheck. NECD, Indiana.
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11. EDR. 2006d. Historical Topographic Map Report. NECD, Indiana.
12. e2M (engineering-environmental Management, Inc.). 2002. Final CTT Range/Site Inventory Report, Newport Chemical Depot, Indiana.
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14. EPIC (Environmental Photographic Interpretation Center). 1985. Installation Assessment for Newport Army Ammunition Plant. TS-PIC-85001. U.S. Environmental Protection Agency.
15. FMC (Food Machinery Corporation). 1967. FMC Corporation memorandum by Mr. Robert D. Brannon, dated June 29, 1967, Subject: "Memorandum regarding radioactive sealed leak test performed on the mine filling machines on June 27, 1967."

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21. IDEM. 2004b. Agreed Order, Commissioner of the Department of Environmental Management (Complainant) vs. Newport Chemical Depot (Respondent), Case No. 2004-13720-H. July.

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23. (Complainant) vs. Newport Chemical Depot (Respondent), Case No. 2005-14481-H. May 24, 2005.

24. IDEM. 2006. Federally Enforceable State Operating Permit (FESOP) Renewal, Office of Air Quality, Newport Chemical Depot, Newport, Indiana.

25. ISU (Indiana State University). 1994. Survey of Endangered, Threatened, and Special Concern Fishes, Amphibians, Reptiles, and Mammals of the Newport Army Ammunition Plant.

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44. NAAP (Newport Army Ammunition Plant). 1983. Petition to Amend 40 CFR Part 261. Miscellaneous correspondence.

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47. NECD. 1996. Facility History and Chronology, provided by Kevin Rudduck, NECD.

48. NECD. 2004. Environmental Baseline Survey for the Proposed Transfer of Hazardous Waste Storage Building, Facility Number 729A, Newport Chemical Depot, Newport, Indiana.

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59. SAIC. 2003c. RDX Manufacturing Area Corrective Measure Implementation Construction, Operation, and Maintenance Plan, Final. Newport Chemical Depot, Newport, Indiana.

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ENCLOSURE 3

TABLE 1 – DESCRIPTION OF PROPERTY

Building Number and Property Description	ECP Study Section	Condition Category	Remedial Actions
Night Soil Pits	1	4	The Night Soil Pits (NSP) (NAAP-038) are designated NFA with LUCs on excavation. Facility-wide RCRA Facility Investigation (RFI) groundwater sampling results from one up gradient and two down gradient wells indicate that site-related metals concentrations that were an order of magnitude higher than their background mean were detected only in down gradient well NSP-03. No VX-related compounds were detected in the groundwater during the Facility-wide RFI or during earlier Site Investigation (SI) activities. The reported disposal of decontaminated solid waste from the VX manufacturing process at the NSPs has not impacted the groundwater at this SWMU. A deed notice indicates the presence of the NSPs in this area. Based on these findings, the Army recommended no further action (NFA), other than implementation of land use controls (LUCs) for the NSPs. This recommendation was reviewed and accepted by IDEM. The land use restrictions at the NSPs prohibit excavation of soil or buried waste in the pit area.
Building 722J 629 ft^2 Saw Shed	1	1	None
733C 629 ft^2 Admin Office/ Magazine Area	1	1	None
14171 1,603 ft^2 Richmond Magazine 1	1	1	None
14172 1,603 ft^2 Richmond Magazine 2	1	1	None
14173 1,603 ft^2 Richmond Magazine 3	1	1	None
14174 1,603 ft^2 Richmond Magazine 4	1	1	None
14175 1,603 ft^2 Richmond Magazine 5	1	1	None
14176 1,603 ft^2 Richmond Magazine 6	1	1	None

Building Number and Property Description	ECP Study Section	Condition Category	Remedial Actions
14177 1,603 ft^2 Richmond Magazine 7	1	1	None
14178 1,603 ft^2 Richmond Magazine 8	1	1	None
14179 1,603 ft^2 Richmond Magazine 9	1	1	None
141710 1,603 ft^2 Richmond Magazine 10	1	1	None
141711 1,603 ft^2 Richmond Magazine 11	1	1	None
141712 1,603 ft^2 Richmond Magazine 12	1	1	None
141713 1,603 ft^2 Richmond Magazine 13	1	1	None
141714 1,603 ft^2 Richmond Magazine 14	1	1	None
141715 1,603 ft^2 Richmond Magazine 15	1	1	None
141716 1,603 ft^2 Richmond Magazine 16	1	1	None
141717 1,603 ft^2 Richmond Magazine 17	1	1	None
141718 1,603 ft^2 Richmond Magazine 18	1	1	None
141719 1,603 ft^2 Richmond Magazine 19	1	1	None
141720 1,603 ft^2 Richmond Magazine 20	1	1	None

Building Number and Property Description	ECP Study Section	Condition Category	Remedial Actions
141721 1,603 ft^2 Richmond Magazine 21	1	1	None
141722 1,603 ft^2 Richmond Magazine 22	1	1	None
141723 1,603 ft^2 Richmond Magazine 23	1	1	None
141724 1,603 ft^2 Richmond Magazine 24	1	1	None
141725 1,603 ft^2 Richmond Magazine 25	1	1	None
141726 1,603 ft^2 Richmond Magazine 26	1	1	None
141727 1,603 ft^2 Richmond Magazine 27	1	1	None
141728 1,603 ft^2 Richmond Magazine 28	1	1	None
141729 1,603 ft^2 Richmond Magazine 29	1	1	None
141730 1,603 ft^2 Richmond Magazine 30	1	1	None
141731 1,603 ft^2 Richmond Magazine 31	1	1	None
141732 1,603 ft^2 Richmond Magazine 32	1	1	None
141733 1,603 ft^2 Richmond Magazine 33	1	3	IDEM concurred with SI NFA recommendation
141734 1,603 ft^2 Richmond Magazine 34	1	1	None

Building Number and Property Description	ECP Study Section	Condition Category	Remedial Actions
141735 1,603 ft^2 Richmond Magazine 35	1	1	None
141736 1,603 ft^2 Richmond Magazine 36	1	1	None
141737 1,603 ft^2 Richmond Magazine 37	1	1	None
141738 1,603 ft^2 Richmond Magazine 38	1	1	None
141739 1,603 ft^2 Richmond Magazine 39	1	1	None
141740 1,603 ft^2 Richmond Magazine 40	1	1	None
141741 1,603 ft^2 Richmond Magazine 41	1	1	None
141742 1,603 ft^2 Richmond Magazine 42	1	1	None
141743 1,603 ft^2 Richmond Magazine 43	1	1	None
141744 1,603 ft^2 Richmond Magazine 44	1	1	None
141745 1,603 ft^2 Richmond Magazine 45	1	1	None
141746 1,603 ft^2 Richmond Magazine 46	1	1	None
141747 1,603 ft^2 Richmond Magazine 47	1	3	IDEM concurred with SI NFA recommendation
141748 1,603 ft^2 Richmond Magazine 48	1	1	None

Building Number and Property Description	ECP Study Section	Condition Category	Remedial Actions
141749 1,603 ft^2 Richmond Magazine 49	1	1	None
141750 1,603 ft^2 Richmond Magazine 50	1	1	None
141751 1,603 ft^2 Richmond Magazine 51	1	1	None
141752 1,603 ft^2 Richmond Magazine 52	1	1	None
Agricultural Lease Areas	1	1	None
Carmack Cemetery	1	1	None
Juliet Cemetery	1	1	None
Walnut Hill Cemetery	1	1	None
Miller Cemetery	1	1	None
Building 701A	3	1	None
729C 4,048 ft^2 Warehouse	3	1	None
729D 4,048 ft^2 Warehouse	3	1	None
729E 4,048 ft^2 Warehouse	3	1	None
Building 738A	3	1	None
1401C 7,796 ft^2 Warehouse	3	1	None
Building 7705	3	1	None

Building Number and Property Description	ECP Study Section	Condition Category	Remedial Actions
A3200 1,046 ft^2 Access Control Facility	3	1	None
A3301 300 ft^2 Igloo	3	1	None
A3302 300 ft^2 Igloo	3	1	None
A3303 300 ft^2 Igloo	3	1	None
A3304 300 ft^2 Igloo	3	1	None
A3305 300 ft^2 Igloo	3	1	None
A3306 300 ft^2 Igloo	3	1	None
A3307 300 ft^2 Igloo	3	1	None
A3308 300 ft^2 Igloo	3	1	None
Burson Cemetery	3	1	None
Sanitary Landfill	4	4	The Closed Sanitary Landfill (CSL) (NAAP-033) was covered with 3 feet of graded soil in the 1970s. LUCs are in place to prevent contact with groundwater and prohibit excavation. The site should not be used for residential or agricultural purposes.
RWABs	4	3	Risk from contaminants did not exceed regulatory targets. SWMUs NAAP-29 through NAAP-32 are included in the NECD NFA Memorandum. IDEM concurred with NFA for these SWMUs on January 9, 2004. These SWMUs do not require LUCs.
RDX-BG	4	3	Risks from site were below regulatory targets. The site was included in the NECD NFA Memorandum. IDEM concurred with NFA for the site on January 9, 2004. The site does not require and LUCs.

Building Number and Property Description	ECP Study Section	Condition Category	Remedial Actions
OCMCDA	4	3	Risks from site were below regulatory targets. The site was included in the NECD NFA Memorandum. IDEM concurred with NFA for the site on January 9, 2004. The site does not require and LUCs.
GSBs	4	4	Human health risk assessment for the GSBs indicates cancer risks and non-cancer HIs exceeding targets for the exposure of residents to groundwater in the shallow unsaturated zone. However, there is neither current nor future feasible use of the sampled shallow groundwater due to poor yield and low transmissivity. Groundwater modeling results indicate that iron and manganese would not be present in the nearest creek at concentrations above background for up to 500 years. In addition, the combined non-cancer HI for the produce consumer is above the target. Based on this rational, NFA, other than implementation of LUCs to restrict residential and agricultural land use at the GSBs has been granted.
PCCRP	4	4	No risks were calculated for soil at the PCCRP and the risks due to groundwater exposure at the PCCRP are the same as for the GSBs (see above table entry) because the groundwater underlying these two areas was treated as a single exposure unit. Based on the rational presented NFA, other than implementation of LUCs to restrict residential land use at the PCCRP, has been granted.
224B 3,213 ft^2 Warehouse	4	1	None
Prairie Restoration Areas	4	1	None
Agricultural Lease Areas	4	1	None
Wooded Areas	4	1	None
729 800 ft^2 TNT Pollution Control Are Maintenance Shop	5	1	None
3001 9,644 ft^2 Acid QA Lab & Office (TNT Lab/Office)	5	1	None
3005 9,264 ft^2 Maintenance Warehouse	5	1	None

Building Number and Property Description	ECP Study Section	Condition Category	Remedial Actions
3022 699 ft^2 Acid Manufacturing Plant	5	1	None
4011 15,093 ft^2 Heat Plant Building	5	1	None
4123 2,295 ft^2 Water Supply Building	5	1	None
4261 Water Tank	5	1	None
6192 3,300 ft^2 Acid Manufacturing Plant	5	1	None
TNT-MA Acid Area	5	3	The TNT Acid Production Area is within the TNT-MA. The SWMUs associated with the TNT Acid Production Area are SWMUs NAAP-56 through NAAP-63. These sites were in operation from 1971 to 1974 and include an Acid Tank Farm Drain, a Sulfur and Ammonia Unloading Area Drain, a Utilities and Shop Area Drain, TNT Laboratory Drains, TNT Acid Laboratory Drains, NAC and Denitration (DN) Drains, AOP Facility Drains and SAR Drains. There is no history of releases from these areas. The 1993 permit issued by IDEM stated that NFA was necessary at the site. In January 2006, IDEM issued the RCRA permit renewal including this site as NFA.
Agricultural Lease Areas	5	1	None
104G 3,161 ft^2 Warehouse	6	1	None
121A 23,040 ft^2 Warehouse	6	1	None
121B 23,040 ft^2 Warehouse	6	1	None
121C 23,040 ft^2 Warehouse	6	1	None

Building Number and Property Description	ECP Study Section	Condition Category	Remedial Actions
223A 80,600 ft^2 Warehouse	6	1	None
227A 4,500 ft^2 Warehouse (Tool Crib)	6	1	None
227B 4,500 ft^2 Warehouse	6	1	None
227C 4,500 ft^2 Warehouse	6	1	None
227D 4,500 ft^2 Warehouse	6	1	None
255A 2,032 ft^2 Warehouse	6	1	None
7700 39,031 ft^2 Administration	6	1	None
7702 755 ft^2 Vehicle Storage	6	1	None
Building TC095	6	1	None
6053 64 ft^2 STP	7	1	None
Agricultural Lease Areas	7	1	None
DI/SY	7	4	The Demilitarization Incinerator/Scrap Yard (DI/SY) (SWMU NAAP-65) was designated NFA with LUCs including no excavation, residential use, agricultural use, or groundwater use.
MCD	7	4	The Memorial Chapel RDX Dump (MCD) (SWMU NAAP-28A) contains various types of construction debris Ecological risks to terrestrial species from exposure to metals COCs in soil were expected to be low. Human health risks did not exceed targets identified for soil or groundwater at the MCD, with the exception of produce consumer exposure to copper. Although copper was identified as the COC for the produce consumer, no further investigation or remediation was

Building Number and Property Description	ECP Study Section	Condition Category	Remedial Actions
			recommended to address this risk based on the assumption that future use of land for crop growing is unlikely, and LUCs would be implemented to ensure that the use of the land for agricultural purposes is prevented. The U.S. Army's recommendation was reviewed and approved by IDEM. SWMU NAAP-28A is included in the NFA Memorandum and IDEM concurred with NFA for the MCD in January 2004. SWMU NAAP-28A also is included in the NECD LUCIP and LUCs, including no intrusive activities or agricultural use, have been implemented.
RDX-MA Acid Area (SWMU NAAP-3A)	8	3	SI complete; listed as NFA in RCRA permits
CPRBs (SWMUs NAAP-10 through NAAP-12)	8	4	Received waste from heavy water and VX production; RI and RFI complete; LUCs in place; listed as NFA in RCRA permit.
Removed USTs (SWMU NAAP-66)	8	2	The USTs were in operation from 1941 to 1990. This SWMU represents four different locations throughout the installation where five USTs were formerly located. The tanks were removed by the installation in 1990, under the oversight of IDEM. During the process it was discovered that the tanks had leaked. The contaminated soil was remediated. An RFI assessment was completed in January 1998 and submitted to EPA, Region 5. Region 5 approved the assessment report in October 1998. According to the 2005 NECD RCRA permit, a determination of NFA was granted to this site.
Waste Oil Tank (SWMU NAAP-53)	8	4	AST formerly located near Building 716A had leaked; contaminated soil was removed; listed as NFA in RCRA permit.
CPAB (SWMU NAAP-67)	8	4	Historically used to accept coal ash from Building 401A Power House operations; RFI complete; LUCs in place; listed as NFA in RCRA permit.
PHCP (SWMU NAAP-69)	8	3	Coal and coal slag stored on ground near Building 401A.
Fuel oil spill at the former railroad near West Chemical Plant (Southeast Corner of Former Building 103)	8	2	Fuel oil released to the environment; remediation occurred.
Leaking 1,000 gallon UST in the Southern Portion of the RDX Acid Area Discovered in 2007	8	2	Petroleum release to the environment; soil and groundwater sampling was conducted.
146 1,068 ft^2 Magazine	8	1	None

Building Number and Property Description	ECP Study Section	Condition Category	Remedial Actions
147 1,068 ft^2 Magazine	8	1	None
402A 59,428 ft^2 Reservoir	8	1	None
412A 5,869 ft^2 Reservoir Pump House	8	1	None
704A 1,563 ft^2 Eng Service Office	8	1	None
707E 150 ft^2 Boiler Room	8	1	None
707BB 3,200 ft^2 Office Building	8	1	None
707CC 3,814 ft^2 Guard Headquarters	8	1	None
713B 15,410 ft^2 Warehouse	8	1	None
714A 6,497 ft^2 Material Shed	8	1	None
715A 2,700 ft^2 Engineering/Housing Maintenance Shop	8	1	None
716 3,600 ft^2 Warehouse	8	1	None
716F 840 ft^2 Boiler House	8	1	None
725A 11,392 ft^2 Vehicle Parking and Storage	8	1	None
726A 124 ft^2 Storage Shed	8	1	None

Building Number and Property Description	ECP Study Section	Condition Category	Remedial Actions
726B 124 ft^2 Storage Shed	8	1	None
726D 1,200 ft^2 Storage Shed	8	1	None
733K 12,800 ft^2 Emergency Vehicle Storage & Training Building	8	1	None
739A 4,094 ft^2 Warehouse	8	1	None
Agricultural Lease Areas	8	1	None
Agricultural Lease Area 232.4 acres	9	1	None
Agricultural Lease Area Southern two thirds (Study Section 10 total area 680 acres)	10	1	None
Former National Guard Training Area, northern part (Study Section 10 total area 680 acres)	10	1	None
Wooded Area 404.1 acres	11	1	None
Wooded Areas with some agricultural land 41.6 acres	12	1	None
Study Section 13 Ranney® wells and 3 associated buildings (Study Area 13 total area 71.2 acres)	13	1	None

Category 1: Areas where no release or disposal of hazardous substances or petroleum products has occurred. (including no migration of these substances from adjacent areas)
Category 2: Areas where only release or disposal of petroleum products has occurred.
Category 3: Areas where release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial response.
Category 4: Areas where release, disposal, and/or migration of hazardous substances has occurred, and all removal or remedial actions to protect human health and the environment have been taken.

ENCLOSURE 4

TABLE 2 – NOTIFICATION OF HAZARDOUS SUBSTANCE STORAGE, RELEASE OR DISPOSAL

Building Number	Name of Hazardous Substance(s)	Date of Storage, Release, or Disposal	Remedial Actions
Building 716A	Waste oil, solvents and PCBs	A waste oil tank near Building 716A is designated at SWMU NAAP-53. The 1,000-gallon tank contained used oil, solvents and PCBs the tank was managed as a hazardous waste tank until it underwent clean closure in 1993.	Tank removal and contaminated soil excavation were completed in February 1993. An IDEM letter dated October 14, 1993 states that IDEM received NECD's certification dated April 23, 1993, for partial closure for the 1,000-gallon waste oil tank. With the receipt of this certification, partial closure was completed as required by 40 CFR 265 Subpart G. According to the 2005 NECD RCRA permit, a determination of NFA was granted to this site.
Building 729A	PCB containing oil	In October 1994, a 55-gallon drum containing transformer oil with between 50 and 500 ppm PCBs ruptured. Approximately 5 gallons of oil spilled on the floor. The floor was concrete coated with epoxy and was impervious.	The spill was cleaned up and confirmation samples demonstrated that the cleanup operation was sufficient to comply with 40 CFR Part 761.

* The information contained in this notice is required under the authority of regulations promulgated under section 120(h) of the Comprehensive Environmental Response, Liability, and Compensation Act (CERCLA or 'Superfund') 42 U.S.C. §9620(h). This table provides information on the storage of hazardous substances for one year or more in quantities greater than or equal to 1,000 kilograms or the hazardous substance's CERCLA reportable quantity (whichever is greater). In addition, it provides information on the known release of hazardous substances in quantities greater than or equal to the substances CERCLA reportable quantity. See 40 CFR Part 373.

ENCLOSURE 5

TABLE 3 – NOTIFICATION OF PETROLEUM PRODUCT STORAGE, RELEASE, OR DISPOSAL

Building Number	Name of Petroleum Product(s)	Date of Storage, Release, or Disposal	Remedial Actions
Underground Storage Tanks			
A3200 – Access Control Facility	Diesel 1,000 gallon	Tank Installed 2002	UST is Active
3005 – Maintenance Warehouse	Fuel Oil 550 gallon	Tank Installed 1992	Closed January 2002
706 – Maintenance Shop	Gasoline 1,000 gallon	Tank Installed 1941	Closed 1990
710 - Warehouse	Diesel 3,000 gallon	Tank Installed 1941	Removed 1990
710 - Warehouse	Gasoline 8,000 gallon	Tank Installed 1941	Removed 1990
716A – Vehicle Maintenance Shop	Gasoline / Waste Oil 1,000 gallon	Tank Installed 1941	Closed 1989/removed
716A – Vehicle Maintenance Shop	Gasoline 10,000 gallon	Tank Installed 1993	UST is Active
716A – Vehicle Maintenance Shop	Diesel 10,000 gallon	Tank Installed in 1993	UST is Active
716A – Vehicle Maintenance Shop	Gasoline 12,000 gallon	Tank Installed 1972	Closed October 1994
716A – Vehicle Maintenance Shop	Gasoline 10,000 gallon	Tank Installed 1941	Closed December 1989

Building Number	Name of Petroleum Product(s)	Date of Storage, Release, or Disposal	Remedial Actions
723A – Chemical Operations	Fuel Oil 1,000	Tank Installed 1981	Removed
Aboveground Storage Tanks			
4011 – Heat Plant Building	#2 Fuel Oil 500,000 gallon	Not available	Removed in 1981.
4011 – Heat Plant Building	#2 Fuel Oil 500,000 gallon	Not available	Removed in 1981.
710 - Warehouse	Diesel 480 gallon	Not available	AST is active
412A – Reservoir Pump House	Fuel Oil 250 gallon	Not available	Removed
412A – Reservoir Pump House	Diesel 225 gallon	Not available	AST is active
716A – Vehicle Maintenance Shop	Diesel 370 gallon	Not available	Removed
716A – Vehicle Maintenance Shop	Ethylene glycol 300 gallon	Not available	Removed
733 K – Emergency Vehicle Storage & Training Building	Diesel 240 gallon	Not available	AST is active
Non-UST/AST Storage			
2500 kilovolt (KV) Main Substation Transformer	Transformer Oil 1,062 gallon	Not available	Still in use

Building Number	Name of Petroleum Product(s)	Date of Storage, Release, or Disposal	Remedial Actions
412A Reservoir Firewater Pump Transformer	Transformer Oil 300 gallon	Not available	Still in use
6173 Sewage Treatment Plant Transformer	Transformer Oil 300 gallons	Not available	Still in use
Area 3300 Substation Transformer	Transformer Oil 172 gallons	Not available	Still in use
405A Substation Transformer 69 KV Oil Containing Breaker (OCB)	Transformer Oil 60 gallons	Not available	Still in use
405A Substation 12.47 KV OCB substation transformer	Transformer Oil 60 gallons	Not available	Still in use
Transformer in drum repack facility (may be gone)	Transformer Oil 240 gallons	Not available	Still in use
Booster pump station transformer	Transformer Oil 140 gallons	Not available	Still in use
710 Crane 1152	Hydraulic Oil 88 gallons	Not available	Still in use
710 Excavator 1120	Hydraulic Oil 90 gallons	Not available	Still in use
725A Emergency generator, unit 1979	Diesel Fuel 100 gallons	Not available	Still in use
716D Hydraulic power unit	Hydraulic Oil 70 gallons	Not available	Still in use

Building Number	Name of Petroleum Product(s)	Date of Storage, Release, or Disposal	Remedial Actions
729B	Used oil or oil/water mixture 8 each 55-gallon drums	Not available	Removed
716A	Used oil 4 each 55-gallon drums	Not available	Removed
716A	Automatic transmission fluid 1 each 55-gallon drum	Not available	Removed
716D, 714A or 725A	Kerosene 2 each 55-gallon drums	Not available	Removed
714A	Transformer Oil 4 each 55-gallon drums	Not available	Removed
717A	Used oil 3 each 55-gallon drums	Not available	Removed
733K	Used oil/water mixture 2 each 55-gallon drums	Not available	Removed
Day tank for Emergency Generator Building	Diesel Fuel 100 gallons	Not available	Removed

ENCLOSURE 6

CERCLA NOTICE, COVENANT, AND ACCESS PROVISIONS AND OTHER DEED PROVISIONS

The following CERCLA Notice, Covenant, and Access Provisions, along with the Other Deed Provisions, will be placed in the deed in a substantially similar form to ensure protection of human health and the environment and to preclude any interference with ongoing or completed remediation activities.

1. CERCLA NOTICE

For the Property, the Grantor provides the following notice, description, and covenant:

A. Pursuant to section 120(h)(3)(A)(i)(I) and (II) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. §9620(h)(3)(A)(i)(I) and (II)), available information regarding the type, quantity, and location of hazardous substances and the time at which such substances were stored, released, or disposed of, as defined in section 120(h), is provided in Exhibit 4 **[The FOST Table 2 – Hazardous Substance, Storage, Release and Disposal should be included as a deed exhibit.]**, attached hereto and made a part hereof. Additional information regarding the storage, release, and disposal of hazardous substances on the property has been provided to the Grantee, receipt of which the Grantee hereby acknowledges. Such additional information includes, but is not limited to, the following documents: SAIC, *Final ECP Report – Newport Chemical Depot, Newport, Indiana*, October 2008; SAIC, *U.S. Army BRAC 2005 Environmental Condition of Property Report Update for FOST 1, Newport Chemical Depot – Indiana*. December 2010; and Finding of Suitability to Transfer (FOST), Newport Chemical Depot, Categories 1, 2, 3 and 4 Parcels, Vermillion County, Indiana, January 2011.

B. Pursuant to section 120(h)(3)(A)(i)(III) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. §9620(h)(3)(A)(i)(III)), a description of the remedial action taken, if any, on the property is provided in Exhibits 3 and 4 **[The FOST Table 1 Description of Property and Table 2 – Hazardous Substance, Storage, Release and Disposal should be included as an exhibit in the final deed]**, attached hereto and made a part hereof. Additional information regarding the remedial action taken, if any, has been provided to the Grantee, receipt of which the Grantee hereby acknowledges. Such additional information includes, but is not limited to, the following documents: SAIC, *Final ECP Report – Newport Chemical Depot, Newport, Indiana*, October 2008; SAIC, *U.S. Army BRAC 2005 Environmental Condition of Property Report Update for FOST 1, Newport Chemical Depot – Indiana*. December 2010.

2. CERCLA COVENANT

Pursuant to section 120(h)(3)(A)(ii) and (B) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. §9620(h)(3)(A)(ii) and (B)), the United States warrants that -

A. All remedial action necessary to protect human health and the environment with respect to any hazardous substance identified pursuant to section 120(h)(3)(A)(i)(I) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 remaining on the property has been taken before the date of this deed, and

B. Any additional remedial action found to be necessary after the date of this deed shall be conducted by the United States.

This warranty shall not apply in any case in which the person or entity to whom the property is transferred is a potentially responsible party with respect to such property. For purposes of this warranty, Grantee shall not be considered a potentially responsible party solely due to the presence of a hazardous substance remaining on the property on the date of this instrument, provided that Grantee has not caused or contributed to a release of such hazardous substance.

3. RIGHT OF ACCESS

A. Pursuant to section [120(h)(3)(A)(iii)] of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. §[9620(h)(3)(A)(iii)]), the United States retains and reserves a perpetual an assignable easement and right of access on, over, and through the property, to enter upon the property in any case in which an environmental response action or corrective action is found to be necessary on the part of the United States, without regard to whether such environmental response action or corrective action is on the Property or on adjoining or nearby lands. Such easement and right of access includes, without limitation, the right to perform any environmental investigation, survey, monitoring, sampling, testing, drilling, boring, coring, test-pitting, installing monitoring or pumping wells or other treatment facilities, response action, corrective action, or any other action necessary for the United States to meet its responsibilities under applicable laws and as provided for in this instrument. Such easement and right of access shall be binding on the Grantee, its successors and assigns, and shall run with the land.

B. In exercising such easement and right of access, the United States shall provide the Grantee or its successors or assigns, as the case may be, with reasonable notice of its intent to enter upon the Property and exercise its rights under this covenant, which notice may be severely curtailed or even eliminated in emergency situations. The United States shall use reasonable means, but without significant additional costs to the United States, to avoid and to minimize interference with the Grantee's and the Grantee's successors' and assigns' quiet enjoyment of the Property. At the completion of said work, the work site shall be reasonably restored. Such easement and right of access includes the right to obtain and use utility services, including water, gas, electricity, sewer, and communications services available on the Property at a reasonable charge to the United States. Excluding the reasonable charges for such utility services, no fee,

charge, or compensation will be due the Grantee nor its successors and assigns, for the exercise of the easement and right of access hereby retained and reserved by the United States.

C. In exercising such easement and right of access, neither the Grantee nor its successors and assigns, as the case may be, shall have any claim at law or equity against the United States or any officer, employee, agent, contractor of any tier, or servant of the United States based on actions taken by the United States or its officers, employees, agents, contractors of any tier, or servants pursuant to and in accordance with this covenant, provided that nothing in this paragraph shall be considered as a waiver by the Grantee and its successors and assigns of any remedy available to them under the Federal Tort Claims Act. In addition, the Grantee, its successors and assigns, shall not interfere with any response action or corrective action conducted by the Grantor on the Property.

4. ”AS IS”

A. The Grantee acknowledges that it has inspected or has had the opportunity to inspect the Property and accepts the condition and state of repair of the subject Property. The Grantee understands and agrees that the Property and any part thereof is offered “AS IS” without any representation, warranty, or guaranty by the Grantor as to quantity, quality, title, character, condition, size, or kind, or that the same is in condition or fit to be used for the purpose(s) intended by the Grantee, and no claim for allowance or deduction upon such grounds will be considered.

B. No warranties, either express or implied, except as provided under applicable law and under Paragraphs 3 and 4 of the Environmental Protection Provisions herein, are given with regard to the condition of the Property, including, without limitation, whether buildings or structures on the Property do or do not contain asbestos or lead-based paint. The Grantee shall be deemed to have relied solely on its own judgment in assessing the overall condition of all or any portion of the Property, including, without limitation, any asbestos, lead-based paint in buildings or structures, or other conditions on the Property. The failure of the Grantee to inspect or to exercise due diligence to be fully informed as to the condition of all or any portion of the Property offered, will not constitute grounds for any claim or demand against the United States.

C. Nothing in this “AS IS” provision will be construed to modify or negate the Grantor’s obligation under the CERCLA Covenant or any other statutory obligations.

5. HOLD HARMLESS

A. To the extent authorized by law, the Grantee, its successors and assigns, covenant and agree to indemnify and hold harmless the Grantor, its officers, agents, and employees from (1) any and all claims, damages, judgments, losses, and costs, including fines and penalties, arising out of the violation of the NOTICES, USE RESTRICTIONS, AND RESTRICTIVE COVENANTS in this Deed by the Grantee, its successors and assigns, and (2) any and all claims, damages, and judgments arising out of, or in any manner predicated upon, exposure to asbestos, lead-based paint in buildings or structures, or other condition on any portion of the Property after the date of

conveyance, except with regard to claims, damages and judgments arising out of acts or omissions of the successors or assigns of Grantee.

B. The Grantee, its successors and assigns, covenant and agree that the Grantor shall not be responsible for any costs associated with modification or termination of the NOTICES, USE RESTRICTIONS, AND RESTRICTIVE COVENANTS in this Deed, including without limitation, any costs associated with additional investigation or remediation of asbestos, lead-based paint in buildings or structures, or other condition on any portion of the Property. Except with regard to recording or filing fees, this paragraph will not be applicable to use restrictions or restrictive covenants that may require modification or termination as a result of remediation activities conducted by the Grantor.

C. Nothing in this Hold Harmless provision will be construed to modify or negate the Grantor's obligation under the CERCLA Covenant or any other statutory obligations.

6. POST-TRANSFER DISCOVERY OF CONTAMINATION

A. If an actual or threatened release of a hazardous substance or petroleum product is discovered on the Property after the date of conveyance, Grantee, its successors or assigns, shall be responsible for such release or newly discovered substance unless Grantee is able to demonstrate that such release or such newly discovered substance was due to Grantor's activities, use, or ownership of the Property. If the Grantee, its successors or assigns discover such hazardous substance and believe it is due to the Grantor's activities, use or ownership of the Property, Grantee, its successors or assigns will immediately secure the site and notify the Grantor of the existence of the hazardous substances, and Grantee, its successors or assigns will not further disturb such hazardous substances without the written permission of the Grantor.

B. Grantee, its successors and assigns, as consideration for the conveyance of the Property, agree to release Grantor from any liability or responsibility for any claims arising solely out of the release of any hazardous substance or petroleum product on the Property occurring after the date of the delivery and acceptance of this Deed, where such substance or product was placed on the Property by the Grantee, or its successors, assigns, employees, invitees, agents or contractors, after the conveyance. This paragraph shall not affect the Grantor's responsibilities to conduct response actions or corrective actions that are required by applicable laws, rules and regulations, or the Grantor's indemnification obligations under applicable laws.

7. ENVIRONMENTAL PROTECTION PROVISIONS

The Environmental Protection Provisions are at Exhibit 8, which is attached hereto and made a part hereof. The Grantee shall neither transfer the property, lease the property, nor grant any interest, privilege, or license whatsoever in connection with the property without the inclusion of the Environmental Protection Provisions contained herein, and shall require the inclusion of the Environmental Protection Provisions in all further deeds, easements, transfers, leases, or grant of any interest, privilege, or license.

ENCLOSURE 7

ENVIRONMENTAL PROTECTION PROVISIONS

The following conditions, restrictions, and notifications will be attached, in a substantially similar form, as an exhibit to the deed and be incorporated therein by reference in order to ensure protection of human health and the environment.

1. LAND USE RESTRICTIONS

A. The United States Department of the Army has undertaken careful environmental study of the Property and concluded that the land use restrictions set forth below are required to ensure protection of human health and the environment. The Grantee, its successors or assigns, shall not undertake nor allow any activity on or use of the property that would violate the land use restrictions contained herein.

(1) Residential Use Restriction. The Grantee, its successors and assigns, shall use the following areas of the Property solely for commercial or industrial activities and not for residential purposes: Gypsum Sludge Basins (GSBs) and Pollution Control Center Retention Pond (PCCRP); Closed Sanitary Landfill (CSL); Demilitarization Incinerator/ Scrap Yard (DY/SI); Basins 30007, 30008, and 30009; Chemical Plant Coal Ash Basin (CPAB), and Asbestos Burial Areas 1) east of the Memorial Chapel Dump, 2) West of the Sewage Treatment Plant, and 3) east of the Pine Trees and west of 1st Street. These areas are more particularly described in Exhibit _____ (include a map or parcel description precisely identifying these areas). For purposes of this provision, residential use includes, but is not limited to, single family or multi-family residences; child care facilities; and nursing home or assisted living facilities; and any type of educational purpose for children/young adults in grades kindergarten through 12.

(2) Groundwater Restriction. Grantee is hereby informed and acknowledges that the groundwater under Property has contamination related to industrial activities on the Property. Groundwater monitoring wells were installed and samples collected in areas of the facility identified in the RCRA permit as having possible groundwater issues. Contaminants detected in these areas include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), site related metals, explosives, and polynuclear aromatic hydrocarbons (PAHs). Contaminants detected in the groundwater in a particular area were dependent on manufacturing activities or material disposal in that area, all contaminant types were not detected in all areas. In some of the areas where samples were collected, the concentrations detected were at relatively low levels and were determined not to pose an unacceptable risk to human health and the environment, groundwater use restrictions were not imposed in these areas. The groundwater contamination detected that does potentially pose an unacceptable risk is limited to industrial areas and areas used for waste disposal on the Property. The Grantee, its successors and assigns, shall not access or use ground water underlying the following areas of the Property: CSL; DY/SI; Basins 30007, 30008, and 30009; and CPAB for any purpose without the prior written approval of United States Department of the Army, the Indiana Department of Environmental Management (IDEM) and the

Environmental Protection Agency (EPA), Region 5. These areas are more particularly described in Exhibit _____ (include a map or parcel description precisely identifying these areas). For the purpose of this restriction, "ground water" shall have the same meaning as in section 101(12) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

(3) Landfill Restriction. The Property has several non-hazardous waste landfills ("Non-Hazardous Waste Landfill Parcels"). The Grantee, its successors and assigns, shall not conduct or permit others to conduct any excavation activities (i.e. digging, drilling, or any other excavation or disturbance of the land surface or subsurface) or other activities, which may damage the Non-Hazardous Waste Landfill Parcels soil cover and liners. A site map depicting the location of the Non-Hazardous Waste Landfill Parcels is provided as Exhibit _____ (Site Map of Property).

(4) Agricultural Restriction. The Grantee, its successors and assigns, shall use the following areas of the Property for commercial or industrial activities and not for agricultural purposes: GSBs; CSL; DY/SI, Basins 30007, 30008, and 30009; CPAB, and Asbestos Burial Areas 1) east of the Memorial Chapel Dump, 2) West of the Sewage Treatment Plant, and 3) east of the Pine Trees and west of 1st Street. These areas are more particularly described in Exhibit _____ (include a map or parcel description precisely identifying these areas). For the purposes of this provision, agricultural use includes, but is not limited to raising crops, keeping orchards, keeping vineyards or grazing animals.

(5) Endangered Species Restriction. The Indiana Bat (*Myotis sodalist*), a federally endangered species, has been found at NECD. The Grantee, its successors and assigns, and every successor in interest to the Property, or any part thereof, shall protect this species and its habitat that is located within the boundary of the Property. Additional covenants for the protection of the Indiana bat and its habitat located within the Property area are specified in the US Fish and Wildlife Service response to the Biological Assessment and are to be included in the final Deed.

B. Modifying Restrictions. Nothing contained herein shall preclude the Grantee, its successors or assigns, from undertaking, in accordance with applicable laws and regulations and without any cost to the Grantor, such additional action necessary to allow for other less restrictive use of the Property. Prior to such use of the Property, Grantee shall consult with and obtain the approval of the Grantor, and, as appropriate, the State or Federal regulators, or the local authorities. Upon the Grantee's obtaining the approval of the Grantor and, as appropriate, state or federal regulators, or local authorities, the Grantor agrees to record an amendment hereto. This recordation shall be the responsibility of the Grantee and at no additional cost to the Grantor.

C. Submissions. The Grantee, its successors and assigns, shall submit any requests to modifications to the above restrictions to Grantor and Indiana Department of Environmental Management (IDEM) and the Environmental Protection Agency (EPA), Region 5 by first class mail, postage prepaid, addressed as follows:

a. Grantor – Ms. Carolyn Jones
Office of the Assistant Chief of Staff
for Installation Management
ATTN: BRAC Division (DAIM-ODB)

600 Army Pentagon
Washington, DC 20310-0600

b. Environmental Protection Agency

Mr. Todd Gmitro, USEPA (Region 5)

c. Indiana Department of Environmental Management

Mr. Doug Griffin

2. NOTICE OF THE POTENTIAL PRESENCE OF MUNITIONS AND EXPLOSIVES OF CONCERN (MEC)

A. The Grantee is hereby notified that due to the former use of the Property as a military installation, the Property may contain munitions and explosives of concern ("MEC"). The term MEC means specific categories of military munitions that may pose unique explosives safety risks and includes: (1) Unexploded ordnance ("UXO"), as defined in 10 U.S.C. §101(e)(5); (2) Discarded military munitions ("DMM"), as defined in 10 U.S.C. §2710(e)(2); or (3) Munitions constituents (e.g., TNT, HMX, RDX), as defined in 10 U.S.C. §2710(e)(3), present in high enough concentrations to pose an explosive hazard.

B. The Grantor represents that, to the best of its knowledge, no MEC is currently present on the Property. Notwithstanding the Grantor's determination, the parties acknowledge that there is a possibility that MEC may exist on the Property. In the event the Grantee, its successors and assigns, should discover any MEC on the Property, they should immediately stop any intrusive or ground–disturbing work in the area or in any adjacent areas and shall not attempt to disturb, remove or destroy it, but shall immediately contact the nearest County Sheriff or local law enforcement agency who will, if needed, contact the nearest Department of Defense Explosive Ordnance Disposal ("EOD") unit. Appropriate Grantor or Grantor designated explosive ordnance personnel will be dispatched promptly to dispose of such MEC at no expense to the Grantee, its successors or assigns. The Grantee, its successors or assigns, shall: (a) cooperate with the Grantor with regard to the location of and removal of MEC from the Property, provided such cooperation does not require the Grantee, or its successors or assigns, to incur any non-reimbursed direct costs, (b) notify the Grantor as soon as reasonably possible after the discovery of any MEC by the Grantee, or its successors and assigns, and (c) take no actions regarding MEC discovered on the Property, except as may be specifically directed by the Grantor.

C. Easement and Access Rights.

(1) The Grantor reserves a perpetual and assignable right of access on, over, and through the Property, to access and enter upon the Property in any case in which a munitions response action is found to be necessary or such access and entrance is necessary to carry out a munitions response action on adjoining property. Such easement and right of access includes, without limitation, the right to perform any additional investigation, sampling, testing, test-pitting, surface and subsurface clearance operations, or any other munitions response action necessary for the

United States to meet its responsibilities under applicable laws and as provided for in this Deed. The right of access shall be binding on the Grantee, its successors and assigns, and shall run with the land.

(2) In exercising this easement and right of access, the Grantor shall give the Grantee or the then record owner, reasonable notice of the intent to enter on the Property, except in emergency situations. Grantor shall use reasonable means, without significant additional cost to the Grantor, to avoid and/or minimize interference with the Grantee's and the Grantee's successors' and assigns' quiet enjoyment of the Property. Such easement and right of access includes the right to obtain and use utility services, including water, gas, electricity, sewer, and communications services available on the property at a reasonable charge to the United States. Excluding the reasonable charges for such utility services, no fee, charge, or compensation will be due the grantee nor its successors and assigns, for the exercise of the easement and right of access hereby retained and reserved by the United States.

(3) In exercising this easement and right of access, neither the Grantee nor its successors and assigns, as the case maybe, shall have any claim at law or equity against the United States or any officer, employee, agent, contractor of any tier, or servant of the United States based on actions taken by the United States or its officers, employees, agents, contractors of any tier, or servants pursuant to and in accordance with this Paragraph, provided that nothing in this paragraph shall be considered as a waiver by the Grantee and its successors and assigns of any remedy available to them under the Federal Tort Claims Act. In addition, the Grantee, its successors and assigns, shall not interfere with any munitions response action conducted by the Grantor on the Property.

3. NOTICE OF THE PRESENCE OF ASBESTOS AND COVENANT

A. The Grantee is hereby informed and does acknowledge that friable and non-friable asbestos or asbestos containing material "ACM" has been found in buildings on the property. The property may also contain improvements such as buildings, facilities, equipment, and pipelines, above and below ground, that contain friable and non-friable asbestos or ACM. The Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency have determined that unprotected or unregulated exposure to airborne asbestos fibers increases the risk of asbestos-related diseases, including certain cancers that can result in disability or death.

B. The following buildings on the property have been determined to contain friable asbestos: Office Building 3005, Coal Power Plant Building 401A, and Sewage Treatment Plant Building 617A. The ACM includes: thermal system insulation. The Grantor covenants and warrants, as of the date of the conveyance of the Property, the above-referenced buildings will be in a condition such that asbestos or ACM will not be released into the environment (air or soil). The Grantee agrees following the conveyance of the Property to the Grantee to undertake any and all asbestos abatement or remediation in the aforementioned buildings that may be required under applicable law or regulation at no expense to the Grantor. The Grantor has agreed to transfer said buildings to the Grantee, prior to remediation or abatement of asbestos hazards, in reliance upon the Grantee's express representation and covenant to perform the required asbestos abatement or remediation of these buildings.

C. The Grantee covenants and agrees that its use and occupancy of buildings and structures on the Property will be in compliance with all applicable laws relating to asbestos. The Grantee agrees to be responsible for any future remediation or abatement of asbestos found to be necessary on the buildings and structures on the Property to include ACM in or on buried pipelines that may be required under applicable law or regulation.

D. The Grantee acknowledges that it has inspected or has had the opportunity to inspect buildings and structures on the Property as to their asbestos and ACM condition and any hazardous or environmental conditions relating thereto. The Grantee shall be deemed to have relied solely on its own judgment in assessing the overall condition of all or any buildings and structures on the Property, including, without limitation, any asbestos or ACM hazards or concerns.

4. NOTICE OF THE PRESENCE OF LEAD-BASED PAINT (LBP) AND COVENANT AGAINST THE USE OF THE PROPERTY FOR RESIDENTIAL PURPOSE

A. The Grantee is hereby informed and does acknowledge that all buildings on the Property, which were constructed or rehabilitated prior to 1978, are presumed to contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Every purchaser of any interest in Residential Real Property on which a residential dwelling was built prior to 1978 is notified that there is a risk of exposure to lead from lead-based paint that may place young children at risk of developing lead poisoning.

B. The Grantee covenants and agrees that it shall not permit the occupancy or use of any buildings or structures on the Property as Residential Property, as defined under 24 Code of Federal Regulations Part 35, without complying with this section and all applicable federal, state and local laws and regulations pertaining to lead-based paint and/or lead-based paint hazards. Prior to permitting the occupancy of the Property where its use subsequent to sale is intended for residential habitation, the Grantee specifically agrees to perform, at its sole expense, the Army's abatement requirements under Title X of the Housing and Community Development Act of 1992 (Residential Lead-Based Paint Hazard Reduction Act of 1992).

C. The Grantee acknowledges that it has inspected, or has had the opportunity to inspect buildings and structures on the Property as to its lead-based paint content and condition and any hazardous or environmental conditions relating thereto. The Grantee shall be deemed to have relied solely on its own judgment in assessing the overall condition of all buildings and structures on the property, including, without limitation, any lead-based paint hazards or concerns.

5. RADIOLOGICAL MATERIALS NOTIFICATION AND COVENANT

A. The Grantee is hereby informed and does acknowledge that radioactive materials and equipment containing radioactive materials are or were present on the Property to be conveyed, described as follows:

- NECD had US Atomic Energy Commission (AEC) License No. 13-07499-01 for sealed sources used in munitions quality control and US Nuclear Regulatory Commission (USNRC) License No. 13-24726-02 for sealed sources in Army Chemical Agent Monitors and Improved Chemical Agent Monitors. Both licenses have been terminated. All monitors that were stored in Building 723 have been removed and transferred to commodity managers. Clearance of the storage areas in Building 723 is pending.

- NECD had an Army Radiation Authorization No. A13-0146-NECD for a Mobile Vehicle and Cargo Inspection System containing a Co 60 radiation source. The unit was transferred to Fort Lewis and the Permit was terminated 24 February 2005.

- Radiological sealed sources in instruments owned and used by Newport Chemical Demilitarization Facility (NECDF) contractors included soil density meters and gauges and industrial radiography devices. All instruments have been removed and the NECDF has been demolished.

- Non-Licensed sources include tritium exit signs, lightning arresters, check sources, and vapor tracers. All sources have been removed from NECD and sent to the Chem-Nuclear Consolidation Facility, Barnwell, South Carolina, except the tritium exit signs which have been removed and are awaiting disposal through the Joint Munitions Command.

- The Manhatten Engineer District constructed and the AEC operating heavy water plants (P-9 and Dana Heavy Water Plants) on the NECD to support the Manhatten Project. Two buildings from the plants still remain on NECD.

There is no evidence of a release of radiological materials from any of the sources.

B. The Grantee, its successors and assigns shall not access or use, or permit others to access or use the remaining buildings from the P-9 and/or Dana Heavy Water Plants on the Property and the storage areas in Buildings 723 (chemical detection equipment) and 728 (lightning arresters) until the Grantor has completed any required decommissioning of radioactive materials on the Property and clearance by commodity managers is provided.

C. The Grantor reserves a perpetual and assignable right of access on, over, and through the Property, to access and enter upon the Property in any case in which a response action is found to be necessary or such access and entrance is necessary to carry out a response action on adjoining property associated with radiological materials. Such easement and right of access includes, without limitation, the right to perform any additional investigation, sampling, testing, test-pitting, surface and subsurface clearance operations, or any other response action necessary for the United States to meet its responsibilities under applicable laws associated with radiological materials. The right of access shall be binding on the Grantee, its successors and assigns, and shall run with the land.

ENCLOSURE 8

PUBLIC NOTICE

The following announcement was published in The Daily Clintonian, Clinton, Indiana, on 8 November 2010. The comment period ended on 8 December 2010.

NOTICE OF INTENT: The Department of the Army intends to sign a finding of suitability to transfer (FOST) document for the transfer of approximately 6,500 acres of the Newport Chemical Depot in Vermillion County to the Newport Chemical Deport Reuse Authority (NeCDRA). The FOST includes the CERCL Notice, Covenant, Access Provisions, and other Deed Provisions; and the Environmental Protection Provisions necessary to protect human health and the environment after transfer. The FOST is based on the Final Environmental Condition of Property Report dated October 2008, and the Site Inspection Report dated November 2009. The draft FOST is available for review at the Clinton Public Library, 313 S 3rd Street, Clinton IN or at http://www.hqda.army.mil/acsimweb/brac/env_fost.htm. Comments may be submitted on or before December 3, 2010 to:
Commander's Representative, Newport Chemical Depot, ATTN: Ms. Cathy Collins, PO Box 160, Newport, IN 47862.

ENCLOSURE 9

RESPONSIVENESS SUMMARY

Comment: From Mr. Phillip Cox, Conservation Chair, Wabash Valley Audubon Society, and Vice President of Development, Ouabache Land Conservancy.

I request that the public comment period for review and comment of the Newport Chemical Depot draft Finding of Suitability to Transfer be extended. The Notice of Intent for the Finding Of Suitability to Transfer 6,500 acres was published in The Daily Clintonian on November 8, 2010 and public comments are due to the Army by December 3, 2010. This is not adequate time to review this document.

In addition, the website published in the The Daily Clintonian was http://www.hqda.army.mil/acsimweb/brac/envfost.htm <blockedhttp://www.hqda.army.mil/acsimweb/brac/envfost.htm> and this page cannot be found on the Internet. Therefore it is requested that the Notice of Intent for the Finding Of Suitability to Transfer 6,500 acres of Newport Chemical Depot be republished with the correct website and at least 30 days be allowed to review and comment on the FOST. This is required in order that all stakeholders and interested parties have enough time to review this important document.

Army Response: The Notice of Intent was published later than indicated originally by the Daily Clintonian. Therefore comments on the document will be accepted up to December 8, 2010.

The web address did not appear correctly in the public notice because of an underline between env_fost. A hard copy of the FOST was placed at the Clinton Public Library and has been accessed by several citizens.

The Army believes this will provide interested parties and stakeholders sufficient time and access to this document.