

PROPERTY SURVEY SUMMARY SHEET
LAKE ONTARIO ORDNANCE WORKS
FUDS PROPERTY NUMBER C02NY0025
FFID NUMBER NY9799F7345
ADDENDED 23 MARCH 2007

PROPERTY NAME: The FUDS property named the "Lake Ontario Ordnance Works" has, since the late 1940s, been subdivided into hundreds of individual parcels with a variety of Department of Defense (DoD) and non-DoD owners. The DoD owned numerous parcels after the operation of the LOOW explosives plant including the Northeast Chemical Warfare (NECW) Depot, Air Force Plant 38 (AFP-38), Model City Igloo Area, Air Force Plant 68 (AFP-68), Navy Interim Pilot Production Plant (Navy IPPP), NIKE Missile Battery NF-03/05, Ransomville Test Annex (RTA), the Youngstown Test Annex (YTA), and the Army National Guard Weekend Training Site (WETS). Some of the major current non-DoD owned parcels include the Model City Treatment Storage Disposal and Recovery (TSDR) Facility, the Lew-Port Industrial Park, the Lewiston-Porter Central School District, the Modern Landfill, and the Niagara Falls Storage Site (NFSS). There are also numerous residential homes, farms, commercial, municipal, and industrial parcels on the former LOOW.

LOCATION: The Towns of Lewiston and Porter, Niagara County, New York, see Location Map - Attachment A and Site Map with directions - Attachment B;
Latitude: 43° 12' 47" N, Longitude: 78° 58' 41" W, EPA Region II, 26th
Congressional District of New York.

PROPERTY HISTORY: This addendum property survey summary sheet (PSSS) is part of Addendum Number 1 to the initial Inventory Project Report (INPR) with FDE signed 15 June 1986. This addendum PSSS presents site history, past ownership of the site, and additional environmental and safety concerns remaining at the site. This addendum PSSS also addresses the inclusion of certain additional acreage not identified in the original LOOW INPR that was part of the original LOOW but had subsequent different periods of ownership. Some of these subsequent periods of different ownership were originally erroneously identified as separate sites and were given their own FUDS property numbers. All documentation regarding the LOOW is now being consolidated under this LOOW FUDS property number, and the following erroneous separate site numbers are being closed out through this INPR addendum: C02NY0012 (entitled RTA with separate FDE signed 17 December 1992), C02NY0074 (entitled NIKE Battery NF-03 and with separate FDE signed 20 September 1985), C02NY0576 (entitled AFP-68 and with separate FDE signed 3 January 1992, C02NY0005 (Youngstown National Guard Facility, an active DOD facility known as the National Guard WETS) and C02NY0003 (AFP-38, part of the active DOD facility known as the National Guard WETS).

The DOD acquired a total of approximately 7,567.46 acres in the towns of Lewiston and Porter in Niagara County, New York at various times and by various methods for various uses as discussed below. The acquisition of these 7,567.46 acres was by the Army for the construction of LOOW. However, subsequent to the operation of LOOW, portions of the 7,567.46 acres were owned by other DOD components. The subsequent property ownership also caused parts of the property to be renamed. The new site names/uses included the NECW Depot, AFP-38, Model City Igloo Area, AFP-68, Navy IPPP, NIKE Missile Battery NF-03/05, RTA, YTA, and the Army National Guard WETS. The different periods of ownership did not change the acreage associated with the original LOOW property. The site history is presented below.

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LOOW

The Department of the Army acquired a total of 7,567.46 acres (7,453.28 acres fee and 114.18 acres perpetual easement) by various deeds and condemnation proceedings between 1941 and 1944 for the establishment of LOOW. The 114.18 acres perpetual easement included an easement along Four Mile Creek to be used for drainage (79.6 acres), an easement for a 42-in. water intake line from the Niagara River (13.39-acres), and an easement for a sewer discharge house and a 30-in. sewer outfall line (21.19 acres) to the Niagara River. The fee acreage included a 12-acre parcel (connected via an easement) used for the construction of a water supply pump house and valve house as well as the main acreage (7,441.28 acres) used for the construction of the ordnance works and the surrounding buffer zone.

LOOW was built for the purpose of manufacturing flaked trinitrotoluene (TNT). It consisted of 6 TNT manufacturing lines (3 pairs) with the necessary facilities for the manufacture, recovery, purification, concentration, and mixing of the acid reagents incident to TNT manufacture as well as the disposal of waste materials from processing operations. Construction of the TNT plant began in March 1942. The operations contract for LOOW was with Chemical Construction Corporation (CCC), which was retained for the installation of equipment, training of key personnel, and plant operation. At the time of construction, LOOW consisted of some two hundred twenty-nine buildings (229). The plant facilities included nitrating houses, absorption towers, wash houses, flaking and packing houses, nitric acid plants; all necessary steam and power plants (central heating plant), water supply facilities (including a 4,000,000-gal concrete reservoir), sewage and wastewater treatment plant; outside lines for electricity, water, steam, and air, railroad tracks, roads, walks, fencing, 58 magazines for TNT storage, warehouses, specialty shops, fueling and maintenance facilities, aboveground storage tanks (ASTs), underground storage tanks (USTs), and administration buildings. The TNT production lines, as well as most of the storage facilities for raw materials and finished products, were constructed on approximately 2,440 acres located on the east-central portion of LOOW. The remaining portion of LOOW, consisting of approximately 5,000 acres (excluding the easements), functioned as a buffer zone.

The first TNT was produced in October 1942 and by 30 June 1943 LOOW had produced a total of 40,240,850 lbs of TNT. Production was scheduled to continue until 31 July 1943 and an agreement was made with CCC to put the plant on 90-day standby starting 1 August 1943. USACE was originally directed to remove and ship all of the equipment from the production lines. It was later determined that removal would be limited to the overhead piping and that which needed to be removed because it represented a safety hazard, until USACE was directed to do otherwise. A contract between USACE and the John W. Cowper Co. and the John W. Danforth Co. was signed on 6 August 1943 for the dismantling and decontamination of the process equipment (Contract #W-321-eng.-986). Cowper and Danforth were to dismantle and decontaminate equipment that had been exposed to TNT and to clean equipment from the nitric acid areas to prevent deterioration. Actual dismantling and decontamination commenced on 12 August 1943. Process equipment, machinery, tools, and surplus stock items were in high demand by other bases, and many articles were transferred to other facilities.

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The entire site was transferred to USACE-North Atlantic Division in 1944. Approximately 860 acres fee (of the former magazine area north of Balmer Road) was transferred to the Chemical Warfare Service (CWS) after 27 June 1944. This area became known as the NECW Depot (discussed in a separate section below). By use permit dated 21 July 1944, the USACE Manhattan Engineering District (MED) was granted use of the 4,000,000-gal concrete reservoir on the north side of the LOOW fresh water treatment plant, as well as the surrounding 25 acres. The permit specified that the reservoir be properly cleaned in order that the future use for water storage is not destroyed. The land covered under the use permit included the 4,000,000-gal reservoir, as well as a smaller reservoir on the south side of the plant, the water treatment facilities, and the roadways.

LOOW was declared surplus to the War Assets Administration (WAA) on 31 March 1945. The disposal of LOOW occurred in two main transactions involving the buffer zone and the TNT/Acid production areas, while a third area was retained under DoD ownership for various DOD components. The buffer zone outside the TNT production and igloo storage areas, approximately 5,066.64 acres fee (according to USACE real estate maps), was transferred to the Federal Farm Mortgage Company (FFMC) on 30 October 1945. Between 1945 and 1950 FFMC conveyed most of the buffer zone (5,050.03 acres) to various owners. Accountability for 13.1 acres fee (of the 5,066.64 acres) was re-assumed by the Army on 7/6/51 and transferred to the USAF on 3 November 1954 (the 13.1 acres which were located in the northern part of the site subsequently became part of AFP-38 as discussed below). The remaining 3.51 acres fee was not accounted for in FFMC disposal documents. It is assumed that this difference is due to a resurveying of the parcels that were conveyed by FFMC.

On 31 December 1946, 1,545.6 acres (1,511.02 acres fee along with 34.58 acres sewer and water easements) was transferred to the Atomic Energy Commission (AEC). This area included the former LOOW TNT/acid production areas, sewage and wastewater treatment plant as well as the concrete reservoir and fresh water treatment plant. The AEC, a non-DOD entity and successor to the MED, had been granted access to the water treatment area as discussed above. The 1,511.02 acres fee had several subsequent uses including non-DOD use as the Lake Ontario Storage Area (LOSA), Niagara Falls Storage Site (NFSS) and the Boron 10 Production Plant. Portions of this acreage also had subsequent DOD ownership including areas identified as NIKE Battery NF-03/05, YTA, RTA, and AFP-68/Navy IPPP. The subsequent DOD ownership is discussed in separate sections below.

On 20 October 1947, the remaining 955.22 acres (875.62 acres fee and 79.6 acres perpetual easement associated with Four Mile Creek) were excessed to the WAA. This area included the former LOOW igloo/TNT storage area north of Balmer Road (the northern portion of LOOW). Portions of this acreage were subsequently owned by other branches of the DOD and during these periods of subsequent DOD ownership the site was known as the NECW Depot, AFP-38, and the Model City Igloo Area as discussed below.

NECW Depot/ AFP-38/ Model City Igloo Area

Approximately 860 acres located on the north side of Balmer Road (the northern portion of LOOW) was transferred from the USACE-North Atlantic Division to the U.S. Army CWS on 27 June 1944. This area, which contained the 58 TNT storage

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"igloos" associated with the former LOOW, was subsequently designated the NECW Depot. It was classified as a "Class IV installation" and was identified as a sub-depot of the Eastern Chemical Warfare Depot, Edgewood Arsenal (Edgewood, Maryland).

The storage area of the NECW Depot was essentially rectangular in shape and was generally bounded on the south by Balmer Road, on the west by Lutts Road, on the north by vacant land (previously identified as the North Patrol Road), and on the east by Porter Center Road. Facility improvements included the restoration of 4 buildings for the housing of administrative personnel and the installation of certain required utilities. According to reports dating from circa 1979, the area occupied by NECW also included land south of Balmer Road, as well as the former LOOW box factory, locomotive shed and various administration buildings. Also, as of May 1945, the NECW Depot included 58 magazines (each igloo was 26 ft by 60 ft interior), 1 warehouse (105 ft by 200 ft), 1 administration building (20 ft by 45 ft), 1 telephone building (15 ft by 25 ft), 1 clock house (30 ft by 30 ft), 1 maintenance shop (40 ft by 65 ft), 1 carpenter shop (28 ft by 50 ft), 2 tool houses (each 20 ft by 40 ft), 47 open storage areas (each 14 ft by 200 ft), and 1 drum storage area (90 ft by 200 ft). The original LOOW railroad spur and loop located along the eastern portion of the site was used to import and export munitions shipments. It is unclear how much additional acreage south of Balmer Road was occupied by the NECW depot and how this land was acquired (i.e. use permit or transfer from USACE NAD).

The bulk of the material that was stored at the NECW Depot during World War II was produced locally and was temporarily stored prior to shipment to the New York Port of Embarkation. At the close of World War II in Europe, the NECW Depot was identified as a temporary storage site for incendiary bombs (such as M-17, M-47, and M-76 bombs) which came back to the United States from Europe. Complete information (e.g., inventory lists) regarding the materials and bombs stored at the NECW Depot was not identified in the historical information located/reviewed. According to one historical document dated circa 1979, "in December 1970, an AEC radiological team surveying the Lake Ontario Ordnance Works site for radiation hazards unexpectedly encountered a sign at the site warning Danger, Phosgene Gas Stored Here. The AEC called in Army Chemical Warfare experts from Edgewood Arsenal to assess the situation. One of those experts later appeared as an Army representative testifying before the Assembly Committee on Environmental Conservation. He reported that the phosgene gas cylinders were in fact determined to have been buried at the LOOW site, as indicated by the warning sign, but that when the cylinders were discovered the cylinders were empty and posed no hazard." A second reference to cylinders was found in a 1978 trip report which states that no one interviewed "ever recalled burial pits (other than some cylinder that had been buried marked removed and sold back in 1970)". No additional information was found to determine the specific location of the cylinders and the report did not confirm the final status of the cylinders.

As of May 1946, munitions had been disposed of offsite and remaining supplies at the depot consisted of surplus property and depot property. Use of the depot was discontinued on 30 June 1946, and the depot was subsequently declared excess by CWS. On 20 October 1947 the remainder of the LOOW site was excessed to the WAA. This property (including the former NECW depot property)

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consisted of 955.22 acres (875.62 acres fee and 79.6 acres easement associated with Four Mile Creek). A portion of the excessed property consisting of 12 acres fee, which housed the fresh water intake pump and valve house, were subsequently disposed of by WAA to Evelyn R. Lord by Quitclaim Deed dated 24 April 1950.

Between 1950 and 1963, approximately 876.72 acres fee of the original LOOW "igloo area" (including the NECW Depot) were withdrawn from surplus by USACE and transferred to the U.S. Air Force (USAF) for the establishment and operation of AFP-38. This included 13.1 acres fee that was originally transferred to FMMC and then back to WAA. AFP-38 was also granted approximately 15.08 acres in easements over AEC and Army property associated with the original LOOW. The easements were associated with rail lines, water lines, electrical lines, and other utilities. AFP-38, also referred to as Bell Test Center AFP-38, was a GOCO facility that was operated by Bell Aircraft Corporation (Bell Textron) from approximately 1954 to 1982 for a variety of purposes, including rocket, missile, and laser research and development (R&D). The USAF gained jurisdiction of the area from the GSA and granted Bell Aircraft Corporation the use of AFP-38 for the development and production of the RASCAL Missile. The area consisted of the original 58 concrete TNT-storage igloos, additional storage facilities, test installations (including four test cell complexes and seven test cells), service buildings, administrative offices and waste handling facilities (including an incinerator and a dam to contain wastewater/runoff). The facilities were constructed to support propellant handling, testing, and hot firing of rocket propulsion systems and components. In 1979, the principal use of the facility was to provide production support for the Minuteman III Propulsion System Rocket Engine (PSRE). The PSRE was fabricated and assembled in the Bell Plant in Wheatfield, New York and was then shipped to AFP-38, where operations such as propellant loading, ordnance installation, and final electrical checkout were accomplished. According to available real estate maps, on 18 April 1955, 8.9 acres of AFP 38 was acquired from the USAF by the Army under use permit. This area was designated the Model City Igloo Area. According to a report prepared by the U.S. Army Toxic and Hazardous Material Agency (USATHAMA) dated 4 January 1979, this area was used by the 40th Explosive Ordnance Detachment (EOD) Disposal Unit for the destruction of hand grenades, fireworks, small arms and relatively small caliber high explosive (HE) ammunition by burning or detonation. The report also indicated that the site was used for the consolidation of liquid fuel components for the NIKE Ajax Rockets prior to shipment to other locations including other Army Depots and Edgewood Arsenal, MD. No evidence of waste disposal was found. At the time of the report in 1979 the 40th EOD was still using the facility and no information pertaining to disposal of the facility was found.

On 31 January 1979, the USAF transferred the western half of AFP-38, 346.86 acres (331.78 acres fee and 15.08 acres easement, which included the Model City Igloo Area that was being occupied under use permit), back to the Army. These 346.86 acres were subsequently leased from the Army on an unknown date (after January 1979) by the Army National Guard. The site became known as the Army National Guard WETS. On 29 April 1985, 3.35 acres of the former AFP-38 was conveyed by quitclaim deed to the Town of Porter. This area currently contains water storage facilities used by the Town of Porter. On 24 August 1992, the USAF transferred 528.89 acres fee of the former AFP-38 to the Army for expansion of the WETS. The 528.89 acres reportedly included acreage

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associated with the former LOOW North Patrol Road and a strip of land north of the North Patrol Road. The Army National Guard continues to use 879.1 acres (864.02 acres fee and 15.08 acres rail and utility easements) for training purposes. An acreage difference of 12.7 acres fee was found between the historical disposal information and the tax maps (876.72 acres fee were acquired and 864.02 acres fee were sold/transferred) for AFP-38. This difference in acreage is assumed to be attributed to resurveying efforts and the transfer of the underlying interest in Balmer Road and Lutts Road from the Army to the Town of Porter (dates unknown). No information pertaining to the disposition of the residual 79.6 acres easement associated with Four Mile Creek was found. It is assumed that this acreage is still owned by DOD but under GSA custody (GSA was the successor to WAA). The majority of the former NECW Depot north of Balmer Road is encompassed by the National Guard Weekend Training Site (WETS). The WETS occupies 864.02 acres fee and 15.08 acres easement [existing over fee acreage] associated with the former NECW Depot. Due to the property status (active DOD property) this area is not eligible for remediation under DERP-FUDS. However the area south of Balmer Road is eligible under DERP-FUDS.

Navy IPPP/AFP-68

Under Right of Entry permit NYDRE(M)-1641, dated 30 July 1954, the Department of the Navy was granted access to approximately 388.96 +/- acres by the AEC. This area comprised the northwestern portion of the 1511.02 acres fee that was being occupied by AEC (the AEC area was identified as the LOSA). The land was bounded by McArthur Street to the east, "N" Street to the south, West Patrol Road to the west, and Balmer Road to the north. It is noted that the former TNT manufacturing lines associated with LOOW were located within these 388.96 acres. On 1 November 1956, the USAF acquired 5.27 acres fee by Declaration of Taking. The 5.27-acre parcel contained the original fresh water intake, the pump house, and the valve house (it is noted that this was part of the 12 acres originally sold to Evelyn R. Lord by Quitclaim Deed dated 24 April 1950). The AEC issued the USAF two no-area use permits on 15 March 1957 (A 3394) and 15 August 1957 (M 3501) for use of 42-in. and 60-in. water mains, and for construction of a 42-in. water main, respectively. On 1 November 1957 the AEC issued use permit M 3593 for the use of 22 acres, including the warehouses and buildings associated with the former LOOW sewage treatment plant. The USAF acquired a letter permit from AEC giving the USAF permission to conduct alterations and rehabilitation activities at the former sewage treatment plant. The USAF subsequently acquired two more use permits covering two parcels totaling 7.39 acres. One permit was for 5.39 acres acquired from AEC on 15 April 1958 (permit DA 30-075 eng 9377) and the second permit was for 2.0 acres (permit DA 30-075 eng 8877) acquired from the Army on 15 January 1959. Both permits were for the use and maintenance of power lines going into the site. Thus the acreage associated with AFP-68/Navy IPPP was increased to approximately 423.59 acres (388.96 acres right of entry, 29.39 acres use permit, and 5.27 acres fee). The fee and permit acreages were part of the original LOOW site; therefore, they do not represent an increase in the overall acreage of the LOOW site.

The Navy IPPP (referred to as the South Plant) was built in 1956 by Olin Mathieson, as part of a Navy contract to produce a high energy fuel (HEF-2). The plant was a GOCO facility that was operated by Olin Mathieson in connection with AFP-68 (discussed below). According to a statement prepared

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by GSA for the Director of the Bureau of the Budget dated 29 April 1957, the Navy had been using a portion of the former LOOW containing 38 buildings under a permit from USAEC since 30 July 1954. The Navy IPPP was constructed around the former LOOW buildings located along "M" Street south of the TNT production area but north of the former acid production area. Nine existing buildings (consisting of the three former TNT change houses, a main TNT compressor building, TNT inspectors office building, TNT supervisors office building, three TNT shop buildings and an old barn) were located along "M" street when Olin Mathieson began construction of the plant in 1956. Facilities installed as part of the process (which reportedly occupied approximately 9 acres) included production buildings, warehouses, two heating plant buildings, a laboratory, cafeteria, water reservoir, cooling tower, four 3,400-gal USTs, railcars used as ASTs, utilities (heating, air, fire, and water lines), open storage areas, electrical substation, refrigeration plant, and a burning area with flare stack. Full-scale production at the Navy IPPP began in May 1958. The Navy IPPP produced diborane, converted it to pentaborane (and some decaborane), and then converted the pentaborane to HEF-2. Capacity of the Navy IPPP was around 480,000 lbs/yr. The Navy IPPP continued to operate until about 1960.

AFP-68 (referred to as the North Plant) was built by Olin Mathieson as part of a contract with the USAF. This plant was a GOCO facility, operated by Olin Mathieson in conjunction with the Navy IPPP. Construction of AFP-68 began on 9 July 1957 with a 15 January 1959 target date for plant operation. Capacity of AFP-68 was to be 2.2 million lbs/yr of HEF-2. AFP-68 contained 78 buildings that were constructed on approximately 100 acres on the western border of the former LOOW TNT production area (the AFP-68 buildings were constructed over the westernmost TNT production line). AFP-68 consisted of about 11 production areas and 13 support areas. The production areas performed separate functions, ranging from raw materials receiving and storage to intermediate process steps such as gas synthesis, salt purification, and nitrogen production to final product handling and shipment. In general, each production area typically consisted of a control building, tank farm (with ASTs), and a process building/area. Support areas, which typically consisted of one building for each service, included a cafeteria, warehouses, maintenance buildings, office/administration buildings (including three temporary buildings), a refrigeration and steam plant with AST, an electrical substation, water supply and treatment buildings, and sanitary sewage and waste disposal systems (using the former LOOW sewage and wastewater treatment plant). The production areas were interconnected to each other through an extensive overhead piping system used for transportation of raw materials, gas, heat, and refrigeration. Sewer systems were also developed to collect and treat chemical waste, storm water, and sanitary sewage. Although pre-production testing of the various process areas occurred, documents indicate that the AFP-68 project was cancelled in August 1959, before production took place. As part of the decommissioning activities, process equipment, tanks, and a majority of piping were removed from the site.

On 31 July 1962, 5.27 acres fee (including the former water intake pump and valve houses) were reported excess to GSA by the USAF. The remainder of the site including the buildings of AFP-68 and the Navy IPPP were declared excess to GSA by the USAF and Navy on an unknown date. GSA conveyed the 5.27-acre fee parcel to the Town of Lewiston on 20 February 1967. The no-area use

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permits covering 388.96 acres as well as the 27.39 acres in use permits were relinquished by the USAF and Navy to the AEC on 17 September 1962. The 2-acre use permit acquired from the Army was relinquished by the USAF to the Army on 25 October 1962. By Quitclaim Deed dated 28 July 1966, GSA conveyed 564.74 acres fee, including the acreage occupied by the former AFP-68 and the Navy IPPP, to the Fort Conti Corporation. It is noted that this acreage also included the Control Area of NIKE Battery NF-03/05, as discussed below. The deed reserved to the AEC approximately 11.22 acres easement (7.9 acres for drainage through the Central Drainage Ditch and 3.32 acres for utilities). The deed also reserved 10.92 acres easement to the USAF for AFP-38 (6.56 acres for a railroad easement and 4.36 acres for utilities as included in the AFP-38 discussion above).

NIKE BATTERY NF-03/05

Between 1954 and 1958, the Army received access to, and subsequently acquired, 398.71 acres fee from AEC for the construction of NIKE Battery NF-03/05. This area was the eastern portion of the land parcel under custody of the USAEC. The former NF-03/05 was operated by the U.S. Army from about 1954 to 1966. The base was divided into 2 areas, a Launch Area and a Control Area. The Launch Area was located in the northern section of the 309.71 acres, and the Control Area was located in the southern portion of the 309.71 acres. Improvements to the Launch Area included two missile batteries (six missile silos), administrative building, mess hall, water pump house, barracks buildings, a generator building with UST, operator's shelter, missile assembly building, and nitric acid storage shed. The northernmost battery, NF-03, was constructed first; construction began in 1954 and was completed in 1955. As-built drawings indicate that the southern battery, identified as NF-05, was completed in May 1957. The Control Area consisted of 2 control buildings, 2 generator buildings (with USTs), 4 radar towers, a barracks building with UST, a small sewage treatment building, a guardhouse, and security fencing. The remaining 89 acres were acquired for the addition of a housing area to be associated with the NIKE site; however, a review of available information indicates that no structures associated with the NIKE site were constructed on this 89-acre parcel.

On 2 May 1960, The Army reported the 89-acre parcel excess to the GSA, and by Quitclaim Deed dated 4 May 1961 the 89 acres fee were transferred to the Town of Lewiston. The deed reserved a railroad easement of 6.66 acres to the United States. The NIKE site was deactivated between 1960 and 1966. The Army reported the remainder of the NIKE site consisting of 309.71 acres excess on an unknown date prior to 1966. By Quitclaim Deed dated 28 July 1966, 564.74 acres fee, including 211.09 acres associated with NIKE NF-03/05, were conveyed to the Fort Conti Corporation. The remaining 98.62 acres (containing the buildings associated with the Launch Area of NIKE NF-03/05) were transferred to the USAF on 16 September 1966. This area became known as the YTA or Youngstown site. These 98.62 acres are still owned by the DOD.

RANSOMVILLE TEST ANNEX (RTA)

On 18 September 1962, 126 acres fee were transferred by the AEC to the USAF for the RTA. By use permit, the AEC reserved 0.69 acres easement for utilities. This area was located along Pletcher Rd, and it was formerly part

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of the administration area of LOOW. The site contained a one-story brick building that was used by the USAF as a defense communications research and testing facility. Additional improvements constructed at the site included a transmitting antenna. On 8 July 1976, the 126.0 acres fee were transferred from the USAF by Secretarial Transfer to the U.S. Department of Labor ending DOD ownership of this portion of the site.

In the mid to late 1950's, a portion of the AEC site was occupied under use permit by the Navy and the Air Force for use as the Navy IPPP and AFP-68. During the 1960s, the permits were cancelled, and the AEC began declaring most of the 1,500-acre area as excess. Most of the acreage was excessed to the GSA for disposal. During this time, the responsibility for storage and handling of radioactive materials was transferred to the U. S. Department of Energy (DOE). The former USAEC area was eventually reduced in size to approximately 213 acres (located in the center of what was the former LOOW) and transferred to the USDOE. The 213-acre area was designated as the NFSS. In 1974, the size of NFSS was further reduced to 191 acres (this acreage is located in the area of the former LOOW water treatment plant) when the former LOOW sewage and wastewater treatment plant was sold to the Town of Lewiston. The 1,309 acres that were formerly used by the USAEC is currently owned by several landowners, including CWM, the Somerset Group, Town of Lewiston, Modern Disposal Services, Inc., and the USAF.

CURRENT OWNERS

Current owners of the former LOOW industrial area include: Town of Porter 3.35 acres; CWM Chemical Services Inc. (CWM) approximately 713 acres (portions of the former LOOW, AFP-68/Navy IPPP, and NIKE NF-03/05) currently known as the Model City TSDR Facility; Niagara Mohawk Power Corporation approximately 5.39 acres fee; The Somerset Group referred to as the Lew-Port Industrial Park approximately 39 acres fee; the approximately 98.62 acres fee auctioned by the US General Services Agency in late 2007 (formerly known as the YTA); the Army approximately 875.75 acres (860.67 acres fee and 15.08 acres easement - the former AFP-38 now known as the Army National Guard WETS); Town of Lewiston approximately 116.74 acres fee and 26.837 acres easement (which includes the former sewage treatment plant - 22.47 acres fee, the former fresh water intake plant - 5.27 acres fee, 4.217 acres easement associated with the water lines, 22.62 acres easement associated with the sewer outfall lines and the 89 acres fee from the NIKE Battery NF-03/05); Modern Disposal Services, Inc. (which operates a landfill known as Modern Landfill) approximately 380 acres which includes the acreage associated with the former RTA), and the DOE, approximately 191 acres known as the NFSS. The 191-acre NFSS site contains the former LOOW 4 million gal reservoir (currently used as an interim waste containment structure) and some other former LOOW areas that are being addressed under the Formerly Utilized Sites Remedial Action Program [FUSRAP]). FUSRAP will also address radiological hazards associated with open NFSS vicinity properties. The remaining acreage including the former buffer zone is owned by many different owners including the Lewiston-Porter Central School District, Occidental Chemical Corporation and miscellaneous businesses and private entities.

As previously discussed the former AFP-38/ Army National Guard WETS (879.1 acres [864.02 acres fee and 15.08 acres rail and utility easements]), the YTA (98.62 acres fee and 6.66 acres easement), and the 79.6 acres easement

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associated with 4 Mile Creek are still owned by DOD; consequently, no discussion of potential hazards at these properties is included in the sections below.

PROPERTY VISIT: During the week of 4 June 2001, Mr. Michael O'Neill and Ms. Sandra Staigerwald of EA Engineering, Science, and Technology, Inc. (EA) under contract to the U.S. Army Corps of Engineers (USACE), Baltimore District, conducted a site visit of the former LOOW as part of the INPR addendum. EA personnel focused on the 2,500 acres that contained the structures and were involved in the TNT production. EA personnel were not able to access the portion of the former LOOW currently identified as NFSS. In November 2005 and April 2006, Ms. Staigerwald of EA conducted a site visit to address remaining CON/HTRW issues. In April 2006, Mr. Steve Vriesen of USACE conducted a site visit to address remaining BD/DR issues.

CATEGORY OF HAZARD(S): BD/DR, CON/HTRW, MMRP, PRP/MMRP, and PRP/HTRW hazards were identified to be associated with the former DOD ownership of the property. An HTRW project is currently authorized and ongoing.

PROJECT DESCRIPTION:

a. HTRW. No new HTRW projects are proposed. Several HTRW projects have been authorized and are underway: C02NY002500 (Remedial Investigation [RI] of OU-1 groundwater), C02NY002501 (site wide RI contaminated buildings), C02NY002502 (RI of TNT pipelines), C02NY002504 (TNT interim removal action-Burn Area), and C02NY002505 (RI of OU-3 Burn Area). The first HTRW project was proposed as part of the original INPR (FDE signed 15 June 1986). The INPR recommended a remedial investigation (RI) and a feasibility study (FS) be conducted at the former LOOW to identify areas of DOD responsibility. The RI/FS is currently ongoing at the site. USACE has completed several interim removal actions at the former LOOW site to address HTRW hazards remaining from DOD ownership of the site.

b. BD/DR. No DOD action indicated (NDAI). Only two parcels of the former LOOW property contain former DOD structures and have been continuously owned by a state or local government subsequent to DOD ownership: 3.35 acres belonging to the Town of Porter and 5.27 acres (containing the water intake facility) belonging to the Town of Lewiston. The structures on the Town of Porter property are not hazardous and do not represent safety hazards. The Town of Lewiston owns a concrete and brick shaft associated with the former water intake pump house which does represent a potential falling/drowning hazard, but the shaft does not amount to an inherently hazardous structure according to DERP-FUDS policy guidance. The entrance to the shaft is 3-4 feet aboveground, is covered with a plate steel lid, and it is unlikely to cause injury or death to a person exercising ordinary and reasonable care; therefore, this structure is not identified as an eligible hazard in accordance with DERP-FUDS guidance.

Several DOD-installed structures were observed to remain at other portions of the former LOOW on property currently owned by the Town of Lewiston (other parcels), DOE, the Somerset Group, CWM, and other private owners. Some of the structures represent potential structural, falling, and drowning hazards. Several structures have been beneficially used and many of the hazards are the result of neglect or actions taken by current owners subsequent to DOD site

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ownership. Due to DERP-FUDS policy considerations, those portions of the site that have not been continuously owned by state or local government subsequent to DOD ownership are ineligible for inclusion in a BD/DR project as discussed in the BD/DR Project Summary Sheet.

c. CON/HTRW. A CON/HTRW Project is proposed to address 11 DOD-installed USTs. Numerous other DOD owned/installed USTs, ASTs, and suspect PCB transformers and ballasts were observed to remain at the former LOOW. However, due to DERP-FUDS policy considerations (some of the USTs, ASTs, and suspect PCB transformers have been used subsequent to DOD ownership of the site, or remediation has been initiated by the current owner for some former USTs and the PCB ballasts); therefore, these other potential CON/HTRW hazards are ineligible for inclusion in a CON/HTRW project as discussed in the CON/HTRW Project Summary Sheet.

d. MMRP. Two separate MMRP Projects are proposed as discussed in the MMRP project summary sheets to address conventional explosives hazards and potential Chemical Warfare Material (CWM) hazards remaining at the site.

MMRP hazards related to TNT manufacturing operations were identified during the execution of the previously authorized HTRW project (C02NY002502) that was entered in FUDSMIS as an HTRW project prior to Sept 30, 2000 when the MMRP program element was officially established (via passage of the FY01 Defense Authorization Act). The former LOOW facility manufactured approximately 40,240,850 lbs of TNT in the early 1940s. Several investigations (including some that are ongoing) have reported that TNT and its degradation products remain at the site. Varying concentrations of TNT have been found in acid waste lines, TNT waste lines, and on the surface in the areas associated with TNT manufacture and waste treatment (sewer and waste water treatment plant). Residual TNT in explosive concentrations are known to exist on the site. Aerial photographic evidence of potential burial areas and other ground disturbances exist from the TNT production era throughout the LOOW. An MMRP project to address conventional explosive hazards is proposed.

An additional MMRP project is proposed to address potential CWM hazards remaining at the FUDS from the NECW Depot operations. Incendiary munitions were known to be stored and handled on the site. This project will also address unresolved potential hazards related to NECW Depot operations (south of Balmer Road), and the discovery of phosgene cylinders on the LOOW. This is further discussed in the MMRP Project Summary Sheet.

e. PRP/HTRW. A PRP/HTRW project is proposed as discussed in the PRP/HTRW Project Summary Sheet. The former LOOW manufactured TNT and AFP-68/Navy IPPP developed HEF-2 type fuels in GOCO facilities that were located on the approximately 2,500-acre industrialized portion of the site. The facilities were built, operated, and decommissioned/decontaminated by different contractors on behalf of the DOD, and it appears that some of the GOCO operators or their successors are viable. DOD operations at the site consisted of NIKE Battery NF-03/05 (operated by the Army) and the YTA (operated by the USAF). Numerous other operations with a potential for releasing hazardous substances have also been conducted at the former LOOW by subsequent owners, including AEC/DOE (storage/burial of radioactive materials and production of boron-10 by AEC contractors, Nuclear Materials and Equipment Corporation (NUMEC), and Hooker Chemical); CWM (storage of hazardous

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material/operation of hazardous waste landfill); Somerset Group (light manufacturing operations and storage of miscellaneous materials); Modern Disposal Inc. (landfill and recycling operation); and the Town of Lewiston (landfill).

f. PRP/MMRP. No DOD Action Indicated (NDAI). LOOW was a government-owned, contractor-operated (GOCO) TNT production facility operated by the Chemical Construction Corporation (CCC) for DOD. In 1943, partial decontamination of the site was completed by John W. Cowper Co. and John W. Danforth Co. under contract to the U.S. Army Corps of Engineers (USACE). Based on a review of available information it appears that neither the GOCO operator (CCC) nor John W. Cowper Co. nor John W. Danforth Co. is a viable entity and neither business appears to have corporate successors. Therefore, in accordance with DERP-FUDS policy no PRP/MMRP project is proposed.

AVAILABLE STUDIES AND REPORTS: (available in CELRB files)

"An Appraisal of Ordnance Plant Facilities, WA-New York-1, Lake Ontario Ordnance Works, Niagara County, New York" prepared for the War Assets Administration (WAA), prepared by the Industrial Research Corporation (IRC), dated 3 March 1948.

"The Federal Connection a History of U.S. Military Involvement in the Toxic Contamination of Love Canal and the Niagara Frontier Region Volumes I, II, and III" prepared for the New York State Assembly Speaker, prepared by the New York State Assembly Task Force on toxic Substances, dated 29 January 1981.

"Final Preliminary Contamination Assessment Report, Operable Unit No. 2, Vol I", prepared for USACE Kansas City District, prepared by Acres International Corporation (Acres), dated December 1992.

"Draft Data Search Summary Report", prepared for USACE Kansas City District, prepared by Acres International Corporation Acres, dated February 1993.

"Remedial Design for Interim Removal Actions, Operable Unit Numbers 1 & 2, Former Lake Ontario Ordnance Works, Lewiston and Porter, Niagara County, New York, Preliminary Remedial Design Investigation (PRDI) Report", prepared for USACE, prepared by Weston, Roy F. Inc., dated May 1997.

"Remedial Design for Interim Removal Actions, Operable Units 1 and 2, Former LOOW", prepared for USACE, prepared by Weston, Roy F. Inc., dated September 1997.

"Final History Search Report, LOOW, Niagara County, New York" prepared for USACE-Baltimore District, prepared by EA Engineering, Science, and Technology, Inc. (EA), dated August 1998.

"Final Report of Results for the Phase I Remedial Investigation at the Former Lake Ontario Ordnance Works (LOOW) Niagara County, New York" prepared for USACE-Baltimore District, prepared by EA Engineering, Science, and Technology, Inc. (EA), dated July 1999.

"Project Report Second Phase Emergency Ordnance Explosive Services Lake Ontario Ordnance Works TNT Pipeline Removal Project Lewiston, New York"

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prepared for Severson Environmental Services, Inc. under contract to USACE-Buffalo District, prepared by ISSI Unexploded Ordnance Inc., dated September 2000.

"After Action Report Trinitrotoluene Resizing Operation Former Lake Ontario Ordnance Plant Model City, New York" prepared for Severson Environmental Services, Inc. under contract to USACE-Buffalo District, prepared by ISSI Unexploded Ordnance Inc., dated March 2001.

"Final Report of Results for the Phase II Remedial Investigation at the Former Lake Ontario Ordnance Works (LOOW) Niagara County, New York" prepared for USACE-Baltimore District, prepared by EA Engineering, Science, and Technology, Inc. (EA), dated February 2002.

POINT OF CONTACT: Bill Kowalewski, CELRB, (716) 879-4418.

LEAD REGULATOR: Kent Johnson, New York State Department of Environmental Conservation (NYSDEC), (518) 402-8594.

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FOR
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SITE NAME: Lake Ontario Ordnance Works

LOCATION: Lewiston/Porter, Niagara County, New York; (Latitude: 43° 12' 47" N, Longitude: 78° 58' 41" W)

SITE HISTORY: This addended site survey summary sheet is part of Addendum No. 1 to the initial Inventory Project Report (INPR) with the Findings and Determination of Eligibility (FDE) signed 15 June 1986. This addendum combines additional periods of use originally identified as separate sites into the INPR for the Lake Ontario Ordnance Works (LOOW) site (C02NY0025). Those eligible period of use, originally identified as separate sites, have been incorporated into the addended INPR for LOOW. Those incorporated sites are as follows: C02NY0012 (entitled Ransomville Test Annex [RTA] and signed 17 December 1992), C02NY0074 (entitled NIKE Battery NF-03 and signed 20 September 1985) and C02NY0576 (entitled Air Force Plant # 68 [AFP-68] signed 3 January 1992). Two additional sites C02NY0005 (identified as the Youngstown National Guard Facility) and C02NY0003 (identified as Air Force Plant 38 [AFP-38]) were determined to be ineligible since they are active DOD sites. However, since these sites were part of the original FUDS-eligible LOOW, they are also incorporated into this addendum. The addendum addresses site history, past uses of the site, and additional environmental and safety concerns remaining at the site.

The United States Department of Defense (DOD) acquired a total of approximately 7,567.46 acres in the towns of Lewiston and Porter in Niagara County, New York at various times and by various methods for various uses as discussed below. The acquisition of these 7,567.46 acres was for the construction of LOOW. However, subsequent to the operation of LOOW, additional periods of DOD use occurred during which portions of the site were identified as the Northeast Chemical Warfare (NECW) Depot, AFP-38, Model City Igloo Area, AFP-68, Navy Interim Pilot Production Plant (IPPP), NIKE Missile Battery NF-03/05, RTA, the Youngstown Test Annex (YTA) and the Army National Guard Weekend Training Site (WETS). Approximately 974.37 acres (98.62 acres fee associated with the YTA/the former Launch Area of NIKE Missile Battery NF-03/05, and 860.67 fee and 15.08 acres easement associated with the Army National Guard WETS/formerly known as AFP-38 and Model City Igloo Area) are still owned by DOD; therefore, this acreage is ineligible for consideration under DERP-FUDS. Potential hazards associated with these ineligible parcels are not included in the discussion since they are ineligible for consideration under DERP-FUDS and should be addressed under the Installation Restoration Program (IRP).

LOOW

The Department of the Army acquired a total of 7,567.46 acres (7,453.28 acres fee and 114.18 acres perpetual easement) by various deeds and condemnation proceedings between 1941 and 1944 for the establishment of LOOW. The 114.18 acres perpetual easement included an easement along Four Mile Creek to be used for drainage (79.6 acres), an easement for a 42-in. water intake line from the Niagara River (13.39-acres), and an easement for a sewer discharge house and a 30-in. sewer outfall line (21.2 acres) to the Niagara River. The fee acreage included a 12-acre parcel (connected via an easement) used for the construction of a water supply pump house and valve house as well as the main

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acreage (7,441.28 acres) used for the construction of the ordnance works and a surrounding buffer zone.

LOOW was built for the purpose of manufacturing flaked trinitrotoluene (TNT). It consisted of 6 TNT manufacturing lines (3 pairs) with the necessary facilities for the manufacture, recovery, purification, concentration, and mixing of the acid reagents incident to TNT manufacture as well as the disposal of waste materials from processing operations. Construction of the TNT plant began in March 1942. The operations contract for LOOW was with Chemical Construction Corporation (CCC), which was retained for the installation of equipment, training of key personnel, and plant operation. At the time of construction, LOOW consisted of some two hundred twenty-nine buildings (229). The plant facilities included nitrating houses, absorption towers, wash houses, flaking and packing houses, nitric acid plants; all necessary steam and power plants (central heating plant), water supply facilities (including a 4,000,000-gal concrete reservoir), wastewater treatment plant (WWTP); outside lines for electricity, water, steam, and air, railroad tracks, roads, walks, fencing, 58 magazines for TNT storage, warehouses, specialty shops, fueling and maintenance facilities, aboveground storage tanks (ASTs), underground storage tanks (USTs), and administration buildings. The TNT production lines, as well as most of the storage facilities for raw materials and finished products, were constructed on approximately 2,440 acres located on the east-central portion of LOOW. The remaining portion of LOOW, consisting of approximately 5,000 acres (excluding the easements), functioned as a buffer zone.

The first TNT was produced in October 1942 and by 30 June 1943 LOOW had produced a total of 40,240,850 lbs of TNT. Production was scheduled to continue until 31 July 1943 and an agreement was made with CCC to put the plant on 90-day standby starting 1 August 1943. USACE was originally directed to remove and ship all of the equipment from the production lines. It was later determined that removal would be limited to the overhead piping and that which needed to be removed because it represented a safety hazard, until USACE was directed to do otherwise. A contract between USACE and the John W. Cowper Co. and the John W. Danforth Co. was signed on 6 August 1943 for the dismantling and decontamination of the process equipment (Contract #W-321-eng.-986). Cowper and Danforth were to dismantle and decontaminate equipment that had been exposed to TNT and to clean equipment from the nitric acid areas to prevent deterioration. Actual dismantling and decontamination commenced on 12 August 1943. Process equipment, machinery, tools, and surplus stock items were in high demand by other bases, and many articles were transferred to other facilities.

The entire site was transferred to USACE-North Atlantic Division in 1944. Approximately 860 acres fee (of the former magazine area north of Balmer Road) was transferred to the Chemical Warfare Service (CWS) after 27 June 1944. This area became known as the NECW Depot (discussed in a separate section below). By use permit dated 21 July 1944, the USACE Manhattan Engineering District (MED) was granted use of the 4,000,000-gal concrete reservoir on the north side of the LOOW fresh water treatment plant, as well as the surrounding 25 acres. The permit specified that the reservoir be properly cleaned in order that the future use for water storage not be destroyed. The land covered under the use permit included the 4,000,000-gal reservoir, as well as

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a smaller reservoir on the south side of the plant, the water treatment facilities, and the roadways.

LOOW was declared surplus to the War Assets Administration (WAA) on 31 March 1945. The buffer zone outside the TNT production and igloo storage areas, approximately 5,066.64 acres fee (according to USACE real estate maps), was transferred to the Federal Farm Mortgage Company (FFMC) on 30 October 1945. Between 1945 and 1950 FFMC conveyed 5050.03 acres to various owners. Accountability for 13.1 acres fee (of the 5,066.64 acres) was re-assumed by the Army on 7/6/51 and transferred to the USAF on 3 November 1954 (the 13.1 acres subsequently became part of AFP-38 as discussed below). The remaining 3.51 acres fee was not accounted for in FFMC disposal documents. It is assumed that this difference is due to a resurveying of the parcels that were conveyed by FFMC.

On 31 December 1946, 1511.02 acres fee (of the remaining 2,386.64 acres fee) were transferred to the Atomic Energy Commission (AEC). The AEC, which was a non-DOD entity, was the successor to the MED. The 1511.02 acres fee (which included the 25 acres occupied by MED under the use permit) had several subsequent uses including non-DOD use as the Lake Ontario Storage Area (LOSA), Niagara Falls Storage Site (NFSS) and the Boron 10 Production Plant. Portions of this acreage also had subsequent DOD usage including areas identified as NIKE Battery NF-03/05, YTA, RTA, and AFP-68/Navy IPPP. The subsequent DOD uses are discussed in separate sections below.

On 20 October 1947, the WAA assumed accountability for the remaining acreage 989.8 acres (875.62 acres fee and 114.18 acres easement). This acreage included the area comprising the former NECW Depot, additional acreage, and the easements for the water line, sewer line and Four Mile Creek. A portion of the easement acreage (34.58 acres including the water and sewer lines) was subsequently transferred from WAA to AEC on an unknown date after 20 October 1947. Between November 1954 and February 1966, approximately 863.62 acres fee were transferred from the WAA to the USAF for AFP-38 (discussed below). The remaining 12 acres fee, which housed the fresh water intake pump and valve house, were subsequently disposed by WAA to Evelyn R. Lord by Quitclaim Deed dated 24 April 1950. No disposal information was found for the remaining 79.6 acres easement along Four Mile Creek. It is assumed that this acreage is still owned by the General Services Administration (GSA), the successor to the WAA.

NECW Depot

Approximately 860 acres located on the north side of Balmer Road (the northern portion of LOOW) was transferred from the USACE-North Atlantic Division to the U.S. Army CWS on 27 June 1944. This area, which contained the 58 TNT storage "igloos" associated with the former LOOW, was subsequently designated the NECW Depot. It was classified as a "Class IV installation" and was operated as a sub-depot of the Eastern Chemical Warfare Depot, Edgewood Arsenal (Edgewood, Maryland).

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The NECW Depot was essentially rectangular in shape and was bounded on the south by Balmer Road, on the west by Lutts Road, on the north by vacant land (previously identified as the North Patrol Road), and on the east by Porter Center Road. Facility improvements included the restoration of 4 buildings for the housing of administrative personnel and the installation of certain required utilities. As of May 1945, the NECW Depot included 58 magazines (each igloo was 26 ft by 60 ft interior), 1 warehouse (105 ft by 200 ft), 1 administration building (20 ft by 45 ft), 1 telephone building (15 ft by 25 ft), 1 clock house (30 ft by 30 ft), 1 maintenance shop (40 ft by 65 ft), 1 carpenter shop (28 ft by 50 ft), 2 tool houses (each 20 ft by 40 ft), 47 open storage areas (each 14 ft by 200 ft), and 1 drum storage area (90 ft by 200 ft). The original LOOW railroad spur and loop located along the eastern portion of the site was used to import and export munitions shipments.

During World War II, the bulk of the material that was stored at the NECW Depot was produced locally and was temporarily stored prior to shipment to the New York Port of Embarkation. At the close of World War II in Europe, the NECW Depot operated as a temporary storage site for incendiary bombs (such as M-17, M-47, and M-76 bombs) brought back to the United States from Europe. Complete information (e.g., inventory lists) regarding the materials and bombs stored at the NECW Depot was not found.

As of May 1946, munitions had been disposed, and remaining supplies at the depot consisted of surplus property and depot property. Use of the depot was discontinued on 30 June 1946, and the depot was subsequently declared excess by CWS. On 20 October 1947, WAA assumed accountability for 989.80 acres that had been declared excess by the Army (the former NECW Depot facility was included in this acreage).

AFP-38/Model City Igloo Area

Between 1951 and 1968, 934.34 acres (881.11 acres fee and 53.23 acres easement) were acquired by the Air Force for operation of AFP-38. AFP-38, which was referred to as Bell Test Center Air Force Plant 38, was located in the "igloo area" of the former LOOW site (the same area formerly used as the NECW Depot). AFP-38 was a government owned-contractor operated (GOCO) facility that was operated by Bell Aircraft Corporation (Bell Textron) from approximately 1954 to 1982 for a variety of purposes, including rocket, missile, and laser research and development (R&D). The USAF gained jurisdiction of the area from the GSA and granted Bell Aircraft Corporation the use of AFP-38 for the development and production of the RASCAL Missile. The area consisted of the original 58 concrete TNT-storage igloos, additional storage facilities, test installations (including four test cell complexes and seven test cells), service buildings, administrative offices and waste handling facilities (including an incinerator and a dam to contain wastewater/runoff). The facilities were constructed to support propellant handling, testing, and hot firing of rocket propulsion systems and components. In 1979, the principal use of the facility was to provide production support for the Minuteman III Propulsion System Rocket Engine (PSRE). The PSRE was fabricated and assembled in the Bell Plant in Wheatfield, New York and was then shipped to AFP-38, where operations such as propellant loading, ordnance installation, and final electrical checkout were accomplished. According to available real estate maps, on 18 April 1955, 8.9 acres of AFP 38 was acquired

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from the USAF by the Army under U.S. Department of the Army (USDOA) use permit. This area was redesignated the Model City Igloo Area. According to a report prepared by the U.S. Army Toxic and Hazardous Material Agency (USATHAMA) dated 4 January 1979, this area was used by the 40th Explosive Ordnance Detachment (EOD) Disposal Unit for the destruction of hand grenades, fireworks, small arms and relatively small caliber high explosive (HE) ammunition by burning or detonation. The report also indicated that the site was used for the consolidation of liquid fuel components for the NIKE Ajax Rockets prior to shipment to other locations including other Army Depots and Edgewood Arsenal, MD. No evidence of waste disposal was found. At the time of the report in 1979 the 40th EOD was still using the facility and no information pertaining to disposal of the facility was found.

On 31 January 1979, the USAF transferred the western half of AFP-38, 346.86 acres (331.78 acres fee and 15.08 acres easement, including the Model City Igloo Area which was being occupied under use permit), back to the USDOA. These 346.86 acres were subsequently leased by the DOA to the Army National Guard. The site became known as the Army National Guard WETS. On 29 April 1985, 3.35 acres of the former AFP-38 was conveyed by Quitclaim deed to the Town of Porter. This area currently contains water storage facilities used by the Town of Porter. On 24 August 1992, the USAF transferred an additional 528.89 acres fee of the former AFP-38 to the Army for expansion of the WETS. The Army National Guard continues to use the 875.75 acres (860.67 acres fee and 15.08 acres easement) for training purposes. It is noted that an acreage difference of 17.09 acres fee was found between the acquisition and disposal information (881.11 acres acquired and 864.02 disposed). This difference in acreage is thought to be attributed to resurveying efforts and the transfer of the underlying interest in Balmer Road and Lutts Road from the Army to the Town of Porter (dates unknown). It is also noted that no information pertaining to the disposition of the additional 38.15 acres easement associated with the former AFP-38 was found.

According to DERP-FUDS policy the portion of the site, 860.67 acres fee and 15.08 acres easement associated with the WETS, is ineligible for consideration since it still owned by DOD. Therefore, there is no discussion of potential remaining hazards on this portion of the site in the project description section below. It is noted; however, that this portion of the site has been investigated under IRP. The 3.35 acres fee conveyed by DOD to the Town of Porter prior to 1986 is eligible for consideration under DERP-FUDS.

Navy Interim Pilot Production Plant/AFP-68

Under Right of Entry permit NYDRE(M)-1641, dated 30 July 1954, the Department of the Navy was granted access to approximately 388.96 +/- acres by the AEC. This area comprised the northwestern portion of the 1511.02 acres fee that was being occupied by AEC (the AEC area was identified as the LOSA). The land was bounded by McArthur Street to the east, "N" Street to the south, West Patrol Road to the west, and Balmer Road to the north. It is noted that the former TNT manufacturing lines associated with LOOW were located within these 388.96 acres. On 1 November 1956, the USAF acquired 5.27 acres fee by Declaration of Taking. The 5.27-acre parcel contained the original fresh water intake, the

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pump house, and the valve house (it is noted that this was part of the 12 acres originally sold to Evelyn R. Lord by Quitclaim Deed dated 24 April 1950). The AEC issued the USAF two no-area use permits on 15 March 1957 (A 3394) and 15 August 1957 (M 3501) for use of 42-in. and 60-in. water mains, and for construction of a 42-in. water main, respectively. On 1 November 1966 the AEC issued another use permit, M 3593, for the use of 22 acres, including the warehouses and buildings associated with the former LOOW sewage treatment plant. The USAF then acquired a letter permit from AEC giving the USAF permission to conduct alterations and rehabilitation activities at the former sewage treatment plant. The USAF subsequently acquired two more use permits covering two parcels totaling 7.39 acres. One was a for 5.39 acres acquired from AEC on 15 April 1958 and the second was for 2.0 acres acquired from the Army on 15 January 1959. Both easements were for the use and maintenance of power lines going into the site. Thus the acreage associated with AFP-68/Navy IFPF was approximately 423.59 acres (418.32 acres use permit and 5.27 acres fee). It should be noted that the acres fee and easement were part of the original LOOW site; therefore, they do not represent an increase in the overall acreage of the site.

The Navy IPFP (referred to as the South Plant) was built in 1956 by Olin Mathieson, as part of a Navy contract to produce a high energy fuel (HEF-2). The plant was a GOCO facility that was operated by Olin Mathieson in connection with AFP-68 (discussed below). According to a statement prepared by GSA for the Director of the Bureau of the Budget dated 29 April 1957, the Navy had been using a portion of the former LOOW containing 38 buildings under a permit from USAEC since 30 July 1954. The Navy IPFP was constructed around the former LOOW buildings located along "M" Street south of the TNT production area but north of the former acid production area. Nine existing buildings (consisting of the three former TNT change houses, a main TNT compressor building, TNT inspectors office building, TNT supervisors office building, three TNT shop buildings and an old barn) were located along "M" street when Olin Mathieson began construction of the plant in 1956. Facilities installed as part of the process included production buildings, warehouses, two heating plant buildings, a laboratory, cafeteria, water reservoir, cooling tower, four 3,400-gal USTs, railcars used as ASTs, utilities (heating, air, fire, and water lines), open storage areas, electrical substation, refrigeration plant, and a burning area with flare stack. Full-scale production at the Navy IPFP began in May 1958. The Navy IPFP produced diborane, converted it to pentaborane (and some decaborane), and then converted the pentaborane to HEF-2. Capacity of the Navy IPFP was around 480,000 lbs/yr. The Navy IPFP continued to operate until about 1960.

AFP-68 (referred to as the North Plant) was built by Olin Mathieson as part of a contract with the USAF. This plant was a GOCO facility, operated by Olin Mathieson in conjunction with the Navy IPFP. Construction of AFP-68 began on 9 July 1957 with a 15 January 1959 target date for plant operation. Capacity of AFP-68 was to be 2.2 million lbs/yr of HEF-2. AFP-68 contained 78 buildings which were constructed on approximately 100 acres on the western border of the former LOOW TNT production area (the AFP-68 buildings were constructed over the westernmost TNT production line). AFP-68 consisted of about 11 production areas and 13 support areas. The production areas performed separate functions, ranging from raw materials receiving and storage to intermediate process steps such as gas synthesis, salt purification, and

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nitrogen production to final product handling and shipment. In general., each production area typically consisted of a control building, tank farm (with ASTs), and a process building/area. The support areas included a cafeteria, warehouses, maintenance buildings, office/administration buildings (including three temporary buildings), a refrigeration and steam plant with AST, an electrical substation, water supply and treatment buildings, and sanitary sewage and waste disposal systems (using the former LOOW wastewater treatment plant). Typically the support areas consisted of one building for each service. Each production area was interconnected to others through an extensive overhead piping system used for transportation of raw materials, gas, heat, and refrigeration. Sewer systems were also developed to collect and treat chemical waste, storm water, and sanitary sewage. Although pre-production testing of the various process areas occurred, documents indicate that the AFP-68 project was cancelled in August 1959, before production took place. As part of the decommissioning activities, process equipment, tanks, and a majority of piping were removed from the site.

On 26 May 1955, the AEC declared 967.84 acres (which included the 388.29 acres occupied under permit) excess to the GSA. The 388.96-acre parcel was transferred to the GSA; however, no subsequent transfer of the property to the Navy or USAF was completed. Therefore, it is assumed that the property continued to be occupied under use permit until an unknown date prior to 1962 when the use permits were cancelled. On 31 July 1962, 5.27 acres fee (including the former water intake pump and valve houses) were reported excess to GSA. The remainder of the site including the buildings of AFP-68 and the Navy IPPP were declared excess to GSA by the USAF and Navy on an unknown date. GSA assumed accountability of the 5.27 acres on 15 February 1965 and subsequently conveyed the parcel to the Town of Lewiston on 20 February 1967. The no-area use permits and the 27.39 acres in use permits were relinquished to the AEC on 17 September 1962. The 2-acre use permit acquired from the Army was relinquished to the Army on 25 October 1962. By Quitclaim Deed dated 28 July 1966, 564.74 acres fee, including the former AFP-68 and the Navy IPPP, were conveyed by GSA to the Fort Conti Corporation. This acreage included the Launch and Control Areas of NIKE Battery NF-03/05, as discussed below. The deed reserved to the AEC approximately 11.22 acres easement (7.9 acres for drainage through the Central Drainage Ditch and 3.32 acres for utilities). The deed also reserved 10.92 acres easement to the USAF for AFP-38 (6.56 acres for a railroad easement and 4.36 acres for utilities as discussed in the AFP-38 section above).

NIKE BATTERY NF-03/05

Between 1957 and 1958 the Department of the Army acquired 398.71 acres fee from AEC for the construction of NIKE Battery NF-03/05. This area was the eastern portion of the land parcel under custody of the USAEC.

The former NF-03/05 was operated by the U.S. Army from about 1954 to 1966. The base was divided into 2 areas, a Launch Area and a Control Area. The Launch Area was located in the northern section of the 309.71 acres, and the Control Area was located in the southern portion of the 309.71 acres. Improvements to the Launch Area included two missile batteries (six missile silos), administrative building, mess hall, water pump house, barracks buildings, a generator building with UST, operator's shelter, missile assembly building,

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and nitric acid storage shed. The northernmost battery, NF-03, was constructed first; construction began in 1954 and was completed in 1955. As-built drawings indicate that the southern battery, identified as NF-05, was completed in May 1957. The Control Area consisted of 2 control buildings, 2 generator buildings (with USTs), 4 radar towers, a barracks building with UST, a small sewage treatment building and a guard house. The 89-acre parcel was acquired for the addition of a housing area to be associated with the NIKE site; however, a review of available information indicates that no structures associated with the NIKE site were constructed on this parcel.

On 2 May 1960, The Army reported the 89-acre parcel excess to the GSA, and by Quitclaim Deed dated 4 May 1961 the 89 acres fee were transferred to the Town of Lewiston. The deed reserved a railroad easement of 6.66 acres to the United States. By Quitclaim Deed dated 28 July 1966, 564.74 acres fee, including 211.09 acres of NIKE site NF-03/05, were conveyed to the Fort Conti Corporation. The remaining 98.62 acres (containing the buildings associated with the Launch Area) were transferred to the USAF on 16 September 1966. This area became known as the YTA (later known as the Rome Air Development Center [RADC]). This site is still owned by the USAF. According to DERP-FUDS policy these 98.62 acres are ineligible for consideration since the property was still owned by DOD after 1986; therefore, there is no discussion of potential remaining hazards associated with this parcel in the project description section below.

RANSOMVILLE TEST ANNEX

On 18 September 1962, 126 acres fee were transferred by the AEC to the USAF for use as the RTA. By use permit, the AEC reserved 0.69 acres easement for utilities. This area was located along Pletcher Rd, and it was formerly part of the administration area of LOOW. The site contained a one-story brick building that was used by the USAF as a defense communications research and testing facility. Additional improvements constructed at the site included a transmitting antenna. On 8 July 1976, the 126.0 acres fee were transferred from the USAF by Secretarial Transfer to the U.S. Department of Labor.

NFSS

By use permit dated 21 July 1944, the USACE Manhattan Engineering District (MED) was granted use of the 4,000,000-gal concrete reservoir on the north side of the LOOW fresh water treatment plant, as well as the surrounding 25 acres. The permit specified that the reservoir be properly cleaned in order that the future use for water storage not be destroyed. The land covered under the use permit included the 4,000,000-gal reservoir, as well as a smaller reservoir on the south side of the plant, the water treatment facilities, and the roadways.

On 31 December 1946, 1511.02 acres fee were transferred to the AEC. The 1511.02 acres fee included the 25 acres occupied by MED under the use permit. The site had several non-DOD subsequent uses including use as the LOSA, the Boron 10 Production Plant and ultimately NFSS. In 1953, USAEC contracted with Hooker Electro-Chemical Company (Hooker) to construct and operate a boron-10 isotope separation plant at the former LOOW site. The plant was operated from 1953 to 1958 by Hooker and was then placed on standby status. The plant was

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reactivated in 1964 and operated by Nuclear Materials Company (NUMEC) until 1971, when it was shut down. It is known that one of the boron-10 production buildings was the former boiler building (Building 401) utilized by the LOOW TNT production facility.

In the mid to late 1950's a portion of the AEC site was occupied under use permit by the Navy and the Air Force for use as the Navy IPPP and AFP-68. During the 1960s, the USAEC began declaring most of the 1,500-acre area as excess, and had transferred it to the GSA for disposal. During this time, the responsibility for storage and handling of radioactive materials was transferred to the U. S. Department of Energy (DOE). The former USAEC area was eventually reduced in size to approximately 213 acres (located in the center of what was the former LOOW) and transferred to the USDOE. The 213-acre area was redesignated as the NFSS. The size of NFSS was further reduced to 191 acres (in the area of the water treatment plant) in 1974, when the former LOOW WWTP was sold to the Town of Lewiston. The approximate 1,309 acres that were formerly used by the USAEC is currently owned by several landowners, including CWM, the Somerset Group, Town of Lewiston, Modern Disposal Services, Inc., and the USAF. The 191 acres which contained the former LOOW 4 million gal reservoir (currently used as a waste containment structure) is being addressed under the Formerly Utilized Sites Remedial Action Program [FUSRAP].

CURRENT OWNERS

Current owners of the former LOOW industrial area include: Town of Porter 3.35 acres; CWM Chemical Services Inc. (CWM) approximately 713 acres (portions of the former LOOW, AFP-68/Navy IPPP, and NIKE NF-03/05); Niagara Mohawk Power Corporation approximately 5.39 acres fee; The Somerset Group approximately 39 acres fee; the USAF approximately 98.62 acres fee (the former YTA); the Army approximately 875.75 acres (860.67 acres fee and 15.08 acres easement - the former AFP-38); Town of Lewiston approximately 116.74 acres fee and 26.837 acres easement (which includes the former sewage treatment plant - 22.47 acres fee, the former fresh water intake plant - 5.27 acres fee, 4.217 acres easement associated with the water lines, 22.62 acres easement associated with the sewer outfall lines and the 89 acres fee from the NIKE Battery NF-03/05); Modern Disposal Services, Inc. approximately 380 acres (contains the acreage associated with the former RTA), and the DOE, approximately 191 acres. The remaining acreage including the former buffer zone is owned by several different owners. As previously discussed the former AFP-38/WETS and the YTA (98.62 acres fee) are still owned by DOD; therefore, they are ineligible for consideration under DERP-FUDS. Consequently, no discussion of potential hazards at these properties is included in the sections below.

SITE VISIT: Several site visits have been conducted at various portions of the site over the years. On 22 August 1991, Mr. Constancio J. Labeste and Mr. Honesto Castaneda of USACE (CENAN-EN-IR) conducted a site visit of the former fresh water intake pump house and valve house associated with the former LOOW and AFP-68. On 29 July 1992 Mr. Labeste and Mr. Castaneda of USACE conducted a site visit of the area associated with the former YTA. During the week of 4 June 2001, Mr. Michael O'Neill and Ms. Sandra Staigerwald of EA Engineering, Science, and Technology, Inc. (EA) under contract to the U.S. Army Corps of Engineers, Baltimore District, conducted a site visit of the former LOOW. EA

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personnel focused on the 2,500 acres that contained the structures and were involved in the TNT production. EA personnel were not able to access the portion of the former LOOW currently identified as NFSS.

CATEGORIES OF HAZARD: BD/DR, CON/HTRW, OEW, and PRP/HTRW.

PROJECT DESCRIPTION:

a. HTRW. An HTRW project C02NY002501 was proposed in the original INPR (FDE signed 15 June 1986). The INPR recommended a remedial investigation (R?) and a feasibility study (FS) be conducted at the former LOOW to identify areas of DOD responsibility. USACE as well as several current owners have conducted investigations and completed removal actions at the former LOOW site to address potential HTRW hazards which remain from DOD ownership of the site.

During the 2001 site visit, EA personnel observed what appeared to be parts degreasing sink (including a hood with a fan for volatiles) located in Building No. 41 (part of AFP-68) along the western wall of the building in the repair area. According to the current owner this sink has not been used. Piping/drains associated with this degreasing sink may represent a potential HTRW hazard. In addition, EA observed piping associated with the former AFP-68 operations. Due to operations associated with the former AFP-68, this piping may represent a potential DOD HTRW hazard. On property owned by Occidental Chemical Corporation (Occidental), EA personnel observed what may have been a DOD landfill (initially identified in aerial photographs from the 1940s). Material in the western portion of the landfill (clay piping, rusted drums, transite panels) appeared to be of DOD vintage, while material in the eastern portion of the landfill along the access road appeared to be more recent (plastic bottles, tires and miscellaneous things on the surface). Unknown material potentially present in the drums/landfill may represent an HTRW hazard.

Based on a review of information to date, it appears that several areas of concern have been identified on the former LOOW. Some of these areas have been remediated under authorized HTRW projects (C02NY002502, C02NY002504, and C02NY002505). USACE has proposed to address the issue of remaining underground lines at the site and the suspect landfill observed on the Occidental property under the ongoing HTRW project no. C02NY002501; therefore, no additional HTRW project is proposed.

b. BD/DR. Several structures related to DOD site use were observed to be present during the site visit. On the property owned by CWM the following structures were observed: three former TNT manufacturing structures, the former TNT box factory, and four structures associated with the former LOOW/Navy IPPP located along the former "M" street; eleven buildings and numerous foundations/structures associated with the former AFP-68; and seven buildings associated with the former NIKE Battery NF-03/05. Several of the improvements associated with the former AFP-68 represent falling and drowning hazards, the remaining DOD installed/used buildings do not represent hazards. However, according to DERP-FUDS policy no BD/DR project is proposed for this portion of the site since the area is privately owned.

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Twelve buildings, several foundations, and three concrete tanks related to DOD site use (the former AFP-68) were observed to be present on the property owned by the Somerset Group. In addition, several piles of debris (some piles associated with former DOD use and other piles associated with current owner use) were observed on the site. Several of the improvements/foundations represented falling and/or drowning hazards. According to DERP-FUDS policy no BD/DR project can be proposed for sites that are privately owned; therefore, no BD/DR project is proposed for this portion of the property.

Two structures thought to be associated with the former LOOW were observed on NFSS property. Since this site could not be visited, it is unknown if there are any hazards associated with these structures. However, these structures were beneficially used by the AEC/DOE and/or its contractors subsequent to DOD use of the site. According to DERP-FUDS policy these structures are ineligible for consideration since they were beneficially used by subsequent owners; therefore, no BD/DR project is proposed. It should be noted that these structures are being addressed under the FUSRAP program.

Three structures associated with the former AFP-38 were identified on the property owned by the Town of Porter. These buildings have been beneficially used subsequent to DOD use of the site; therefore, no BD/DR project is proposed for these structures.

Several buildings/structures associated with the former LOOW wastewater treatment plant were identified on a portion of the property owned by the Town of Lewiston. Many of these structures represent falling and drowning hazards. In addition, potentially friable asbestos containing material was observed in the debris associated with two of the former wastewater treatment plant buildings. These buildings were used by AEC and its contractors subsequent to DOD use; therefore, according to DERP-FUDS policy, no BD/DR project is proposed for these structures.

Three buildings and a brick structure (thought to have been part of a septic system) were identified on two separate parcels (two buildings and the septic system structure were located at the former water intake area and one building was located at the sewage discharge station). These parcels which are owned by the Town of Lewiston are part of the former 5,000-acre buffer zone (which is owned by miscellaneous owners). None of the three buildings located on these two Town of Lewiston parcels represent hazards, and two of the buildings have been beneficially used by the town of Lewiston (the pump house and valve house). Therefore, no BD/DR project is proposed for these three buildings. However, the brick structure associated with the septic system on the former intake pump house property represents a falling hazard and it has not been used subsequent to DOD use of the site. Therefore, a BD/DR project is proposed for this structure.

No DOD buildings or structures were observed on the property owned by Modern Landfill Inc. or the former Lewiston landfill property. In addition, no DOD buildings or structures were observed on the approximate 5,000-acre buffer zone (excluding the parcels owned by town of Lewiston discussed in the previous paragraph) with the exception of two structures located along Harold Road that were associated with the former LOOW Transportation Center. These two structures, identified as T-5 and T-12, were reportedly used by DOD.

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These structures do not represent hazards and they were used subsequent to DOD use; therefore, no BD/DR project is proposed for these structures.

c. CON/HTRW. Several USTs/ASTs were observed at the former LOOW. One DOD owned AST and five DOD-owned USTs were observed on the property owned by CWM. The approximately 250,000 gallon DOD-installed AST (formerly associated with the AFP-68 heating plant and thought to contain heating oil) was observed on CWM property near the intersection of "K" and "McArthur" streets. This AST is currently being used by CWM; therefore, this AST is ineligible for removal under current DERP-FUDS policy. Five DOD-installed USTs (four 1,000 gallon diesel fuel tanks and one 3,000 gallon heating oil tank) were associated with the former NIKE Battery NF-03/05 Control Area currently owned by CWM. According to representatives of CWM these USTs have not been used subsequent to DOD use of the site. Therefore, these USTs are eligible for removal under current DERP-FUDS policy. Additional owner-installed ASTs and transformers were observed around the former AFP-68 on property owned by CWM. However since these ASTs and transformers were not owned or used by DOD; therefore, these additional ASTs and Transformers are ineligible for consideration under DERP-FUDS.

Eased on a review of historical information four 3,400-gal USTs were installed as part of the former Navy IPPP. No USTs were observed at the location of the former NAVY IPPP during the site visit; however, no information pertaining to the subsequent disposal of the 4 USTs was found. Therefore it is believed that these USTs may remain. These suspect USTs would have been associated with the former DOD ownership of the site; however, no information was found to indicate DOD use of these USTs subsequent to contractor operation of the site. Therefore, since it is assumed that DOD did not use these USTs, they are ineligible for removal under DERP-FUDS.

Three transformers, believed to have been installed by contractors for DOD, were observed at the former LOOW wastewater treatment plant. The treatment plant, which is owned by the Town of Lewiston, was used by AEC and its contractors subsequent to DOD ownership/use of the site; therefore, these transformers are ineligible for removal under DERP-FUDS.

Three former USTs, six ASTs and two suspect USTs were identified on the property owned by the Somerset Group. Based on a review of available historical information, the three former USTs and two suspect USTs were thought to have been installed by contractors for DOD. The three former USTs (approximately 10,000 gallons each) are located on the southern portion of the former AFP-68 process area No. 3. These USTs were formerly associated with Building No. 41 (AFP-68 maintenance building). The current owner initiated the remedial action and removed these former USTs, thus they are ineligible for removal under DERP-FUDS. An AST was observed adjacent to the former guardhouse (Building No. 27). According to the current owner this AST was present when the property was purchased. However, after reviewing available information (including aerial photographs, site maps and available reports) no evidence of DOD installation/ownership of this AST was found. Therefore, since this AST does not appear to have been installed/used by DOD it is ineligible for consideration under DERP-FUDS. The five other ASTs observed during the site visit were installed by the current owner; therefore, they are ineligible for consideration under DERP-FUDS. A pipe believed to be a fill

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pipe associated with a possible UST was observed on the north side of the former AFP-68 Building No. 31 (laboratory building). The current owner stated that he did not know if a UST was present in this location, but that if a UST was present he had never used it. No DOD maps of this building could be located; therefore, this potential UST could not be confirmed. This suspect UST is believed to be associated with the former DOD ownership of the site; however, no information was found to indicate DOD use of this UST subsequent to contractor operation of the site. Therefore, since it is assumed that DOD did not use this UST, it is ineligible for removal under DERP-FUDS. A second pipe believed to be a fill pipe associated with a second possible UST was observed on the east side of the former AFP-68 Building No. 41 (maintenance building). A sump (believed to be connected to this UST) was observed within Building No. 41. It appeared that the current owner was indirectly using the UST since runoff from current owner operations was filling the sump and possibly the UST. The current owner stated that he did not know if a UST was present in this location, but that if a UST was present he had never used it. This suspect UST is believed to be associated with the former DOD ownership of the site; however, no information was found to indicate DOD use of this UST subsequent to contractor operation of the site. Therefore since DOD did not use this UST it is ineligible for removal under DERP-FUDS.

Approximately 50 electrical ballasts (believed to contain PCBs) were observed on a concrete pad to the east of AFP-68 Building No. 5-01. According to the current owner these ballasts were moved from different buildings associated with the former AFP-68 to this concrete pad for consolidation. Since remedial action was initiated by the current owner for these ballasts they are ineligible for removal under current DERP-FUDS policy.

Based on a review of available historical information (which included site visits by USACE contractors), it was concluded that at least two USTs and a pole-mounted transformer potentially containing PCBs are believed to remain on the property currently owned by DOE (identified as NFSS). These USTs and the transformer are believed to have been installed by DOD; however, it is unknown if the USTs and transformer were used subsequent to DOD use of the site. Based on conversations with representatives of USACE, these USTs and the transformer are being addressed under the FUSRAP program, which will address remaining hazards on the DOE property. Since these potential CON/HTRW hazards are being addressed by the current owner (DOE), they are ineligible for consideration under current DERP-FUDS policy.

d. OEW. The former LOOW facility manufactured TNT from October 1942 through July 1943. It was estimated that at least 40,240,850 lbs of TNT were produced at LOOW during this period. After July 1943 the site was placed on 90-day standby starting 1 August 1943. USACE was originally directed to remove and ship all of the equipment from the production lines. It was later determined that removal would be limited to the overhead piping and that which needed to be removed because it represented a safety hazard, until USACE was directed to do otherwise. A contract between USACE and the John W. Cowper Co. and the John W. Danforth Co. was signed on 6 August 1943 for the dismantling and decontamination of the process equipment. Cowper and Danforth were to dismantle and decontaminate equipment that had been exposed to TNT and to clean equipment from the nitric acid areas to prevent deterioration. Actual dismantling and decontamination commenced on 12 August 1943. Equipment which

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was removed consisted of process equipment, machinery, tools, and surplus stock items which were in high demand by other bases and which were transferred to other facilities.

A decontamination report entitled "Appraisal of Ordnance Plant Facilities, Final Report WA-New York-1, Lake Ontario Ordnance Works, Niagara County, New York" was prepared for the former LOOW by Industrial Research Corporation (IRC). The report, which was submitted to the WAA on 3 March 1948, concluded that while no large deposits were apparent from inspection there is undoubtedly "ground contamination at considerable extent in certain sections of each of the explosive production areas" and that "final decontamination would have to take this into consideration." The report identifies potential hazards such as waste disposal lines; operating buildings; and grounds associated with TNT manufacturing operations.

Several investigations (including some that are ongoing) have reported that TNT and its degradation products remain at the site. The TNT has been found at detonable and nondetonable quantities in acid waste lines, TNT waste lines as well as on the surface in the areas associated with TNT manufacture and waste treatment (waste water treatment plant). Due to the potential for unexploded TNT to be present in surface soil, as well as former process lines, an OEW project is proposed.

e. PRP/HTRW. The former LOOW manufactured TNT and AFP-68/Navy IPPF developed HEF-2 type fuels in GOCO facilities that were located on the approximately 2,500-acre industrialized portion of the site. The facilities were built, operated, and decommissioned/decontaminated by different contractors on behalf of the DOD. DOD use/operations at the site consisted of NIKE Battery NF-03/05 (operated by the Army) and the YTA (operated by the USAF). It is also noted that operations have been conducted at the former LOOW by subsequent owners including: AEC/DOE (storage/burial of radioactive materials and production of boron-10 by AEC contractors Nuclear Materials and Equipment Corporation (NUMEC) and Hooker Chemical); CWM (storage of hazardous material/operation of hazardous waste landfill); Somerset Group (light manufacturing operations and storage of miscellaneous materials); Modern Disposal Inc. (landfill and recycling operation); and the Town of Lewiston (landfill).

The area comprising the former industrial portion of LOOW and AFP-68/Navy IPPF has been the subject of investigations by USACE as well as several current owner/operators. Based on a review of available reports including the original INPR, areas of potential contamination have been found within and around the former TNT manufacturing area as well as within the former AFP-68. Several owners/operators have conducted operations that may have contributed to the observed potential contamination. According to DERP-FUDS policy a PRP/HTRW project may be proposed if there is physical or reliable testimonial evidence that DOD is potentially responsible for property contamination and if the contamination may be at least partially the result of other PRP's actions. Current DERP-FUDS policy also states that in reference to GOCO facilities, if a FUDS was operated by another party under a contract or lease or other commercial arrangement during the period that the property was under the jurisdiction of DOD, and Hazardous substances were disposed during that period of operations, and if that party is apparently financially viable, then a PRP

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project will be designated and the operator will be considered a PRP for the property. Therefore, based on a review of available information including historical site information, the results of previous investigations, and DERP-FUDS policy guidance, a PRP/HTRW project is proposed.

AVAILABLE STUDIES AND REPORTS: (available in CENAB-EN-HN files)

"An Appraisal of Ordnance Plant Facilities, WA-New York-1, Lake Ontario Ordnance Works, Niagara County, New York" prepared for the War Assets Administration (WAA), prepared by the Industrial Research Corporation (IRC), dated 3 March 1948.

"Final Preliminary Contamination Assessment Report, Operable Unit No. 2, Vol I", prepared for USACE Kansas City District, prepared by Acres International Corporation (Acres), dated December 1992.

"Draft Data Search Summary Report", prepared for USACE Kansas City District, prepared by Acres International Corporation Acres, dated February 1993.

"Remedial Design for Interim Removal Actions, Operable Unit Numbers 1 & 2, Former Lake Ontario Ordnance Works, Lewiston and Porter, Niagara County, New York, Preliminary Remedial Design Investigation (PRDI) Report", prepared for USACE, prepared by Weston, Roy F. Inc., dated May 1997.

"Remedial Design for Interim Removal Actions, Operable Units 1 and 2, Former LOOW", prepared for USACE, prepared by Weston, Roy F. Inc., dated September 1997.

"Final History Search Report, LOOW, Niagara County, New York" prepared for USACE-Baltimore District, prepared by EA Engineering, Science, and Technology, Inc. (EA), dated August 1998.

"Project Report Second Phase Emergency Ordnance Explosive Services Lake Ontario Ordnance Works TNT Pipeline Removal Project Lewiston, New York" prepared for Severson Environmental Services, Inc. under contract to USACE-Buffalo District, prepared by ISSI Unexploded Ordnance Inc., dated September 2000.

"After Action Report Trinitrotoluene Resizing Operation Former Lake Ontario Ordnance Plant Model City, New York" prepared for Severson Environmental Services, Inc. under contract to USACE-Buffalo District, prepared by ISSI Unexploded Ordnance Inc., dated March 2001.

"Draft Report of Results for the Phase II Remedial Investigation at the Former Lake Ontario Ordnance Works (LOOW) Niagara County, New York" prepared for USACE-Baltimore District, prepared by EA Engineering, Science, and Technology, Inc. (EA), dated June 2001.

PA POC: Mary K. Foley, CELRB-PM-PM, (716) 879-4417.

SITE SURVEY SUMMARY SHEET
FOR
DERP-FUDS SITE NO. C02NY0025
ADDENDED 30 JULY 2001

SITE NAME: Lake Ontario Ordnance Works

LOCATION: Lewiston/Porter, Niagara County, New York; (Latitude: 43° 12' 47" N, Longitude: 78° 58' 41" W)

SITE HISTORY: This addended site survey summary sheet is part of Addendum No. 1 to the initial Inventory Project Report (INPR) with the Findings and Determination of Eligibility (FDE) signed 15 June 1986. This addendum combines additional periods of use originally identified as separate sites into the INPR for the Lake Ontario Ordnance Works (LOOW) site (C02NY0025). Those sites which are included in the LOOW INPR are as follows: C02NY0012 (entitled Ransomville Test Annex [RTA] and signed 17 December 1992), C02NY0074 (entitled NIKE Battery NF-03 and signed 20 September 1985) and C02NY0576 (entitled Air Force Plant # 68 [AFP-68] signed 3 January 1992). This addendum addresses additional environmental and safety concerns remaining at the site.

The United States of America acquired a total of approximately 7,567.46 acres in the towns of Lewiston and Porter in Niagara County, New York at various times and by various methods for various uses as discussed below. The acquisition of these 7,567.46 acres was for the construction of LOOW. However, subsequent to the operation of LOOW, additional periods of DOD use occurred during which portions of the site were identified as the Northeast Chemical Warfare (NECW) Depot, U.S. Air Force Plant 38 (AFP-38), Model City Igloo Area, AFP-68, Navy Interim Pilot Production Plant (IPPP), NIKE Missile Battery NF-03/05, RTA, and the Youngstown Test Annex (YTA). Approximately 974.37 acres (98.62 acres fee associated with the YTA/the former Launch Area of NIKE Missile Battery NF-03/05, and 860.67 fee and 15.08 acres easement associated with the Army National Guard Weekend Training Site (WETS)/formerly known as AFP-38 and Model City Igloo Area) are still owned by DOD; therefore, this acreage is ineligible for consideration under DERP-FUDS. Potential hazards associated with these ineligible parcels are not included in the discussion since they are ineligible for consideration under DERP-FUDS and should be addressed under the Installation Restoration Program (IRP).

LOOW

The Department of the Army acquired a total of 7,567.46 acres (7,453.28 acres fee and 114.18 acres perpetual easement) by various deeds and condemnation proceedings between 1941 and 1944 for the establishment of LOOW. The 114.18 acres perpetual easement included an easement along Four Mile Creek to be used for drainage (79.6 acres), an easement for a 42-in. water intake line from the Niagara River (13.39-acres), and an easement for a sewer discharge house and a 30-in. sewer outfall line (21.2 acres) to the Niagara River. The fee acreage included a 12-acre parcel (connected via an easement) used for the construction of a water supply pump house and valve house as well as the main acreage (7,441.28 acres) used for the construction of the ordnance works and a surrounding buffer zone.

As land acquisition was taking place, final construction plans for LOOW were being approved. The final layout plan of the site, based on the master design from E.I. duPont de Nemours and Company, Inc. (duPont), was approved on 17 February 1942. The operations contract for LOOW was with Chemical Construction Corporation (CCC), which was retained for the installation of

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equipment, training of key personnel, and plant operation. The Power Plant Design Contract was with Stone and Webster Engineering Corp. and the Architect and Engineering Management Contract was with J.G. White Engineering Corp. LOOW was built for the purpose of manufacturing flaked trinitrotoluene (TNT). It consisted of 6 TNT manufacturing lines (3 pairs) with the necessary facilities for the manufacture, recovery, purification, concentration, and mixing of the acid reagents incident to TNT manufacture as well as the disposal of waste materials from processing operations. Construction of the TNT plant by CCC began in March 1942. At the time of construction, LOOW consisted of some two hundred twenty-nine buildings (229). The plant facilities included nitrating houses, absorption towers, wash houses, flaking and packing houses, nitric acid plants; all necessary steam and power plants (central heating plant), water supply facilities (including a 4,000,000-gal concrete reservoir), wastewater disposal facilities; all necessary outside lines for electricity, water, steam and air; all necessary railroad tracks, roads, walks, fencing, 58 magazines for TNT storage, warehouses, specialty shops, fueling and maintenance facilities, aboveground storage tanks (ASTs), underground storage tanks (USTs), and administration buildings. The TNT production lines, as well as most of the storage facilities for raw materials and finished products, were constructed on approximately 2,440 acres located on the east-central portion of LOOW. The remaining portion of LOOW, consisting of approximately 5,000 acres (excluding the easements), functioned as a buffer zone.

The first freight cars of raw material used for the production of TNT, including toluene, sulfuric acid, sulfur, and soda ash, began arriving in August 1942. The WWTP began operation on 28 September 1942. The water treatment plant was also completed in September and began supplying the powerhouse with Zeolite (water softener) treated water. Steam generation at the powerhouse began on 2 October 1942. The first TNT was produced in October 1942. However, due to production levels that exceeded expectations at several ordnance plants, the Ordnance Board decided to terminate the CCC contract at LOOW and to discontinue operations on 12 June 1943. By 30 June 1943, LOOW had produced a total of 40,240,850 lbs of TNT, and production was scheduled to continue until 31 July 1943. An agreement was made with the CCC to put the plant on 90-day standby starting 1 August 1943. USACE was originally directed to remove and ship all of the equipment from the production lines. It was later determined that removal would be limited to the overhead piping and that which needed to be removed because it represented a safety hazard, until USACE was directed to do otherwise. A contract between USACE and the John W. Cowper Co. and the John W. Danforth Co. was signed on 6 August 1943 for the dismantling and decontamination of the process equipment (Contract #W-321-eng.-986). Cowper and Danforth were to dismantle and decontaminate equipment that had been exposed to TNT and to clean equipment from the nitric acid areas to prevent deterioration. Actual dismantling and decontamination commenced on 12 August 1943. Process equipment, machinery, tools, and surplus stock items were in high demand by other bases, and many articles were transferred to other facilities.

The entire site was transferred to USACE-North Atlantic Division in 1944. Approximately 860 acres fee (of the former magazine area north of Balmer Road) was transferred to the Chemical Warfare Service (CWS) after 27 June 1944. This area became known as the NECW Depot (discussed in a separate section

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below). By use permit dated 21 July 1944, the USACE Manhattan Engineering District (MED) was granted use of the 4,000,000-gal concrete reservoir on the north side of the LOOW fresh water treatment plant, as well as the surrounding 25 acres. The permit specified that the reservoir be properly cleaned in order that the future use for water storage not be destroyed. The land covered under the use permit included the 4,000,000-gal reservoir, as well as a smaller reservoir on the south side of the plant, the water treatment facilities, and the roadways.

LOOW was declared surplus to the War Assets Administration (WAA) on 31 March 1945. The buffer zone outside the TNT production and igloo storage areas, approximately 5,066.64 acres fee (according to USACE real estate maps), was transferred to the Federal Farm Mortgage Company (FFMC) on 30 October 1945. Between 1945 and 1950 FFMC conveyed 5050.03 acres to various owners. Accountability for 13.1 acres fee (of the 5,066.64 acres) was re-assumed by the Army on 7/6/51 and transferred to the USAF on 3 November 1954 (the 13.1 acres subsequently became part of AFP-38 as discussed below). The remaining 3.51 acres fee was not accounted for in FFMC disposal documents. It is assumed that this difference is due to a resurveying of the parcels that were conveyed by FFMC.

On 31 December 1946, 1511.02 acres fee (of the remaining 2,686.64 acres fee) were transferred to the Atomic Energy Commission (AEC). The AEC, which was a non-DOD entity, was the successor to the MED. The 1511.02 acres fee (which included the 25 acres occupied by MED under the use permit) had several subsequent uses including non-DOD use as the Lake Ontario Storage Area (LOSA), Niagara Falls Storage Site (NFSS) and the Boron 10 Production Plant. Portions of this acreage also had subsequent DOD usage including areas identified as NIKE Battery NF-03/05, YTA, RTA, and AFP-68/Navy IPPP. The subsequent DOD uses are discussed in separate sections below.

On 20 October 1947, the WAA assumed accountability for the remaining acreage 989.8 acres (875.62 acres fee and 114.18 acres easement). This acreage included the area comprising the former NECW Depot, additional acreage, and the easements for the water line, sewer line and Four Mile Creek. A portion of the easement acreage (34.58 acres including the water and sewer lines) was subsequently transferred from WAA to AEC on an unknown date after 20 October 1947. Between November 1954 and February 1966, approximately 863.62 acres fee were transferred from the WAA to the USAF for AFP-38 (discussed below). The remaining 12 acres fee, which housed the fresh water intake pump and valve house, were subsequently disposed by WAA to Evelyn R. Lord by Quit Claim Deed dated 24 April 1950. No disposal information was found for the remaining 79.6 acres easement along Four Mile Creek. It is assumed that this acreage is still owned by the General Services Administration (GSA), the successor to the WAA.

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NECW Depot

Approximately 860 acres located on the north side of Balmer Road (the northern portion of LOOW) was transferred from the USACE-North Atlantic Division to the U.S. Army CWS on 27 June 1944. This area, which contained the 58 TNT storage "igloos" associated with the former LOOW, was subsequently designated the NECW Depot. It was classified as a "Class IV installation" and was operated as a sub-depot of the Eastern Chemical Warfare Depot, Edgewood Arsenal (Edgewood, Maryland).

The NECW Depot was essentially rectangular in shape and was bounded on the south by Balmer Road, on the west by Lutts Road, on the north by vacant land (previously identified as the North Patrol Road), and on the east by Porter Center Road. Facility improvements included the restoration of 4 buildings for the housing of administrative personnel and the installation of certain required utilities. As of May 1945, the NECW Depot included 58 magazines (each igloo was 26 ft by 60 ft interior), 1 warehouse (105 ft by 200 ft), 1 administration building (20 ft by 45 ft), 1 telephone building (15 ft by 25 ft), 1 clock house (30 ft by 30 ft), 1 maintenance shop (40 ft by 65 ft), 1 carpenter shop (28 ft by 50 ft), 2 tool houses (each 20 ft by 40 ft), 47 open storage areas (each 14 ft by 200 ft), and 1 drum storage area (90 ft by 200 ft). The original LOOW railroad spur and loop located along the eastern portion of the site was used to import and export munitions shipments.

During World War II, the bulk of the material that was stored at the NECW Depot was produced locally and was temporarily stored prior to shipment to the New York Port of Embarkation. At the close of World War II in Europe, the NECW Depot operated as a temporary storage site for incendiary bombs (such as M-17, M-47, and M-76 bombs) brought back to the United States from Europe. Complete information (e.g., inventory lists) regarding the materials and bombs stored at the NECW Depot was not found.

As of May 1946, munitions had been disposed, and remaining supplies at the depot consisted of surplus property and depot property. Use of the depot was discontinued on 30 June 1946, and the depot was subsequently declared excess by CWS. On 20 October 1947, WAA assumed accountability for 989.80 acres that had been declared excess by the Army (the former NECW Depot facility was included in this acreage).

AFP-38/Model City Igloo Area

On 6 July 1951, the U.S. Army withdrew 13.10 acres from the 5066.64 acres fee under custody of FFMC. On 13 June 1952, the U.S. Army withdrew 850.19 acres fee of the 989.80-acres under custody of the WAA. On 3 November 1954, these two parcels, totaling 863.29 acres fee, were transferred to the USAF for the establishment of AFP-38. On 16 November 1964, an additional 4.39 acres along Balmer Road (a portion of the 1511.02 acres under custody of the AEC) was transferred by AEC to the USAF for use with AFP-38. On 24 February 1966, an additional 13.43 acres fee (a portion of the 989.8 acres fee formerly under custody of WAA but withdrawn from custody on 13 June 1952) was transferred to the USAF. The USAF subsequently acquired an additional 21.74 acres easement; 15.08 acres easement from a private interest by deed dated 7 December 1954, and 14.22 acres easement from AEC on an unknown date (6.66 acres perpetual

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easement for a water line and 7.9 acres perpetual easement for a railroad line). Both easements acquired from the AEC were on the 1511.02 acres held by AEC. The USAF subsequently acquired two "no area" easements from the AEC for the maintenance of utility and railroad lines on AEC-held property. Between 1955 and 1967 the AEC reported 1301.51 acres fee (of the 1511.02 acres being held by AEC) excess to the needs of AEC. This acreage was transferred to the GSA. On 28 July 1966 and 23 December 1968, GSA transferred three parcels totaling 18.34 acres railroad easement and two parcels totaling 5.59 acres water line easement to the USAF for use with AFP-38. These additional easements were located on property conveyed by AEC to Fort Conti Corporation and on property conveyed to Frank Monroe (these transactions are further discussed below). Thus the acreage associated with AFP-38 is 934.34 acres (881.11 acres fee and 53.23 acres easement). It should be noted that all acres fee and easement were part of the original LOOW site; therefore, they do not represent an increase in the overall acreage of the original LOOW site.

AFP-38, which was referred to as Bell Test Center Air Force Plant 38, was located in the "igloo area" of the former LOOW site (the same area formerly used as the NECW Depot). AFP-38 was a government owned-contractor operated (GOCO) facility that was operated by Bell Aircraft Corporation (Bell Textron) from approximately 1954 to 1982 for a variety of purposes, including rocket, missile, and laser research and development (R&D). The USAF gained jurisdiction of the area from the GSA and granted Bell Aircraft Corporation the use of AFP-38 for the development and production of the RASCAL Missile. The area consisted of the original 58 concrete TNT-storage igloos, additional storage facilities, test installations (including four test cell complexes and seven test cells), service buildings, administrative offices and waste handling facilities (including an incinerator and a dam to contain wastewater/runoff). The facilities were constructed to support propellant handling, testing, and hot firing of rocket propulsion systems and components. In 1979, the principal use of the facility was to provide production support for the Minuteman III Propulsion System Rocket Engine (PSRE). The PSRE was fabricated and assembled in the Bell Plant in Wheatfield, New York and was then shipped to AFP-38, where operations such as propellant loading, ordnance installation, and final electrical checkout were accomplished. According to available real estate maps, on 18 April 1955, 8.9 acres of AFP 38 was acquired from the USAF by the Army under USDOA use permit. This area was redesignated the Model City Igloo Area. According to a report prepared by the U.S. Army Toxic and Hazardous Material Agency (USATHAMA) dated 4 January 1979, this area was used by the 40th Explosive Ordnance Detachment (EOD) Disposal Unit for the destruction of hand grenades, fireworks, small arms and relatively small caliber high explosive (HE) ammunition by burning or detonation. The report also indicated that the site was used for the consolidation of liquid fuel components for the NIKE Ajax Rockets prior to shipment to other locations including other Army Depots and Edgewood Arsenal, MD. No evidence of waste disposal was found. At the time of the report in 1979 the 40th EOD was still using the facility and no information pertaining to disposal of the facility was found.

On 31 January 1979, the USAF transferred the western half of AFP-38, 346.86 acres (331.78 acres fee and 15.08 acres easement, including the Model City Igloo Area which was being occupied under use permit), back to the USDOA. These 346.86 acres were subsequently leased by the DOA to the Army National

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Guard. The site became known as the Army National Guard WETS. On 29 April 1985, 3.35 acres of the former AFP-38 was conveyed by quitclaim deed to the Town of Porter. This area currently contains water storage facilities used by the Town of Porter. On 24 August 1992, the USAF transferred an additional 528.89 acres fee of the former AFP-38 to the Army for expansion of the WETS. The Army National Guard continues to use the 875.75 acres (860.67 acres fee and 15.08 acres easement) for training purposes. It is noted that an acreage difference of 17.09 acres fee was found between the acquisition and disposal information (881.11 acres acquired and 864.02 disposed). This difference in acreage is thought to be attributed to resurveying efforts and the transfer of the underlying interest in Balmer Road and Lutts Road from the Army to the Town of Porter (dates unknown). It is also noted that no information pertaining to the disposition of the additional 38.15 acres easement associated with the former AFP-38 was found.

According to DERP-FUDS policy the portion of the site, 860.67 acres fee and 15.08 acres easement associated with the WETS, is ineligible for consideration since it still owned by DOD. Therefore, there is no discussion of potential remaining hazards on this portion of the site in the project description section below. It is noted; however, that this portion of the site has been investigated under IRP. The 3.35 acres fee conveyed by DOD to the Town of Porter prior to 1986 is eligible for consideration under DERP-FUDS.

Navy Interim Pilot Production Plant/AFP-68

Under Right of Entry permit NYDRE(M)-1641, dated 30 July 1954, the Department of the Navy was granted access to approximately 388.96 +/- acres by the AEC. This area comprised the northwestern portion of the 1511.02 acres fee that was being occupied by AEC (the AEC area was identified as the LOSA). The land was bounded by McArthur Street to the east, "N" Street to the south, West Patrol Road to the west, and Balmer Road to the north. It is noted that the former TNT manufacturing lines associated with LOOW were located within these 388.96 acres. On 1 November 1956, the USAF acquired 5.27 acres fee by Declaration of Taking. The 5.27-acre parcel contained the original fresh water intake, the pump house, and the valve house (it is noted that this was part of the 12 acres originally sold to Evelyn R. Lord by Quit Claim Deed dated 24 April 1950). The AEC issued the USAF two no-area use permits on 15 March 1957 (A 3394) and 15 August 1957 (M 3501) for use of 42-in. and 60-in. water mains, and for construction of a 42-in. water main, respectively. On 1 November 1968 the AEC issued another use permit, M 3593, for the use of 22 acres, including the warehouses and buildings associated with the former LOOW sewage treatment plant. The USAF then acquired a letter permit from AEC giving the USAF permission to conduct alterations and rehabilitation activities at the former sewage treatment plant. The USAF subsequently acquired two more use permits covering two parcels totaling 7.39 acres. One was a for 5.39 acres acquired from AEC on 15 April 1958 and the second was for 2.0 acres acquired from the Army on 15 January 1959. Both easements were for the use and maintenance of power lines going into the site. Thus the acreage associated with AFP-68/Navy IPPP was approximately 423.59 acres (418.32 acres use permit and 5.27 acres fee). It should be noted that the acres fee and easement were part of the original LOOW site; therefore, they do not represent an increase in the overall acreage of the site.

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The Navy IPPP (referred to as the South Plant) was built in 1956 by Olin Mathieson, as part of a Navy contract to produce a high energy fuel (HEF-2). The facility was a GOCO facility that was operated by Olin Mathieson in connection with AFP-68 (discussed below). According to a statement prepared by GSA for the Director of the Bureau of the Budget dated 29 April 1957, the Navy had been using a portion of the former LOOW containing 38 buildings under a permit from USAEC since 30 July 1954. The Navy IPPP was constructed around the former LOOW buildings located along "M" Street south of the TNT production area but north of the former acid production area. Nine existing buildings (consisting of the three former TNT change houses, a main TNT compressor building, TNT inspectors office building, TNT supervisors office building, three TNT shop buildings and an old barn) were located along "M" street when Olin Mathieson began construction of the plant in 1956. Facilities installed as part of the process included production buildings, warehouses, two heating plant buildings, a laboratory, cafeteria, water reservoir, cooling tower, four 3,400-gal USTs, railcars used as ASTs, utilities (heating, air, fire, and water lines), open storage areas, electrical substation, refrigeration plant, and a burning area with flare stack. Full-scale production at the Navy IPPP began in May 1958. Capacity of the Navy IPPP was around 480,000 lbs/yr. The Navy IPPP produced diborane, converted it to pentaborane (and some decaborane), and then converted the pentaborane to HEF-2. The Navy IPPP produced diborane from a reaction between sodium borohydride and boron-trichloride.

AFP-68 (referred to as the North Plant) was built by Olin Mathieson as part of a contract with the USAF. This plant was a GOCO facility, operated by Olin Mathieson in conjunction with the Navy IPPP. Construction of AFP-68 began on 9 July 1957 with a 15 January 1959 target date for plant operation. Capacity of AFP-68 was to be 2.2 million lbs/yr of HEF-2. AFP-68 contained 78 buildings which were constructed on approximately 100 acres on the western border of the former LOOW TNT production area (the AFP-68 buildings were constructed over the westernmost TNT production line). AFP-68 consisted of about 11 production areas and 13 support areas. The production areas performed separate functions, ranging from raw materials receiving and storage to intermediate process steps such as gas synthesis, salt purification, and nitrogen production to final product handling and shipment. In general, each production area typically consisted of a control building, tank farm (with ASTs), and a process building/area. The support areas included a cafeteria, warehouses, maintenance buildings, office/administration buildings (including three temporary buildings), a refrigeration and steam plant with AST, an electrical substation, water supply and treatment buildings, and sanitary sewage and waste disposal systems (using the former LOOW wastewater treatment plant). Typically the support areas consisted of one building for each service. Each production area was interconnected to others through an extensive overhead piping system used for transportation of raw materials, gas, heat, and refrigeration. Sewer systems were also developed to collect and treat chemical waste, storm water, and sanitary sewage. Although pre-production testing of the various process areas occurred, documents indicate that the AFP-68 project was cancelled in 1959, before production took place. As part of the decommissioning activities, process equipment, tanks, and a majority of piping were removed from the site.

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On 26 May 1955, the AEC declared 967.84 acres (which included the 388.29 acres occupied under permit) excess to the GSA. The 388.96-acre parcel was transferred to the GSA; however, no subsequent transfer of the property to the Navy or USAF was completed. Therefore, it is assumed that the property continued to be occupied under use permit until an unknown date prior to 1962 when the use permits were cancelled. The entire site, including the buildings of AFP-68 and the Navy IPPP, were declared excess to GSA by the USAF and Navy on an unknown date. On 31 July 1962 5.27 acres fee (including the former water intake pump and valve houses) were reported excess to GSA. GSA assumed accountability on 15 February 1965 and subsequently conveyed the parcel to the Town of Lewiston on 20 February 1967. The no-area use permits and the 27.39 acres in use permits were relinquished to the AEC on 17 September 1962. The 2-acre use permit acquired from the Army was relinquished to the Army on 25 October 1962. By Quit Claim Deed dated 28 July 1966, 564.74 acres fee, including the former AFP-68 and the Navy IPPP, were conveyed to the Fort Conti Corporation. This acreage included the Launch and Control Areas of NIKE Battery NF-03/05, as discussed below. The deed reserved to the AEC approximately 11.22 acres easement (7.9 acres for drainage through the Central Drainage Ditch and 3.32 acres for utilities). The deed also reserved 10.92 acres easement to the USAF for AFP-38 (6.56 acres for a railroad easement and 4.36 acres for utilities as discussed in the AFP-38 section above).

NIKE BATTERY NF-03/05

On 25 April 1957, 309.71 acres fee were transferred from the AEC to the Department of the Army for the construction of NIKE Battery NF-03/05. On 18 March 1958 a second parcel of land, containing an additional 89 acres fee, was transferred from the AEC to the Army. The total site acreage was 398.71 acres fee. The NIKE Base was located in the east-central portion of the former LOOW TNT production area. This area was also the eastern portion of the land parcel under custody of the USAEC.

The former NF-03/05 was operated by the U.S. Army from about 1954 to 1966. The base was divided into 2 areas, a Launch Area and a Control Area. The Launch Area was located in the northern section of the 309.71 acres, and the Control Area was located in the southern portion of the 309.71 acres. Improvements to the Launch Area included two missile batteries (six missile silos), administrative building, mess hall, water pump house, barracks buildings, a generator building with UST, operator's shelter, missile assembly building, and nitric acid storage shed. The northernmost battery, NF-03, was constructed first; construction began in 1954 and was completed in 1955. As-built drawings indicate that the southern battery, identified as NF-05, was completed in May 1957. The Control Area consisted of 2 control buildings, 2 generator buildings (with USTs), 4 radar towers, a barracks building with UST, a small sewage treatment building and a guard house. The 89-acre parcel was acquired for the addition of a housing area to be associated with the NIKE site; however, a review of available information indicates that no structures associated with the NIKE site were constructed on this parcel.

On 2 May 1960, The Army reported the 89-acre parcel excess to the GSA, and by Quit Claim Deed dated 4 May 1961 the 89 acres fee were transferred to the Town

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of Lewiston. The deed reserved a railroad easement of 6.66 acres to the United States. By Quit Claim Deed dated 28 July 1966, 564.74 acres fee, including 211.09 acres of NIKE site NF-03/05, were conveyed to the Fort Conti Corporation. The remaining 98.62 acres (containing the buildings associated with the Launch Area) were transferred to the USAF on 16 September 1966. This area became known as the YTA (later known as the Rome Air Development Center [RADC]). This site is still owned by the USAF. According to DERP-FUDS policy these 98.62 acres are ineligible for consideration since the property was still owned by DOD after 1986; therefore, there is no discussion of potential remaining hazards associated with this parcel in the project description section below.

RANSOMVILLE TEST ANNEX

On 18 September 1962, 126 acres fee were transferred by the AEC to the USAF for use as the RTA. By use permit, the AEC reserved 0.69 acres easement for utilities. This area was located along Pletcher Rd, and it was formerly part of the administration area of LOOW. The site contained a one-story brick building that was used by the USAF as a research and testing facility. No information was found to indicate that additional improvements were constructed at the site. On 8 July 1976, the 126.0 acres fee were transferred from the USAF by Secretarial Transfer to the U.S. Department of Labor.

CURRENT OWNERS

Current owners of the former LOOW industrial area include: Town of Porter 3.35 acres; CWM Chemical Services Inc. (CWM) approximately 713 acres (portions of the former LOOW, AFP-68/Navy IPPP, and NIKE NF-03/05); Niagara Mohawk Power Corporation approximately 5.39 acres fee; The Somerset Group approximately 39 acres fee; the USAF approximately 98.62 acres fee (the former YTA); the Army approximately 875.75 acres (860.67 acres fee and 15.08 acres easement - the former AFP-38); Town of Lewiston approximately 116.74 acres fee and 26.837 acres easement (which includes the former sewage treatment plant - 22.47 acres fee, the former fresh water intake plant - 5.27 acres fee, 4.217 acres easement associated with the water lines, 22.62 acres easement associated with the sewer outfall lines and the 89 acres fee from the NIKE Battery NF-03/05); Modern Disposal Services, Inc. approximately 380 acres (contains the acreage associated with the former RTA), and the Department of Energy (DOE), approximately 191 acres (located in the center of LOOW and currently identified as the NFSS, which is being addressed under the Formerly Utilized Sites Remedial Action Program [FUSRAP]). As previously discussed the former AFP-38/WETS and the YTA (98.62 acres fee) are still owned by DOD; therefore, they are ineligible for consideration under DERP-FUDS. Consequently, no discussion of potential hazards at these properties is included in the sections below.

SITE VISIT: Several site visits have been conducted at various portions of the site over the years. On 22 August 1991, Mr. Constancio J. Labeste and Mr. Honesto Castaneda of USACE (CENAN-EN-IR) conducted a site visit of the former fresh water intake pump house and valve house associated with the former LOOW and AFP-68. On 29 July 1992 Mr. Labeste and Mr. Castaneda of USACE conducted a site visit of the area associated with the former YTA. During the week of 4 June 2001, Mr. Michael O'Neill and Ms. Sandra Staigerwald of EA Engineering,

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Science, and Technology, Inc. (EA) under contract to the U.S. Army Corps of Engineers, Baltimore District, conducted a site visit of the former LOOW. EA personnel focused on the 2,500 acres that contained the structures and were involved in the TNT production. EA personnel were not able to access the portion of the former LOOW currently identified as NFSS.

CATEGORIES OF HAZARD: BD/DR, CON/HTRW, OEW, and PRP/HTRW.

PROJECT DESCRIPTION:

a. HTRW. An HTRW project C02NY002501 was proposed in the original INPR (FDE signed 15 June 1986). The INPR recommended a remedial investigation (RI) and a feasibility study (FS) be conducted at the former LOOW to identify areas of DOD responsibility. Several investigations have been conducted on various portions of the former LOOW by USACE as well as the current property owners. The following summarizes some of the key investigations that were conducted by the current owner and USACE:

- Ecology and Environment (E&E) under contract with USACE-Huntsville District conducted surface water and sediment sampling in 1985 in the vicinity of two suspect disposal areas associated with the former AFP-68 and identified as "the drum burial area" and "the Olin burn area".
- In 1988, a field reconnaissance of selected areas was performed by Acres International Corporation (Acres) under contract to USACE-Kansas City District. Observations were recorded at the former AFP-68, the former LOOW nitration houses, the wastewater treatment plant, and NIKE Battery NF-03/05. A document and background information search regarding DOD activities on the former LOOW was performed by Acres in 1989. The report contained information regarding "the drum burial area" and "the Olin burn area", the location of magnetic anomalies, and analytical data from surface water and soil samples.
- Investigations of the CWM property ("the drum burial area" and "the Olin burn area", as well as the TNT waste line and acid waste lines) were performed by Acres during an initial RI under contract to USACE-Kansas City District. A supplemental RI was prepared for USACE-Kansas City District. The study included ground-water sampling, soil sampling, drum sampling, underground line sampling, and geophysical investigations.
- In 1992, Acres under contract to USACE-Kansas City District investigated the former AFP-68 in a Preliminary Contaminant Assessment (PCA) of the entire AFP-68. During the PCA, soil, ground water, sludge, and sewage samples were collected from potential sources within AFP-68, the wastewater treatment plant, and the former NIKE Battery NF-03/05.
- In 1993, a data search summary report, which summarized historical data associated with areas potentially impacted by DOD activity in former Operable Unit 2 (AFP-68, WWTP, NIKE Base) was conducted by Acres under contract to USACE-Kansas City District.
- An engineering evaluation/cost analysis (EE/CA) for removal of the TNT waste lines, buried drums in area A, burn pit in Area B, asbestos on Somerset Group property, and miscellaneous containers was performed by Acres under contract to USACE-Kansas City District in 1995. The associated remedial design investigation and remedial design were also conducted by Weston in 1997 under contract to USACE-Baltimore District.

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During the remedial design investigation, additional soil, sludge, and sewage samples were collected.

- EA, under contract to USACE Baltimore District, completed a sitewide Phase I RI of LOOW in 1998. The Phase I included the collection of soil, ground water, surface water, sediment, sludge, and wastewater. In 2000, EA Engineering, Science, and Technology completed a Phase II RI of LOOW. The Phase II RI included collection and analysis of soil, ground water, sludge, and wastewater.
- Several radiological investigations were performed by USDOE on the current NFSS site and vicinity properties. A comprehensive characterization and hazard assessment of the NFSS was conducted by Battelle in 1981 under contract to DOE. Environmental monitoring reports have subsequently been issued each year since the early 1980s.
- CWM conducted several investigations on areas of the former LOOW. The former AFP-68 property was investigated by Golder Associates, Inc. for CWM in 1991. The investigation included collection of soil, ground water, and sludge samples from the acid neutralization lagoon, oil/water separator, and chemical waste lift station areas in the southern portion of the former AFP-68. A RCRA Facility Investigation (RFI) completed by Golder in 1993 under contract to CWM contains data associated with the southern portion of AFP-68, former West Drum Area (south of the nitration houses), Piezometer P12-2S (west of the Area North of the "drum trench area"), and the PCB warehouse (former LOOW box factory).
- CWM conducted a survey of PCB concentrations in surface soil and sediment in 1989. Some of these sampling locations were within AFP-68 and in the vicinity of other areas investigated during the RFI.
- In 1985, Golder under contract to CWM conducted an extensive hydrogeologic characterization, including the assessment of hydraulic conductivities, vertical gradients, and grain size distributions of the portion of LOOW currently owned by CWM. A hydrogeologic update was performed by Golder in 1993.

In addition to the investigations mentioned above, CWM performed additional ground-water evaluations, corrective measures, well construction comparisons, sampling technique comparisons, and background concentration evaluations. Investigations by CWM as well as DOD are ongoing.

During the 2001 site visit, EA personnel observed what appeared to be parts degreasing sink (including a hood with a fan for volatiles) located in Building No. 41 (part of AFP-68) along the western wall of the building in the repair area. According to the current owner this sink has not been used. Piping/drains associated with this degreasing sink may represent a potential HTRW hazard. In addition, EA observed piping associated with the former AFP-68 operations. Due to operations associated with the former AFP-68, this piping may represent a potential hazard. On property owned by Occidental Chemical Corporation, EA personnel observed what may have been a DOD landfill (initially identified in aerial photographs from the 1940s). Material in the western portion of the landfill (clay piping, rusted drums, transite panels) appeared to be of DOD vintage, while material in the eastern portion of the landfill along the access road appeared to be more recent (plastic bottles, tires and miscellaneous things on the surface). Unknown material potentially present in the drums/landfill may represent an HTRW hazard.

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Based on a review of information to date, it appears that several areas of concern have been identified on the former LOOW. Some of these areas have been remediated under authorized HTRW projects (C02NY002502, C02NY002504, and C02NY002505). USACE has proposed to address the issue of remaining underground lines at the site and the suspect landfill observed on the Occidental property under the ongoing HTRW project no. C02NY002501; therefore, no additional HTRW project is proposed.

b. BD/DR. Several structures related to DOD site use were observed to be present. On the property owned by CWM the following structures were observed: three former TNT manufacturing structures, the former TNT box factory, and four structures associated with the former LOOW/Navy IPPP located along the former "M" street; eleven buildings and numerous foundations/structures associated with the former AFP-68; and seven buildings associated with the former NIKE Battery NF-03/05. Several of the improvements associated with the former AFP-68 represent falling and drowning hazards, the remaining DOD installed/used buildings do not represent hazards. However, according to DERP-FUDS policy no BD/DR project is proposed for this portion of the site since the area is privately owned.

Twelve buildings, several foundations, and three concrete tanks related to DOD site use (the former AFP-68) were observed to be present on the property owned by the Somerset Group. In addition, several piles of debris (some piles associated with former DOD use and other piles associated with current owner use) were observed on the site. Several of the improvements/foundations represented falling and/or drowning hazards. According to DERP-FUDS policy no BD/DR projects can be proposed for sites that are privately owned; therefore, no BD/DR project is proposed for this portion of the property.

Two structures thought to be associated with the former LOOW were observed on NFSS property. Since this site could not be visited, it is unknown if there are any hazards associated with these structures. However, these structures were beneficially used by the AEC/DOE subsequent to DOD use of the site. According to DERP-FUDS policy these structures are ineligible for consideration since they were beneficially used by subsequent owners; therefore, no BD/DR project is proposed.

Three structures associated with the former AFP-38 were identified on the property owned by the Town of Porter. These buildings have been used subsequent to DOD use of the site; therefore, no BD/DR project is proposed.

Several buildings/structures associated with the former LOOW wastewater treatment plant were identified on a portion of the property owned by the Town of Lewiston. Many of these structures represent falling and drowning hazards. In addition, potentially friable asbestos containing material was observed in the debris associated with two of the former wastewater treatment plant buildings. These buildings were used by AEC subsequent to DOD use; therefore, according to DERP-FUDS policy, these structures would be ineligible. However, due to the imminent danger created by the accessibility to these structures, USACE has proposed that an exception to DERP-FUDS policy be issued and that these structures be made eligible for inclusion in a BD/DR project.

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Three additional buildings were identified on two separate parcels (the former water intake area and sewage discharge station) owned by the Town of Lewiston. In addition, a brick structure thought to have been part of a septic system was identified near the water intake pump house. None of the three buildings represent hazards, and two of the buildings have been beneficially used by the town of Lewiston (the pump house and valve house). Therefore, no BD/DR project is proposed for these three buildings. However, the brick structure associated with a former intake pump house represents a falling hazard and it has not been used subsequent to DOD use of the site. Therefore, a BD/DR project is proposed for this structure.

No DOD buildings or structures were observed on the property owned by Modern Landfill Inc., former Lewiston landfill property, and the approximate 5,000-acre buffer zone (owned by miscellaneous owners) with the exception of two structures located along Harold Road that were associated with the former LOOW Transportation Center. These two structures, identified as T-5 and T-12, were used by DOD. These structures do not represent hazards and they were used subsequent to DOD use; therefore, no BD/DR project is proposed.

c. CON/HTRW. Several USTs/ASTs were observed at the former LOOW. One AST and five USTs were observed on the property owned by CWM. The DOD-installed AST (formerly associated with the AFP-68 heating plant) was observed on CWM property near the intersection of "K" and "McArthur" streets. This AST is currently being used by CWM. Five USTs associated with the former NIKE Battery NF-03/05 Control Area owned by CWM were observed during the recent site visit. According to representatives of CWM these USTs have not been used subsequent to DOD use of the site. Therefore, these USTs are eligible for removal under current DERP-FUDS policy. Additional owner-installed ASTs and transformers were observed around the former AFP-68 on property owned by CWM. However since these ASTs were not owned or used by DOD they are ineligible for consideration under DERP-FUDS.

Based on a review of historical information four 3,400-gal USTs were installed as part of the former Navy IPPP. No information pertaining to the location or disposal of these USTs has been found. In addition, no USTs were observed at the location of the former NAVY IPPP during the site visit; therefore, these USTs are not considered eligible under current DERP-FUDS policy.

Three transformers believed to be DOD-installed were observed at the former LOOW wastewater treatment plant. The treatment plant, which is owned by the Town of Lewiston, was used by AEC subsequent to DOD use of the site. It is believed that these transformers were used by AEC; however, the transformers have not been beneficially used by the Town of Lewiston and they represent potential hazards. Due to the inherent danger associated with these transformers (the transformers potentially contain PCBs and the site has been accessed by the public), USACE has requested an exception to DOD policy be issued and that these transformers be made eligible for removal under a CON/HTRW project.

Three former USTs, six ASTs and two suspect USTs were identified on the property owned by the Somerset Group. Based on a review of available historical information, the three former USTs and two suspect USTs were thought to have been installed by DOD. The three former USTs are located on

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the southern portion of the former AFP-68 process area No. 3. These USTs were formerly associated with Building No. 41 (AFP-68 maintenance building). The current owner initiated the remedial action and removed these former USTs, thus they are ineligible for further remedial action under DERP-FUDS. An AST was observed adjacent to the former guardhouse (Building No. 27). According to the current owner this AST was present when the property was purchased. However, after reviewing available information (including aerial photographs, site maps and available reports) no evidence of DOD installation/ownership of this AST was found. Therefore, since this AST does not appear to have been installed/used by DOD it is ineligible for consideration under DERP-FUDS. The five other ASTs were installed by the current owner therefore they are ineligible for consideration under DERP-FUDS. A pipe believed to be a fill pipe associated with a possible UST was observed on the north side of the former AFP-68 Building No. 31 (laboratory building). The current owner stated that he did not know if a UST was present in this location, but that if a UST was present he had never used it. No DOD maps of this building could be located; therefore, this potential UST could not be confirmed. However, since this is believed to be a UST associated with former DOD use of the site this UST is eligible for removal under current DERP-FUDS policy. A pipe believed to be a fill pipe associated with a second possible UST was observed on the east side of the former AFP-68 Building No. 41 (maintenance building). A sump (believed to be connected to this UST) was observed within Building No. 41. It appeared that the current owner was indirectly using the UST since runoff from current owner operations was filling the sump and possibly the UST. The current owner stated that he did not know if a UST was present in this location, but that if a UST was present he had never used it. However, due to the possibility that the suspect UST was receiving waste from owner no CON/HTRW project is proposed. This UST will be addressed under the proposed PRP/HTRW project.

Approximately 50 electrical ballasts (believed to contain PCBs) were observed on a concrete pad to the east of AFP-68 Building No. 5-01. According to the current owner these ballasts were moved from different buildings associated with the former AFP-68 to this concrete pad for consolidation. Since remedial action was initiated by the current owner for these ballasts they are ineligible for consideration under current DERP-FUDS policy.

Based on a review of available historical information (which included site visits by USACE contractors), it was concluded that at least two USTs and a pole-mounted transformer potentially containing PCBs are believed to remain on the property currently owned by DOE (identified as NFSS). These USTs and the transformer are believed to have been installed by DOD; however, it is unknown if the USTs and transformer were used subsequent to DOD use of the site. Based on conversations with representatives of USACE, these USTs and the transformer are being addressed under the FUSRAP program, which will address remaining hazards on the DOE property. Since these potential CON/HTRW hazards are being addressed by the current owner (DOE), they are ineligible for consideration under current DERP-FUDS policy.

d. OEW. The former LOOW facility manufactured TNT from October 1942 through July 1943. It was estimated that at least 40,240,850 lbs of TNT were produced at LOOW during this period. After July 1943 the site was placed on 90-day standby starting 1 August 1943. USACE was originally directed to

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remove and ship all of the equipment from the production lines. It was later determined that removal would be limited to the overhead piping and that which needed to be removed because it represented a safety hazard, until USACE was directed to do otherwise. A contract between USACE and the John W. Cowper Co. and the John W. Danforth Co. was signed on 6 August 1943 for the dismantling and decontamination of the process equipment. Cowper and Danforth were to dismantle and decontaminate equipment that had been exposed to TNT and to clean equipment from the nitric acid areas to prevent deterioration. Actual dismantling and decontamination commenced on 12 August 1943. Process equipment, machinery, tools, and surplus stock items were in high demand by other bases, and many articles were transferred to other facilities.

A decontamination report entitled "Appraisal of Ordnance Plant Facilities, Final Report WA-New York-1, Lake Ontario Ordnance Works, Niagara County, New York" was prepared for the former LOOW by Industrial Research Corporation (IRC). The report, which was submitted to the WAA on 3 March 1948, concluded that while no large deposits were apparent from inspection there is undoubtedly "ground contamination at considerable extent in certain sections of each of the explosive production areas" and that "final decontamination would have to take this into consideration." The report identifies potential hazards such as waste disposal lines; operating buildings; and grounds associated with TNT manufacturing operations.

On 29 October 1982, the New York State Department of Environmental Conservation (NYSDEC) and CWM collected sludge samples from acid waste lines associated with the former TNT manufacturing process. The samples were reportedly brownish and orange and were thought to be residual TNT. According to sample results, the dried sludge sample was "detonable 50% of the time at 19.5", but it was reported that this sludge was not as explosive as pure TNT. This was likely due to other constituents (such as DNT and NT) as well as TNT being present. It was noted that the wet sludge did not detonate.

In 2000, Weston under contract to USACE-Buffalo District observed TNT crystals on the ground surface during the TNT waste line removal operation (DERP-FUDS project No. C02NY002505). The material was sampled and Weston reported that over 35% TNT was present in the sample, which would have been explosive. No additional TNT was found. Precautions were taken to verify the contents of the piping prior to removal. It was determined that the material must have been left on the surface during previous pipeline excavation/removal operations.

In addition, TNT and its degradation products were reported in surface soil samples collected by EA Engineering in 2001 as part of the ongoing RI. The TNT levels were determined to be nondetonable. However, due to the potential for unexploded TNT to be present in surface soil, as well as former process lines, an OEW project is proposed.

e. PRP/HTRW. The former LOOW manufactured TNT and AFP-68/Navy IPPP developed HEF-2 type fuels in GOCO facilities that were located on the approximately 2,500-acre industrialized portion of the site. The facilities were built, operated, and decommissioned/decontaminated by different contractors on behalf of the DOD. DOD use/operations at the site consisted of NIKE Battery NF-03/05 (operated by the Army) and the YTA (operated by the

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USAF). It is also noted that operations have been conducted at the former LOOW by subsequent owners including: AEC/DOE (storage/burial of radioactive materials and production of boron-10 by AEC contractors Nuclear Materials and Equipment Corporation (NUMEC) and Hooker Chemical); CWM (storage of hazardous material/operation of hazardous waste landfill); Somerset Group (light manufacturing operations and storage of miscellaneous materials); Modern Disposal Inc. (landfill and recycling operation); and the Town of Lewiston (landfill).

The area comprising the former industrial portion of LOOW and AFP-68/Navy IPPP has been the subject of investigations by USACE as well as several current owner/operators. Based on a review of available reports including the original INPR, areas of potential contamination have been found within and around the former TNT manufacturing area as well as within the former AFP-68. Several owners/operators have conducted operations that may have contributed to the observed potential contamination. According to DERP-FUDS policy a PRP/HTRW project may be proposed if there is physical or reliable testimonial evidence that DOD is potentially responsible for property contamination and if the contamination may be at least partially the result of other PRP's actions. Current DERP-FUDS policy also states that in reference to GOCO facilities, if a FUDS was operated by another party under a contract or lease or other commercial arrangement during the period that the property was under the jurisdiction of DOD, and Hazardous substances were disposed during that period of operations, and if that party is apparently financially viable, then a PRP project will be designated and the operator will be considered a PRP for the property. Therefore, based on a review of available information including historical site information, the results of previous investigations, and DERP-FUDS policy guidance, a PRP/HTRW project is proposed.

AVAILABLE STUDIES AND REPORTS: (available in CENAB-EN-HN files)

"An Appraisal of Ordnance Plant Facilities, WA-New York-1, Lake Ontario Ordnance Works, Niagara County, New York" prepared for the War Assets Administration (WAA), prepared by the Industrial Research Corporation (IRC), dated 3 March 1948.

"Final Preliminary Contamination Assessment Report, Operable Unit No. 2, Vol I", prepared for USACE Kansas City District, prepared by Acres International Corporation (Acres), dated December 1992.

"Draft Data Search Summary Report", prepared for USACE Kansas City District, prepared by Acres International Corporation Acres, dated February 1993.

"Remedial Design for Interim Removal Actions, Operable Unit Numbers 1 & 2, Former Lake Ontario Ordnance Works, Lewiston and Porter, Niagara County, New York, Preliminary Remedial Design Investigation (PRDI) Report", prepared for USACE, prepared by Weston, Roy F. Inc., dated May 1997.

"Remedial Design for Interim Removal Actions, Operable Units 1 and 2, Former LOOW", prepared for USACE, prepared by Weston, Roy F. Inc., dated September 1997.

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"Final History Search Report, LOOW, Niagara County, New York" prepared for USACE-Baltimore District, prepared by EA Engineering, Science, and Technology, Inc. (EA), dated August 1998.

"Project Report Second Phase Emergency Ordnance Explosive Services Lake Ontario Ordnance Works TNT Pipeline Removal Project Lewiston, New York" prepared for Severson Environmental Services, Inc. under contract to USACE-Buffalo District, prepared by ISSI Unexploded Ordnance Inc., dated September 2000.

"After Action Report Trinitrotoluene Resizing Operation Former Lake Ontario Ordnance Plant Model City, New York" prepared for Severson Environmental Services, Inc. under contract to USACE-Buffalo District, prepared by ISSI Unexploded Ordnance Inc., dated March 2001.

"DRAFT Report of Results for the Phase II Remedial Investigation at the Former Lake Ontario Ordnance Works (LOOW) Niagara County, New York" prepared for USACE-Baltimore District, prepared by EA Engineering, Science, and Technology, Inc. (EA), dated June 2001.

PA POC: Mary K. Foley, CELRB-PE-EE, (716) 879-4417.