

Five-Year Review Report

**First Five-Year Review Report
For
The Former Forest Park Recreation Camp
St. Louis, Missouri
Defense Environmental Restoration Program-
Formerly Used Defense Site (DERP-FUDS)
Site #B07MO098801**



AUGUST 2010

PREPARED BY:

**U.S. Army Corps of Engineers
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List of Acronyms

AOC	Area of Concern
ARARs	applicable or relevant and appropriate requirements
ASR	Archives Search Report
CEHNC	U.S. Army Engineering and Support Center, Huntsville (Huntsville Center)
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CFR	Code of Federal Regulations
DERP	Defense Environmental Restoration Program
DMM	Discarded Military Munitions
DoD	Department of Defense
EE/CA	Engineering Evaluation/Cost Analysis
EOD	Explosive Ordnance Disposal
FUDS	Formerly Used Defense Site
HTW	Hazardous and Toxic Waste
IC	Institutional Control
INPR	Inventory Project Report
IRA	Interim Removal Action
LIR	Line Item Review
LTM	Long-Term Management
LUC	Land Use Control
MDNR	Missouri Department of Natural Resources
MOA	Memorandum of Agreement
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NOFA	No Further Action
NPL	National Priority List
O&M	Operations and Maintenance
OE	Ordnance and Explosives

QAR	Quality Assurance Report
RAO	Remedial Action Objective
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
UXO	Unexploded Ordnance
WP	White Phosphorus
WWI	World War I

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Executive Summary

The U.S. Army Corps of Engineers (USACE) has conducted the first five-year review of the former Forest Park Recreation Camp (also referred to as the Forest Park Area of Concern (AOC)) in St. Louis, Missouri, pursuant to a MOA between the USACE and the City of St. Louis. Under the Defense Environmental Restoration Act, the USACE is responsible for cleanup actions at Formerly Used Defense Sites (FUDS) on behalf of the Department of Defense (DoD). Furthermore, the DoD requires that a five-year review be performed to determine whether the remedial actions implemented at a site remain protective of human health and the environment if contamination is left at levels that do not allow for unlimited use and unrestricted exposure. This five-year review is required at the former Forest Park Recreation Camp because potential discarded military munitions (DMM), previously referred to in Forest Park documents as unexploded ordnance (UXO), remains on site thereby preventing unlimited use and unrestricted exposure. DMM are unfired military munitions that have been abandoned, discarded or improperly disposed of and are still capable of functioning. Although the former Forest Park Recreation Camp is not on the National Priorities List (NPL), USACE is required to follow the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and National Oil and Hazardous Pollution Contingency Plan (NCP) with regard to the response actions and preparation of the five-year review. The methods, findings, and conclusions of the review are documented in this report. In addition, this report summarizes issues identified during the review and includes recommendations and follow-up actions for them.

The selected remedy for the former Forest Park Recreation Camp site in St. Louis, Missouri is Land Use Controls (LUCs), previously referred to in Forest Park documents as Institutional Controls (ICs). The LUCs include the combination of educational awareness materials, a Memorandum of Agreement (MOA) between the City of St. Louis and the USACE and the passage of a city ordinance which binds the City of St. Louis to the provisions of the MOA. The site achieved construction completion in March 2005 when the MOA was signed by the Kansas City District Commander. Because the selected remedy does not include construction-type activities, the MOA approval date is considered construction completion for the purposes of this review. The second five-year review will be budgeted for FY2015.

The assessment of this five-year review found that the remedy was implemented in accordance with the requirements found in the 2004 Action Memorandum (Attachment 1). The purpose of the Action Memorandum is to present the selected remedy that reduces the risk of exposure to military munitions at the Forest Park site. The remedy, consisting of LUC's in the form of educational awareness materials, a MOA between the City of St. Louis and USACE and passage of a city ordinance which binds the City of St. Louis to the provisions of the MOA, is functioning as designed and is expected to continue to be protective of human health and the environment by preventing future exposure of potential DMM to the public and onsite workers. Additionally, the five-year review confirmed that oversight responsibilities are being performed in accordance with the 2005 MOA (Attachment 2) between USACE and the City of St. Louis. The MOA defines the relationship, responsibilities and general objectives under which the City of St. Louis and the USACE provide future military munitions response and LUC's during any and all construction activities on the site of the Forest Park AOC detailed in the attached map (Attachment 3).

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Former Forest Park Recreation Camp		
FUDS Project Number: B07MO098801		
Region: 7	State: MO	County: St. Louis
SITE STATUS		
NPL status: Non-NPL Site		
Remediation status: Ongoing		
Multiple OUs? NO	Construction completion date: 11/23/2004	
Has site been put into reuse? YES		
REVIEW STATUS		
Lead agency: U.S. Army Corps of Engineers, Kansas City District		
Author name: Josephine Newton-Lund		
Author title: Senior Project Manager	Author affiliation: US Army Corps of Engineers, Kansas City District	
Review period: 03/17/2010 to 09/30/2010		
Date of site inspection: 05/04/2010		
Type of review: Policy (Non-NPL Remedial Action Site)		
Review number: 1 (first)		
Triggering action: Memorandum of Agreement Approval date of 03/17/2005		
Triggering action date: 03/17/2005		
Due date (five years after triggering action date): 03/17/2010		

Five-Year Review Summary Form *Continued*

Issues:

No issues were identified during the most recent site inspection and stakeholder interviews conducted on May 4, 2010 by USACE and Missouri Department of Natural Resources (MDNR).

Recommendations and Follow-up Actions:

Continued annual site inspections and stakeholder interviews by USACE and MDNR to ensure that educational awareness measures are being performed by the City of St. Louis is recommended. Additionally, annual monitoring of the City of St. Louis' website, <http://www.slpl.lib.mo.us/cco/ords/search.htm>, which tracks city ordinances, will ensure City Ordinance 68329 (Attachment 4) has not been repealed is also recommended.

Protectiveness Statement:

All immediate threats at the site have been addressed, and the remedy remains protective of human health and the environment as demonstrated by the continued educational awareness measures performed by the City of St. Louis design and construction management staff, which includes onsite workers of the Norman K. Probstein Golf Course. Additionally, the passage of City Ordinance 68329, which binds the City of St. Louis to the provisions found in the 2005 MOA, is another component of the remedy that contributes to the protection of human health and the environment by enforcing the responsibilities under which the City of St. Louis and USACE provide continued military munitions response and LUC's during any and all construction activities at the Forest Park AOC.

I. Introduction

The purpose of the Five-year Review is to determine whether the remedy at the former Forest Park Recreation Camp site is protective of human health and the environment. The methods, findings, and conclusions of the reviews are documented in Five-Year Review Reports. In addition, Five-Year Review Reports identify issues found during the review, if any, and identify recommendations to address them.

As the lead agency for the former Forest Park Recreation Camp site, the U.S. Army Corps of Engineers, Kansas City District (USACE-KC) prepared this Five-Year Review Report pursuant to CERCLA §121(c) and the NCP. USACE is required to follow CERCLA and the NCP for response actions that address DMM based on the provisions of 10 USC § 2701 and the DoD “Management Guidance for the Defense Environmental Restoration Program”. Although the former Forest Park Recreation Camp Site is not on the National Priorities List (NPL), the USACE follows the CERCLA process. CERCLA § 121(c) states the following:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

The USEPA interpreted this requirement further in the NCP at 40 Code of Federal Regulations (CFR) 300 [specifically 40 CFR 300.430(f)(4)(ii)], which states the following:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

The five-year period covered by this review is from March 2005 through March 2010. This is the first five-year review conducted for the former Forest Park Recreation Camp in St. Louis, Missouri. This review was conducted from March 2010 through June 2010 and covers the period from March 2005 through March 2010.

The triggering action for this first five-year review was the approval of the MOA, which was signed by the Kansas City District Commander on March 17, 2005. The Five-Year Review is required due to the fact that military munitions may remain buried at the site which would result in an unacceptable health and safety risk to the public and onsite workers.

II. Site Chronology

Table 1 below lists the chronology of events at the former Forest Park Recreation Camp site.

TABLE 1 Chronology of Site Events	
Event	Date
Forest Park dedicated at a large public ceremony	1876
Louisiana Purchase Exposition (also known as the 1904 World's Fair) held at Forest Park	1904
Numerous military demonstrations held at Forest Park during World War I (WWI)	1917-1918
St. Louis Exposition held at Forest Park. Mock WWI battle demonstrations included use of military munitions	1926
Army was granted permission to use 17 acres in Forest Park for a recreation camp for 1,500 soldiers during World War II (WWII)	1942
Mock WWII battle conducted around Art Hill area of Forest Park with soldiers from Jefferson Barracks	1943
Workers installing a sprinkler system on a fairway of the lower 9-hole Forest Park golf course uncover a unexploded 3" Stokes mortar round	1988
DERP-FUDS Inventory Project Report (INPR)- USACE-KC	1995
DERP-FUDS Archives Search Report (ASR)- USACE-St. Louis	1997

Missouri Department of Natural Resources (MDNR) notifies USACE-KC of future renovations of Forest Park, including the municipal golf course	August 2000
Information meeting and site visit conducted by USACE-KC with representatives from City of St. Louis and Missouri Department of Natural Resources (MDNR) to discuss potential ordnance risk related to the City's future renovation of the Forest Park municipal golf course.	8 September 2000
Information meeting conducted by USACE-KC with City of St. Louis engineer and golf course manager - Plan of Action Recommendations presented. USACE-KC and St. Louis Districts also visit with St. Louis Metropolitan Police's Bomb and Arson Squad.	11 October 2000
Information meeting conducted by USACE-KC with City of St. Louis golf course manager to discuss finalization of golf course renovation designs	9 April 2001
Golf Course renovations pre-construction meeting conducted by City of St. Louis- USACE KC and St. Louis Districts invited to conduct ordnance awareness presentation. USACE also performs a courtesy visit with the St. Louis Metropolitan Police Department.	28 August 2001
Golf course renovations begin. USACE-St. Louis District begins full-time construction oversight.	17 September 2001

During renovations of the Forest Park golf course, a bulldozer worker moving dirt uncovers a 4" Stokes mortar. St. Louis Metropolitan Police Bomb Squad remove ordnance item.	5 December 2001
During renovations of the Forest Park golf course, a 4" Stokes mortar was excavated by an irrigation-trenching machine. St. Louis Metropolitan Police Bomb and Arson Squad remove ordnance item.	15 May 2002
During continued renovations of the Forest Park golf course, a 4" Stokes mortar was found. St. Louis Metropolitan Police Bomb and Arson Squad remove ordnance item.	20 June 2002
During renovation work at the Grand Basin located across from the Forest Park golf course, a construction worker excavated a Livens projector, which is a British designed mortar-like munition used in WWI that typically contained chemical agents, but could also contain flammable or explosive fill. The item was determined to be empty and was removed by the St. Louis Metropolitan Police Department Bomb and Arson Squad.	8 July 2002
USACE-KC issues press release to inform public of recently discovered DMM and to caution public about the dangers of removing or tampering with unknown objects	15 July 2002
Public availability session held to discuss recommended response action alternative for Forest Park munitions and explosives of concern	13 July 2004
Engineering Evaluation/Cost Analysis-USACE-Omaha District	2004
Action Memorandum- USACE-Omaha District	2004
Distribution of DMM informational pamphlets to City of St. Louis	2004

MOA between USACE-KC and City of St. Louis	2005
Annual site inspections of Forest Park golf course and stakeholder interviews	2005-Present
Passage of City Ordinance 68329 which binds the City of St. Louis to the provisions of the MOA	2009

III. Background

Physical Characteristics

Forest Park is located within the west central portion of the City of St. Louis, approximately 5 to 6 miles west of the downtown area. Forest Park is bordered by Highway I-64, Kingshighway Boulevard, Lindell Boulevard, and Skinker Boulevard (Attachment 5). Although, the former Forest Park Recreation Camp was located in the southeastern corner of Forest Park, the area of concern where military munitions were discovered is located in the northwestern portion of Forest Park.

The topography of Forest Park and surrounding area is of the gently-rolling prairie type, with low rounded hills and broad shallow valleys. The Mississippi River to the east, the Missouri River to the north, and the Meramec River to the south have cut large valleys. Flowing into these rivers are numerous small tributaries with shallow valleys separated by low ridges.

Surface drainage is by sheet flow to the park's streets, then via the storm sewer system to the River des Peres. The River des Peres drains most of the northwest and west metropolitan St. Louis area, and has regularly flooded portions of Forest Park during the park's first half century of existence. A bond issue, passed in 1923, allowed the stream to be put entirely underground in twin 23 feet high by 29 feet wide horseshoe-shaped storm sewers. Construction was completed in 1930. The river is now underground for its entire path through the park.

Flood waters are confined to the sewers except during rare high precipitation events when sewer surcharging and ponding within low areas of the park can occur. These ponds are within and near the old channel of the River des Peres, which is now used as a chain of recreation lakes. These areas generally extend along the north and east sides of the park. Ponding from River des Peres surcharging is of short duration, generally for less than 24 hours. All runoff from the park eventually flows into the Mississippi River via the River des Peres.

Land and Resource Use

Forest Park is currently used as a recreation area for the City of St. Louis. Facilities at the park include the St. Louis Art Museum, the St. Louis Zoo, the Missouri Historical Museum, the St. Louis Science Center and the Muny Opera. It also serves as a sports center for golf (Norman K. Probstein Golf Course), tennis, baseball, bicycling, boating, fishing, handball, ice skating, roller blading, jogging, rugby and more.

The Norman K. Probstein Golf Course, where a primary portion of the Forest Park AOC is located, consists of three nine-hole courses. However, the mortar rounds were discovered in the relatively flat Hawthorne Course, which is sometimes referred to as the “lower nine” (Attachment 6). The Grand Basin, which is surrounded by a majority of the golf course, is also considered a part of the AOC.

As discussed in the 1995 Forest Park Master Plan, Forest Park belongs to all St. Louisans. The Park attracts 12 million visitors per year and is more than a scenic backdrop to an historic cityscape. The Park is recognized as an important gathering place where people of all ages, races and economic backgrounds can gather and mix in a positive way. As outlined in the Master Plan, over \$100 million of improvements were completed between 2001 and 2004 in time for the 100th anniversary of the 1904 World’s Fair. Therefore, it is expected that Forest Park will remain a recreation area for the foreseeable future.

History of Contamination

Forest Park, a St. Louis City park, was established in 1876. Forest Park is one of the largest urban parks in the country at 1,371 acres. The 1904 World’s Fair used almost the entire western half of Forest Park and brought more than 19 million visitors to St. Louis. After the closing of the Fair, most of the buildings and exhibits were demolished and their debris buried on site.

Documented military use of Forest Park began with WWI. The only known military use of Forest Park was for patriotic public demonstrations and bivouacs, which are temporary encampments or shelters. Between 1917 and 1918 numerous military demonstrations were held at Forest Park, which included an Army tank demonstration, a military parade and a demonstration of British aircraft. In 1926, the City of St. Louis held the St. Louis Exposition. As part of the Exposition, Army troops from Jefferson Barracks performed daily mock WWI battles.

Historical records indicate that complaints were made concerning the loud noise of the 75mm cannons. The officer in charge of the battery agreed to reduce the charges for the remainder of the Exposition.

In 1942, the Army was granted permission to use 17 acres in the southeastern corner of Forest Park for a recreation camp for soldiers. The camp accommodated approximately 1,500 men and was to operate for the duration of World War II (WWII). By 1947, the camp was abandoned and the southeast corner of the park was restored. In 1943, during the recreation camp's operation, a mock battle for the public took place near the Art Hill area of Forest Park with soldiers from Jefferson Barracks. This mock battle included 350 soldiers, amphibious jeeps, a smoke screen and a final assault up Art Hill.

In 1988, workers installing a sprinkler system on the third fairway of the lower 9-hole golf course at Forest Park uncovered a live 3" Stokes mortar round containing white phosphorus (WP). The workers thought the mortar round was a remnant of the 1904 World's Fair. The round was given to an individual who thought it was a type of time capsule. The next week the individual attempted to open the round in his home and caused the phosphorus to ignite. A local fire department responded and was able to contain the phosphorus by burying the round. The Granite City Illinois Support Center, 50th Explosive Ordnance Disposal Attachment recovered the round and disposed of it.

As part of the \$100 million of improvements at Forest Park as outlined in the 1995 Master Plan, the Forest Park Golf Course underwent renovations from 2001 through 2004. The golf course underwent a complete re-design that also included the construction of a new clubhouse. Pro golfer Hale Irwin's design firm was hired by the City of St. Louis to re-work the 27-hole course, which was renamed the Norman K. Probstain Golf Course. Not long after renovations began in September 2001 at the lower nine-hole course, a bulldozer worker uncovered a 4" Stokes mortar while moving soil. The St. Louis Metropolitan Police Department's Bomb and Arson Unit removed the piece of ordnance, which contained white phosphorus.

As renovation work continued into 2002 at the golf course, two additional 4" Stokes mortars were uncovered at the lower nine-hole course location. Both items, which contained WP, were removed by the St. Louis Metropolitan Police Department and destroyed at an off-site location. In July 2002, during renovations of the Grand Basin located across from the lower nine-hole course, a construction worker excavated a Livens projector.

A Livens projector was a British designed mortar-like munition used in WWI that typically contained chemical agents, but could also contain flammable or explosive fill. The Livens projector was removed by the St. Louis Metropolitan Police Department, who determined it to be empty of WP.

Initial Response

In August 2000 during a quarterly Line Item Review (LIR), MDNR representatives alerted USACE-KC staff of future renovations of Forest Park, including the municipal golf course. MDNR representatives were aware of the 1988 incident where a golf course worker unearthed a Stokes mortar round as a result of their review of the 1995 INPR and 1997 ASR. Upon learning this information, USACE-KC coordinated an information meeting and site visit with representatives from the City of St. Louis and MDNR to discuss potential ordnance risk related to the City's future renovation of the Forest Park municipal golf course. A follow-on meeting was held in October 2000 between the City of St. Louis' chief design engineer, the golf course manager and USACE-KC representatives to discuss a plan of action to address potential military munitions discoveries during renovation work.

In April of 2001, another meeting was held between City of St. Louis officials, USACE-KC and also USACE-St. Louis District representatives to discuss finalization of the golf course renovation designs. USACE health and safety language related to military munitions was provided to the City for use in construction specifications. USACE KC and St. Louis Districts also met with the St. Louis Metropolitan Police Department's Bomb and Arson Squad to discuss their assistance in the removal of munitions, if uncovered during golf course renovations. Although Fort Leonard Wood's Explosives Ordnance Disposal (EOD) unit has removal jurisdiction of army munitions in the St. Louis geographic region, St. Louis Metropolitan Police agreed to assist. A construction contract was awarded by the City of St. Louis three months later.

In August 2001, USACE KC and St. Louis Districts participated in a pre-construction meeting arranged by the City of St. Louis. USACE conducted an ordnance awareness presentation at the pre-construction meeting, which was attended by the City's primary contractor and several sub-contractors. The primary message presented by USACE at this meeting was the 3R's of Explosives Safety (Recognize, Retreat and Report). Included in the presentation was a display of spent Stokes mortar rounds recovered from the former Jefferson Barracks Post Dumping Grounds Site. Photocopies of a Stokes mortar round were also distributed to all participants.

USACE recommended that all bulldozer and excavator operators tape the photo to the interior of their vehicles to assist in munitions recognition.

Golf course renovations began in September 2001 with full-time construction oversight performed by USACE-St. Louis. One Stoke's mortar was removed and disposed of by the St. Louis Police Department in December 2001 after a bulldozer operator recognized the munition from the photo taped to the interior of the windshield. In 2002 as renovation work continued, two more Stokes mortar rounds were recognized by construction workers and later removed by the St. Louis Metropolitan Police Department. All three munition items contained WP, according to the police who transported the rounds to a quarry south of the city for detonation.

Concurrent with the golf course renovation work, construction began at the Grand Basin located across the street from the lower nine-hole course. USACE-KC and St. Louis District conducted ordnance awareness training to the Grand Basin contractor similar to the golf course contractors. In June 2002, a construction worker excavated a Livens projector. The item was determined to be empty and was removed by the St. Louis Metropolitan Police Department.

In order to address the military munitions concerns at the Forest Park areas of concern, an Engineering Evaluation/Cost Analysis (EE/CA) was approved in 2004 to determine the most appropriate response action. Four response action alternatives were developed and are as follows: 1) No Department of Defense (DoD) Action Indicated (NDAI); 2) Institutional Controls; 3) Comprehensive Surface Clearance with Institutional Controls; and 4) Comprehensive Subsurface Clearance with Institutional Controls. Alternative 2 was selected as the preferred remedy based on the selection criteria of effectiveness, implementability and cost. Alternative 2- Institutional Controls, which includes the combination of educational awareness materials, a Memorandum of Agreement (MOA) between the City of St. Louis and the USACE and the passage of a city ordinance which binds the City of St. Louis to the provisions of the MOA, was selected due to the results from site investigations, evaluation of risk-reduction alternatives, and an understanding of the current and projected land use

Approval of an action memorandum in 2004 authorized the expenditure of funds for the reproduction and distribution of educational awareness pamphlets (Attachment 7). In addition, the action memorandum authorized the expenditure of funds to develop the memorandum of agreement between the City of St. Louis and USACE and to assist the City in the preparation of a city ordinance.

In 2009, the City of St. Louis passed City Ordinance 68329, which binds the City to the provisions of the MOA.

Basis for Taking Action

Military munitions discoveries in 1988, 2001 and 2002 at the Forest Park AOC revealed DMM contamination present and served as the basis for taking action at this Site. The potential for remaining DMM presented an imminent and substantial endangerment to public safety.

IV. Remedial Actions

Remedy Selection

The purpose of the selected remedy was to address DMM contamination associated with the Forest Park AOC. DMM contamination at the Forest Park AOC consisted of buried WW I-era mortar shells. The remedy consisted of the following:

- Distribution of military munitions educational awareness materials in the form of pamphlets.
- Providing a MOA between the USACE and the City of St. Louis. The purpose of the MOA is to define the relationship, responsibilities and general objectives under which the City of St. Louis and USACE provide future military munitions response and IC's during any and all construction activities on the site of the Forest Park AOC. Additionally, in accordance with the terms of the MOA, the City of St. Louis is authorized to enter into the provisions of the MOA under a City Ordinance.

The Action Memorandum for the Forest Park AOC was signed on November 23, 2004. The selection criteria of the Action Memorandum consisted of the following:

- Effectiveness- Includes the protection of human safety and health and the environment, compliance with applicable or relevant and appropriate requirements (ARARs), long-term effectiveness, and short-term effectiveness.
- Implementability- Includes technical and administrative feasibility, and availability of services and materials.
- Cost.

Remedy Implementation

An EE/CA was completed by the USACE in 2004 and an Action Memorandum was signed in the same year. Implementation of the remedy began in 2004 with the reproduction and distribution of educational awareness pamphlets to the City of St. Louis engineering and construction departments, the St. Louis Parks and Recreation department, the Norman K. Probststein golf staff and the St. Louis Art Museum facility director.

In 2005, the MOA between the City of St. Louis and USACE was signed. The purpose of the MOA is to define the relationship, responsibilities and general objectives under which the City of St. Louis and USACE provide future military munitions response and IC's during any and all construction activities on the site of the Forest Park AOC.

As a final LUC component of the remedy and in accordance with the terms of the MOA, a city ordinance was approved by the City of St. Louis in 2009. The purpose of the ordinance is to bind the City to the provisions of the MOA, which is similar to the purpose of a deed restriction or restrictive covenant. Because a deed to the Forest Park property does not exist, the creation of a city ordinance was agreed to by the City, MDNR and USACE.

System Operation and Maintenance

Although operation and maintenance (O&M) actions are not a component of the MOA, responsibilities related to future land use controls implemented at the Forest Park Site and future military ordnance and explosive response activities are defined for both the City of St. Louis and USACE. In accordance with the terms of the MOA, site inspections and stakeholder interviews, which are considered long-term management actions (LTM), are conducted by USACE annually. The purpose of the annual site inspections and interviews is for USACE to remain actively informed of any new or different information regarding the Site. Distribution of additional educational awareness pamphlets to the City of St. Louis design engineer is also performed at the annual interview. These materials are an important component of the remedy, which promotes military munitions awareness and assists in the identification of munitions to construction personnel working in the Forest Park AOC. The pamphlet is in English on the front side and Spanish on the back, due to the observation of some Spanish-speaking construction workers during the golf course renovations. Five site inspections, including stakeholder interviews have been performed since 2004. Site inspection participants include the project managers from MDNR and USACE-Kansas City. Stakeholders interviewed by USACE include the following:

Roger Allison- Chief Design Engineer, Board of Public Utilities, City of St. Louis

Dan Skillman- Commissioner, St. Louis Parks and Recreation

Jeff Raffelson- Managing Director, Norman K. Probstein Golf Course

Mark Macinski- Facility Manager, St. Louis Art Museum

Detective John Jones- St. Louis Metropolitan Police Department Bomb and Arson Squad

Table 1 below provides a yearly summary of the O&M or LTM costs. These include labor and travel costs for USACE-Kansas City staff to conduct inspections and interviews in addition to the preparation of annual quality assurance reports. Costs for Fiscal Year 2010 also include labor to prepare the five-year review report.

Table 2: O&M (LTM) Costs

Fiscal Year	Cost (rounded to nearest \$1,000)
2006	\$6,000
2007	\$9,000
2008	\$9,000
2009	\$10,000
2010	\$15,000

V. Progress Since the Last Five-Year Review

This was the first five-year review for the site.

VI. Five-Year Review Process

Administrative Components

The Five-Year Review was lead by Josephine Newton-Lund, USACE-Kansas City project manager for this site. The review was conducted between November 2009 and the signature date of this report. The review included a site inspection, stakeholder interviews, document review, and report development and review.

Community Involvement

A newspaper advertisement was placed in the *St. Louis Post Dispatch* on June 9, 2010 notifying the public of the start of the Five-Year Review process (Attachment 8). In addition, notification of the Five-Year Review to stakeholders was presented during interviews conducted on May 4, 2010. Upon completion of this report, a notice will be placed in the newspaper announcing the completion of the Five-Year Review and its availability at St. Louis Public Library and on-line at the MDNR website. In addition, based on a recommendation by MDNR as part of this five-year review, USACE will consult Roger Allison of the City of St. Louis Board of Public Utilities in regard to USACE presenting the results of the five-year review in a public forum, such as a board of aldermen meeting or other relevant public-type meeting.

Document Review

This Five-Year Review included a review of all relevant documents including decision documents, site investigation documents, and quality assurance reports.

Data Review

Site inspections and stakeholder interviews have been conducted since 2005. Upon completion of these inspections, quality assurance reports, which summarize the findings from the site inspections and interviews, are submitted to MDNR. Attachment 9 contains the quality assurance reports generated to date. USEPA deferred lead regulatory involvement on this non-NPL site to MDNR during the development of the EE/CA back in 2004 and as such, are not provided the quality assurance reports. However, a copy of the final Five-Year Review Report will be submitted to USEPA for inclusion on their website, <http://www.epa.gov/region7/cleanup/index.htm>, that identifies the completion of all five-year review reports in Region 7 by fiscal year.

Site Inspection

Five site inspections have been conducted since 2004 when the Action Memorandum was approved. The most recent annual site inspection was conducted on May 4, 2010. Site inspection participants included the project managers from MDNR and USACE Kansas City District. The purpose of the inspections is to remain actively informed of any new or different information regarding the Site. In particular, information concerning construction work involving excavation in the Forest Park AOC would be of interest and require USACE review of plans and construction oversight.

No significant issues were identified during the May 4, 2010 site inspection. No construction activities were observed at the lower nine holes of the golf course or Grand Basin area. However, construction was observed at the St. Louis Art Museum (Attachment 10) and excavation activities were observed on Art Hill located in front of the art museum (Attachment 11). According to Mr. Mark Macinski, Chief of Facilities and Operations at the St. Louis Art Museum, the \$110 million addition will add underground parking and a new exhibit area. The excavation observed on Art Hill in front of the museum involved sewer line work related to the new museum addition. Furthermore, military munitions awareness discussions took place prior to construction and nothing suspicious was encountered during the sewer line work on Art Hill.

There was no knowledge of any military munitions discoveries within the last year and no new construction activities in the munitions area of concern are anticipated, according to Mr. Jeff Raffelson (Norman K. Probstain Golf Course); Mr. Roger Allison (St. Louis Board of Public Service) and Mr. Dan Skillman (St. Louis Parks and Recreation) during interviews conducted on May 4, 2010. Additional military munitions educational awareness pamphlets were provided to Mr. Roger Allison for distribution to City construction workers and City contractors.

A phone interview was conducted on May 13, 2010 with Detective John Jones of the St. Louis Metropolitan Police Department Bomb and Arson Squad. Detective Jones was an intern bomb and arson squad officer when the munitions discoveries occurred in 2001 and 2002. He was not aware of any bomb and arson responses to military munitions discoveries at Forest Park over the last year.

Interviews

Interviews are conducted annually with representatives from the City of St. Louis' Board of Public Service, the Norman K. Probstain golf course, the St. Louis Parks and Recreation Department, the St. Louis Art Museum and the St. Louis Metropolitan Police Department. The most recent interviews with stakeholders were conducted on May 4, 2010 and May 13, 2010. Interview information can be found in the quality assurance reports contained in Attachment 11.

VII. Technical Assessment

Question A: Is the remedy functioning as intended by the decision documents?

YES.

The answer to this question addresses remedial action performance, early indicators of potential issues, O&M or LTM issues, and implementation of land use controls. The items are discussed as follows:

The review of documents and the results of the annual inspections and stakeholder interviews indicate that the remedy is functioning as intended by the requirements in the 2004 Action Memorandum. The selected remedy for this Site as identified in the Action Memorandum included a variety of land use controls to protect human health and the environment.

The land use controls included a combination of educational awareness materials, a MOA between the City of St. Louis and the USACE and the passage of a city ordinance which binds the City of St. Louis to the provisions of the MOA. The land use controls have achieved the remedy selection criteria outlined in Section IV to protect human health and the environment. Site inspections and stakeholder interviews for the past five years have resulted in the observance of no DMM or munitions debris and kept USACE actively informed of any new land use changes.

Additionally, the educational awareness measures performed by the City of St. Louis design and construction management staff, which includes onsite workers of the Norman K. Probstain Golf Course, are effectively protecting human health from exposure to potential DMM and ensure future DMM discoveries, if any, would be responded to safely. In addition, the passage of City Ordinance 68329, which binds the City of St. Louis to the provisions found in the 2005 MOA, is another component of the remedy that contributes to the protection of human health and the environment by enforcing the responsibilities under which the City of St. Louis and USACE provide continued military munitions response and LUC's during any and all construction activities at the Forest Park AOC.

Question B: Is the selection criteria used at the time of the remedy still valid?

YES.

The selection criteria presented in the 2004 Action Memorandum were reviewed to determine their continuing validity and the results are discussed below.

The selection criteria of effectiveness, implementability and cost for this Site are outlined in Section IV. Although the effectiveness criteria include compliance with ARARs, no ARARs were identified during the development of the EE/CA. Land use controls in the form of educational awareness materials and a MOA between the City of St. Louis and the USACE continues to provide long-term protection from the threat of potential DMM and/or military munitions exposure to the public and onsite construction workers by preventing future exposure to potential DMM. Furthermore, the passage of a city ordinance, which binds the City of St. Louis to the provisions of the MOA, also contributes to the prevention of potential DMM exposure.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

NO.

There is no other information that calls into question the protectiveness of the remedy.

Technical Assessment Summary

Based on information gathered during annual site inspections and from interviews with stakeholders, the remedy is functioning as intended by the Action Memorandum. There have been no changes in the physical conditions of the Forest Park AOC Site that would affect the protectiveness of the remedy. There is no other information that calls into question the protectiveness of the remedy.

VIII. Issues

No issues were identified during the five-year review.

IX. Recommendations and Follow-Up Actions

Although no issues were identified during the five-year review, continued annual site inspections and stakeholder interviews by USACE and MDNR to ensure that educational awareness measures are being performed by the City of St. Louis is recommended. Additionally, annual monitoring of the City of St. Louis' website, <http://www.slpl.lib.mo.us/cco/ords/search.htm>, which tracks city ordinances, will ensure City Ordinance 68329 has not been repealed is also recommended.

X. Protectiveness Statement

The remedy is protective and is expected to remain protective of human health and the environment through the following actions that include land use controls, which consist of the distribution of educational awareness materials to the City of St. Louis construction workers and contractors, a MOA between the City of St. Louis and the USACE that enforces the responsibilities under which the City of St. Louis and USACE provide continued military munitions response and LUC's during any and all construction activities at the Forest Park AOC and City Ordinance 68329, which binds the City of St. Louis to the provisions of the MOA.

All immediate threats at the site have been addressed through the implementation of the above LUCs. In addition, the remedy is protective of human health and the environment as demonstrated by no observance of DMM since approval of the 2005 Action Memorandum.

Long-term protectiveness of the remedy will be verified by the continuation of annual inspections and stakeholder interviews. In addition to the annual inspections and interviews, annual monitoring of the City of St. Louis' website, <http://www.spl.lib.mo.us/cco/ords/search.htm> , which tracks city ordinances, will be performed to ensure City Ordinance 68329 has not been repealed.

XII. Next Review

The next five-year review for the former Forest Park AOC is required by September 2015, five years from the date of this review.

Attachment 1

ACTION MEMORANDUM

ENGINEERING EVALUATION/COST ANALYSIS

ACTION MEMORANDUM

**FOREST PARK
FUDS PROJECT NUMBER B07MO0988
ST. LOUIS, MISSOURI**

FOREWORD

This Engineering Evaluation/Cost Analysis (EE/CA) Action Memorandum represents the selected response action alternative to reduce the risk from Munitions and Explosives of Concern (MEC) for Forest Park in St. Louis, MO. The United States Army Corps of Engineers is the executing agent under the Defense Environmental Restoration Program (DERP) at Forest Park, and developed this EE/CA Action Memorandum in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act as amended, and the National Contingency Plan. This decision is based on the information contained in the Administrative Record for this site. This document has been approved by the undersigned.

1.0 INTRODUCTION

The Forest Park Area of Concern (AOC) is an approximately 125 acre site located within Forest Park in the City of St. Louis, MO (See Attachment 1). The Forest Park AOC includes the Art Hill area and part of the Norman K. Probst Municipal Golf Course. Documented military use of Forest Park began with World War I and continued through World War II. The only known military use of Forest Park was limited to public demonstrations and bivouacs, which were temporary encampments. A detailed list of military activities and discoveries of military munitions is included in the Forest Park EE/CA Report (Sep 2004).

2.0 STATEMENT OF BASIS AND PURPOSE

The U.S. Army Corps of Engineers will implement the response alternative selected in the Forest Park EE/CA Report. The purpose of this EE/CA Action Memorandum is to present the selected response alternative to reduce the risk from MEC at Forest Park. Based on the results of the completed EE/CA, the recommended response alternative for Forest Park is Institutional Controls. Institutional Controls for Forest Park will include a combination of MEC education/awareness materials and a Memorandum of Agreement (MOA) between the City of St. Louis and the U.S. Army Corps of Engineers. The MOA will outline response requirements for MEC discoveries and distribution requirements for MEC education/awareness materials. This alternative has been chosen based on all information gathered, including public, city, and regulatory comment, and is protective of human health and the environment. The basis for this decision is documented in the Administrative Record for the site. The Administrative Record, which contains documents that were relied upon by the U.S. Army Corps of Engineers in selecting the response action, is available at the U.S. Army Corps of Engineers, Kansas City District, 601 E. 12th Street, Kansas City, Missouri 64106. The Information Repository, which contains up to date correspondence including the Administrative Record, is located at the St. Louis Public Library at 1301 Olive Street, St. Louis, Missouri 63103.

3.0 PROJECT JUSTIFICATION

The Forest Park AOC includes the Art Hill area and part of the Norman K. Probst Municipal Golf Course. During golf course and Grand Basin renovations, MEC items were discovered. The MEC consisted of four Stokes Mortars and one Livens Projector. A map is included which shows where the MEC items were discovered within the AOC (Attachment 2).

In July 1942, the Army was granted permission to use 17 acres in the southeastern corner of Forest Park for a recreation camp. Forest Park Recreation Camp accommodated approximately 1,500 men and was to operate for the duration of World War II. By 1947, the camp was abandoned and contracts were let by the government to restore the southeastern corner of the park. By July 1948, the restoration was complete and accepted by the City of St. Louis.

4.0 ALTERNATIVES CONSIDERED

The specific objective of the approved action is to reduce the potential hazards posed to the public and onsite workers by MEC. Four alternatives were evaluated, including:

- No Department of Defense Action Indicated (NDAI)
- Institutional Controls
- Comprehensive Surface Clearance with Institutional Controls
- Comprehensive Subsurface Clearance with Institutional Controls

5.0 HIGHLIGHTS OF COMMUNITY PARTICIPATION

A public meeting was held on July 13, 2004, at the Forest Park Visitor Center, located adjacent to the project site. Paid advertisements announcing the meeting were published in local newspapers. Regulatory and City of St. Louis representatives were verbally notified about the meeting. The 30 day public comment period occurred from July 13 to August 13, 2004. Public comments were received and addressed. Comments consisted of five comments received from Mark Ort of the Missouri Department of Natural Resources (MDNR). The comments and responses are summarized below:

Comments

General Comments: The word insure is frequently used in text when ensure seems to be what is meant. Please review definitions and maybe do a "find and replace" if you agree.

Specific Comments:

1. Section 5.4.1.4 (Depth Distribution), Page 5-6: Last sentence, "Therefore," is not a justified or logical conclusion based on preceding information in 5.4.1.4. Conclusion must be modified. (See my previous Comment 17, the USACE response, and text noted here.)
2. Section 6.5 (Summary), Page 6-14, Table 6-4: Seems like ranking for Alternative 4 should be a 3 rather than a 2. Please review.
3. Section 4.3.2.4 (Administrative Controls), Page D4-5, First Bullet: Provisions for placing a notice of MEC warning, advisories, and investigative/remedial information the public repository expressly created for this purpose should be included.
4. Section 5 (Stakeholder Identification), Page G-2: It seems stakeholder list should be ordered with respect to awareness of current issues, involvement with, and historic knowledge of the site, perhaps list bomb squad, USACE, MDNR, and then golf course, board of public service, EPA, and art museum(?). This is just a suggestion since there are lots of considerations.

Responses

General Comment Response: "insure" has been replaced with "ensure" throughout the document.

1. **Response:** The conclusion has been modified to read: Therefore, MEC that exists at the AOC is not expected on the ground surface. Any MEC that exists at the AOC is expected to be below the ground surface.

2. **Response:** Ranking for alternative 4 has been changed to 3 instead of 2.

3. **Response:** The following bullet has been added: Placement of MEC educational/awareness materials, advisories, and investigative/remedial information in the information repository established to provide information to the public.

4. **Response:** No change made. Stakeholder list is part of the Recurring Review Plan and all stakeholders will be contacted during Recurring Review.

6.0 COORDINATION SUMMARY

The draft and draft final EE/CA Report were coordinated with the Missouri Department of Natural Resources and the U.S. Environmental Protection Agency. The draft final EE/CA Report was coordinated with the City of St. Louis. Copies of the draft final EE/CA Report were available to the public for a 30 day review period at an information repository established at the Central Branch of the St. Louis Public Library.

7.0 SELECTION CRITERIA

The selection criteria used to evaluate the response alternatives included effectiveness, implementability, and cost. Specific factors considered during the selection process included overall protection of human health and the environment, technical feasibility, and public and regulatory/administrative acceptance of the alternative. These factors are discussed in more detail in Chapter 6 of the EE/CA Report.

8.0 DESCRIPTION OF SELECTED RESPONSE ACTION

The selected alternative for Forest Park is Institutional Controls, which include a combination of MEC education/awareness materials and a Memorandum of Agreement (MOA) between the City of St. Louis and the U.S. Army Corps of Engineers. The selected response action associated with Forest Park represents conclusions based on results of the site investigations, evaluation of risk-reduction alternatives, and an understanding of the current and projected land use. This alternative was selected based on the following rationale:

- The Forest Park AOC is currently used as a golf course and city park open space. Forest Park has essentially unlimited access to the public and receives more than 12 million visitors annually.
- Forest Park has been a city park since its establishment in June 1876. The likelihood of encountering MEC on the ground surface, where members of the public are most likely to encounter it, is considered extremely low.

- Institutional Controls is considered an effective response action, is the most implementable of the alternatives, and is also the least costly.
- Regulatory, community, and city government stakeholders accept this risk-reduction alternative.

9.0 RECURRING REVIEW

A review of the effectiveness of this risk-reduction alternative will be conducted five years from the implementation of the selected alternative.

10.0 TRADE OFF ANALYSIS

Institutional Controls is the preferred alternative to reduce the potential hazard of MEC at the Forest Park AOC, as noted below:

- The No Department of Defense Action Indicated (NDAI) alternative does not provide overall protection of human health and the environment.
- The Comprehensive Surface Clearance with Institutional Controls alternative does provide overall protection of human health and the environment. However, the likelihood of discovery of MEC items on the ground surface is extremely low, and implementation of this alternative would result in considerable disruption of Forest Park/City of St. Louis activities.
- The Comprehensive Subsurface Clearance with Institutional Controls alternative does provide overall protection of human health and the environment. However, the likelihood of discovery of significant numbers of MEC items below the ground surface is extremely low, and implementation of this alternative would result in considerable disruption of Forest Park/City of St. Louis activities.

11.0 PLANNED OR ONGOING REMEDIAL ACTION

There are no other planned or ongoing remedial activities at this site. Forest Park is not a Potentially Responsible Party site.

12.0 OUTSTANDING ISSUES

No outstanding policy issues exist relative to the Forest Park AOC.

13.0 DOCUMENTATION OF SIGNIFICANT CHANGES

If the actions outlined in this EE/CA Action Memorandum are delayed or not taken, there is a potential risk, although low, that a member of the public or onsite worker could encounter MEC. If they are unaware of the potential presence of MEC and what to do if encountered, there is the potential for an accident resulting in injury or death.

14.0 RECOMMENDATION AND APPROVAL

This Action Memorandum presents the selected response action alternative for addressing risk associated with MEC exposure at the Forest Park AOC in St. Louis, Missouri; Alternative 2, Institutional Controls, which includes distribution of MEC educational/awareness pamphlets, and development of an MOA between the Corps of Engineers, Kansas City District, the City of St. Louis, and the Board of Police Commissioners. The selected alternative was developed in accordance with CERCLA, as amended, and is consistent with the NCP. This decision is based on the administrative record for the site. The total project cost is estimated at \$98,840 over a 10-year period. This document has been approved by the undersigned.

Approved By:



MICHAEL A. ROSSI
Colonel, EN
Commanding

Date: 23 Nov 04

Attachment 2

MEMORANDUM OF AGREEMENT (MOA)

MEMORANDUM OF AGREEMENT (MOA)
BETWEEN
U.S. ARMY ENGINEER DISTRICT, KANSAS CITY
AND
CITY OF ST. LOUIS, MISSOURI
FOR
THE FORMER FOREST PARK RECREATION CAMP,
ST. LOUIS, MISSOURI

1. Purpose: The Purpose of this Memorandum of Agreement (MOA) is to define the relationship, responsibilities, and general objectives under which the City of St. Louis, Missouri (City of St. Louis), and the U.S. Army Corps of Engineers, Kansas City District (CENWK), will provide future military ordnance and explosives response and institutional controls during any and all construction activities on the site of the Forest Park Area of Concern detailed in the map ("the Site") attached to this document as Appendix A. All of the Parties are vitally interested in ensuring that the public is informed of the potential dangers of military ordnance and explosives on the Site, and in ensuring that qualified personnel perform any necessary emergency response to the discovery of potential military ordnance and explosives at the Site in a swift and proper manner. The MOA is intended to promote coordination and cooperation between the City of St. Louis and CENWK.

2. Authority: The MOA is created in accordance with the Defense Environmental Restoration Program (DERP), 10 U.S.C. 2701-2707, 1986, which authorizes the Secretary of Defense to conduct response actions at sites which were contaminated while under the jurisdiction of the Department of Defense (DoD). Additionally, 40 C.F.R. 300.120, designates DoD to be the removal response authority for incidents involving DoD military weapons and munitions under the jurisdiction, custody and control of DoD. The City of St. Louis is authorized to enter into the provisions of this MOA under City of St. Louis Ordinance # (add later).

3. Scope: This MOA defines and establishes mutually agreed upon terms, conditions, roles, and responsibilities related to future institutional controls implemented at the Site and future military ordnance and explosive response activities at the Site to ensure the safe and proper removal and disposal of potential military ordnance and explosives, especially unexploded ordnance (UXO).

4. CENWK Responsibilities:

a. CENWK is charged with fulfilling the DoD's responsibility to clean up contaminated Formerly Used Defense Sites (FUDS) in a geographic area that includes the Site.

b. CENWK will be responsible for the overall project management of the ordnance safety oversight efforts, including all funding actions, the coordination of community relations functions, and any notification to the Missouri Department Natural Resources (MDNR), the Environmental Protection Agency (EPA), and the City of St.

Louis, if it has not already been notified, of any discovery of potential military ordnance and explosives.

c. CENWK will make a minimum of one visit to the Site every year to remain actively informed of any new or different information regarding the Site.

d. CENWK will provide informational pamphlets related to the potential for military ordnance and explosives on the Site as part of the institutional controls implemented for the Site to the City of St. Louis. The pamphlets will be written in English and Spanish to illustrate and describe military ordnance and explosives items that may be found at the Site to construction workers, maintenance workers, and the general public. The pamphlets will instruct that no one should touch what is suspected to be a military ordnance or explosive item, and a person is to call 911 if a potential military ordnance or explosive item is found. CENWK will routinely check with the City of St. Louis regarding the supply of the informational pamphlets and will provide more pamphlets when necessary.

e. CENWK will be responsible for maintaining a current Point of Contact (POC) list attached to this MOA as Appendix B.

f. CENWK will be responsible for the management and coordination of all funding actions regarding informational pamphlets.

g. CENWK will be responsible for funding requests to FUDS Program Manager at Northwestern Division (NWD).

h. CENWK will be responsible for notification to MDNR and EPA of any changes to the FUDS program that would affect the terms of this MOA.

i. CENWK will be responsible for the coordination and performance of a five year review that will include a complete survey of the Site to determine if any changes have occurred and conduct interviews with City of St. Louis officials and stakeholders in order to obtain information concerning future land use at the site. This review shall begin five years after the Action Memorandum is signed.

j. The Commander, CENWK, will designate a single POC responsible for coordinating and directing all CENWK requests for assistance from the City of St. Louis.

k. CENWK will be responsible for funding requests if additional work is required at the site.

5. City of St. Louis' Responsibilities:

a. The City of St. Louis will accept informational pamphlets from CENWK regarding the potential for ordnance and explosives to exist on the Site. The City of St. Louis through its Board of Public Service will distribute the informational pamphlets to any person, company, organization, political subdivision, or other entity that plans doing any construction, digging, soil removal, or other activity that might disturb the soil on the Site. The City will include appropriate provisions in its contracts or permits issued for such work.

b. The City of St. Louis will be responsible for notification to CENWK of any changes to land use at the Site that shall include major construction and/or significant excavation type activities, including, but not limited to new buildings and underground utilities.

c. The City of St. Louis will be responsible for notification to CENWK if the Site is sold. In the event that the City of St. Louis should sell the Site identified in this MOA

as the Forest Park Area of Concern, then the terms of the sale of the Site to the new property owner shall include a legal mechanism that binds the new owner to the terms of this MOA and shall be added to this MOA as Appendix C.

d. The City of St. Louis will be responsible for providing notification to the buyer of the potential presence of military munitions at the Site and shall also notify buyer of restrictions and other requirements in regard to the presence, location, and disposition of potential military munitions.

6. St. Louis Metropolitan Police Department Responsibilities:

a. The St. Louis Metropolitan Police Department's Bomb and Arson Squad ("St. Louis Bomb Squad") will support CENWK in the capacity of emergency response if military ordnance or explosives are discovered at the Site.

b. Upon the discovery of suspected military ordnance on the Site and notification, the St. Louis Bomb Squad will respond to the location on the Site of the suspected military ordnance. The St. Louis Bomb Squad then will attempt to positively identify the suspected military ordnance as a Stokes Mortar or Livens Projector present at the site. If the St. Louis Bomb Squad is unable to positively identify the military ordnance as a Stokes Mortar or Livens Projector, then the St. Louis Bomb Squad will call the 52nd Explosive Ordnance Group (EOD) of the United States Army for that EOD organization to remove, render safe, or otherwise dispose of the suspected military ordnance or explosive. If the St. Louis Bomb Squad finds and identifies numerous military ordnance or explosives requiring extensive clearance operations, then the St. Louis Bomb Squad will abate the immediate safety threat. The St. Louis Bomb Squad then may recommend to CENWK that it identify the site as requiring full remediation.

c. The St. Louis Bomb Squad shall perform off-site disposal of the above-limited military ordnance and explosives discovered on the Site, unless in-place detonation is deemed necessary for safety reasons.

d. The St. Louis Bomb Squad will secure the area of the Site where the suspected military ordnance or explosive was discovered from all other personnel and the public.

e. The St. Louis Bomb Squad shall distribute any police reports generated as a result of a removal and/or disposal of a suspected military ordnance item to CENWK.

f. The St. Louis Bomb Squad will provide other personnel from the Saint Louis Police Department to secure any UXO items if overnight security is thought to be necessary after the Bomb Squad's team has arrived but before any removal or disposal procedure can be performed.

g. The St. Louis Bomb Squad will coordinate and respond to any news media and public inquiries concerning military ordnance removal or disposal activities at the Forest Park site and immediately notify the CENWK POC.

h. The St. Louis Bomb Squad shall designate a single Point-of-Contact (POC) responsible for coordinating and directing the St. Louis Police Department's activities with CENWK, particularly with regards to notification to CENWK of the discovery of any suspected military ordnance or explosive on the Site.

7. Funding: The City of St. Louis and the St. Louis Metropolitan Police Department have not sought reimbursement or other payment for previous military ordnance and explosives responses on the Site. Similarly, the City of St. Louis and the St. Louis

Metropolitan Police Department will not seek reimbursement or other payment for any future military ordnance and explosives response activities or disbursement of informational pamphlets under this MOA.

8. Duration and Review: The MOA may be modified or amended only upon the written, mutual agreement of both Parties. The MOA shall be effective upon signature of both Parties to the agreement. Any Party can terminate the MOA upon sixty (60) days written notice to the other Party. MDNR and EPA will be notified if the MOA is modified, amended, or terminated.

9. References:

- a. Inventory Project Report, Corps of Engineers Kansas City District, Jun 1995
- b. Archive Search Report, Corps of Engineers St. Louis District, Sep 1997
- c. Munitions and Explosives of Concern Engineering Evaluation/Cost Analysis, Corps of Engineers Omaha District, Sep 2004

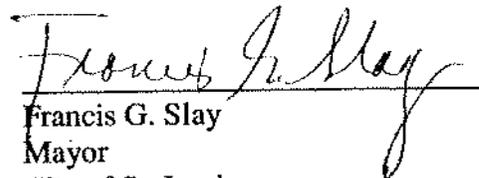


MICHAEL A. ROSSI
COL, EN

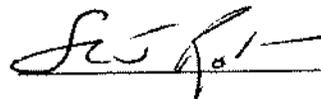
Commanding, Kansas City District

Date: 17 March 2005

The City of St. Louis By and Through



Francis G. Slay
Mayor
City of St. Louis



President
Board of Police Commissioners

LEGEND

AREA OF CONCERN

WATER FEATURES

Project borders are a digital representation prepared from Aerial 2000 Color photography.



**FOREST PARK
ST. LOUIS, MISSOURI**

**APPENDIX A
MEMORANDUM OF AGREEMENT
FOREST PARK SITE MAP**

DATE OF PHOTOGRAPHY: MARCH 1997
GRAPHIC INTENDED FOR VISUAL INSPECTION ONLY

LSH

SCALE: 1:10,000

2000 Feet

0

Appendix B

9/16/04

Former Forest Park Recreation Camp Project St. Louis, Missouri

Points of Contact (POCs)

Corps of Engineers, Kansas City District

Josephine Newton-Lund
Project Manager
CENWK-EC-EB
601 East 12th Street
Kansas City, MO 64106
Josephine.m.Newton-lund@usace.army.mil
816-983-3912

Judy Meier
Formerly Used Defense Site (FUDS) Program Manager
CENWK-PM-ED
601 East 12th Street
Kansas City, MO 64106
Judith.a.Meier@usace.army.mil
816-983-3363

City of St. Louis

Roger Allison
Board of Public Service
City Hall, Room 301
1200 Market Street
St. Louis, MO 63103
allisonr@stlouiscity.com
314-622-3535

Jeff Raffelson
Norman K. Probststein Golf Course
6141 Lagoon Drive
Forest Park
St. Louis, MO 63112
fopogoco@aol.com
314-367-1337

Dan Skillman and Anabeth Weil
St. Louis Department of Parks Recreation and Forestry
5600 Clayton Road
St. Louis, MO 63110
skillmand@stlouiscity.com and weila@stlouiscity.com
314-289-5340

Dan Esarey
St. Louis Art Museum
Forest Park
1 Fine Arts Drive
St. Louis, MO 63110
sre@slam.org
314-655-5240

St. Louis Metropolitan Police Department

Detective Sgt. Stephen Sorocko
St. Louis Metropolitan Police Department
Bomb and Arson Squad
1200 Clark Avenue
St. Louis, MO 63103
sfsorocko@slmpd.org
314-444-5701 or 314-591-4202

Missouri Department of Natural Resources

Mark Ort
Hazardous Waste Program
P.O. Box 176
Jefferson City, MO 65102
Mark.ort@dnr.mo.org
573-751-1968

Attachment 3

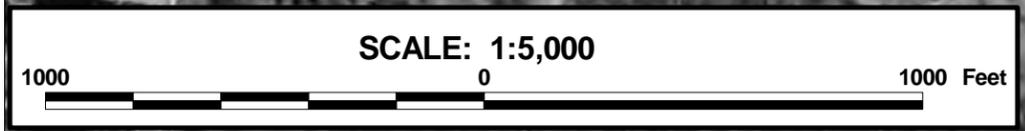
AREA OF CONCERN MAP



LEGEND

-  AREA OF CONCERN
-  WATER FEATURES
-  APPROXIMATE MEC LOCATION

Water features are a general representation digitized from April 2003 CIR photography



**FOREST PARK
St. LOUIS, MISSOURI**

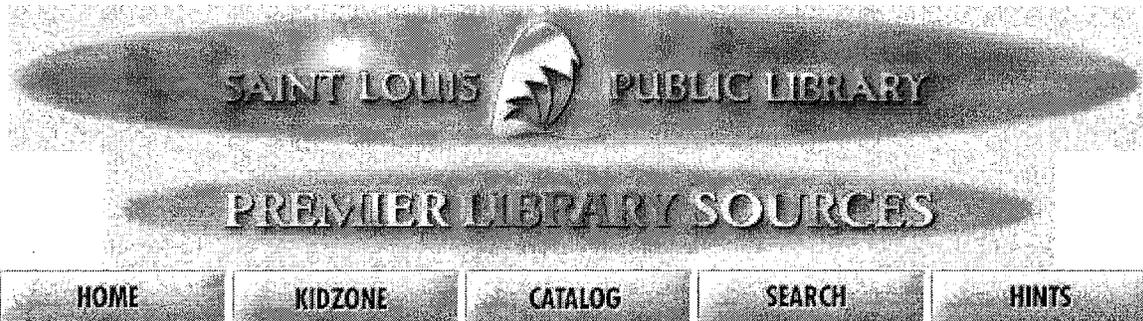
**ATTACHMENT 2
ACTION MEMORANDUM
APPROXIMATE MEC LOCATIONS**

DATE OF PHOTOGRAPHY: MARCH 1997
GRAPHIC INTENDED FOR VISUAL INSPECTION ONLY



Attachment 4

CITY ORDINANCE



St. Louis City Ordinance 68329

St. Louis City Ordinances have been converted to electronic format by the staff of the St. Louis Public Library. There may be maps or illustrations (graphics) that are not available in this format. This electronic version has been done for the interest and convenience of the user. These are unofficial versions and should be used as unofficial copies.

Official printed copies of St. Louis City Ordinances may be obtained from the Register's Office at the St. Louis City Hall.

FLOOR SUBSTITUTE
BOARD BILL NO. [08] 176

INTRODUCED BY ALDERMAN LYDA KREWSON

An Ordinance, recommended and approved by the Board of Public Service (the "Board of Public Service"), ratifying the execution by the Mayor of the City of St. Louis (the "City") of a Memorandum of Agreement among the U.S. Army Engineer District, Kansas City, sometimes referred to as the Corps of Engineers, Northwest Division, Kansas City ("CENWK"), the City, and the Metropolitan St. Louis Police Department regarding possible unexploded ordnance in Forest Park, and authorizing and directing the execution of such Memorandum of Agreement by the Comptroller on behalf of the City; with an emergency provision.

WHEREAS, the Defense Environmental Restoration Program (DERP), 10 U.S.C. 2701-2707, 1986 authorizes the Secretary of Defense to conduct response actions at sites which were contaminated while under the jurisdiction of the Department of Defense (DoD); and

WHEREAS, CENWK is charged with fulfilling the DoD's responsibility to clean up contaminated Formerly Used Defense Sites (FUDS) in a geographic area that includes Forest Park; and

WHEREAS, a Munitions and Explosive of Concern Engineering Evaluation/Cost Analysis Report for Forest Park (FUDS #B07M0098800) has been prepared by the U.S. Army Engineer District, Omaha at the request of CENWK and said report has identified an area of concern for unexploded ordnance as a result of former military use of Forest Park and has recommended certain institutional controls; and

WHEREAS, it is in the best interest of the public to institute the recommended institutional controls.

NOW THEREFORE, BE IT ORDAINED BY THE CITY OF ST. LOUIS AS FOLLOWS:

SECTION ONE. The execution by the Mayor of the City of St. Louis of the Memorandum of Agreement (MOA) in the form attached hereto as Exhibit A is hereby ratified and approved.. The Comptroller is authorized and directed to execute such MOA on behalf of the City.

SECTION TWO. The Board of Public Service is hereby directed to establish rules and regulations in furtherance of the City's responsibilities under the MOA.

SECTION THREE. In the event that the Area of Concern, either in whole or in part, is subject to sale or transfer of ownership by the City, then terms of that sale or transfer of ownership shall include provisions assigning the City's responsibilities under the MOA to the new owner.

SECTION FOUR. This being an ordinance for the immediate preservation of the public peace, health or safety, it is hereby declared to be an emergency measure as defined in Article IV, Section 20 of the City Charter and shall become effective immediately upon its passage and approval by the Mayor of the City.

EXHIBIT A

MEMORANDUM OF AGREEMENT (MOA)

BETWEEN

U.S. ARMY ENGINEER DISTRICT, KANSAS CITY

AND

CITY OF ST. LOUIS, MISSOURI

FOR

THE FORMER FOREST PARK RECREATION CAMP,

ST. LOUIS, MISSOURI

1. Purpose: The Purpose of this Memorandum of Agreement (MOA) is to define the relationship, responsibilities, and general objectives under which the City of St. Louis, Missouri (City of St. Louis), and the U.S. Army Corps of Engineers, Kansas CITY District (CENWK), will provide future military ordnance and explosives response and institutional controls during any and all construction activities on the site of the Forest Park Area of Concern detailed in the map ("the Site") attached to this document as Appendix A. All of the Parties are vitally interested in ensuring that the public is informed of the potential dangers of military ordnance and explosives on the Site, and in ensuring that qualified personnel perform any necessary emergency response to the discovery of potential military ordnance and explosives at the Site in a swift and proper manner. The MOA is intended to promote coordination and cooperation between the City of St. Louis and CENWK.

2. Authority: The MOA is created in accordance with the Defense Environmental Restoration Program (DERP), 10 U.S.C. 2701-2707, 1986, which authorizes the Secretary of Defense to conduct response actions at sites which were contaminated while under the jurisdiction of the Department of Defense (DoD). Additionally, 40 C.F.R. 300.120, designates DoD to be the removal response

authority for incidents involving DoD military weapons and munitions under the jurisdiction, custody and control of DoD. The City of St. Louis is authorized to enter into the provisions of this MOA under City of St. Louis Ordinance ____ (Board Bill ____).

3. Scope: This MOA defines and establishes mutually agreed upon terms, conditions, roles, and responsibilities related to future institutional controls implemented at the Site and future military ordnance and explosive response activities at the Site to ensure the safe and proper removal and disposal of potential military ordnance and explosives, especially unexploded ordnance (UXO).

4. CENWK Responsibilities:

a. CENWK is charged with fulfilling the DoD's responsibility to clean up contaminated Formerly Used Defense Sites (FUDS) in a geographic area that includes the Site.

b. CENWK will be responsible for the overall project management of the ordnance safety oversight efforts, including all funding actions, the coordination of community relations functions, and any notification to the Missouri Department Natural Resources (MDNR), the Environmental Protection Agency (EPA), and the City of St. Louis, if it has not already been notified, of any discovery of potential military ordnance and explosives.

c. CENWK will make a minimum of one visit to the Site every year to remain actively informed of any new or different information regarding the Site.

d. CENWK will provide informational pamphlets related to the potential for military ordnance and explosives on the Site as part of the institutional controls implemented for the Site to the City of St. Louis. The pamphlets will be written

in English and Spanish to illustrate and describe military ordnance and explosives items that may be found at the Site to construction workers, maintenance workers, and the general public. The pamphlets will instruct that no one should touch what is suspected to be a military ordnance or explosive item, and a person is to call 911 if a potential military ordnance or explosive item is found. CENWK will routinely check with the City of St. Louis regarding the supply of the informational pamphlets and will provide more pamphlets when necessary.

e. CENWK will be responsible for maintaining a current Point of Contact (POC) list attached to this MOA as Appendix B.

f. CENWK will be responsible for the management and coordination of all funding actions regarding informational pamphlets.

g. CENWK will be responsible for funding requests to FUDS Program Manager at Northwestern Division (NWD).

h. CENWK will be responsible for notification to MDNR and EPA of any changes to the FUDS program that would affect the terms of this MOA.

i. CENWK will be responsible for the coordination and performance of a five year review that will include a complete survey of the Site to determine if any changes have occurred and conduct interviews with City of St. Louis officials and stakeholders in order to obtain information concerning future land use at the site. This review shall begin five years after the Action Memorandum is signed.

j. The Commander, CENWK, will designate a single POC responsible for coordinating and directing all CENWK requests for assistance from the City of St. Louis.

k. CENWK will be responsible for funding requests if additional work is required at the site.

5. City of St. Louis' Responsibilities:

a. The City of St. Louis will accept informational pamphlets from CENWK regarding the potential for ordnance and explosives to exist on the Site. The City of St. Louis through its Board of Public Service will distribute the informational pamphlets to any person, company, organization, political subdivision, or other entity that plans doing any construction, digging, soil removal, or other activity that might disturb the soil on the Site. The City will include appropriate provisions in its contracts or permits issued for such work.

b. The City of St. Louis will be responsible for notification to CENWK of any changes to land use at the Site that shall include major construction and/or significant excavation type activities, including, but not limited to new buildings and underground utilities.

c. The City of St. Louis will be responsible for notification to CENWK if the Site is sold. In the event that the City of St. Louis should sell the Site identified in this MOA as the Forest Park Area of Concern, then the terms of the sale of the Site to the new property owner shall include a legal mechanism that binds the new owner to the terms of this MOA and shall be added to this MOA as Appendix C.

d. The City of St. Louis will be responsible for providing notification to the buyer of the potential presence of military munitions at the Site and shall also notify buyer of restrictions and other requirements in regard to the presence, location, and disposition of potential military munitions.

6. St. Louis Metropolitan Police Department Responsibilities:

a. The St. Louis Metropolitan Police Department's Bomb and Arson Squad ("St. Louis Bomb Squad") will support CENWK in the capacity of emergency response if military ordnance or explosives are discovered at the Site.

b. Upon the discovery of suspected military ordnance on the Site and notification, the St. Louis Bomb Squad will respond to the location on the Site of the suspected military ordnance. The St. Louis Bomb Squad then will attempt to positively identify the suspected military ordnance as a Stokes Mortar or Livens Projector present at the site. If the St. Louis Bomb Squad is unable to positively identify the military ordnance as a Stokes Mortar or Livens Projector, then the St. Louis Bomb Squad will call the 52nd Explosive Ordnance Group (EOD) of the United States Army for that EOD organization to remove, render safe, or otherwise dispose of the suspected military ordnance or explosive. If the St. Louis Bomb Squad finds and identifies numerous military ordnance or explosives requiring extensive clearance operations, then the St. Louis Bomb Squad will abate the immediate safety threat. The St. Louis Bomb Squad then may recommend to CENWK that it identify the site as requiring full remediation.

c. The St. Louis Bomb Squad shall perform off-site disposal of the above-limited military ordnance and explosives discovered on the Site, unless in-place detonation is deemed necessary for safety reasons.

d. The St. Louis Bomb Squad will secure the area of the Site where the suspected military ordnance or explosive was discovered from all other personnel and the public.

e. The St. Louis Bomb Squad shall distribute any police reports generated as a result of a removal and/or disposal of a suspected military ordnance item to CENWK.

f. The St. Louis Bomb Squad will provide other personnel from the Saint Louis Police Department to secure any UXO items if overnight security is thought to be necessary after the Bomb Squad's team has arrived but before any removal or disposal procedure can be performed.

g. The St. Louis Bomb Squad will coordinate and respond to any news media and public inquiries concerning military ordnance removal or disposal activities at the Forest Park site and immediately notify the CENWK POC.

h. The St. Louis Bomb Squad shall designate a single Point-of-Contact (POC) responsible for coordinating and directing the St. Louis Police Department's activities with CENWK, particularly with regards to notification to CENWK of the discovery of any suspected military ordnance or explosive on the Site.

7. Funding: The City of St. Louis and the St. Louis Metropolitan Police Department have not sought reimbursement or other payment for previous military ordnance and explosives responses on the Site. Similarly, the City of St. Louis and the St. Louis Metropolitan Police Department will not seek reimbursement or other payment for any future military ordnance and explosives response activities or disbursement of informational pamphlets under this MOA.

8. Duration and Review: The MOA may be modified or amended only upon the written, mutual agreement of both Parties. The MOA shall be effective upon signature of both Parties to the agreement. Any Party can terminate the MOA upon sixty (60) days written notice to the other Party. MDNR and EPA will be notified if the MOA is modified, amended, or terminated.

9. References:

a. Inventory Project Report, Corps of Engineers Kansas City District, Jun 1995

b. Archive Search Report, Corps of Engineers St. Louis District, Sep 1997

c. Munitions and Explosives of Concern Engineering Evaluation/Cost Analysis, Corps of Engineers Omaha District, Sep 2004

MICHAEL A. ROSSI
COL, EN
Commanding, Kansas City District

Date: _____

The City of St. Louis By and Through:

Francis G. Slay
Mayor
City of St. Louis

Darlene Green
Comptroller

APPROVED AS TO FORM:

City Counselor

ATTEST:

Register

President
Board of Police Commissioners
Saint Louis Ambassadors, Inc.

Appendix B

9 /16/04

Former Forest Park Recreation Camp Project

St. Louis, Missouri

Points of Contact (POCB)

Corps of Engineers, Kansas City District

Josephine Newton-Lund
Project Manager
CENWK-EC-EE
601 East 12th Street
Kansas City, MO 64106
<mailto:64106%0d%0aJosephine.m.Newton-lund@usace.army.mil>
816-983-3912

Judy Meier
Formerly Used Defense Site (FUDS) Program Manager
CENWK-PM-ED
601 East 12th Street
Kansas City, MO 64106
<mailto:64106%0d%0aJudith.a.Meier@usace.army.mil>
816-983-3363

City of St. Louis

Roger Allison
Board of Public Service
City Hall, Room 301
1200 Market Street
St. Louis, MO 63103
<mailto:63103%0d%0aallisonr@stlouiscity.com>
314-622-3535

Jeff Raffelson
Norman K. Probststein Golf Course
6141 Lagoon Drive
Forest Park
St. Louis, MO 63112
<mailto:63112%0d%0afopogoco@aol.com>
314-367-1337

Dan Skillman and Anabeth Weil
St. Louis Department of Parks, Recreation and Forestry
5600 Clayton Road
St. Louis, MO 63110
skillmand@stlouiscity.com and weila@stlouiscity.com
314-289-5340

Dan Esarey
St. Louis Art Museum
Forest Park
1 Fine Arts Drive
St. Louis, MO 63110
<mailto:63110%0d%0asre@slam.org>
314-655-5240

St. Louis Metropolitan Police Department

Detective Sgt. Stephen Sorocko
 St. Louis Metropolitan Police Department
 Bomb and Arson Squad
 1200 Clark Avenue
 St. Louis, MO 63103
<mailto:63103%0d%0asfsorocko@slmpd.org>
 314-444-5701 or 314-591-4202

Missouri Department of Natural Resources

Mark Ort
 Hazardous Waste Program
 P.O. Box 176
 Jefferson City, MO 65102
<mailto:65102%0d%0aMark.ort@dnr.mo.org>
 573-751-1968

Legislative History				
1ST READING	REF TO COMM	COMMITTEE	COMM SUB	COMM AMEND
09/12/08				
2ND READING	FLOOR AMEND	FLOOR SUB	PERFECTN	PASSAGE
ORDINANCE	VETOED	VETO OVR	SIGNED BY MAYOR	
68329				

Return to [Top of this Document](#).
 Return to [Top of Charter, Code, and Ordinances](#).
 Return to [Search Ordinances](#).

Attachment 5

SITE LOCATION MAP



LEGEND

 AREA OF CONCERN

 WATER FEATURES

Water features are a general representation digitized from April 2003 CIR photography

SCALE: 1:10,000

2000 0 2000 Feet

**FOREST PARK
St. LOUIS, MISSOURI**

**ATTACHMENT 1
ACTION MEMORANDUM
FOREST PARK SITE MAP**

DATE OF PHOTOGRAPHY: MARCH 1997
GRAPHIC INTENDED FOR VISUAL INSPECTION ONLY



Lindell Blvd

Norman K. Probst
Municipal Golf Course

History
Museum

Skinker Blvd

Grand Basin

Post
Dispatch Lake

Grand Dr.

Forest Park Blvd

Art Hill
Art Museum

Muny
Opera

Jefferson Dr.

Kingshighway Blvd.

Government Dr.

Central
Fields

Kennedy
Forest

World Fair
Payillon

Wells Dr.

Wells Dr.

St. Louis Zoo

Clayton Rd

Aviation Field

Hampton Ave.

64



Attachment 6



Photo Courtesy of Jesse Scott, MDNR

Norman K. Probststein Golf Course- Forest Park
Hawthorne Course- "Lower Nine"

Attachment 7

EDUCATIONAL AWARENESS PAMPHLET



US Army Corps of Engineers
Kansas City District



A cooperative effort between the U.S. Army Corps of Engineers, Missouri Department of Natural Resources, and the City of St. Louis Police Department to protect the health and safety of the citizens of St. Louis.

What is UXO?

Unexploded ordnance (UXO) is an explosive device that failed to explode. Most UXO is from past activities associated with military training or testing. If UXO detonates, it could cause serious injury or death.

What Does UXO look Like?

UXO comes in all shapes and sizes—from small bullets to large bombs. Illustrated throughout this handout are common types of UXO found at Forest Park.



World War I soldiers preparing to fire the Stokes Mortar. This was how the Stokes Mortar was fired at Forest Park.

What Should You Do If You Find UXO?

Remember the three R's

RECOGNIZE
RETREAT
REPORT

Recognize that a UXO has been found by using the general characteristics of the pictures contained in this handout.

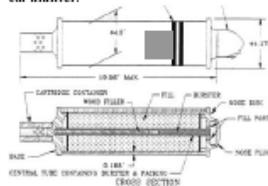
Retreat from the area.

Report the find by calling 911.

Ordnance Identification

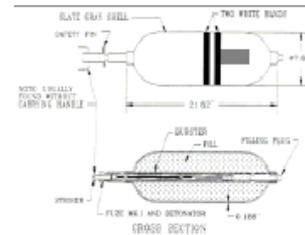
Stokes Mortars

Stokes Mortars are World War I era ordnance that have been found in Forest Park during construction of the Norman K. Probste in Golf Course. The mortar shells were used in mock battles performed by Army troops in Forest Park during the early 1900's. The mortar shells were used for hiding troop movements by producing a thick wall of smoke. These ordnance items do not look like conventional ordnance, but closely resemble a small car muffler.



Livens Projectors

Livens Projectors have been found in Forest Park during the renovation of the Emerson Grand Basin. Livens Projectors were used in mock battles performed by Army troops in Forest Park during the early 1900's. These ordnance items were used for hiding troop movements by producing a thick wall of smoke.



Questions may be referred to:

Army Corps of Engineers, Kansas City, Public Affairs Office at (816) 983-3486

or

Missouri Department of Natural Resources-Federal Facilities Section at (573) 751-3907

Attachment 8

FIVE-YEAR REVIEW PUBLIC NOTICE



PUBLIC NOTICE

A FIVE-YEAR REVIEW IS BEING CONDUCTED AT THE FORMER FOREST PARK RECREATION CAMP SITE, ST. LOUIS, MISSOURI

The U.S. Army Corps of Engineers, Kansas City District (USACE) is conducting the first five-year review for the former Forest Park Recreation Camp Military Munitions Response Program Site. The former Forest Park Recreation Camp, also referred to as the Forest Park Area of Concern (AOC) was established in 1942 as a recreation camp for soldiers. However, as early as 1917, military demonstrations were held at Forest Park, which included an Army tank demonstration, a military parade and Army troops from Jefferson Barracks performing daily mock World War I (WWI) battles. These activities resulted in the burial of unexploded ordnance (UXO) consisting of WWI-era mortar shells and projectiles in a portion of Forest Park. The Forest Park AOC is an approximate 125-acre site, which includes the lower nine holes of the Norman K. Probst Municipal Golf Course, the Grand Basin and the Art Hill area. The selected remedy for the Site, which was implemented in 2004, includes Institutional Controls (ICs), also referred to as Land Use Controls (LUCs), a combination of education awareness materials, a Memorandum of Agreement (MOA) between the City of St. Louis and the USACE and the passage of city ordinance 68329. The ordinance binds the City of St. Louis to the provisions of the MOA. The IC's or LUCs are intended to promote military munitions awareness and assist in the identification of munitions for construction personnel working in the Forest Park AOC.

What is the purpose of a five-year review?

The purpose of a five-year review is to determine if the remedy is protecting human health and the environment. The five-year review report documents the methods, findings, conclusions and any recommendations of the review which also includes a visual site inspection of the remedies in place.

Why is a five-year review being done for this Site?

Conducting this five-year review of the remedy is required by law because, even though the site was investigated by USACE, military munitions may remain at the former Forest Park AOC Site and may endanger human health and safety. It is required by law for the USACE to conduct reviews of these types of sites beginning five years following the installation of the remedy at a site. USACE will continue to conduct reviews and issue a report every five years or as needed.

The Administrative Record, which contains all the relevant cleanup documents for this site, is available at the following location:

St. Louis Central Public Library
1301 Olive Street
St. Louis, Missouri 63103
314-241-2288

(Copies of documents may be transferred to other St. Louis Public Library branches throughout the city upon request.)

Relevant cleanup documents pertaining to this site may also be viewed at:
<http://dnr.mo.gov/env/hwp/fedfac/ffs.htm>

If you have any questions, requests for information, or information to share, please contact the persons below:

Josephine Newton-Lund, PMP
Senior Project Manager
601 East 12th Street
Kansas City, MO 64106
(816) 389-3912
Josephine.M.Newton-Lund@usace.army.mil

David S. Kolarik
Chief, Public Affairs
601 East 12th Street
Kansas City, MO 64106
(816) 389-3072
David.S.Kolarik@usace.army.mil

Attachment 9

QUALITY ASSURANCE REPORTS (QARs)

INSPECTORS QUALITY ASSURANCE REPORT (QAR) (ER 1180-1-6)					THE QCR WILL BE ATTACHED TO OR FILED WITH THE QAR					
					REPORT NUMBER: 1- 112905					
TO: Mark Ort, MDNR					DATE: November 18, 2005 Friday					
PROJECT: Former Forest Park Recreation Camp, St. Louis, MO Long Term Monitoring – Site Inspection and Stakeholder Interviews					CONTRACT NO: NA					
CONTRACTOR (Or hired labor): NA					WEATHER: Sunny & Cool					
PORTION OF SCHEDULED DAY SUITABLE FOR OPERATIONS					TEMPERATURE					
Structural Excavation	Borrow Excavation	Embankment	Concrete	Structure	MINIMUM 30	MAXIMUM 53				
HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? <input type="checkbox"/> NO <input type="checkbox"/> YES (Explain)					24 HOUR PRECIPITATION					
					INCHES 0	ENDING .0				
NUMBER OF FEDERAL GOVERNMENT EMPLOYEES					RIVER STAGE					
SUPERVISORY	OFFICE	LAYOUT	INSPECTION 1	TOTAL 1	LABOR	FEET	N/A		TIME	N/A
NUMBER OF NON- FEDERAL GOVERNMENT EMPLOYEES				NUMBER OF SHIFTS <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3						
SUPERVISION 1	SKILLED	LABORERS	TOTAL 1	FROM 0900	TO 1445	FROM	TO	FROM	TO	
Attach list of the following if applicable: (a) Major items of equipment either idle or working, and (b) Number and classification of contractor or Government personnel onsite. Note: If the contractor's Quality Control Report (QCR) contains the information it need not be repeated.										
INSPECTION PARTICIPANTS										
a. Mark Ort, MO Department of Natural Resources					e.					
b. Josephine Newton-Lund, Kansas City District (PM)					f.					
c.					g.					
d.					h.					
WORK PERFORMED TODAY (Indicate location and description of work performed. Refer to work performed by prime and/or subcontractors by letter in Table above, if applicable):										
a. Site Inspection of the Forest Park Military Munitions Areas of Concern and stakeholder interviews.					e.					
b.					f.					
c.					g.					
d.					h.					
Days of no work and reasons for same: NA										
Information on progress of work, causes for delays and extent of delays, Plant, material, etc. <u>Equipment List:</u> NONE										

CQC INSPECTION PHASES ATTENDED AND INSTRUCTIONS GIVEN

- 1) The following stakeholders were interviewed: Roger Allison, Chief Design Engineer, Board of Public Service, City of St. Louis; Jeff Raffelson, General Manager of the Norman K. Probstain Golf Course; Dan Skillman and Anabeth Weil, Department of Parks and Recreation; and Dan Esarey, St. Louis Art Museum. A phone message was left by Josephine Newton-Lund to Sgt. Stephen Sorocko of the St. Louis Police Department's Bomb and Arson Squad.
- 2) Questions presented to the stakeholders: 1) Is the stakeholder aware of any military munitions discoveries at any of the Forest Park military munitions areas of concern, which are the lower nine holes of the golf course, the Grand Basin area and Art Hill? 2) Does the stakeholder anticipate any construction activities in the next twelve months at the military munitions areas of concern?
- 3) An inspection of the project repository/administrative record located at the St. Louis Public Library was performed.
- 4) Inspection of the military munitions areas of concern. Purpose of site inspection was to observe any construction or land use changes in the areas of concern.

RESULTS OF QA INSPECTIONS AND TESTS, DEFICIENCIES OBSERVED, ACTIONS TAKEN AND CORRECTIVE ACTION OF CONTRACTOR. INCLUDE COMMENT PERTAINING TO CONTRACTORS CQC ACTIVITIES

- Interview with Roger Allison: No knowledge of any military munitions discoveries within the last year. Potential new construction at the golf course in the next two years will include a new locker room facility. The location of this facility will be north of the clubhouse next to the hitting cages. Construction award anticipated at the end of 2006 and construction beginning in 2007. The building will be approximately 1000 square feet. Dual drainage work along Skinker Blvd has not been awarded, but anticipated to occur soon. City ordinance has not been reviewed by the city attorney. Roger will follow up with attorney. Additional educational awareness pamphlets were provided to Roger.
- Visited with Mr. Bill Obruch, Government Information Librarian, at the St. Louis Public Library. Observed all Forest Park documents on the library shelf. However, the documents were not in one location on the shelf.
- Interview with Jeff Raffelson: No knowledge of any military munitions discoveries within the last year. Discussed new locker room construction. Jeff stated that a basement may or may not be constructed. A decision has not been made at this time. Additional educational awareness pamphlets were provided.
- Interview with Dan Esarey, Dan Skillman and Anabeth Weil: No knowledge of any military munitions discoveries within the last year. Additionally, the Parks and Recreation Department anticipates no construction activities in the area near the Grand Basin in the next year. Other than the installation of two statues on pedestals already in place on Art Hill, the St. Louis Art Museum does not anticipate any construction activities on Art Hill.
- Observed no construction activities at the golf course or Art Hill during the site inspection. However, tree planting work was being performed near the Grand Basin. Anabeth Weil stated that the work involved the replacement of trees that were planted during the Grand Basin's renovations, but did not make it. Therefore, no new holes were excavated for these tree plantings.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR. *(Include names, reaction, remarks)*

- NA

CONTROVERSIAL MATTERS IN DETAIL

- NONE.

INFORMATION, INSTRUCTIONS OR ACTIONS TAKEN NOT COVERED IN QCR REPORT OR DISAGREEMENTS

- NONE.

REMARKS *(Include visitors to project and miscellaneous remarks pertinent to work)*

Roger Allison agreed to keep the Corps (Josephine Newton-Lund) informed of the status of the dual drainage work along Skinker Blvd, the ordinance review by the city attorney; and the development of plans for the new locker room facility. The Corps will provide ordinance oversight of these construction activities. Josephine Newton-Lund will follow up with Bill Obruch of the St. Louis Public Library to ensure that all Forest Park administrative record documents are filed in the back and not in the front where public access most likely resulted in the separation of the documents.

SAFETY (Include any infractions of approved safety plan, safety manual or instructions from Government personnel. Specify corrective action taken.)

- No safety infractions or injuries occurred during the site inspection or stakeholder interviews.

INSPECTOR'S SIGNATURE Josephine Newton-Lund	DATE 11/29/2005	SUPERVISOR'S INITIALS	DATE
--	--------------------	-----------------------	------

INSPECTORS QUALITY ASSURANCE REPORT (QAR) (ER 1180-1-6)					THE QCR WILL BE ATTACHED TO OR FILED WITH THE QAR				
					REPORT NUMBER: 2- 112906				
TO: Mark Ort, MDNR					DATE: November 29, 2006 Wednesday				
PROJECT: Former Forest Park Recreation Camp, St. Louis, MO Long Term Monitoring – Site Inspection and Stakeholder Interviews					CONTRACT NO: NA				
CONTRACTOR (Or hired labor): NA					WEATHER: Partly Sunny & Warm				
PORTION OF SCHEDULED DAY SUITABLE FOR OPERATIONS					TEMPERATURE				
Structural Excavation	Borrow Excavation	Embankment	Concrete	Structure	MINIMUM 40	MAXIMUM 72			
HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? <input type="checkbox"/> NO <input type="checkbox"/> YES (Explain)					24 HOUR PRECIPITATION				
					INCHES 0	ENDING .0			
NUMBER OF FEDERAL GOVERNMENT EMPLOYEES					RIVER STAGE				
SUPERVISORY	OFFICE	LAYOUT	INSPECTION 2	TOTAL 2	LABOR	FEET	N/A	TIME N/A	
NUMBER OF NON- FEDERAL GOVERNMENT EMPLOYEES				NUMBER OF SHIFTS <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3					
SUPERVISION 1	SKILLED	LABORERS	TOTAL 1	FROM 0915	TO 1445	FROM	TO	FROM	TO
Attach list of the following if applicable: (a) Major items of equipment either idle or working, and (b) Number and classification of contractor or Government personnel onsite. Note: If the contractor's Quality Control Report (QCR) contains the information it need not be repeated.									
INSPECTION PARTICIPANTS									
a. Mitch Scherzinger, MO Department of Natural Resources					e.				
b. Josephine Newton-Lund, Kansas City District (PM)					f.				
c. Bob Finneran, Kansas City District (Operations Division)					g.				
d.					h.				
WORK PERFORMED TODAY (Indicate location and description of work performed. Refer to work performed by prime and/or subcontractors by letter in Table above, if applicable):									
a. Site Inspection of the Forest Park Military Munitions Areas of Concern and stakeholder interviews.					e.				
b.					f.				
c.					g.				
d.					h.				
Days of no work and reasons for same: NA									
Information on progress of work, causes for delays and extent of delays, Plant, material, etc. <u>Equipment List:</u> NONE									

CQC INSPECTION PHASES ATTENDED AND INSTRUCTIONS GIVEN

- 1) The following stakeholders were interviewed: Roger Allison, Chief Design Engineer, Board of Public Service, City of St. Louis; Jeff Raffelson, General Manager of the Norman K. Probstain Golf Course; and Dan Skillman and Anabeth Weil, Department of Parks and Recreation.
- 2) Questions presented to the stakeholders: 1) Is the stakeholder aware of any military munitions discoveries at any of the Forest Park military munitions areas of concern, which are the lower nine holes of the golf course, the Grand Basin area and Art Hill? 2) Does the stakeholder anticipate any construction activities in the next twelve months at the military munitions areas of concern?
- 3) Inspection of the military munitions areas of concern. Purpose of site inspection was to observe any construction or land use changes in the areas of concern.

RESULTS OF QA INSPECTIONS AND TESTS, DEFICIENCIES OBSERVED, ACTIONS TAKEN AND CORRECTIVE ACTION OF CONTRACTOR. INCLUDE COMMENT PERTAINING TO CONTRACTORS CQC ACTIVITIES

- Interview with Roger Allison: No knowledge of any military munitions discoveries within the last year. Potential new construction at the golf course in future years may include a new locker room facility. The location of this facility will be north of the clubhouse next to the hitting cages. A construction award date at this time is unknown. Discussions regarding this work are ongoing. The building will be approximately 1000 square feet. Roger presented information regarding an erosion problem on Art Hill as a result of the Art Museum's landscaping work from three years ago. He indicated that City staff would begin design work to address the drainage problem after the first of the year with the intent to begin the construction work in the summer. The City ordinance, which will enforce the provisions of the MOA, is complete, but pending approval by the Board of Aldermen due to political issues unrelated to the MMRP project. The unrelated political issues concern the lease extension of property East of Forest Park to the Barnes-Jewish Hospital (BJC). The following websites describe the lease issue in more detail: www.bjc.org/bjc and www.protectforestpark.org. Josephine will continue to follow-up on this issue with Roger throughout the year. Additional educational awareness pamphlets were provided to Roger.
- Interview with Jeff Raffelson: No knowledge of any military munitions discoveries within the last year. Discussed new locker room construction. Jeff stated that a basement will not be constructed and there is no definite schedule for this construction.
- Interview with Dan Skillman and Anabeth Weil: No knowledge of any military munitions discoveries within the last year. Additionally, the Parks and Recreation Department anticipates no construction activities in the area near the Grand Basin in the next year.
- Observed no construction activities at the golf course. Temporary art work was observed near the Grand Basin. After speaking with Roger Allison in regard to the soil erosion problem on Art Hill, the area was inspected. Erosion was observed on the Northeast side of Art Hill along with the attempt by the City to mitigate the problem with sand bags and other material.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR. (Include names, reaction, remarks)

- NA

CONTROVERSIAL MATTERS IN DETAIL

- NONE.

INFORMATION, INSTRUCTIONS OR ACTIONS TAKEN NOT COVERED IN QCR REPORT OR DISAGREEMENTS

- NONE.

REMARKS (Include visitors to project and miscellaneous remarks pertinent to work)

Roger Allison agreed to keep the Corps (Josephine Newton-Lund) informed of the status of the Art Hill drainage work. The Corps will provide ordnance oversight of this construction activity.

SAFETY (Include any infractions of approved safety plan, safety manual or instructions from Government personnel. Specify corrective action taken.)

- No safety infractions or injuries occurred during the site inspection or stakeholder interviews.

INSPECTOR'S SIGNATURE Josephine Newton-Lund, PMP	DATE 12/8/2006	SUPERVISOR'S INITIALS	DATE
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INSPECTORS QUALITY ASSURANCE REPORT (QAR) <i>(ER 1180-1-6)</i>					THE QCR WILL BE ATTACHED TO OR FILED WITH THE QAR					
					REPORT NUMBER:3- 112907					
TO: Mark Ort, MDNR					DATE: November 29, 2007 Thursday					
PROJECT: Former Forest Park Recreation Camp, St. Louis, MO Long Term Monitoring – Site Inspection and Stakeholder Interviews					CONTRACT NO: NA					
CONTRACTOR <i>(Or hired labor)</i> : NA					WEATHER: Sunny					
PORTION OF SCHEDULED DAY SUITABLE FOR OPERATIONS					TEMPERATURE					
Structural Excavation	Borrow Excavation	Embankment	Concrete	Structure	MINIMUM 26	MAXIMUM 46				
HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? <input type="checkbox"/> NO <input type="checkbox"/> YES <i>(Explain)</i>					24 HOUR PRECIPITATION					
					INCHES 0		ENDING .0			
NUMBER OF FEDERAL GOVERNMENT EMPLOYEES					RIVER STAGE					
SUPERVISORY	OFFICE	LAYOUT	INSPECTION 1	TOTAL 1	LABOR	FEET	N/A		TIME	N/A
NUMBER OF NON- FEDERAL GOVERNMENT EMPLOYEES				NUMBER OF SHIFTS <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3						
SUPERVISION 1	SKILLED	LABORERS	TOTAL 1	FROM 1000	TO 1330	FROM	TO	FROM	TO	
Attach list of the following if applicable: (a) Major items of equipment either idle or working, and (b) Number and classification of contractor or Government personnel onsite. Note: If the contractor's Quality Control Report (QCR) contains the information it need not be repeated.										
INSPECTION PARTICIPANTS a. Mitch Scherzinger, MO Department of Natural Resources e. b. Josephine Newton-Lund, Kansas City District (PM) f. c. g. d. h.										
WORK PERFORMED TODAY <i>(Indicate location and description of work performed. Refer to work performed by prime and/or subcontractors by letter in Table above, if applicable:</i>										
a. Site Inspection of the Forest Park Military Munitions Areas of Concern and stakeholder interviews. e. b. f. c. g. d. h.										
Days of no work and reasons for same: NA										
Information on progress of work, causes for delays and extent of delays, Plant, material, etc. <u>Equipment List:</u> NONE										

CQC INSPECTION PHASES ATTENDED AND INSTRUCTIONS GIVEN

- 1) The following stakeholders were interviewed: Roger Allison, Chief Design Engineer, Board of Public Service, City of St. Louis; Jeff Raffelson, General Manager of the Norman K. Probstain Golf Course; and Dan Skillman, Department of Parks and Recreation.
- 2) Questions presented to the stakeholders: 1) Is the stakeholder aware of any military munitions discoveries at any of the Forest Park military munitions areas of concern, which are the lower nine holes of the golf course, the Grand Basin area and Art Hill? 2) Does the stakeholder anticipate any construction activities in the next twelve months at the military munitions areas of concern?
- 3) Inspection of the military munitions areas of concern. Purpose of site inspection was to observe any construction or land use changes in the areas of concern.

RESULTS OF QA INSPECTIONS AND TESTS, DEFICIENCIES OBSERVED, ACTIONS TAKEN AND CORRECTIVE ACTION OF CONTRACTOR. INCLUDE COMMENT PERTAINING TO CONTRACTORS CQC ACTIVITIES

- Interview with Roger Allison: No knowledge of any military munitions discoveries within the last year. Potential new construction at the golf course in future years includes a new locker room facility. The location of this facility will be north of the clubhouse next to the hitting cages. The facility is still under design and a construction award date is expected in the spring. As discussed at last year's interview, the building will be approximately 1000 square feet. Last year, Roger presented information regarding an erosion problem on Art Hill as a result of the Art Museum's landscaping work from three years ago. A design to address the drainage problem, which was submitted to USACE for review on 11/30/07, is complete. The erosion area is not located near any MMRP areas of concern. However, Kansas City District will arrange for part-time ordnance oversight by St. Louis District staff during the construction work, which is anticipated next spring. The City ordinance, which will enforce the provisions of the MOA, has been completed for over a year and has been pending approval by the Board of Aldermen due to political issues unrelated to the MMRP project. The unrelated political issues which were related to the lease extension of property East of Forest Park to the Barnes-Jewish Hospital (BJC) are no longer a concern. Roger indicated that he will be forwarding the ordinance to the Mayor's assistant, Jim Sonderman, who will coordinate introduction of the ordinance to the board of aldermen. Additional educational awareness pamphlets were provided to Roger.
- Interview with Jeff Raffelson: No knowledge of any military munitions discoveries within the last year. Discussed new locker room construction. Jeff stated that a basement will not be constructed, but there will be excavation work related to utility lines. Also discussed the golf course's change of ownership from American Golf to Eagle Golf. This change is expected to be official next year. Josephine was aware of this ownership change when a consultant for Eagle Golf contacted her for information related to the military munitions. The consultant had been hired to perform an environmental assessment of the property.
- Interview with Dan Skillman: No knowledge of any military munitions discoveries within the last year. Additionally, the Parks and Recreation Department anticipates no construction activities in the area near the Grand Basin in the next year other than the soil erosion work on the side of Art Hill.
- Observed no construction activities at the golf course.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR. *(Include names, reaction, remarks)*

- NA

CONTROVERSIAL MATTERS IN DETAIL

- NONE.

INFORMATION, INSTRUCTIONS OR ACTIONS TAKEN NOT COVERED IN QCR REPORT OR DISAGREEMENTS

- NONE.

REMARKS *(Include visitors to project and miscellaneous remarks pertinent to work)*

Josephine Newton-Lund will remain in contact with Roger Allison during the FY08 fiscal year in regard to the status of the soil erosion and locker room facility construction start dates. Ordinance construction oversight support will be provided by St. Louis District ordnance safety staff. In addition, Josephine will continue communications with Roger Allison regarding the passage of the City Ordinance

SAFETY (Include any infractions of approved safety plan, safety manual or instructions from Government personnel. Specify corrective action taken.)

- No safety infractions or injuries occurred during the site inspection or stakeholder interviews.

INSPECTOR'S SIGNATURE Josephine Newton-Lund, PMP	DATE 12/10/2007	SUPERVISOR'S INITIALS	DATE
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INSPECTORS QUALITY ASSURANCE REPORT (QAR) <i>(ER 1180-1-6)</i>					THE QCR WILL BE ATTACHED TO OR FILED WITH THE QAR				
					REPORT NUMBER: 4- 032409				
TO: Mark Ort, MDNR					DATE: November 29, 2007 Thursday				
PROJECT: Former Forest Park Recreation Camp, St. Louis, MO Long Term Monitoring – Site Inspection and Stakeholder Interviews					CONTRACT NO: NA				
CONTRACTOR (Or hired labor): NA					WEATHER: Cloudy				
PORTION OF SCHEDULED DAY SUITABLE FOR OPERATIONS					TEMPERATURE				
Structural Excavation	Borrow Excavation	Embankment	Concrete	Structure	MINIMUM 52	MAXIMUM 70			
HAS ANYTHING DEVELOPED ON THE WORK WHICH MIGHT LEAD TO A CHANGE ORDER OR FINDING OF FACT? <input type="checkbox"/> NO <input type="checkbox"/> YES (Explain)					24 HOUR PRECIPITATION				
					INCHES 0	ENDING .0			
NUMBER OF FEDERAL GOVERNMENT EMPLOYEES					RIVER STAGE				
SUPERVISORY	OFFICE	LAYOUT	INSPECTION 1	TOTAL 1	LABOR	FEET	N/A	TIME N/A	
NUMBER OF NON- FEDERAL GOVERNMENT EMPLOYEES				NUMBER OF SHIFTS <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3					
SUPERVISION	SKILLED	LABORERS	TOTAL	FROM 1000	TO 1330	FROM	TO	FROM	TO
Attach list of the following if applicable: (a) Major items of equipment either idle or working, and (b) Number and classification of contractor or Government personnel onsite. Note: If the contractor's Quality Control Report (QCR) contains the information it need not be repeated.									
INSPECTION PARTICIPANTS a. Josephine Newton-Lund, Kansas City District (PM) e. b. f. c. g. d. h.									
WORK PERFORMED TODAY (Indicate location and description of work performed. Refer to work performed by prime and/or subcontractors by letter in Table above, if applicable): a. Site Inspection of the Forest Park Military Munitions Areas of Concern and stakeholder interviews. e. b. f. c. g. d. h.									
Days of no work and reasons for same: NA									
Information on progress of work, causes for delays and extent of delays, Plant, material, etc. <u>Equipment List:</u> NONE									

CQC INSPECTION PHASES ATTENDED AND INSTRUCTIONS GIVEN

- 1) The following stakeholders were interviewed: Roger Allison, Chief Design Engineer, Board of Public Service, City of St. Louis; and Doug Barnhouse, Director of Golf at the Norman K. Probstain Golf Course. Doug Skillman of the Parks and Recreation Office was not available.
- 2) Questions presented to the stakeholders: 1) Is the stakeholder aware of any military munitions discoveries at any of the Forest Park military munitions areas of concern, which are the lower nine holes of the golf course, the Grand Basin area and Art Hill? 2) Does the stakeholder anticipate any construction activities in the next twelve months at the military munitions areas of concern?
- 3) Inspection of the military munitions areas of concern. Purpose of site inspection was to observe any construction or land use changes in the areas of concern.

RESULTS OF QA INSPECTIONS AND TESTS, DEFICIENCIES OBSERVED, ACTIONS TAKEN AND CORRECTIVE ACTION OF CONTRACTOR. INCLUDE COMMENT PERTAINING TO CONTRACTORS CQC ACTIVITIES

- Interview with Roger Allison: No knowledge of any military munitions discoveries within the last year. For the last two years, Roger has presented information regarding an erosion problem on Art Hill as a result of the Art Museum's landscaping work from four years ago. A design to address the drainage problem, which was submitted to USACE for review on 11/30/07, is complete. The erosion area is not located near any MMRP areas of concern. However, Kansas City District will arrange for part-time ordnance oversight by St. Louis District staff during the construction work, which is anticipated later this year, if funding is available. The City ordinance, which will enforce the provisions of the MOA, has been completed for over almost two years finally reached the Board of Aldermen for review and approval. Board Bill 176 was introduced to the Board last fall. In February 2009, the Intergovernmental Affairs Committee of the Board of Aldermen passed the bill out of committee by unanimous vote of all members present. Next session (April 20, 2009), it is anticipated that Alderwoman Krewson will get the bill passed. Roger added that the next election is April 7, 2009, so the next session is considered a lame duck session where many ordinances are expected to pass before new Aldermen are sworn in the next day. Additional educational awareness pamphlets were provided to Roger.
- Interview with Doug Barnhouse: No knowledge of any military munitions discoveries within the last year. Discussed new locker room construction. The locker room was completed last summer. There was very little excavation work as the locker room was constructed on a concrete slab. No military munitions were encountered during the construction work. Also discussed the golf course's change of ownership from American Golf to Eagle Golf. Before departing, Josephine provided the golf staff a handful of educational awareness pamphlets
- Observed no construction activities at the lower nine holes of the golf course or Grand Basin Area. However, the Triple A Course located southeast of the Norman K. Probstain Course was under construction. This course is not located in the former Forest Park Recreation Camp area and not a military munitions area of concern.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR. *(Include names, reaction, remarks)*

- NA

CONTROVERSIAL MATTERS IN DETAIL

- NONE.

INFORMATION, INSTRUCTIONS OR ACTIONS TAKEN NOT COVERED IN QCR REPORT OR DISAGREEMENTS

- NONE.

REMARKS *(Include visitors to project and miscellaneous remarks pertinent to work)*

Josephine Newton-Lund will remain in contact with Roger Allison during the FY09 fiscal year in regard to the status of the soil erosion construction start date. Ordinance construction oversight support will be provided by St. Louis District ordnance safety staff. In addition, Josephine will continue communications with Roger Allison regarding the passage of the City Ordinance

SAFETY *(Include any infractions of approved safety plan, safety manual or instructions from Government personnel. Specify*

corrective action taken.)

- No safety infractions or injuries occurred during the site inspection or stakeholder interviews.

INSPECTOR'S SIGNATURE Josephine Newton-Lund, PMP	DATE 03/25/2009	SUPERVISOR'S INITIALS	DATE
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CQC INSPECTION PHASES ATTENDED AND INSTRUCTIONS GIVEN

- 1) The following stakeholders were interviewed: Roger Allison, Chief Design Engineer, Board of Public Service, City of St. Louis; Dan Skillman, Commissioner of St. Louis Parks and Recreation, Jeff Raffelson, Managing Director of Golf at the Norman K. Probstain Golf Course and Mark Macinski, Chief Facilities and Operations, St. Louis Art Museum. Detective John Jones of the St. Louis Metropolitan Police Bomb and Arson Squad was contacted by phone on 5/13/10.
- 2) Questions presented to the stakeholders: 1) Is the stakeholder aware of any military munitions discoveries at any of the Forest Park military munitions areas of concern, which are the lower nine holes of the golf course, the Grand Basin area and Art Hill? 2) Does the stakeholder anticipate any construction activities in the next twelve months at the military munitions areas of concern?
- 3) Inspection of the military munitions areas of concern. Purpose of site inspection was to observe any construction or land use changes in the areas of concern.

RESULTS OF QA INSPECTIONS AND TESTS, DEFICIENCIES OBSERVED, ACTIONS TAKEN AND CORRECTIVE ACTION OF CONTRACTOR. INCLUDE COMMENT PERTAINING TO CONTRACTORS CQC ACTIVITIES

- Observed no construction activities at the lower nine holes of the golf course or Grand Basin Area. However, construction was observed at the St. Louis Art Museum and excavation activities on Art Hill in front of the art museum. The Triple A Course located southeast of the Norman K. Probstain Course, which was under construction at the time of last year's inspection, is now complete. This course is not located in the former Forest Park Recreation Camp area and not a military munitions area of concern. The course is named The Highlands and is operated by Eagle Golf, who also operates the Norman K. Probstain courses.
- Interview with Jeff Raffelson: No knowledge of any military munitions discoveries within the last year. He did point out the St. Louis Art Museum's \$110 million addition for underground parking and additional exhibit space. He also mentioned that the Highlands Course and club house were completed and in operation.
- Interview with Mark Macinski: Jesse Scott and I attempted to visit Mr. Macinski at the St. Louis Art Museum to discuss the parking garage construction and excavation work on Art Hill. He was not available for a face-to-face meeting. However, contact was made by phone later that afternoon. Mr. Macinski stated that military munitions awareness discussions took place prior to construction. Nothing suspicious was encountered during excavation activities. The excavation work located on Art Hill in front of the museum is sewer line work, which was just completed.
- Interview with Roger Allison and Dan Skillman: No knowledge of any military munitions discoveries within the last year and no new construction activities in the munitions areas of concern are anticipated. The new construction at the St. Louis Art Museum and completion of the new golf course was discussed. Additional educational awareness pamphlets were provided to Roger.
- Phone Interview with Detective John Jones: Detective Jones was an intern bomb and arson squad officer when the munitions discoveries occurred in 2001 and 2002. Detective Jones was not aware of any bomb and arson responses to military munitions discoveries at Forest Park. He also confirmed that Detective Mark Wuellner is still on the squad and SGT Detective Greg Newhouse is still the Chief of the department.

VERBAL INSTRUCTIONS GIVEN TO CONTRACTOR. *(Include names, reaction, remarks)*

- NA

CONTROVERSIAL MATTERS IN DETAIL

- NONE.

INFORMATION, INSTRUCTIONS OR ACTIONS TAKEN NOT COVERED IN QCR REPORT OR DISAGREEMENTS

- NONE.

REMARKS *(Include visitors to project and miscellaneous remarks pertinent to work)*

- Josephine will provide her contact information to Mr. Macinski of the St. Louis Art museum via email.

SAFETY *(Include any infractions of approved safety plan, safety manual or instructions from Government personnel. Specify*

corrective action taken.)

- No safety infractions or injuries occurred during the site inspection or stakeholder interviews.

INSPECTOR'S SIGNATURE  Josephine Newton-Lund, PMP	DATE 05/14/2010	SUPERVISOR'S INITIALS	DATE
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Attachment 10



Photo Courtesy of Jesse Scott, MDNR

St. Louis Art Museum Expansion- New Underground Parking and Exhibit Area
Looking northeast from Fine Arts Drive

Attachment 11



Photo Courtesy of Jesse Scott, MDNR

St. Louis Art Museum Sewer Line Excavation on Art Hill- New Sod within Orange Fencing
Looking South from Grand Basin Area

Attachment 12

List of Documents Reviewed Former Forest Park Recreation Camp

St. Louis City Ordinance 68329, St. Louis, Missouri, 2009

Quality Assurance Reports for the Former Forest Park Recreation Camp, U.S. Army Corps of Engineers, Kansas City District, 2005-2010

Memorandum of Agreement (MOA) between USACE and City of St. Louis, former Forest Park Recreation Camp, 2005

Action Memorandum for the former Forest Park Recreation Camp, 2004

Engineering Evaluation/Cost Analysis (EE/CA) for the former Forest Park Recreation Camp, 2004

Archives Search Report (ASR) for the former Forest Park Recreation Camp, 1997

Inventory Project Report (INPR) for the former Forest Park Recreation Camp, 1995