Revised Final

Environmental Condition of Property Update Report
Armed Force Reserve Center (IL027)
7402 W. Roosevelt Road, Forest Park, Illinois 60130

Environmental Documentation in Support of
U.S. Army Reserve Facility Disposals

Contract # W912QR17D0040
Delivery Order # W912QR19F0319

Prepared for:

Army Reserve Installation Management Directorate
Office of the Chief Army Reserve
6075 Goethals Road
Ft. Belvoir, VA 22060

and

U.S. Army Corps of Engineers-Louisville District
600 Dr. Martin Luther King, Jr. Place
Louisville, KY 40202

Prepared by:

SIA Solutions, LLC
15115 Park Row Drive, Suite 125
Houston, TX 77084

January 2022

SUBJECT: Environmental Condition of Property Update (ECP-U) Report for the Forest Park Armed Forces Reserve Center (IL027), dated January 2022.

To the best of my knowledge and belief, based upon this ECP-U Report and facts presented to me, the conditions of the Property described within this document are true at this time, and this report is in general accordance with the DOD requirements for completion of an ECP-U Report.

LEWIS.JAMES.MATTHEW.1099982949
Digitally signed by LEWIS.JAMES.MATTHEW.1099982949
Date: 2022.01.31 13:21:22 -05'00'

31 January 2022

FOR THE COMMANDER — Date

JAMES M. LEWIS
Colonel, U.S. Army
Director, Public Works
88th Readiness Division

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LIST OF ACRONYMS AND ABBREVIATIONS

ACM	Asbestos-Containing Material
AEM	Area Environmental Manager
AEPS	Area Environmental Protection Specialist
AFOS	Area Facility Operations Specialist
AFRC	Armed Forces Reserve Center
AHERA	Asbestos Hazard Emergency Response Act
AIRS	Aerometric Information Retrieval System
AR	Army Regulation
ARIMD	Army Reserve Installation Management Directorate
AST	Aboveground Storage Tank
ASTM	ASTM International
BOL	Bureau of Land Inventory
BN	Battalion
BRRM	Base Redevelopment and Realignment Manual
C-DOCKET	Criminal Docket System
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERFA	Community Environmental Response Facilitation Act
CESQG	Conditionally Exempt Small Quantity Generators
CFR	Code of Federal Regulations
CSB	Corps Support Battalion
CSSB	Combat Sustainment Support Battalion
DA	Demolition of Asbestos
DOCKET	Enforcement Docket
DoD	Department of Defense
DPW	Directorate of Public Works
EBS	Environmental Baseline Survey
ECP	Environmental Condition of Property
ECP-U	Environmental Condition of Property Update
ECHO	Enforcement and Compliance History Online
EDR	Environmental Data Resources, Inc.
ENG	Engineering Controls
EPS	Environmental Protection Specialist

ERR	Environmental Radius Report
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Administration
FFIS	Federal Facilities Information System
FINDS	Facility Index System/Facility Identification Initiative Program Summary Report
FURS	Federal Underground Injection Control
HA	Homogeneous Area
HRHR	High Risk Historical Records
HSWA	Hazardous and Solid Waste Amendments
HUD	Housing and Urban Development
IDOT	Illinois Department of Transportation
IEMA	Illinois Emergency Management Agency
IEPA	Illinois Environmental Protection Agency
IL	Illinois
INST	Institution
IPaC	Information for Planning and Consultation
ISCP	Installation Spill Contingency Plan
LBP	Lead-Based Paint
LED	Light-Emitting Diodes
LRL	Louisville District
LUST	Leaking Underground Storage Tank
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MEP	Military Equipment Parking
MWH	MWH Americas, Inc.
NA	Not Applicable
NESHAP	National Emission Standards for Hazardous Air Pollutants
NEPA	National Environmental Policy Act
NETR	Nationwide Environmental Title Research
NHPA	National Historic Preservation Act of 1966
NFA	No Further Action
NFR	No Further Remediation
NL	Not Listed in Database
NR	Not Requested at this Search Distance
NRC	Naval Reserve Center

NRHP	National Register of Historic Places
NWI	National Wetland Inventory
O&M	Operations and Maintenance
ODC	Ozone-Depleting Chemicals
OMS	Organization Maintenance Shop
OSFM	Office of the Illinois State Fire Marshall
OWS	Oil Water Separator
PADS	PCBs Activity Data System
PCB	Polychlorinated Biphenyl
PCS	Permit Compliance System
PLM	Polarized Light Microscopy
POL	Petroleum, Oil, and Lubricants
PWTB	Public Works Technical Bulletin
RCRA	Resource Conservation and Recovery Act
RD	Readiness Division
REC	Recognized Environmental Condition
RSAR	Radiological Site Assessment Survey
SHPO	State Historic Preservation Office
SIA	SIA Solutions, LLC
SPCCP	Spill Prevention Control and Countermeasures Plan
SRP	Site Remediation Program
SSU	State Sites Unit
SWRCY	Solid Waste Recycling
TP	Target Property
TRS	Teacher Retirement System of Illinois
TSI	Thermal System Insulation
U.S.	United States
USC	United States Code
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VSQG	Very Small Quantity Generators

XRF	X-ray Fluorescence

Units of Measure

sf	square feet
kg	kilogram
pCi/L	picocurie per liter

DECLARATIONS

COMPLETION OF INDEPENDENT TECHNICAL REVIEW

SIA Solutions, LLC (SIA) has completed the Environmental Condition of Property Update Report, Forest Park Armed Forces Reserve Center, 7402 W. Roosevelt Road, Forest Park, Illinois, 60130 for the U.S. Army Reserve Facility Disposals project.

Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of assumptions; methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used, and level of data obtained; and reasonableness of the results, including whether the product meets the customer's needs consistent with existing USACE policy. This review was completed following the procedures detailed SIA's Project Quality Control Plan, approved in January 2020.

18 January 2022

Signature/SIA Report Preparer – Aravind Marella Date

17 January 2022

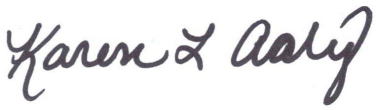
Signature/SIA Independent Technical Reviewer – Kirk Huff Date

CERTIFICATION OF INDEPENDENT TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows:

Item	Technical Concerns	Possible Impact	Resolutions
None			

As noted above, all concerns resulting from independent technical review of the plan have been resolved.



18 January 2022

Signature/Project Manager – Karen Aaby Date

CERTIFICATION OF ENVIRONMENTAL PROFESSIONAL

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 Code of Federal Regulations Part 312 and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have performed all appropriate inquiries in conformance with the standards and practices set forth in 40 Code of Federal Regulations Part 312. All information and documentation provided accurately reflects the environmental condition of the property. This Environmental Condition of Property Report is in general accordance with the U.S. Department of Defense requirements for completion of an Environmental Condition of Property Update Report.

Aravind Marella
SIA Solutions, LLC

Date

EXECUTIVE SUMMARY

The United States Army Corps of Engineers - Louisville District (USACE-LRL), acting for the Army Reserve Installation Management Directorate (ARIMD), retained SIA Solutions, LLC (SIA) via Contract #W912QR17D0040 and Delivery Order #W912QR19F0931 to prepare this Environmental Condition of Property Update (ECP-U) Report for the Forest Park Armed Forces Reserve Center (AFRC) (IL027), hereafter referred to as the "Property."

The Department of the Navy Base Realignment and Closure Program Management Office assessed and prepared the environmental condition of property (ECP) report in May 2006 (ECP 2006). The 2006 ECP report states that it is not intended to identify uncontaminated property in compliance with the Community Environmental Response Facilitation Act (CERFA) and Department of Defense (DoD) Policy (see 2006 ECP Report in **Appendix D**).

The primary purpose of an ECP-U is to identify potential environmental liabilities associated with a property, especially those associated with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended. The ECP-U also reviews and documents essentially every environmental consideration of a property across the spectrum of environmental regulations. This ECP-U Report is required because the amount of time that has passed since the 2006 ECP Report was prepared.

This ECP-U was prepared in conformance with 42 U.S. Code (USC) § 9620(h), Army Regulation (AR) 200-1, *Environmental Protection and Enhancement* (2007), and in general conformance with the following standards:

- ASTM International (ASTM) D6008-96 (2014), *Standard Practice for Conducting Environmental Baseline Surveys;*
- ASTM E1527-13 (2013), *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process;*
- ASTM D5746-98 (2016), *Standard Classification of Environmental Condition of Property Area Types for Defense Base Closure and Realignment Facilities*; and
- The Department of Defense's Base Redevelopment and Realignment Manual (DoD 4165.66-M ([BRRM]).

This ECP Report Update was to identify any recognizable environmental conditions (RECs) at the Property. A REC is defined in ASTM International (ASTM) D5746-98 (2016), *Standard Classification of Environmental Condition of Property Area Types for Defense Base Closure and Realignment Facilities,* as

> *"the presence or likely presence of any hazardous substances or petroleum products on any Department of Defense (DoD) real property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."*

Previous Recognized Environmental Conditions

The 2006 ECP Report did not identify any RECs on the Property, however, the following other property conditions were identified:

- Approximately 53,300 square feet (sf) of assumed asbestos-containing floor tiles and mastic were in place throughout the Property. Asbestos-containing materials (ACM) remained on the heating system pipe insulation of the AFRC Building in the boiler room and in Room 109; domestic water pipe and fitting insulation in Room 109; mastic on sink of Room 109; and on the heating system pipe fitting insulation located throughout the first floor of the Army side of the building.
- Paint chip samples indicated the presence of lead-based paint (LBP) in Room 192 of the AFRC Building. The paint was in good condition at the time of the survey.

The 2006 ECP Report did not classify the Property's ECP Area Type in accordance with the ASTM D5746-98 (2016), *Standard Classification of Environmental Condition of Property Area Types for Defense Base Closure and Realignment Facilities*. The 2006 ECP Report was not intended to identify uncontaminated property in compliance with CERFA and DoD policy (2006 ECP Report, **Appendix D**).

The Property was reassessed for environmental condition via two (2) ECP-U site visits conducted on 17 October 2019 and 03 June 2021 (ECP-U site visits), respectively, through review of current and historical records pertaining to the Property and interviewed the following key personnel of the Property:

- Ms. Diann Shim, Contractor, 88th Readiness Division (RD), Directorate of Public Works (DPW), Area Facility Operations Specialist (AFOS).
- Ms. Andrea E. Pawlik, Contractor, 88th RD, Area Environmental Protection Specialist (AEPS), 88th RD, via telephone on 29 October 2019 and 30 June 2021.
- Ms. Lisa Gulbranson, Contractor, 88th RD, Environmental Protection Specialist (EPS), lisa.gulbranson.ctr@mail.mil, (612) 467-7594.

Ms. Diann Shim and Ms. Lisa Gulbranson were present at the Property during the 2019 ECP-U site visit. Ms. Diann Shim was present during the 03 June 2021 site visit. This ECP-U assessment of the Property did not reveal any RECs.

Table ES-1 provides the previously identified condition of each hazardous or environmental issue reviewed in the 2006 ECP Report. If there has been a change in this condition based on the current site visits, records review, or interviews, it is noted in the below table. Detailed information associated with any identified change in status is provided in the remaining portion of the document in the designated section number identified. For this evaluation, one condition was found to affect the CERFA category.

TABLE ES-1. PROJECT ENVIRONMENTAL OVERVIEW

2006 ECP Report Section No.	2006 ECP Section Title	Previously Identified Condition	Previously Affect CERFA Category*? (Yes/No)	Condition Changed? (Yes/No)	Current Condition	Currently Affect CERFA Category?
4.5, 4.19	Hazardous Substances, Hazardous Materials and Petroleum Products, and Hazardous and Petroleum Waste	Two (2) 55-gallon drums of caustic liquid, stored in AFRC Building Room 172, are used by the maintenance contractor to clean the boilers. The Army Storage Building at the southeast corner of the site contains minor amounts of motor oil, transmission fluid, antifreeze, and two (2) small generators with diesel tanks. The Navy Storage Building at the southwest corner of the site contains several one-gallon cans and five-gallon buckets of latex paint. This paint was relatively new and was not suspected to be lead-based.	No	Yes	Per the Federal Regulatory Database Search section in the 2021 Environmental Data Resources, Inc., (EDR) Radius Map with Geocheck® (2021 EDR Report), the Property was identified as a Resource Conservation and Recovery Act (RCRA) Very Small Quantity Generator (VSQG). According to the EDR Report, the Property generated waste containing lead, within the allowable quantities. No violations have been reported at the Property. SIA noted small quantities of paints, commercially available cleaning chemicals, backup batteries for computers and printer ink cartridges during the two (2) ECP-U site visits (**Appendix B** - photos 28, 29, 48, 61-64, and 69-73). No	No

2006 ECP Report Section No.	2006 ECP Section Title	Previously Identified Condition	Previously Affect CERFA Category*? (Yes/No)	Condition Changed? (Yes/No)	Current Condition	Currently Affect CERFA Category?
					issues or concerns were identified with regards to these materials. Ms. Andrea Pawlik stated that these materials will be disposed of in accordance with safety data sheets (SDS) (See **Appendix C**). To meet the User Responsibility requirements ("All Appropriate Inquiries" Final Rule [40 C.F.R. Part 312.20]), SIA obtained the Environmental Radius Report (ERR) for the Property from NETRONLINE on December 3, 2021. The ERR continued to identify the Property under RCRA VSQG database with no violations. A copy of the complete ERR is included in **Appendix E**.	
4.3	Aboveground Storage Tanks (ASTs) Storage	No historical or current evidence of ASTs located onsite.	No	No	No change.	No
4.3	Underground Storage Tanks	No historical or current evidence that USTs used	No	Yes	The 2021 EDR Report, the ERR and the Office of the	Yes

2006 ECP Report Section No.	2006 ECP Section Title	Previously Identified Condition	Previously Affect CERFA Category*? (Yes/No)	Condition Changed? (Yes/No)	Current Condition	Currently Affect CERFA Category?
	(USTs)	for storing petroleum products were located onsite.			Illinois State Fire Marshal (OSFM) Division of Petroleum & Chemical Safety UST database indicated that the Property had one (1) 15,000-gallon capacity #2 heating oil UST, which was removed in January 1991. The #2 heating oil was not regulated, and the UST's regulated status was indicated as "Exempt". According to Utility and Site Plan (of unknown date), the former UST was located in between the buildings, east of the boiler room. However, the tank was removed in January 1991 and the status is closed. Based on the age of the buildings at the Property, it is estimated that the tank's age is at least 40 years at the time of removal. No additional information regarding the former UST is available. Based on the age of the tank, there is potential for leaks in the tank and release of #2	

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					heating oil into the ground at the Property. According to the 1990 United States Army Toxic and Hazardous Materials Agency's (USATHAMA's) Waste Site Characterization Study, the Army only occupied a portion of the Property, including east wing of the AFRC Building, the OMS and a portion of the parking areas. Naval Reserve Center (NRC) owned the Property and is responsible for the tanks, utilities and the firing range. The Army assumed ownership in 2007, therefore, the former UST is not associated with the Army's occupancy at the Property.	
Not discussed in 2006 ECP Report	Oil Water Separator (OWS)	Not discussed.	No	No	There is no OWS present at the Property. An OWS associated with the wash rack has been out of service since 2001 and was removed in 2003 (see **Appendix D**). No	No

2006 ECP Report Section No.	2006 ECP Section Title	Previously Identified Condition	Previously Affect CERFA Category*? (Yes/No)	Condition Changed? (Yes/No)	Current Condition	Currently Affect CERFA Category?
					issues or violations regarding the wash rack or the OWS were found in the previous reports.	
4.8	Pesticides/Herbicides	According to the 1997 Navy Environmental Compliance Evaluation (Navy 1997), pesticides were applied by a licensed contractor to the areas of the Property occupied by the Navy. The Army-occupied areas had pesticides applied by Army personnel. Currently, pesticides are applied to all areas of Nuclear Regulatory Commission Forest Park by a licensed contractor.	No	No	No change.	No
4.18	Medical and Biohazard Waste	All medical waste for both medical and dental services (Rooms 119, 121A, and 121B) was transported and disposed of off-site by a licensed contractor (Marin 2006c).	No	Yes	Currently, no medical waste is generated or stored at the Property.	No

2006 ECP Report Section No.	2006 ECP Section Title	Previously Identified Condition	Previously Affect CERFA Category*? (Yes/No)	Condition Changed? (Yes/No)	Current Condition	Currently Affect CERFA Category?
Not discussed in 2006 ECP Report.	Radioactive Waste	Not discussed.	No	No	No change. None identified through records review, interviews, or the site inspections. Plexus Scientific Corporation prepared a Radiological Site Assessment Report (RSAR), dated 02 December 2020. Based on available documentary information, personnel interviews, site inspection (walk down) and radiation surveys, there was no evidence of residual radioactivity above normal background values at the Property. As a result, the information documented in the RSAR supports the finding that the Property did not contain residual radioactivity above Table M-2 in NUREG-1556, Vol. 7, Rev. 1 limits at the time of the on-site assessment. Based on the historical data and supporting survey results, the Property	No

2006 ECP Report Section No.	2006 ECP Section Title	Previously Identified Condition	Previously Affect CERFA Category*? (Yes/No)	Condition Changed? (Yes/No)	Current Condition	Currently Affect CERFA Category?
					may be considered radiologically non-impacted and is eligible for release for unrestricted use in accordance with NUREG-1575, MARSSIM (see **Appendix D**, Final RSAR).	
4.16	Solid Waste	Solid waste was disposed of in an approved landfill by a solid waste contractor.	No	No	No change.	No
Not discussed in 2006 ECP Report	Surrounding Properties	Not discussed.	No	Yes	According to the 2021 ERR, 32 facilities are present within 0.25 miles from the Property. Based on the interpretation of the information, none of these will impact the environmental condition of the Property.	No
4.13.1, 4.13.2,	Groundwater/ Drinking Water Quality	Drinking water is supplied to the Property by the Village of Forest Park. There is no known groundwater production or monitoring wells located within the boundaries of the Property.	No	No	According to the 2016, 2017 and 2018 Annual Drinking Water Reports for Forest Park, IL, no measured analytical parameters were found to be in violation of regulatory standards.	No

2006 ECP Report Section No.	2006 ECP Section Title	Previously Identified Condition	Previously Affect CERFA Category*? (Yes/No)	Condition Changed? (Yes/No)	Current Condition	Currently Affect CERFA Category?
4.13.5	Wastewater Treatment, Collection and Discharge/Storm Water Discharge	The Property is connected to the Village of Forest Park's public water and sewer system. There were no known permits for the connection to the municipal system. A vehicle wash rack was constructed on the Property in 1964 and was connected to the municipal sewer system (Mack 2006b). According to Navy personnel (Mack 2006a), the wash rack was taken out of service in approximately 2001 and was removed in 2003 by the same contractor who performed the demolition of the Pistol Range building (Mack 2006b).	No	No	No change. The Property is connected to the Village of Forest Park's public water and sewer system.	No
4.4	Munitions & Explosives	None identified in the 2006 ECP report.	No	No	No evidence of Munitions or Explosives storage since the 2006 ECP Report. The vault was not accessible during the	No

2006 ECP Report Section No.	2006 ECP Section Title	Previously Identified Condition	Previously Affect CERFA Category*? (Yes/No)	Condition Changed? (Yes/No)	Current Condition	Currently Affect CERFA Category?
					site visit because it was still being utilized during the 17 October 2019 site visit. The vault was empty during the 03 June 2021 site visit. It has empty caged storage areas and safes. According to Ms. Diann Shim, AFOS, the contents in the vault were emptied in 2020.	
4.9	ACM	Approximately 53,300 sf of assumed asbestos-containing floor tiles and mastic remain in place. ACM remains on the heating system pipe insulation in the boiler room and in Room 109 of the AFRC Building; domestic water pipe and fitting insulation in Room 109; mastic on sink of Room 109; and on the heating system pipe fitting insulation located throughout the first floor of the Army side of the	No	Yes	In December 2009, CH2M HILL conducted an Asbestos Survey at the Property. The survey confirmed ACM in the AFRC Building in the following locations: • Black mastic for 12” x 12” green, gray and black vinyl floor tile. This non-friable ACM was found to be in good condition. • ACM is present in Thermal System Insulation (TSI). • Gray, beige, and off-white window caulk.	No

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		building.			The survey also identified presumed ACM in the following locations. • Sink in room 261. This sink is believed to be made of transite, which, until the mid 1980s, contained asbestos. • Fire doors in the stairwells potentially contain asbestos. At the Organizational Maintenance Shop (OMS), the CH2M HILL team's asbestos inspector identified no confirmed or assumed ACM. SIA observed suspect ACM in the TSI of the piping present in the ceiling of the OMS (**Appendix B** - photos 47 & 49). In 2020, MEC^{X}, under contract to SIA, conducted an ACM Survey Update at the Property. In addition to previously identified ACM, the	

2006 ECP Report Section No.	2006 ECP Section Title	Previously Identified Condition	Previously Affect CERFA Category*? (Yes/No)	Condition Changed? (Yes/No)	Current Condition	Currently Affect CERFA Category?
					survey identified 23 homogenous areas (HAs) and nine (9) ACM areas were identified. The majority of the newly identified ACM is in the AFRC Building in the form of mastic associated with floor tiles, fire doors, transite sink and mudded pipe fittings. Additional information about the HAs and the ACM at the Property is available in sections 2.1 and 6.2.	
4.10	Lead-Based Paint (LBP)	All painted surfaces were found to be intact, although lead was detected in Room 192 of the AFRC Building on the masonry window molding, the south facing block wall, and the plaster ceiling above the drop ceiling. These components were determined to be intact. The Navy concluded that if painted surfaces in the surveyed locations	No	Yes	In December 2009, CH2M HILL conducted an LBP survey at the Property. Based on survey observations and the sample analytical results, the CH2M HILL team did not identify any areas containing LBP on the interior or exterior of the AFRC Building. However, LBP was identified within the OMS and the exterior of the Storage	No

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		were in good condition and surface preparation did not breach the top layer of paint, then there was no hazard posed in painting these rooms.			Building in the following areas: gray paint on a beam in the OMS; black paint on the door and door frame in the OMS; red paint on the exterior of the Storage Building; and yellow paint on the exterior concrete parking blocks. SIA observed peeling paint surfaces in the OMS (**Appendix B** - photos 47, 55 and 56).	
4.6	Polychlorinated Biphenyls (PCB) Equipment	There are no transformers located on the Property. The servicing transformer is located to the west of the Property on commercial property. All fluorescent lighting at the Property is operated with non-PCB ballasts.	No	Yes	Interior and exterior light-emitting diodes (LEDs) were installed in 2016. A pad-mounted transformer is present on the southside of the AFRC Building. No markings were found on the transformer during the site inspection indicating that it contains PCBs (Appendix B - photo 7). According to Ms. Diann Shim, AFOS, the transformer was installed in 2007 and the	No

2006 ECP Report Section No.	2006 ECP Section Title	Previously Identified Condition	Previously Affect CERFA Category*? (Yes/No)	Condition Changed? (Yes/No)	Current Condition	Currently Affect CERFA Category?
					contractor who installed the transformer informed the AFOS that the transformer does not have PCBs (Appendix C).	
4.11	Radon	A radon screening conducted during the 1980s did not identify any radon gas concentrations in buildings on the Property above the screening criterion of 4.0 picocuries per Liter (pCi/L) (Mack 2006a).	No	No	An additional radon survey was conducted in 2009. Forty-six (46) survey locations at the Property did not include any sample containing radon with a concentration above 4.0 pCi/L. The sample results ranged from less than 0.4 to 1.9 pCi/L. The 2021 ERR indicates that the Property has a low propensity for radon and meets the screening criteria.	No
Not discussed in 2006 ECP Report.	Ozone-Depleting Chemicals (ODC)	Not discussed.	No	No	No change.	No
4.14.1	100-Year Floodplain	Review of the Federal Emergency Management	No	No	No change.	No

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		Administration (FEMA) flood plain maps for Ottawa County found that the Property is not located in the 100-year flood zone.				
4.14.3	Coastal Zone Management	The Property is not located in a coastal zone and is not affected by a coastal zone management plan.	No	No	No change.	No
4.14.2	Wetlands	A search of the U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps found no wetland areas on the Property or on the immediately adjoining properties.	No	No	No change.	No
4.14.7	Threatened and Endangered Species	There are no known federal or state threatened, endangered, or other sensitive species identified on Naval Reserve Center (NRC) Forest Park (Marin 2006b).	No	Yes	According to the USFWS' Information for Planning and Consultation (IPaC) report, the following species were identified within the general area of the Property: • one (1) threatened mammal (Northern Long-	No

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					eared Bat) • two (2) bird species [Piping Plover (endangered) and Red Knot (threatened)] • one (1) reptile [Eastern Massasauga (threatened)] • two (2) insects [Hine's Emerald Dragon (endangered) and Rattlesnake-master Borer Moth (candidate)] • four (4) flowering plants [Leafy Prairie-clover (endangered); Eastern Prairie Fringed Orchid, Mead's Milkweed, Prairie Bush-clover (threatened)] However, there are no critical habitats within the Property. None of the listed species were observed at the Property during the October 2019 and June 2021 site visits.	
4.15	Cultural Resources	Cultural resources at NRC Forest Park are federally regulated under the	No	No	Architectural inventories have been completed for this property (Section 110 Report;	No

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		National Historic Preservation Act (NHPA), Archaeological Resources Protection Act and the Native American Graves Protection and Repatriation Act. The buildings at the NRC Forest Park are not listed in the National Register of Historic Places (NRHP 2006). It does not appear that the buildings meet the NHPA criteria, but because the AFRC Building was constructed in 1955 and is older than 50 years, a cultural resource survey needs to be completed to confirm its historic status. There are no known archeological resources identified on NRC Forest Park (Marin 2006b). There are no known Native American graves identified			Spencer and Tish 2000), with the buildings determined to not be eligible for the NRHP. The building inventory was re-submitted to the Illinois State Historic Preservation Office (SHPO) in 2009 and concurrence was received on the findings. However, Building LL203 (former Navy property, constructed 1964) was not included in the Section 110 inventory and is now 50 years of age. The 88th RD has been planning to re-evaluate the buildings in 2022. Additionally, due to previous disturbance, the Property was considered to have low potential to contain archaeological deposits.	

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		on NRC Forest Park (Marin 2006b).				
Not discussed in 2006 ECP Report	Petroleum Release	None.	No	Yes	According to Ms. Diann Shim, AFOS, and Ms. Andrea Pawlik, AEPS, no petroleum releases have occurred at the Property (**Appendix C**, Interviews). As discussed in section 5.2 of this ECP-U report, there are two (2) conditions, which indicate potential release of petroleum products at the Property. 1. During the October 2019 site visit, SIA identified an abandoned gasoline powered mobile generator present near the former wash rack area. No visible signs of leaks or discoloration was observed around the generator. The gasoline tank attached to the generator was disintegrated. Based on	Yes

2006 ECP Report Section No.	2006 ECP Section Title	Previously Identified Condition	Previously Affect CERFA Category*? (Yes/No)	Condition Changed? (Yes/No)	Current Condition	Currently Affect CERFA Category?
					the condition and capacity of the gasoline tank, the potential for a spill or release of gasoline at some point of time cannot be excluded. 2. Potential of release of #2 heating oil from the former UST at the Property prior to its removal in 1991.	
Not discussed in 2006 ECP Report	Hazardous Substance Release	None	No	No	According to Ms. Diann Shim, AFOS, and Ms. Andrea Pawlik, AEPS, no hazardous substance releases have occurred at the Property (**Appendix C**, Interviews).	No
Adjacent Properties						
Not discussed in 2006 ECP Report	Petroleum Release	Not identified.	No	Yes	According to the 2021 ERR, two (2) Leaking Underground Storage Tank (LUST) incidents related to gasoline release occurred on two (2) adjacent facilities, located across from Hannah Avenue. No Further Action (NFA)	No

2006 ECP Report Section No.	2006 ECP Section Title	Previously Identified Condition	Previously Affect CERFA Category*? (Yes/No)	Condition Changed? (Yes/No)	Current Condition	Currently Affect CERFA Category?
					letters were issued.	
None.	Hazardous Substance Release	No	No	No	No adjacent properties with hazardous substance releases are listed in the 2021 ERR.	No

*CERFA category is equivalent to ECP Type and therefore, interior conditions that do not result in disposal/release to the environment do not affect the category.

As part of the ECP-U scope of work, SIA reviewed the Property documents, the June 2021 EDR Report, the December 2021 ERR, conducted site inspections on 17 October 2019 and 03 June 2021 (ECP-U site visits), and interviewed 88th RD personnel including Ms. Diann Shim, AFOS, and Ms. Andrea Pawlik, AEPS. In accordance with ASTM D5746-98 (2016), Standard Classification of Environmental Condition of Property Area Types for Defense Base Closure and Realignment Facilities, it is recommended that the Property be classified as ***ECP Area Type 2***, defined as *"an area or parcel of real property where only the release or disposal of petroleum products or their derivatives has occurred."*

This classification was selected based on the potential for spill or release of #2 heating oil associated with the former heating oil UST of 15,000-gallon capacity and the historic use of petroleum products and their derivatives at the Property, including regular vehicle maintenance since 1955. Although #2 heating oil USTs are not regulated and there are no documents indicating a leak or release associated with the former UST, based on the age of the tank (at least 40 years at the time of removal) there is a potential for release of petroleum products at the Property. These circumstances do not qualify as RECs; however, they preclude the selection of a Type 1 classification. This recommended classification does not include categorizing the Property based on *de minimis* conditions that generally do not present material risk of harm to the public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The above is only a recommendation. In accordance with §15-5.e of AR 200-1, the Garrison Commander (or equivalent) is responsible for determining the appropriate ECP category for a Property being transferred based on the results of the ECP-U Report and actions taken to address contamination.

1.0 INTRODUCTION

SIA Solutions, LLC (SIA) under contract to the United States Army Corps of Engineers (USACE) Louisville District (USACE-LRL), acting for the Army Reserve Installation Management Directorate (ARIMD), has prepared this Environmental Condition of Property Update (ECP-U) Report for the Forest Park Armed Forces Reserve Center (AFRC), hereafter referred to as the "Property." The Property is located at 7402 W. Roosevelt Road, Forest Park, Illinois (IL) 60130 (**Appendix A,** Figures 1-5). According to the Cook County Property Appraiser, the address for the Property is listed as 7410 W. Roosevelt Road, Forest Park, Illinois (IL) 60130. The Property consists of 6.56 acres of land improved with three (3) buildings and associated parking areas: a 76,201-square foot (sf), two-story building AFRC Building (LL201), a 6,528-sf Organizational Maintenance Shop (OMS) (i.e., Organizational Storage Building) (LL202), a 1,846-sf Storage Building (i.e., General Purpose Storage Building) (LL203), and 21,085-sf of paved parking areas (i.e. Organizational and Non Organizational Vehicle Parking areas).

The U.S. Department of the Army (Army) leased and occupied 27,762 sf of the Property from the U.S. Navy (Navy) in November 1985. The Army utilized the east side of the AFRC Building, the OMS and the parking area for administration, training and logistics, military equipment parking (MEP), minor vehicle maintenance and for storage purposes (**Appendix D**, 2006 Environmental Condition of Property Report [ECP] Report). Through the 31 July 2007 Transfer and Acceptance of Military Real Property document, the Property, formerly known as the Naval Reserve Center (NRC), was transferred to the Army. The Army assumed all responsibilities of the Property, including environmental compliance, investigations, remediation of disposal areas, spills, or storage of waste materials, whether disclosed in the 2006 ECP Report or discovered in the future. The Army shall notify the Navy if the Property is no longer needed for the Army's mission. Following the notification, the Navy will request return of the Property (**Appendix D**, 2007 DD Form 1354).

The primary purpose of an ECP-U is to identify potential environmental liabilities associated with a property, especially those associated with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended. The ECP-U also reviews and documents essentially every environmental consideration of a property across the spectrum of environmental regulations. This ECP-U Report is required because of the amount of time that has passed since the 2006 ECP Report was prepared.

This ECP-U Report was prepared in conformance with 42 U.S. Code (USC) § 9620 (h) for ECP Area Type 2, and 42 USC § 9620 (h) for all other area types, as well as Army Regulation (AR) 200-1 (2007), and in general conformance with the following standards:

- ASTM International (ASTM) D6008-96 (2014), *Standard Practice for Conducting Environmental Baseline Surveys.*
- ASTM E1527-13 (2013), *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process,* paragraphs 4.6-4.8 regarding viability of an Environmental Site Assessment (ESA) and re-use of information from a prior ESA.
- ASTM D5746-98 (2016), *Standard Classification of Environmental Condition of Property Area Types for Defense Base Closure and Realignment Facilities.*

1.1 SCOPE OF SERVICES

The ECP-U Report scope of services for the 6.56-acre AFRC (IL027), includes the following activities.

- Conduct a visual inspection and take photographic documentation of the Property and any buildings, structures, equipment, pipe, pipeline, or other improvements on the Property, and a physical inspection of adjacent properties, to the extent permitted by owners or operators of such properties (see **Appendix B**).
- Document interviews with former personnel involved in operations on the Property, at minimum the Facility Manager, Regional Facility Operations Specialist, Area Facility Operations Specialist, and Regional/Area Environmental Protection Specialist, to verify the presence or absence of recognized environmental conditions (RECs) in connection with the Property. Document requests for information/documentation and documentation received to support any information/data gaps (see **Appendix C**).
- Search and review of previous reports and reviews, including any prior ECP Reports, Environmental Baseline Surveys (EBS), and Environmental Site Assessments (see **Appendix D**).
- Detailed review of regulatory databases [e.g., Environmental Data Resources (EDR) and Environmental Radius Report from NETRONLINE] to identify sources of contamination on the Property and on adjacent properties which could migrate to the Property during Army ownership (see **Appendix E**).
- Resumes of the environmental professionals are provided in **Appendix F**.

1.2 ASSUMPTIONS AND LIMITATIONS

The information obtained from individuals interviewed and prior environmental reports were considered to be accurate unless reasonable inquiries indicated otherwise. Conditions observed were considered representative of similar areas that were not accessible unless otherwise indicated. This ECP-U Report presents a summary of reasonably ascertainable information on the environmental conditions of, and concerns relative to, the land, facilities, and real property assets at the Property. Its findings are based on a record search of publicly available documents, a thorough review of reasonably ascertainable documents, a visual reconnaissance of the Property conducted on 17 October 2019 and 03 June 2021, and interviews with personnel knowledgeable about the Property and its history. Existing environmental assessment reports and historical documents were reviewed in support of this ECP-U.

All Property buildings and structures were visually inspected during the site reconnaissance on 17 October 2019 and 03 June 2021. The weapons vault and the hazmat storage building were not accessible during the October 2019 site visit; however, both areas were inspected during the June 2021 site visit. A visual reconnaissance of every interior space, with the exception of attics and crawl spaces, within each building was conducted. An asbestos containing materials (ACM) and lead-based paint (LBP) survey was conducted in 2009. An ACM Survey Update Report was completed by SIA's subcontractor MEC^X in August 2021. A Radiological Site Assessment Report (RSAR) was completed for the Property in December 2020.

2.0 PROPERTY HISTORY

The Property, formerly known as NRC, was part of the naval ordnance plant, which was active from 1942 to 1971. According to the February 2016 news article published by Forest Park Review, the American Can Company formed the Amertorp Corporation and was awarded the contract to build a torpedo plant on the former site of the Harlem Golf Club. During World War II, Amertorp was the main supplier of torpedoes to the Navy. The plans included constructing seven (7) brick houses for the naval officers who would oversee construction and operation of the plant. Ground was broken on 19 February 1942. The plant cost almost $17 million to build and had a capacity to manufacture 14 torpedoes a day. Its walls were six (6)-feet thick and it was further protected by guard towers on each corner. The plant was commissioned on 28 October 1942. During the war, the plant manufactured 9,000 torpedoes. The flags of Japanese ships sunk by Amertorp's torpedoes were displayed at the plant. At its peak, the plant employed 10,000 workers, many of them women. After the war, the plant continued to produce weapons for the Korean War and Vietnam War. It produced 146,000 rockets and five (5) million artillery fuses. The plant was decommissioned in 1971 and converted into a 360,000-sf shopping mall. A small remaining section of the original plant is the last trace of architect Albert Kahn's vision for protecting America during World War II (**Appendix D**, Forest Park Review 2016).

The 6.56-acre Property was redeveloped in 1955 with the AFRC Building, the OMS, two (2) storage buildings, parking areas, and pistol range building in the southern portion. The Army has occupied approximately 27,762 sf of the AFRC Building, along with the OMS, since November 1985. The pistol range was demolished in 2003. The Property also consisted of a wash rack with an oil-water separator (OWS) that was demolished in 2003 (**Appendix D**, 2006 ECP Report). The Property is located in a mixed residential and commercial zoned area. The Property is bounded by Hannah Avenue to the east, Roosevelt Road to the north, the Forest Park Mall to the west, and a U.S. Postal Warehouse to the south (**Appendix A**, Figure 2).

According to the 2007 Transfer and Acceptance of Military Real Property document (2007 DD Form 1354), the Property comprised two (2) contiguous parcels of land that were acquired by reassignment and transfer from the Naval Ordnance Station, Forest Park, IL. The parcels, comprising 77.79 acres, originally formed part of Civil No. 48066, filed in the District Court of the U.S. for the Northern District of Illinois on 24 December 1941, and amended on 18 March 1942. Approximately 57.29 acres were transferred to the U.S. Postal Service on 23 June 1971, and 13.942 acres were conveyed to the Teacher's Retirement System of the State of Illinois on 14 December 1990. The Navy owned the remaining 6.56-acres until the Property maintenance responsibilities were transferred to the Army on 2 August 2007 (**Appendix D**, 2007 DD Form 1354).

Interpretation of Aerial Photographs 1938-2017

The EDR Aerial Photo Decade Package (**Appendix E**) contains aerial photographs from 1938 to 2017 that depict development of the Property and its surrounding areas. The 1938 aerial photograph shows the Property as a golf course. There are no structures located on the Property. Urban development is observed to the north, south, and east of the Property.

The 1951 photograph shows significant increase in development on and around the Property. The Property now has multiple parking areas and a building. South and west of the Property, large office buildings and associated roads and driveways have been built. This photograph depicts that the Property is connected via driveways with the Amertorp ordnance facility located to the

west and south of the Property. The Property layout appears to be different than the current layout. A tree line borders the north, east, and south sides of the southern half of the Property.

The 1962 photograph shows the AFRC Building, the OMS, the former pistol firing range, and associated parking areas. Increased development has occurred on all sides of the Property. Buildings are located on all adjacent properties. Residential and commercial development has increased along all roadways.

The 1972 photograph shows the Property's development has not changed. There is additional development on the adjoining property south of the Property. The adjoining properties are shown much as they were in the 1964 aerial photograph. Development can be seen along major roadways. Development is present in all directions from the Property.

The 1983 to 2017 photograph shows an additional parking area to the south of the Property, but other development in the area has not changed significantly from 1983.

2.1 REVIEW OF PREVIOUS ENVIRONMENTAL REPORTS

Appendix A of the 2006 ECP Report lists all the reports and sources utilized to prepare the ECP (**Appendix D**, 2006 ECP Report). The following records and reports (**Appendix D**) were made available for this 2021 ECP-U report.

- **IL027 NEPA Documents (NEPA 1979-1981).** This document contains multiple letters and other documents outlining the Property's National Environmental Policy Act (NEPA) actions from 1979-1981. These relate to stationing personnel or offices as well as the development of the land at the Property. It also includes a Utility and Site Plan (date not legible), which depicts the areas occupied by the Army and Navy, the 15,000-gallon former heating oil UST, the Navy's former pistol range, electrical and communication lines, the storm and sanitary sewer drainage network, and the parking areas. Approximately, 10% of the energy needs for the Property was met by #2 heating oil stored in the former UST.
- **United States Army Toxic and Hazardous Materials Agency (USATHAMA) Waste Site Characterization Study, U.S. Army Property Waste Site Summary (August 1990).** This document outlines the Property, its location, its uses, and associated wastes generated**.** It indicates that the Navy owned the Property and is responsible for the tanks, utilities and the firing range. Most of the Army Reserve's maintenance was occurring at the Orland Park Area Maintenance Area 45. It also records the presence of a grease rack (site 1) and petroleum, oil and lube (POL) room as site 2 with a total quantity of ten (10) gallons. The grease rack was described as containing a wooden rack over concrete with no drain, curb, or containment. The grease rack was inactive before 1981, so was not evaluated.
- **Internal Environmental Assessment of Forest Park Armed Forces Reserve Center (1995).** This document provides an overview of the internal environmental assessment conducted at the Property. It outlines the following negative findings: the switch for the exhaust fan to the flammable material storage room is located inside the room rather than outside the door. Periodic inspections of the stormwater drainage system are the

responsibility of the Navy. It lists the following positive findings, which were formerly negative:

- Waste oil, which was improperly stored, was removed;
- The facility has spill kits in the OMS and has trained personnel to respond to any spills;
- The contractor (Safety Kleen) has been contracted to provide waste management (including solvents) and used oil recycling for recycling;
- All flammable and combustible materials are stored properly in cabinets in the OMS with "No Smoking" signs and fire extinguishers nearby;
- Oxygen tanks formerly found to be unsecured in the boiler room have been removed; Spill Prevention Control and Countermeasures Plan (SPCCP) and Installation Spill Contingency Plan (ISCP) are readily available;
- Periodic spill response exercises are conducted;
- A radon test was conducted by the environmental office of Fort McCoy with no readings above the USEPA action level;
- The use of pesticides by onsite personnel is not occurring;
- The facility does not require an Installation Compatible Use Zone (ICUZ) since they do not conduct live fire; and
- The facility has a mitigation and monitoring plan for aircraft operations or any other sources of excessive noise overseen by the Navy, which is the custodial organization.

- **Illinois Section 110 Inventory for the 88th Regional Support Command, Fort McCoy Cultural Resources Management Series (2000).** One (1) cultural resource investigation was conducted within the facility. This investigation included an architectural survey and archaeological reconnaissance (Spencer and Tish 2000), but no National Register of Historic Places (NRHP) eligible cultural resources were identified. Constructed in 1955, the Administration (LL201) and OMS (LL202) buildings were determined not eligible for the NRHP, as they were not yet 50 years of age. The building inventory was re-submitted to the State Historic Preservation Office (SHPO) in 2009 and concurrence was received on the findings. Additionally, Building LL203 (constructed in 1964) had not yet been obtained by the USAR and was thus not evaluated. The 88th RD has been planning to re-evaluate the buildings in 2022 The archaeological assessment determined that, due to previous ground disturbance on the property, the potential for sites was low.
- **Environmental Condition of Property Report for the Naval Reserve Center, Forest Park Illinois (May 2006).** The ECP Report prepared by the Navy to document the environmental conditions of the Property, focusing on hazardous substances or other regulated hazards. The ECP was used to determine if hazardous substances stored for one (1) year or more were released into the environment or structures, or disposed of on

the Property selected for transfer. The ECP stated that it is not intended to identify uncontaminated property in compliance with the Community Environmental Response Facilitation Act (CERFA) and DoD Policy. The ECP did not identify RECs but identified the presence of two (2) environmental concerns on the Property, including the presence of ACM and LBP.

- **Final Sanitary and Storm Sewer Video Inspection Report (July 2009).** MWH Americas, Inc. (MWH) conducted a video inspection of the storm and sanitary sewer system at the Property. The purpose of the inspection was to determine the condition and location of the sewers, outfalls, cross connections in the sewer system, and to provide repair recommendations for any defects that may exist at the Property. Based on the survey, several localized pipe defects were found in the inspected sanitary and storm sewer system at the Property. The report recommended periodic inspection, maintenance, and repair of the sanitary and storm sewer system at the Property. A majority of the catch basins could not be accessed as they were sealed to the rims. The report recommended that all catch basins at the site be opened, cleaned of debris / sediment, and inspected.

- **Asbestos, Polychlorinated Biphenyl, Lead-Based Paint, and Radon Survey Report for IL027 Forest Park Armed Forces Reserve Center (December 2009).** CH2M HILL conducted an Asbestos Survey at the Property. At the AFRC Building, the CH2M HILL team's asbestos inspector identified 19 homogeneous areas with suspect ACM. Fifty-seven (57) samples were collected and analyzed by polarized light microscopy (PLM) for asbestos content. The survey confirmed ACM in mastic in much of the tiling within the AFRC Building, as well as in elbow insulation through the building above hallways and in ceilings and mechanical rooms. The mastic was found to be in good or fair condition, while the elbow insulation was found to be friable and in poor condition. The survey also identified presumed ACM in the AFRC in the sink in room 261 and the fire doors in the stairwells. This sink is believed to be made of transite, which, until the mid-1980s, contained asbestos. Asbestos was commonly used in fire doors.

  At the OMS, the CH2M HILL team's asbestos inspector identified two (2) homogeneous areas with suspect ACM. Six (6) samples were collected and analyzed by PLM for asbestos content. There was no confirmed or presumed ACM in the OMS.

  At the Storage Building, the CH2M HILL team's asbestos inspector identified one (1) homogeneous area (HA) with suspect ACM. Three (3) samples were collected and analyzed by PLM for asbestos content. The survey confirmed ACM in the OMS in window caulking observed on the interior windows. There are three (3) layers of window caulking, all of which are ACM. This non-friable ACM was found to be in fair condition.

  Based on survey observations and the sample analytical results, the CH2M HILL team did not identify any areas containing LBP on the interior or exterior of the AFRC Building and identified the gray paint on a beam and the black paint on the door and the door frame in the OMS as LBP. Additionally, the red paint on the exterior of the Storage Building and the yellow paint on the exterior concrete parking blocks are LBP.

- **Record of Environmental Consideration: 2011-0127, Repair or Replace Existing Transformer, 88th RSC (now known as RD).** This document identified the presence of hazardous materials at the Property for appropriate and safe handling, management, and disposal during the transformer replacement operations. The document indicated the presence of confirmed and presumed ACM and LBP at the Property. The light ballasts present at the Property do not contain PCBs; however, the exterior transformer is presumed to contain PCBs.

  There is a potential for disturbance of ACM during the transformer replacement activity. The contractor will sample and analyze and/or provide documentation (via safet data sheets or knowledge) to verify that materials to be disturbed do not contain ACM. If sampling for ACM is positive or activities disturb known ACM, the contractor is responsible for complying with all federal, state, and local laws and regulations related to asbestos handling and abatement disposal procedures. Copies of disposal manifests will be provided to the 88th RSC.

  An exterior transformer will be replaced as a part of the proposed project. In general, exterior transformers at this facility are presumed to contain PCBs due to lack of information. If the transformer is observed to be leaking prior to the removal and replacement, it should be handled and disposed of in accordance with all applicable laws and regulations.

- **Information for Planning and Consultation (2019)**. This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as trust resources) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the Property. According to the Information for Planning and Consultation (IPaC) report, the following species were identified within the general area of the Property:
  - One (1) mammal (Northern Long-eared Bat [threatened]);
  - two (2) bird species (Piping Plover [endangered] and Red Knot [threatened]);
  - one (1) reptile (Eastern Massasauga [threatened]);
  - two (2) insects (Hine's Emerald Dragon [endangered] and Rattlesnake-master Borer Moth [candidate]);
  - four (4) flowering plants (Leafy Prairie-clover [endangered]; Eastern Prairie Fringed Orchid, Mead's Milkweed, Prairie Bush-clover [threatened]).

  However, there are no critical habitats within the vicinity of the Property. None of the listed species were observed at the Property during the October 2019 and June 2021 site visits.

- **Annual Drinking Water Report for Calendar Year 2016 (Forest Park 2016, 2017 and 2018).** According to the 2018 Annual Drinking Water Report for Forest Park, IL, no measured analytical parameters were found to be in violation of regulatory standards.

- **Radiological Site Assessment Report (December 2020).** A review of historical documentation and interviews by Plexus Scientific Corporation determined that it was likely that a small number of night vision goggles and weapon scopes were stored at the Property. Plexus posited a low probability of residual radioactive contamination based on the lack of evidence of misuse, improper disposal, or improper storage of radioactive materials, coupled with standard protocols for management, control, and reporting of radioactive material use.

  Measurement of the weapons vault and storage cages, which were deemed the most likely storage locations for radioactive materials, did not detect residual radioactivity above the normal background radiation levels at the Property. The report concluded that the Property may be considered radiologically non-impacted and is eligible for release for unrestricted use.

- **Asbestos-Containing Material Survey Update Report (Final) (August 2021).** MEC^X, under contract to SIA, identified 23 HAs not previously identified as suspected ACM. During the November 2020 inspection, MEC^X confirmed the following nine (9) additional areas as ACM:
  - HA-025: Green/gray 12” x 12” floor tile with black streaks and associated black or yellow mastic (AFRC Building – Rooms 187, 202 and 263, maintenance closet by Room 189, and Southwest hallway on 2nd floor); approximately 1,150 sf, 1%-2% Chrysotile in floor tile and 1%-2% in black mastic.
  - HA-026: Black and gray 12” x 12” floor tile and associated black mastic (AFRC Building – Rooms 190 and 194); approximately 940 sf, 2%-4% Chrysotile in black mastic.
  - HA-027: Black and gray 9” x 9” intermixed floor tiles and associated black mastic (AFRC Building – Room 198); approximately 275 sf, 2%-4% Chrysotile in black mastic.
  - HA-031: Brown and white 9” x 9” intermixed floor tiles and associated black mastic (AFRC Building – Room 116); approximately 520 sf, 1%-2% Chrysotile in floor tile and 1%-4% in black mastic.
  - HA-032: Light brown 9” x 9” floor tile with orange and tan streaks and associated black mastic (AFRC Building – Room 260 and 2nd floor former Rooms 243 and 246); approximately 1,180 sf, 2%-3% Chrysotile in floor tile and 2%-3% in black mastic.
  - HA-033: White 12” x 12” floor tile with black and gray mottling and associated black mastic (AFRC Building – Rooms 202E, 257, 262, 264, 266, 268 and 271); approximately 2,460 sf, 1%-2% Chrysotile in black mastic.
  - HA-034: Gray floor tile with orange streaks and associated black mastic (AFRC Building – Room 255); approximately 370 sf, 2%-3% Chrysotile in floor tile and 2%-3% in black mastic.

- HA-035: White 12" x 12" floor tile with gray mottling and associated yellow mastic over light brown 9" x 9" floor tile with orange and tan streaks and associated black mastic (AFRC Building – Room 260); approximately 100 sf, 2%-3% Chrysotile in floor tile and 2%-3% in black mastic.
- HA-036: Dark gray 12" x 12" floor tile with black and gray streaks and associated black mastic (AFRC Building – Room 253); approximately 390 sf, 1%-2% Chrysotile in black mastic.

The December 2009 report identified two (2) HAs that are assumed ACM:

- HA-023: Fire doors (AFRC Building); approximately 17 doors.
- HA-047: Transite sink (AFRC Building – Room 260); one (1) sink.

During the November 2020 re-inspection and assessment following the re-inspection, MEC^X identified one (1) additional HA that is assumed ACM:

- HA-045: Mudded pipe fittings (OMS – interior); approximately nine (9) fittings.

Changes In Conditions of ACM Since the 2009 Report

Of the 2" pipe elbow insulation (HA-018) observed in the AFRC Building, no fittings were in poor condition as stated in the previous report. However, a damaged 12" beige drainpipe elbow insulation (HA-019) was observed, contrary to the previous condition assessment of fair. MEC^X was unable to locate HA-015: Gray, beige and off-white window caulk during the November 2020 re-inspection. HA-045: mudded pipe fittings (OMS – interior) requires a special operation and maintenance (O&M) plan and further assessment by certified personnel. Its removal should be scheduled as part of regular facility maintenance. In the 2009 report, this material is stated to be in the OMB but on the figures is shown in the OMS building. MEC^X did not observe window caulking in either of these buildings. In the locations that were indicated in the 2009 report and figures, there were no windows.

The 2021 ACM Survey Update Report recommended, for the majority of the HAs, continuing with special operations and maintenance using certified personnel until major renovation or demolition requires removal or until assessment factors change. For HA-018: 2" pipe elbow insulation (AFRC Building – above ceilings, hallway, mechanical rooms) and HA-019: 12" beige drainpipe elbow insulation (AFRC Building – 2nd floor), limiting access or removal actions as soon as possible were recommended.

- **Office of the Illinois State Fire Marshal (OSFM), Division of Petroleum & Chemical Safety, UST Search: Facility Details for Naval Reserve Center (June 2021).** According to the OSFM's database, a 15,000-gallon UST was closed and removed on 01 January 1991 from the Property. The UST's owner is indicated as the NRC and its regulated status as "Exempt". The tank was last used in 1902, which is inaccurate as the building at the Property was built in 1955. According to the Army's Utility and Site Plan (drawing date not legible), the UST was located in the open area between the buildings, east of the boiler

room. There is no additional information regarding the tank's integrity or release of heating oil into the ground at the time of removal.

3.0 INTERVIEWS

SIA interviewed the following key personnel to support the reassessment of environmental conditions. Ms. Diann Shim and Ms. Lisa Gulbranson (Contractor, 88th RD, Environmental Protection Specialist [EPS], lisa.gulbranson.ctr@mail.mil) were present onsite during the October 2019 and June 2021 site visits. Interviews with the key personnel indicated that there have been no changes to the condition of the Property that would cause an environmental concern. A copy of the compiled interview questionnaire is included in **Appendix C**.

Ms. Diann Shim, Contractor, 88th RD, Directorate of Public Works, Area Facility Operations Specialist (AFOS), diann.m.shim.ctr@mail.mil, (719) 366-4564.

- Ms. Andrea E. Pawlik, Contractor, Area Environmental Protection Specialist (AEPS), 88th RD, via telephone on 29 October 2019 and 30 June 2021, andrea.e.pawlik.ctr@mail.mil, (317) 531-6102.

4.0 REVIEW OF REGULATORY INFORMATION

A component of the ECP-U is the review of all reasonably obtainable federal, state, and local government records for the Property and surrounding properties, where there has been a release or likely release of any hazardous substance or any petroleum product that is likely to cause or contribute to a release or threatened release of any hazardous substance or any petroleum product on the federal real Property. A regulatory database summary was acquired from Environmental Data Resources, Inc. (EDR) on 15 June 2021. The regulatory database summary consolidates standard federal, state, local, and tribal environmental record sources based on ASTM D6008-96 (2014) recommended minimum search distances from the Property. A copy of the complete EDR Radius Map with GeoCheck® (2021 EDR Report) is included in **Appendix E**. "High Risk" properties are those that exhibit significant environmental conditions that have the probability of adversely affecting the environmental conditions at another site.

To meet the User Responsibility requirements ("All Appropriate Inquiries" Final Rule [40 C.F.R. Part 312.20]), SIA obtained the Environmental Radius Report (ERR) for the Property from NETRONLINE on December 3, 2021. The ERR did not identify the Property in any databases that were not previously identified in the June 2021 EDR Report. The sites adjacent to the Property were also not identified in any additional databases. A copy of the complete ERR is included in **Appendix E**.

4.1 FEDERAL ENVIRONMENTAL RECORDS

The 2006 ECP report did not include a previous EDR report to allow for comparison. The regulatory information presented in **Table 4-1** was obtained from the EDR's Federal regulatory database search report. Bold database entries indicate findings that were identified on the Property or surrounding properties and are further discussed in the sections below.

TABLE 4-1. FEDERAL ENVIRONMENTAL RECORDS

Database	Search Distance (miles)	Property	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	Total
NPL	1.0	0	0	0	0	0	0
Proposed NPL	1.0	0	0	0	0	0	0
NPL LIENS	1.0	0	0	0	0	0	0
Delisted NPL	1.0	0	0	0	0	0	0
FEDERAL FACILITY	0.5	0	0	0	0	NR	0
SEMS	0.5	0	0	0	0	NR	0
SEMS-ARCHIVE	0.5	0	0	0	0	NR	0

Database	Search Distance (miles)	Property	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	Total
CORRACTS	**1.0**	**0**	**0**	**0**	**1**	**0**	**1**
RCRA TSDF	0.50	0	0	0	0	NR	0
RCRA LQG	0.25	0	0	0	NR	NR	0
RCRA SQG	0.25	0	0	0	NR	NR	0
RCRA VSQG	**0.25**	**1**	**2**	**1**	**NR**	**NR**	**4**
LUCIS	0.50	0	0	0	0	NR	0
US ENG CONTROLS	0.50	0	0	0	0	NR	0
US INST CONTROL	0.50	0	0	0	0	NR	0
ERNS	TP	0	NR	NR	NR	NR	0
FINDS	**TP**	**1**	**NR**	**NR**	**NR**	**NR**	**1**
UXO	**1.0**	**0**	**0**	**1**	**0**	**0**	**1**
DOD	1.0	0	0	0	0	0	0
FUDS	**1.0**	**0**	**0**	**0**	**1**	**0**	**1**
CONSENT	1.0	0	0	0	0	0	0
ROD	1.0	0	0	0	0	0	0
UMTRA	0.50	0	0	0	0	NR	0
US MINES	0.25	0	0	0	NR	NR	0
ABANDONED MINES	0.25	0	0	0	NR	NR	0
TRIS	TP	0	NR	NR	NR	NR	0
TSCA	TP	0	NR	NR	NR	NR	0
FTTS	TP	0	NR	NR	NR	NR	0
HIST FTTS	TP	0	NR	NR	NR	NR	0

Database	Search Distance (miles)	Property	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	Total
SSTS	TP	0	NR	NR	NR	NR	0
ROD	1.0	0	0	0	0	0	0
ICIS	TP	0	NR	NR	NR	NR	0
PADS	TP	0	NR	NR	NR	NR	0
MLTS	TP	0	NR	NR	NR	NR	0
DOCKET HWC	TP	0	NR	NR	NR	NR	0
FUELS PROGRAM	0.25	0	0	0	NR	NR	0
ECHO	**TP**	**1**	**NR**	**NR**	**NR**	**NR**	**1**
RADINFO	TP	0	NR	NR	NR	NR	0
DOT OPS	TP	0	NR	NR	NR	NR	0
RAATS	TP	0	NR	NR	NR	NR	0
RMP	TP	0	NR	NR	NR	NR	0
UIC	TP	0	NR	NR	NR	NR	0
DRYCLEANERS	0.25	0	0	0	NR	NR	0
INDIAN RESERV	1.0	0	0	0	0	0	0
FUSRAP	1.0	0	0	0	0	0	0
SCRD DRYCLEANERS	0.50	0	0	0	0	NR	0
Financial Assurance	TP	0	NR	NR	NR	NR	0
LEAD SMELTERS	TP	0	NR	NR	NR	NR	0
AIRS	TP	0	NR	NR	NR	NR	0
US AIRS	TP	0	NR	NR	NR	NR	0
ASBESTOS	TP	0	NR	NR	NR	NR	0

Database	Search Distance (miles)	Property	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	Total
BOL	**TP**	**1**	**NR**	**NR**	**NR**	**NR**	**1**
EPA WATCH LIST	TP	0	NR	NR	NR	NR	0
US FIN ASSUR	TP	0	NR	NR	NR	NR	0
COAL ASH EPA	0.50	0	0	0	0	NR	0
PCB TRANSFORMER	TP	0	NR	NR	NR	NR	0
COAL ASH DOE	TP	0	NR	NR	NR	NR	0
2020 COR ACTION	0.25	0	0	0	NR	NR	0
PRP	TP	0	NR	NR	NR	NR	0
MINES MRDS	TP	0	NR	NR	NR	NR	0
RCRA NonGen/NLR	**0.25**	**0**	**5**	**6**	**NR**	**NR**	**11**

Acronyms are defined in detail in the attached 2021 EDR Report, **Appendix E**.
TP= Property (Target Property); NA=Not Applicable; NL=Not Listed; NR=Not Requested at this Search Distance; **bold text**=finding present

The sections below provide a summary of the bolded databases identified in **Table 4-1**.

4.1.1 RCRA Corrective Action Activity

The Federal RCRA Corrective Action Activity (CORRACTS) database identifies hazardous waste handlers with the Resource Conservation and Recovery Act (RCRA) corrective action activity. The EDR Report identified one (1) property within 0.5-mile radius.

- ACME Resin Corps, 1401 S. Circle Avenue. EDR lists this facility's corrective action as "Determination of Need for an RFI, RFI is Not Necessary." This facility was not found in the 2021 ERR.

4.1.2 Formerly Used Defense Sites (FUDS)

This listing includes locations of Formerly Used Defense Sites (FUDS) properties where the USACE is actively working or will take necessary cleanup actions. The EDR Report identified one (1) property within a 0.5- mile radius.

- Naval Ordnance Station (Forest Park Mall), located at 7500 W. Roosevelt Road. The 117.13- acre site is currently known as the following: Forest Park Mall (owned by Teacher Retirement System of Illinois (TRS)); Chicago Bulk Mail Center (U.S. Postal Service); Naval and Marine Corps Reserve Training Center; and 86th Army Reserve Command Center. Its physical location is 7500 W. Roosevelt Road, Forest Park, Cook County. It is approximately eight (8) miles west of downtown Chicago in a heavily urbanized area. The plant was government owned and contractor operated for at least seven (7) years. The improvements included 27 permanent buildings and eight (8) temporary structures. The plant produced MK 15 torpedoes for the Navy from 1941 through at least 1944. This facility was not identified in the 2021 ERR.

4.1.3 Facility Index System/Facility Registry System Site

The Facility Index Systems/Facility Registry System (FINDS) Site List contains both the Property information and "pointers" to other sources that contain more detail. The 2019 EDR Report includes the following FINDS databases in this report: PCS (Permit Compliance System); AIRS (Aerometric Information Retrieval System); DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); FURS (Federal Underground Injection Control); C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes); FFIS (Federal Facilities Information System); STATE (State Environmental Laws and Statute); and PADS (polychlorinated biphenyls [PCBs] Activity Data System).

- According to the current 2021 EDR Report, the Property is located in the FINDS database under USEPA ID# IL0000009308. The Property was listed as a RCRA-CESQG and an Enforcement and Compliance History Online (ECHO) site in the FINDS database. No violations or evidence of releases were found in the Property's ECHO listing. Therefore, this condition does not affect the environmental condition of the Property. This database is not included in the 2021 ERR.

4.1.4 Unexploded Ordnance

This database includes a listing of potential unexploded ordnance (UXO) site locations.

- Naval Ordnance Station, Forest Park (OEW Review – Torpedo Production).

4.1.5 Enforcement & Compliance History Information

Enforcement & Compliance History Information (ECHO) provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

- According to the current 2021 EDR Report, the Property is identified as an ECHO location. However, the enforcement and compliance summary states that no violation was identified.

4.1.6 RCRA - Very Small Quantity Generators

RCRAInfo is USEPA's comprehensive information system, providing access to data supporting the RCRA of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the RCRA. Very small quantity generators (VSQGs) generate less than 100 kilograms(kg) of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-VSQG list, as provided by 2021 EDR Report, has revealed that there are four (4) RCRA-VSQG sites within approximately 0.25 miles of the target Property.

- Naval Reserve Center, located at 7410 W. Roosevelt Road (the Property)
- Army Reserve Center, located at 7402 W. Roosevelt Road (the Property)
- Unitech Auto Collision Center, located at 1313 S. Circle Avenue
- USPS Chicago Bulk Mail Center, located at 7500 W. Roosevelt Road

The 2021 ERR continues to identify the Property under this database. No violations are reported for the Property.

4.1.7 RCRA - Non Generators / No Longer Regulated

RCRAInfo is USEPA's comprehensive information system, providing access to data supporting the RCRA of 1976 and the HSWA of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the RCRA. Non-Generators do not presently generate hazardous waste. The 2021 EDR report identifies eleven (11) RCRA NonGen / NLR sites within approximately 0.25 miles of the target property:

- Walsh Press Co, located at 1222 S. Hannah Ave
- Sievert Electric SVC, located at 1230 S. Hannah Ave
- Blue Cab Co./M&C Motors, located at 7417 W. Roosevelt Rd
- Thiesse Plumbing Inc, located at 1223 Circle Ave
- Gleason Jerry Chevrolet, located at 1213 S. Circle Ave
- E and F Coach Parts Inc, located at 7535 Roosevelt Rd
- COMED Manhole, located at FILLMORE ST & Hannah Ave
- Chris Guillen Photographic, located at 1130 S. Marengo
- Naval Ordnance Station, located at 7600 W. Roosevelt Rd
- Forest Park Mall, located at 7600 W. Roosevelt Rd
- ACME Resin Corp, located at 1401 S. Circle Ave

This database is not included in the 2021 ERR.

4.1.8 Bureau of Land Inventory Database (BOL)

This database lists Bureau of Land inventory for facility information. Data results are cross-linked with all on-line database system applications from IEPA - Bureau of Land as well as USEPA FRS database.

- Only the Property was searched for in this database and it appears in BOL. No additional details are provided in the database.

This database is not included in the 2021 ERR.

4.2 STATE AND LOCAL ENVIRONMENTAL RECORDS

The regulatory information presented below was obtained from the June 2021 EDR state and local regulatory database search report. Sites identified by this database search are discussed in the following subsections. The December 2021 ERR does not identify the Property in any of the state and local databases that were not previously identified in the June 2021 EDR Report. The sites adjacent to the Property were also not identified in any additional databases.

TABLE 4-2. STATE AND LOCAL ENVIRONMENTAL RECORDS

Database	Search Distance (miles)	Property	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	Total
SSU	**1.0**	**0**	**0**	**0**	**0**	**1**	**1**
SWF/LF	0.50	0	0	0	0	NR	0
CCDD	0.50	0	0	0	0	NR	0
LF SPECIAL WASTE	0.50	0	0	0	0	NR	0
IL NPC	0.50	0	0	0	0	NR	0
LUST	**0.50**	**0**	**3**	**5**	**14**	**NR**	**22**
INDIAN LUST	0.50	0	0	0	0	NR	0
LUST TRUST	**0.50**	**0**	**0**	**0**	**2**	**NR**	**2**
FEMA UST	0.25	0	0	0	NR	NR	0
UST	**0.25**	**1**	**3**	**5**	**NR**	**NR**	**9**
AST	0.25	0	0	0	NR	NR	0

Database	Search Distance (miles)	Property	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	Total
INDIAN UST	0.25	0	0	0	NR	NR	0
CHICAGO ENV	TP	0	NR	NR	NR	NR	0
HMIRS	TP	0	NR	NR	NR	NR	0
SPILLS	TP	0	NR	NR	NR	NR	0
SPILLS 90	TP	0	NR	NR	NR	NR	0
COAL ASH	0.50	0	0	0	0	NR	0
HWAR	TP	0	NR	NR	NR	NR	0
IMPDMENT	0.50	0	0	0	0	NR	0
NPDES	TP	0	NR	NR	NR	NR	0
ENG CONTROLS	**0.50**	**0**	**1**	**2**	**0**	**NR**	**3**
INST CONTROL	**0.50**	**0**	**1**	**2**	**1**	**NR**	**4**
INDIAN VCP	0.50	0	0	0	0	NR	0
US BROWNFIELDS	0.50	0	0	0	0	NR	0
BROWNFIELDS	0.50	0	0	0	0	NR	0
PIMW	0.25	0	0	0	NR	NR	0
TIER 2	TP	0	NR	NR	NR	NR	0
SRP	**0.50**	**0**	**2**	**2**	**3**	**NR**	**7**
INDIAN ODI	0.50	0	0	0	0	NR	0
DEBRIS REGION 9	0.50	0	0	0	0	NR	0
ODI	0.50	0	0	0	0	NR	0
IHS OPEN DUMPS	0.50	0	0	0	0	NR	0

Database	Search Distance (miles)	Property	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	Total
US HIST CDL	TP	0	NR	NR	NR	NR	0
CDL	TP	0	NR	NR	NR	NR	0
US CDL	TP	0	NR	NR	NR	NR	0
TANKS	TP	0	NR	NR	NR	NR	0
LIENS 2	TP	0	NR	NR	NR	NR	0

Acronyms are defined in detail in the attached 2019 EDR Report, **Appendix E**.
NL=Not Listed; NR=Not Requested at this Search Distance; **bold text**=finding present

The sections below provide a summary of changes for the bolded databases identified in **Table 4-2**.

4.2.1 Leaking Underground Storage Tank

A review of the LUST list, as provided by the 2021 EDR Report, has revealed that there are 22 LUST sites within approximately 0.5 miles of the target Property. The sites are listed below, with five (5) sites that have yet to be closed. These sites pose some risk to the property, depending on the date of the spill and relative elevation and distance to the Property, see **Table 4-4** for more information.

- Jim's Phillips 66, located at 7400 W. Roosevelt Road
- Walsh Press Company, located at 1222 S. Hannah Avenue
- JLG Trucking, INC, located at 1313 Circle Avenue
- Illinois Department of Transportation (IDOT), Dist. #1, located at 7239 Roosevelt Rd. This location does not have a removal or closure date. The Illinois Emergency Management Agency (IEMA) entry shows that there was a spill of "other petroleum" products associated with this LUST on 6 October 2017. The last action taken was a review letter sent on 2 November 2017. SIA reached out to Mr. Bradley Dilbaitis, the project manager listed on the IEMA entry, to obtain additional information. Mr. Dilabitis shared that IDOT discovered the old tank when redeveloping an intersection. The incident was reported, but IDOT was not the owner or operator of the UST. IDOT submitted a letter indicating they were not owners or operators, and IEPA issued a letter stating that they were not responsible for the release just because they found it. The release is still open and the IEPA does not have any information about it.
- Lake Manawa, FP ILL LTD PART, located at 7200 West Roosevelt Road.
- U.S. Postal Service/Chicago Bulk Mail Center, located at 7500 West Roosevelt Rd

- AAMED Medical, located at 1215 S. Harlem Avenue
- Shell Oil Products US, located at 7143 W. Roosevelt Road
- Borden Chemical Inc., located at 1401 S. Circle Avenue
- ACME Resin Corp., located at 1401 S Circle Avenue. This location has one (1) active LUST. Additionally, a spill incident of non-petroleum products occurred on 17 August 1990. The last action report is receipt of the completed 45 Day Report.
- Borden Foundry & Ind. Resins, located at 1401 S. Circle Avenue
- Amoco Oil Co. #5391, located at 7410 W. Roosevelt Road
- Agency Graphics Inc, located at 1327 S. Harlem Avenue
- Berwyn Go, located at 1337 S. Harlem Avenue
- Northern Trust – Trust #2-97597, located at 1407 South Harlem Avenue. The location has one (1) LUST with an IEMA entry dated 2 February 2007. This incident is not closed. The last action was electing not to proceed under Title XVI form.
- West Suburban Bank, located at 7100 W. Roosevelt Road
- Dei Cugini, LLC, located at 1427 S. Harlem Avenue
- GC Real Estate, LLC, located at 949 S. Harlem Avenue. This location has one (1) LUST dated May 2015 that is not closed, with an IEMA entry #20150589.
- Forest Park Mobil, located at 949 S. Harlem Avenue
- 7 Eleven, Inc #26063, located at 7749 West Roosevelt Road. This location has one (1) incident in the LUST database dated 20 September 2019. The IEMA Spills database notes on that date that three (3) 10,000-gallon tanks were being removed “now” and that “environmental follow-up will be done.” There is no record of remediation or further survey of the site.
- Laborers Pension Welfare Fund, located at 1515 S. Harlem Avenue
- Apartment Building, located at 7720 Harvard

4.2.2 Leaking Underground Storage Tank Trust

In case sufficient funds are not available in the UST Fund, requests for payment are entered on the Payment Priority List by "queue date" order. As required by the Environmental Protection Act, the queue date is the date that a complete request for partial or final payment was received by the Agency. The queue date is "officially" confirmed at the end of the payment review process when a Final Decision Letter is sent to the site owner.

A review of the LUST Trust list, as provided by the 2021 EDR Report, has revealed that there are two (2) LUST TRUST sites within approximately 0.5 miles of the target Property.

- Berwyn Go, located at 1337 S. Harlem Avenue (see Section 4.2.1 above)
- Harlem Marathon, located at 1427 S. Harlem Avenue

4.2.3 UST – Registered Underground Storage Tanks

USTs are regulated under Subtitle I of the RCRA and must be registered with the State department responsible for administering the UST program. The data come from the Illinois State Fire Marshal's STC Facility List.

A review of the UST list, as provided by EDR and dated 01/20/2021, has revealed that there are nine (9) UST sites within approximately 0.25 miles of the target property.

- Naval Reserve Center, located at 7410 W. Roosevelt Road (the Property). This location had one (1) tank used to store heating oil. This UST is listed as closed. The tank was removed 16 January 1991. The EDR report does not indicate that any of these USTS reported any leakage or spills.
- V R Citgo, located at 7400 W. Roosevelt Road. This location has nine (9) registered tanks, two (2) of which are still present and in use. Five (5) USTs were used to store gasoline, one (1) motor oil, one (1) heating oil, one (1) used oil, and one (1) tank where the substance was not reported. Seven (7) of the tanks were removed, but two (2) gasoline USTs are currently in use. The EDR report does not indicate that any of these USTs reported any leakage or spills.
- Walsh Press Company, located 1222 S. Hannah Avenue. This location has one (1) UST, which was used to store heating oil. The tank was removed on 27 November 1995. According to the EDR Report, the location is listed as a LUST with an IEMA date of 29 November 1995, but the Illinois Environmental Protection Agency LUST Database confirms that a corrective action completion report was submitted 1 April 1996.
- JLG Trucking, Inc., located 1313 S. Circle Avenue. This location has four (4) USTs, three (3) of which were used to store heating oil and one (1) of which was used to store gasoline. Two (2) of the USTs storing heating oil and the UST used to store gasoline were removed on 5 March 1996, 19 August 2003, and 6 December 1995, respectively. According to the EDR Report, the location is listed as a LUST with a confirmed diesel spill reported to IEMA on 6 July 1995. A corrective action report was approved on 24 January 2007.
- IDOT Right-of-Way, Contract 61D26, located at 7239 W. Roosevelt Road. This location has two (2) USTs, both of which were used to store heating oil. Both tanks were removed on 6 October 2017. This location is listed as having LUST, however there is no additional information on the LUST in the EDR Report. The IEMA entry shows that there was a spill of other petroleum products associated with this LUST on 6 October 2017. The last action taken was that a review letter was sent on 2 November 2017. SIA reached out to Mr. Bradley Dilbaitis, the project manager listed on the IEMA entry to obtain additional information. Mr. Dilbaitis shared that "the IDOT discovered the old tank when redeveloping an intersection. The incident was reported, but IDOT was not the owner or operator of the UST. IDOT submitted a letter indicating they were not owners or operators, and IEPA issued a letter stating that they were not responsible for the release just because they found it." The release is still open and the IEPA does not have any additional information on it (see **Appendix D**).

- Betsy Ross School, located at 1325 Marengo Avenue has one (1) UST, used to store fuel oil. The tank is out of service and was last used on 1 August 1980. The EDR report does not indicate that any of these USTSs reported any leakage or spills.
- U.S. Postal Service / Chicago Bulk Mail Center, located at 7500 W Roosevelt Rd. This site has a total of 17 recorded USTs. Two (2) are abandoned in place in 1997, 13 were removed between 1986 and 2017, and two (2) are currently in use. The site is listed in the LUST database, with two IEMA dates in 1997 and one IEMA dated to 1998.
- Venture Store 63, located at 7600 W Roosevelt Rd. This site had one (1) UST that was removed in 1988.
- Borden Chemical Inc, located at 1401 S Circle Ave. This site has 23 USTs on record. Twenty-one were abandoned in place, two (2) in 1994 and 19 in 1998. Two (2) USTs were removed in 2002. It has one (1) LUST record with a 1994 IEMA date and a No Further Remediation Date in 2002.

The December 2021 ERR lists 40 sites within the 0.25-mile radius of the Property, which is 18 more than the 2021 EDR report. Based on the review of the ERR, these sites had unregulated heating USTs, which were either removed or abandoned in place. Therefore, these sites are unlikely impact the environmental condition of the Property.

4.2.4 Engineering Controls

Engineering Controls is a listing of sites with engineering controls (ENG CONTROLS) in place. ENG CONTROLS include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or affect human health.

A review of the ENG CONTROLS list, as provided by 2021 EDR Report, has revealed that there are three (3) ENG CONTROLS sites within approximately 0.5 miles of the target Property.

- Jerry Lee Golf, located at 1299 S. Circle Avenue
- Forest Park Mall, located at 7600 Circle Drive
- Borden Chemical, IN, located at 1401 Circle Drive

The 2021 ERR did not include this database.

4.2.5 Institutional Controls

Legal or administrative restrictions on land use and/or other activities (e.g., groundwater use restrictions) which effectively limit exposure to contamination may be employed as alternatives to removal or treatment of contamination.

A review of the institution controls (INST CONTROL) list, as provided by 2021 EDR Report, has revealed that there are four (4) INST CONTROL sites within approximately 0.5 miles of the target Property.

- Jerry Lee Golf, located at 1299 S. Circle Avenue
- Forest Park Mall, located at 7600 Circle Drive

- Borden Foundry, located at 1401 Circle Drive
- Salerno's Pizza and Pasta, located at 7128 W. Roosevelt Road

The 2021 ERR did not include this database.

4.2.7 Site Remediation Program

A review of the IEPA's Site Remediation Program (SRP) Database list, as provided by the 2021 EDR Report, has revealed that there are seven (7) SRP sites within approximately 0.5 miles of the target Property.

- Wendy's Restaurant, located at 7417 W. Roosevelt Road
- Jerry Lee Golf, located at 1399 S. Circle Avenue
- Forest Park Mall located at 7600 Circle Drive
- Borden Foundry, located at 1401 Circle Drive
- Salerno's Pizza and Pasta, 7218 W. Roosevelt Road
- NDA, Inc., located at 7043 W. Roosevelt Road
- Lakewood Carpentry Services, located at 1520 S. Hannah Avenue

The 2021 ERR identified 11 SRP sites within approximately 0.5 miles of the Property. However, the facility located at 7417 W. Roosevelt Road was listed four (4) times.

4.2.8 State Sites Unit Listing (SSU)

The State Response Action Program database identifies the status of all sites under the responsibility of the Illinois EPA's SSU. There is one (1) SSU site identified in the 2021 EDR Report within approximately one (1) mile of the target Property:

- Berwyn Development Corp, located at 7124-7150 Cermak Road

The 2021 ERR did not include this database.

4.3 EDR PROPRIETARY RECORDS

The regulatory information presented in **Table 4-3**, below, was obtained from EDR's Proprietary Records database search report (see **Appendix E**). According to the EDR Report, four (4) sites were located within the designated radius of the Property.

TABLE 4-3. EDR PROPRIETARY RECORDS

Database	Search Distance (miles)	Property	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	Total
US Hist Auto	**0.125**	**NL**	**2**	**NR**	**NR**	**NR**	**2**
EDR Hist Cleaner	0.125	NL	0	NR	NR	NR	0
EDR MGP	1.0	0	0	0	0	0	0
RGA HWS	TP	0	NR	NR	NR	NR	0
RGA LF	TP	0	NR	NR	NR	NR	0
RGA LUST	TP	0	NR	NR	NR	NR	0

Acronyms are defined in detail in the attached 2019 EDR Report, **Appendix E**.
NL=Not Listed; NR=Not Requested at this Search Distance; **bold text**=finding present

The sections below provide a summary of changes for the bolded databases identified in **Table 4-3**.

4.3.1 US Hist Auto

This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns but may not show up in current government records searches.

A review of the US Hist Auto list, as provided by EDR, has revealed that there are two (2) sites within approximately 0.125 miles of the Property.

- Perfection Auto Laundry, located 7405 W. Roosevelt Road
- Vinyard Kenneth, located 7400 W. Roosevelt Road

4.4 SUMMARY OF PROPERTIES EVALUATED TO DETERMINE RISK TO THE PROPERTY

To summarize Sections 4.1 through 4.3, twenty-five separate properties, in addition to the Property, were evaluated as potential risk properties to the Property. The properties evaluated were identified through area reconnaissance and regulatory database searches and are listed below in **Table 4-4**.

TABLE 4-4. SUMMARY OF PROPERTIES EVALUATED TO DETERMINE RISK TO THE PROPERTY

Company/Site Name	Database	Hydrogeologic Relation Relative to Property	Potential Risk to Property	Comment
Army/Naval Reserve Center	FINDS,ECHO, UST, BOL, RCRA-VSQG,	TP	None	The UST was removed on 16 January 1991. The Property has been listed as a RCRA-VSQG since September 1993. No violations have been found in the databases. This listing does not affect the condition of the Property.
Perfection Auto Laundry Inc	EDR HIST AUTO	Higher	None	No leaks or releases reported. This listing does not affect the condition of the Property.
V R Citgo	UST	Higher	None	This location has nine (9) tanks, two (2) of which are still in use. Five (5) USTs were used to store gasoline, one (1) motor oil, one (1) heating oil, one (1) used oil, and one (1) tank, where the substance was not reported. Seven (7) of the tanks were removed, but two (2), storing gasoline are still currently in use. The EDR report does not indicate that any of these USTs reported any leakage or spills. This listing does not affect the condition of the Property.
Jim's Phillips 66	LUST, SPILLS	Higher	None	This location had one (1) LUST; however, the incident received a no further remediation (NFR) letter on 5 November 1998. This listing does not affect

Company/Site Name	Database	Hydrogeologic Relation Relative to Property	Potential Risk to Property	Comment
				the condition of the Property.
Vinyard Kenneth	EDR HIST AUTO	Higher	None	No leaks or releases reported. This listing does not affect the condition of the Property.
Wendy's Restaurant	SRP	Higher	None	This site has one (1) SRP listed. The SRP has an NFR letter date of 3 April 2000. This listing does not affect the condition of the Property.
Blue Cab Co/M&C Motors	FINDS, ECHO, RCRA NonGen / NLR	Higher	None.	This site had one (1) SQG from 2003 until 2020, with no reported violations. This listing does not affect the condition of the Property.
Gleason Jerry Chevrolet	FINDS, ECHO, RCRA NonGen / NLR	Higher	None	This site had one (1) SQG from 1988 until 2019 with no reported violations. This listing does not affect the condition of the Property.
Walsh Press Co	FINDS, ECHO, LUST, UST, BOL, RCRA NonGen / NLR	Higher	None	This site had one (1) SQG from 1993 to 2020 with no reported violations. This location has one (1) UST, which was used to store heating oil. The tank was removed on November 27, 1995. According to the EDR Report, the location is listed as a LUST with an IEMA date of 29 November 1995, but the Illinois Environmental Protection Agency LUST Database confirms that a corrective

Company/Site Name	Database	Hydrogeologic Relation Relative to Property	Potential Risk to Property	Comment
				action completion report was submitted 1 April 1996. This listing does not affect the condition of the Property.
Thiesse Plumbing Inc	RCRA NonGen / NLR	Higher	None	This site had one (1) SQG from 1991 until 2019. There is no record of violations. This listing does not affect the condition of the Property.
Sievert Electric Svc and Sales Co	FINDS, ECHO, RCRA NonGen / NLR	Higher	None	This site had one (1) SQG from 1990 until 2019 There is no record of violations. This listing does not affect the condition of the Property.
ComEd	RCRA NonGen / NLR	Higher	None	This site had one (1) SQG from 2010 until 2019 There is no record of violations. This listing does not affect the condition of the Property.
Jerry Lee Golf	SRP, INST CONTROL, ENG CONTROLS	Higher	None	This site has one (1) SRP, one (1) INST CONTROL, and one (1) ENG CONTROLS listed. All three (3) were closed in May 2003. This listing does not affect the condition of the Property.
JLG Trucking, Inc.	LUST, UST, BOL	Higher	None	This location has four (4) USTs, three (3) of which were used to store heating oil and one (1) of which was used to store gasoline. Two (2) of the USTs storing

Company/Site Name	Database	Hydrogeologic Relation Relative to Property	Potential Risk to Property	Comment
				heating oil and the one (1) UST used to store gasoline were removed on 5 March 1996, 19 August 2003, and 6 December 1995, respectively. According to the EDR Report, the location is listed as a LUST with a confirmed diesel spill reported to IEMA on 6 July 1995. A corrective action report was approved on 24 January 2007. This listing does not affect the condition of the Property.
Unitech Auto Collision Ctr	RCRA-VSQG	Higher	None	This site has one (1) RCRA-VSQG since August 1980. No leaks or releases reported. This listing does not affect the condition of the Property.
Chris Guillen Photographic	RCRA NonGen / NLR	Higher	None	This site had one (1) SQG from 2007 until 2020, with no record of violations. This listing does not affect the condition of the Property.
IDOT- Right of Way, Contract 61d26/ IDOT District #1	UST, LUST	Higher	None	The incident occurred at 7239 Roosevelt Road. This location has two (2) USTs, both of which were used to storing heating oil. Both tanks were removed on 6 October 2017. This location is listed under LUST, however, there is no additional information available in the EDR Report. The IEMA entry

Company/Site Name	Database	Hydrogeologic Relation Relative to Property	Potential Risk to Property	Comment
				shows that there was a spill of other petroleum products associated with this LUST incident on 6 October 2017. The last action taken was that a review letter was sent on 2 November 2017. SIA reached out to Mr. Bradley Dilbaitis, the project manager listed on the IEMA entry, to obtain additional information. Mr. Dilbaitis shared that "IDOT discovered the leaking old tank when redeveloping the intersection. The incident was reported, but IDOT was not the owner or operator of the UST. IDOT submitted a letter indicating they were not owners or operators, and IEPA issued a letter stating that they were not responsible for the release just because they found it. The release is still open and the IEPA does not have any information on the status of the incident. Based on the location of the incident (downgradient of the Property), elevation and the presumed groundwater flow direction (which is indicated as east southeast in the EDR Report) this listing does not affect the condition of the Property.
E and F Coach	FINDS, ECHO, RCRA NonGen	Higher	None.	This site had one (1) SQG from 1993 until 2019, with

Company/Site Name	Database	Hydrogeologic Relation Relative to Property	Potential Risk to Property	Comment
Parts Inc	/ NLR			no reported violations. This listing does not affect the condition of the Property.
Betsy Ross School	UST	Higher	None	Betsy Ross School, located at 1325 Marengo Avenue. This location has one (1) UST, used to store fuel oil. The tank is out of service and was last used on 1 August 1980. The EDR report does not indicate that this USTs reported any leakage or spills. This listing does not affect the condition of the Property.
OEW Review - Torpedo Production	Unexploded Ordnance (UXO)	Higher	None	This site has one (1) UXO listed with the site ID 02OEW. The site is closed in 2007. This listing does not affect the condition of the Property.
Lake Manawa	LUST	Higher	None	This site has one (1) LUST containing other petroleum products. The LUST was determined non-lust on 28 March 1997. No leaks or releases reported. This listing does not affect the condition of the Property.
U.S. Postal Service/ Chicago Bulk Mail Center (BMC)	ECHO, FINDS, LUST, RCRA-VSQG, US-AIRS, UST	Higher	None	This site has three (3) LUSTs reported, two (2) of which held other petroleum products and a third (3rd) stored used oil. The one (1) storing used oil had a confirmed spill, but the site was remediated, and no further remediation is required as of February

Company/Site Name	Database	Hydrogeologic Relation Relative to Property	Potential Risk to Property	Comment
				2001. The other two (2) LUSTS were determined to be non-LUST in September 1997. This listing does not affect the condition of the Property.
Aamed Medical	LUST	Higher	None	This site has one (1) LUST which stored diesel. There was a confirmed spill in October 1991, but the Property was remediated, and no further remediation was required. The case was closed in November 1998. This listing does not affect the condition of the Property.
Naval Ordnance Station	RCRA NonGen / NLR	Higher	None	This site had one (1) SQG until 2009. The start of SQG operation is not recorded. There are no reported violations. This listing does not affect the condition of the Property.
Forest Park Mall	SRP, INST CONTROL, ENG CONTROLS, RCRA NonGen / NLR, FINDS, ECHO	Higher	None	This site has one (1) SRP, one INST CONTROL, and one ENG CONTROLS. The remediation was completed, and the case was closed in September 1999. It operated an SQG from 1999 until 2019, with no violations recorded. This listing does not affect the condition of the Property.
Shell Oil Products Us	LUST	Higher	None	This site has one (1) LUST, with a confirmed spill in 2005. The spill was remediated, and no further

Company/Site Name	Database	Hydrogeologic Relation Relative to Property	Potential Risk to Property	Comment
				remediation is required as of April 2010. This listing does not affect the condition of the Property.
Borden Chemical Inc	LUST, UST	Higher	None	This site has one (1) LUST and 23 USTs. The LUST was a non-petroleum product and occurred in May 1994, the case was closed in November 2002. Of the 23 USTs, 21 were abandoned in place and two (2) containing hazardous materials were removed. Of those abandoned in place, two (2) were empty, four (4) contained non-regulated substances, one (1) contained kerosene, two (2) contained Naphtha, 10 contained Hazardous Substances, and two (2) did not have a reported substance. The site is 900 feet from the south boundary of the Property and in the inferred groundwater down gradient. This listing does not affect the condition of the Property.
Acme Resin Corp	LUST, CORRACTS, RCRA NONGEN / NLR	Higher	None	This site is a RCRA NonGEN / NLR, has one (1) LUST, and one (1) CORRACTS. This location has one (1) active LUST. A spill incident of non-petroleum products occurred on 17 August

Company/Site Name	Database	Hydrogeologic Relation Relative to Property	Potential Risk to Property	Comment
				1990. The last action report is receipt of the 45 Day Report. This listing does not affect the condition of the Property.
Borden Foundry & Ind. Resins	LUST	Higher	None	This site has one (1) LUST listing, which included a spill of non-petroleum products. The case was closed November 2002. This listing does not affect the condition of the Property.
Borden Chemical, Inc. (2.2 Acres)	SRP, INST CONTROL, ENG CONTROLS	Higher	None	This site has one (1) SRP, one (1) INST CONTROL, and one (1) ENG CONTROLS listed. All three (3) were closed in February 2003. This listing does not affect the condition of the Property.
Amoco Oil Co. #5391	LUST	Higher	None	This site has one (1) LUST. The LUST contained gasoline and the case was closed in August 2001.This does not affect the condition of the Property.
Agency Graphics Inc	LUST, UST	Higher	None	This site has one (1) LUST and one (1) UST. The LUST contained other petroleum substances and the case was closed in February 1999. The site also has a UST storing heating oil, which was last used in 1973 and is therefore exempt. This listing does not affect the

Company/Site Name	Database	Hydrogeologic Relation Relative to Property	Potential Risk to Property	Comment
				condition of the Property.
Salerno's Pizza and Pasta	SRP, INST CONTROL	Higher	None	This site has one (1) SRP and one (1) INST CONTROL listed. These were closed in June 2014. This listing does not affect the condition of the Property.
Berwyn Go	LUST, LUST TRUST, UST	Higher	None	This site has two (2) LUST, one (1) LUST TRUST, and seven (7) USTs. The LUSTs both contained gasoline and had confirmed spills that were remediated and closed in August 2015. This listing does not affect the condition of the Property.
Northern Trust - Trust #2-97597	LUST	Higher	None	The location has one (1) LUST with an IEM entry dated 2 February 2007. This incident is not closed. The last action was electing not to proceed under Title XVI form. Due to the distance to the Property, this listing is not likely to affect the condition of the Property.
West Suburban Bank	LUST	Higher	None.	The location has one (1) LUST with a confirmed spill in April 1996. This was remediated and no further action was required after September 1997. This listing does not affect the condition of the Property.

Company/Site Name	Database	Hydrogeologic Relation Relative to Property	Potential Risk to Property	Comment
Dei Cugini, LLC	LUST, SPILLS	Higher	None	This location has two (2) LUSTs. Both contained gasoline and both were remediated and require no further action as of July 2018. Due to the distance of this LUSTs from the Property, it is not likely that this listing affects the condition of the Property.
Harlem Marathon	LUST TRUST, UST	Higher	None	This location has two (2) LUST TRUST and 10 USTs that store gasoline. Two (2) of the USTs are currently in use. Another two (2) tanks are marked as being entered in error. The other three (3) USTs were removed November and December 2015. Due to the distance to the Property this listing is not likely to affect the condition of the Property.
GC Real Estate, LLC	LUST, SPILLS	Higher	None	This location has one (1) LUST that is not closed, with an IEMA entry #20150589. The last action was miscellaneous correspondence on 6 March 2017. This listing does not affect the condition of the Property.
Forest Park Mobil	LUST, UST, BOL	Higher	None	This site has one (1) LUST that stored unleaded gasoline. There is a notice of release on the Property,

Company/Site Name	Database	Hydrogeologic Relation Relative to Property	Potential Risk to Property	Comment
				but the case was closed in March 2015. This listing does not affect the condition of the Property.
NDA, Inc.	SRP	Higher	None	The site has one (1) SRP enrolled in September 2001. The IL EPA ID is 310215119. The SRP is no longer active. This listing does not affect the condition of the Property.
Naval Ord Station, Forest Park	FUDS	Higher	None	This site is in the FUDS database. The site was owned by the U.S. and utilized to construct Naval ordnance in 1941 -1944. The American Can Company was the contractor/operator of this facility. This listing does not affect the condition of the Property.
Venture Store 63	UST	Higher	None	One UST was removed in 1988, with no associated violations. This listing does not affect the condition of the Property.
Lakewood Carpentry Services	SRP, BOL	Higher	None	This site has an SRP that is no longer active. It was enrolled in August 2007. This listing does not affect the condition of the Property.
7 Eleven, Inc #26063	LUST, SPILLS, ASBESTOS, BOL	Higher	None	This facility has one (1) incident recorded in September 2019. The report was of a leak assumed to be from one of

Company/Site Name	Database	Hydrogeologic Relation Relative to Property	Potential Risk to Property	Comment
				three 10,000-gallon tanks. The report stated that tanks were being removed and environmental follow-up planned. No further information was available. This listing does not affect the condition of the Property.
Laborers Pension Welfare Fund	LUST, RCRA NonGen / NLR, FINDS, ECHO	Higher	None	This facility does not generate hazardous waste. No violations were found in ECHO. This location also has a LUST that stored other petroleum products. The case was closed in February 1996. This listing does not affect the condition of the Property.
Apartment Building	LUST, UST, BOL	Higher	None	The location has one (1) LUST with an IEM entry dated 18 April 1997. The LUST contained heating oil and was removed on 18 April 1997. This listing does not affect the condition of the Property.
Berwyn Development Corps / Berwyn Service Station	SSU, LUST, ENG CONTROLS, INST CONTROLS, SRP, BOL	Higher	None	This site has one (1) LUST listing, with an Illinois Emergency Management Agency date of 12 May 2011. A No Further Remediation letter was recorded in April 2013. Located nearly one (1) mile away, this listing does not affect the condition of the Property.

Acronyms are defined in detail in the attached 2021 EDR Report, **Appendix E**.

Based on an evaluation of available site information and details concerning the properties listed in **Table 4-4**, none of the facilities evaluated are classified as "High Risk". "High Risk" properties are those that exhibit environmental conditions that are likely to adversely affect the environmental conditions of the Property.

5.0 ENVIRONMENTAL CONDITION OVERVIEW

5.1 SITE AND VICINITY RECONNAISSANCE

The SIA field team conducted a visual inspection of the Property, readily accessible surrounding areas, and the surrounding area on 17 October 2019 and 03 June 2021 to identify obvious potential environmental conditions. Photographs taken as part of the site reconnaissance are provided in **Appendix B**. The site reconnaissance was performed in an efficient manner, focusing initially on the interior of the AFRC Building, followed by a review of the OMS and finally ofthe exterior areas of the Property. Observations were also made of surrounding areas, roads, and properties to identify any obvious potential environmental conditions on neighboring properties.

SIA also conducted interviews during the site visits and electronically with 88th RD personnel to learn more about the operation and history of the Property. In addition, SIA reviewed existing documentation concerning the Property, conducted database searches, and reviewed the database searches prepared by EDR and the NETRONLINE (see **Appendix E**). The EDR and the ERR database search reports were reviewed to identify any information concerning the use, storage, or release to the environment of hazardous substances, hazardous waste, or petroleum products at the Property. The ECP assessment of the Property revealed no RECs under the USAR's ownership since the completion of the 2006 ECP.

5.1.1. AFRC Building

The two-story AFRC Building was constructed in 1955. It is an irregularly-shaped building consisting of two rectangular building sections joined by a central corridor section, and a T-shaped wing on the east side of the building. The building rests on a poured concrete foundation and has concrete block walls and a brick facade. The AFRC Building consists of office rooms, meeting rooms, classrooms, drill areas, storage rooms, and a weapons vault, with an interior courtyard i between the four (4) building sections. The main entrance to the AFRC Building is a recessed entry in the center of the north side of the building. A fixed glass and metal frame windows are located around the perimeter of the building (**Appendix B** - site inspection photos). A flat roof covers the building.

The AFRC Building was primarily used as an office space and drill facility for Army and Naval reserve units. The 88th RD administration offices are located in the eastern wing of the building. The Navy's deep-sea submarine training room is in the AFRC Building. This room has been inactive for several years (**Appendix B** - photos 8, 30, 31 and 32). An arms vault is inside the building. During the October 2019 site visit, the building and the vault were still being utilized by the Army. The vault was not accessible in October 2019; however, it was visually inspected during the June 2021 site visit. The vault is empty (**Appendix B** - photos 95 and 96). The Army completely ceased operations at the Property in January 2021.

5.1.2 OMS

The Organizational Maintenance Shop, constructed in 1955, was used for vehicle maintenance and storage. It is a rectangular, single-story building on a concrete foundation with concrete block walls with four (4) metal roll-up doors on the north and west side of the building. Two (2) metal pedestrian doors are located on the south wall, and third is located on the north wall. The OMS was being used for storing computer peripherals, printer ink cartridges, furniture, and other materials at the time of site inspections. According to the 2006 ECP Report, minor quantities of motor oil, transmission fluid, antifreeze, and two (2) small generators with diesel tanks were stored in the OMS. However, no hazardous wastes or substances were observed at the time of site inspections. A wall with black staining was observed in the OMS, which appeared to be ink staining from one (1) of the printer ink cartridges (**Appendix B** - photo 97). According to Ms. Diann Shim, AFOS, all materials will remain at the Property.

5.1.3 Other Areas

- **Storage Building**: Formerly known as the Navy storage building (1,846 sf), this building is in the southwest corner of the Property. It is a rectangular, single-story building on a concrete foundation with concrete block walls with four (4) metal roll-up doors on the north side of the building. The Storage Building was being used for storing office furniture. A small storage room containing two (2) flammable storage cabinets and a wooden bench is in the southwest corner of the Storage Building, and can be accessed by a metal pedestrian door. The storage room could not be accessed during the October 2019 site visit; however, Ms. Diann Shim, AFOS, inspected the room on a later date and informed SIA about the presence of small quantities of charcoal lighter fluid, motor oil, degreaser, shredder oil, and a propane gas tank (**Appendix B** - photos 69-73). The 2006 ECP report indicated the presence of several one (1)-gallon cans and five (5)-gallon buckets of latex paint. This paint is relatively new and is not suspected to be lead based (2006 ECP Report). At the time of 03 June 2021 site inspection, storage room and cabinets were found to be empty. All previously stored materials have been removed from the Property.
- **OWS**: There is no OWS currently at the Property. An OWS associated with the wash rack was removed in 2003. No issues or violations regarding the wash rack or the OWS were found in the reports.

5.2 DISCUSSION AND IDENTIFICATION OF RECOGNIZED ENVIRONMENTAL CONDITIONS

In addition, SIA reviewed existing documentation concerning the Property, conducted database searches, and reviewed the database reports prepared by EDR and NETRONLINE to identify any information concerning the use, storage, or release to the environment of hazardous substances, hazardous waste, or petroleum products at the Property. The ECP-U assessment of the Property revealed no RECs associated with the Property.

However, based on the following two (2) observations, there is potential that release of petroleum-based products occurred at the Property.

- During the October 2019 site visit, SIA identified an abandoned gasoline-powered generator present near the former wash rack area. No signs of leak or discoloration were observed around the generator. The gasoline tank attached to the generator had disintegrated. Based on its size, it appears to be a five (5)-gallon tank (**Appendix B** - photo 66). The generator was not present during the June 2021 site visit. There were no visible stains or discoloration present at the former generator location. Ms. Diann Shim, AFOS, and Ms. Andrea Pawlik, AEPS, are not aware of the gasoline powered generator's status. Based on the condition, the potential for a spill or release of gasoline in the past cannot be excluded. Based on the capacity of the tank, approximately five (5) gallons, a spill or release will be considered *de minimis* (less than the reportable quantity of 110 gallons).
- The June 2021 EDR Report and the December 2021 ERR indicated that the Property had one (1) 15,000-gallon capacity #2 heating oil UST. However, the tank was removed in January 1991 and the status is closed. According to the OSFM's Division of Petroleum & Chemical Safety, the 15,000-gallon UST was closed and removed on 01 January 1991 from the Property. The UST's owner is listed as the NRC and its regulated status as "Exempt". The tank was last used in 1902, which is inaccurate as the buildings at the Property were built in 1955. According to the Army's Utility and Site Plan (plan date is not legible), the UST was located in the open area between the buildings, east of the boiler room. There is no additional information regarding the tank's integrity or release of heating oil into the ground at the time of removal. According to the 1990 USATHAMA's Waste Site Characterization Study, the Navy owned the Property and is responsible for the tanks, utilities and the firing range. Since the UST was removed prior to the Army's ownership (2007), any aspects associated with the UST are not related to the Army's occupancy.

  Based on the age of the buildings at the Property, it is likely that the UST was installed at the time of construction, which would have made it at least 40 years old at the time removal (see **Appendix E**). There are no documents indicating spills or releases associated with the tank. Due to the age of the tank, it is possible that the tank may had leaks. Also, minor spills would have occurred during refueling operations.

6.0 CONCLUSIONS

SIA performed an Environmental Condition of Property Update Report in conformance with the scope and limitations of 42 USC § 9620(h), AR 200-1 (2007), and in general conformance with the following standards:

- ASTM D6008-96 (2014), Standard *Practice for Conducting Environmental Baseline Surveys*;
- ASTM E1527-13 (2013), *Standard Practice for Environmental Site Assessments: Phase I Environmental* Site *Assessment Process;*
- ASTM D5746-98 (2016), *Standard Classification of Environmental Condition of Property Area Types for Defense Base Closure and Realignment Facilities;*
- DoD 4165.66-M (2006), *Department of Defense Base Reuse Implementation Manual.*

6.1 ECP AREA TYPE CATEGORIZATION

In accordance with ASTM D5746-98 (2016), *Standard Classification of Environmental Condition of Property Area Types for Defense Base Closure and Realignment Facilities*, it is recommended that the Property be classified as **ECP Area Type 2**, defined as "*an area or parcel of real property where only the release or disposal of petroleum products or their derivatives has occurred.*"

This classification was selected based on the potential for spill or release of #2 heating oil associated with the former heating oil UST of 15,000-gallon capacity and the historic use of petroleum products and their derivatives at the Property, including regular vehicle maintenance since 1955. Although #2 heating oil USTs are not regulated and there are no documents indicating a leak or release associated with the former UST, based on the age of the tank (at least 40 years at the time of removal) there is a potential for release of petroleum products at the Property. These circumstances do not qualify as RECs; however, they preclude the selection of a Type 1 classification. This recommended classification does not include categorizing the Property based on *de minimis* conditions that generally do not present material risk of harm to the public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The June 2021 EDR Report and December 2021 ERR did not identify any sites that present a risk to the Property.

The above is only a recommendation. In accordance with §15-5.*e* of AR 200-1, the Garrison Commander (or equivalent) is responsible for determining the appropriate ECP category for a Property being transferred based on the results of the ECP Report and actions taken to address contamination.

6.2 OTHER PROPERTY CONDITIONS

6.2.1 Asbestos-Containing Material

In December 2009, CH2M HILL conducted an Asbestos Survey at the Property. At the AFRC Building, the CH2M HILL team's asbestos inspector identified 19 homogeneous suspect ACM.

Fifty-seven (57) samples were collected and analyzed by PLM for asbestos content. The 2009 survey confirmed ACM in the AFRC Building in the following locations:

- HA-001: Green 12" x 12" floor tiles and associated black mastic (throughout AFRC Building 1st floor; hallways, Rooms 125, 126, 127, 128, 129, 133, 137, 139, 152, 153, 157, 168, 204, 207, 213, 214, 216, 217, 218, 227, 228, 238, and 239); approximately 20,000 sf, 4% Chrysotile in mastic.
- HA-002: Black 12" x 12" floor tiles and associated black mastic throughout AFRC Building 1st floor; hallways, Rooms 125, 126, 127, 128, 129, 133, 137, 139, 152, 153, 157, 168, 204, 207, 213, 214, 216, 217, 218, 227, 228, 238, and 239); approximately 14,000 sf, 4% Chrysotile in mastic.
- HA-005: Green 12" x 12" floor tiles and associated black mastic underneath layer of gray 12" x 12" floor tiles and associated black mastic (AFRC Building – Rooms 121 and 122); approximately 7,000 sf, 4% Chrysotile in mastic associated with green tiles.
- HA-011: Multi-colored off-white 12" x 12" floor tiles and associated black mastic (AFRC Building – Rooms 114 and 119); approximately 2,000 sf, 4% Chrysotile in mastic.
- HA-015: Gray, beige and off-white window caulk (OMB – interior windows); approximately 600 linear feet, 2%-3% Chrysotile.
- HA-018: 2" pipe elbow insulation (AFRC Building – above ceilings and in hallway, and mechanical rooms); approximately 160 units, 35% Chrysotile.
- HA-019: 12" beige drainpipe elbow insulation (AFRC Building – 2nd floor); approximately 25 units, 20% Amosite and 25% Chrysotile.
- HA-020: Multi-layered black and off-white 12" x 12" floor tiles and associated black mastic (AFRC Building – Room 120); approximately 800 sf, 2% Chrysotile in floor tiles and 5% Chrysotile in mastic.
- HA-021: Black 9" x 9" floor tiles and associated black mastic (AFRC Building – 2nd Floor Northeast hallway); approximately 1,000 sf, 2%-5% Chrysotile in mastic.

During the November 2020 re-inspection, MEC^X confirmed the following nine (9) additional HAs as ACM:

- HA-025: Green/gray 12" x 12" floor tile with black streaks and associated black or yellow mastic (AFRC Building – Rooms 187, 202 and 263, maintenance closet by Room 189, and Southwest hallway on 2nd floor); approximately 1,150 sf, 1%-2% Chrysotile in floor tile and 1%-2% in black mastic.
- HA-026: Black and gray 12" x 12" floor tile and associated black mastic (AFRC Building – Rooms 190 and 194); approximately 940 sf, 2%-4% Chrysotile in black mastic.
- HA-027: Black and gray 9" x 9" intermixed floor tiles and associated black mastic (AFRC Building – Room 198); approximately 275 sf, 2%-4% Chrysotile in black mastic.
- HA-031: Brown and white 9" x 9" intermixed floor tiles and associated black mastic (AFRC Building – Room 116); approximately 520 sf, 1%-2% Chrysotile in floor tile and 1%-4% in black mastic.

- HA-032: Light brown 9" x 9" floor tile with orange and tan streaks and associated black mastic (AFRC Building – Room 260 and 2nd floor former Rooms 243 and 246); approximately 1,180 sf, 2%-3% Chrysotile in floor tile and 2%-3% in black mastic.
- HA-033: White 12" x 12" floor tile with black and gray mottling and associated black mastic (AFRC Building – Rooms 202E, 257, 262, 264, 266, 268 and 271); approximately 2,460 sf, 1%-2% Chrysotile in black mastic.
- HA-034: Gray floor tile with orange streaks and associated black mastic (AFRC Building – Room 255); approximately 370 sf, 2%-3% Chrysotile in floor tile and 2%-3% in black mastic.
- HA-035: White 12" x 12" floor tile with gray mottling and associated yellow mastic over light brown 9" x 9" floor tile with orange and tan streaks and associated black mastic (AFRC Building – Room 260); approximately 100 sf, 2%-3% Chrysotile in floor tile and 2%-3% in black mastic.
- HA-036: Dark gray 12" x 12" floor tile with black and gray streaks and associated black mastic (AFRC Building – Room 253); approximately 390 sf, 1%-2% Chrysotile in black mastic.

The December 2009 report further identified two (2) HAs as assumed ACM:

- HA-023: Fire doors (AFRC Building); approximately 17 doors.
- HA-047: Transite sink (AFRC Building – Room 260); one (1) sink.

During the November 2020 re-inspection and assessment following the re-inspection, MEC^X identified one (1) additional HA as assumed ACM:

- HA-045: Mudded pipe fittings (OMS – interior); approximately nine (9) fittings.

There were several changes to the condition of the ACM between the 2009 and 2020 reports. Of the 2" pipe elbow insulation (HA-018) observed in the AFRC Building, no fittings were in poor condition as stated in the previous report. However, a damaged 12" beige drainpipe elbow insulation (HA-019) was observed contrary to the previous condition assessment of fair. MEC^X was unable to locate HA-015: Gray, beige and off-white window caulk during the November 2020 re-inspection. In the 2009 report, this material is stated to be in the OMB but the figures depict it in the OMS building. MEC^X did not observe window caulking in either of these buildings. In the locations that were indicated in the 2009 report and figures, there were no windows.

The 2021 ACM Survey Update Report recommended, for the majority of the HAs, continuing with special operations and maintenance using certified personnel until major renovation or demolition requires removal or until assessment factors change. For HA-018: 2" pipe elbow insulation (AFRC Building – above ceilings and in hallway and mechanical rooms) and HA-019: 12" beige drainpipe elbow insulation (AFRC Building – 2nd floor), limiting access or removal actions as soon as possible were recommended. HA-045: mudded pipe fittings (OMS – interior) requires a special operation and maintenance (O&M) plan and further assessment by certified personnel. Its removal should be scheduled as part of regular facility maintenance. See the report in **Appendix D** for more information regarding recommended corrective actions for each ACM present at the Property.

6.2.2 Lead Based Paint

In December 2009, CH2M HILL conducted a LBP Survey at the Property.

Based on survey observations and the sample analytical results, the CH2M HILL team did not identify any areas containing LBP on the AFRC Building.

LBP was found in other areas of the Property, namely:

- Gray paint on a beam in the OMS.
- Black paint on the door and door frame in the OMS.
- Red paint on the exterior of the Storage Building.
- Yellow paint on the exterior concrete parking blocks.

SIA observed peeling paint surfaces in the OMS during the October 2019 and June 2021 site visits (**Appendix B** - photos 47, 55 & 56).

6.2.3 PCB-containing equipment

A pad-mounted transformer is present to the south of the AFRC Building. No markings indicating that the transformer contains PCBs were observed during the site inspection (**Appendix B** - photo 7). According to Ms. Diann Shim, AFOS, the transformer was installed in 2011; she was informed by the contractor that installed transformer did not contain PCBs (See **Appendix C**).

All fluorescent lighting at the site is operated with non-PCB ballasts. According to document reviews,interviews on 17 October 2019 and 03 June 2021, and site observations, interior and exterior fixtures are replaced with light-emitting diodes (LEDs) as they need replacement..

6.2.4 Miscellaneous

In addition to the findings in the 2006 ECP Report, there was one (1) additional environmental concern identified during the 17 October 2019 and 03 June 2021 site visits.

- During the inspection of the OMS, there was significant splatter and staining on the wall and floor of a small side room (**Appendix B** - photo 54). The material that caused staining appears to be ink from printer cartridges. This is considered a *de minimis* condition and does not affect the condition of the Property.

7.0 REFERENCES

7.1 PERSONS CONTACTED

- Ms. Lisa Gulbranson, Contractor, 88th RD, EPS, lisa.gulbranson.ctr@mail.mil, (612) 467-7594.
- Ms. Diann Shim, Contractor, 88th RD, Directorate of Public Works, AFOS, diann.m.shim.ctr@mail.mil, (719) 366-4564.
- Ms. Andrea E. Pawlik, Contractor, 88th RD, AEPS, via telephone on 29 October 2019 and 30 June 2021, andrea.e.pawlik.ctr@mail.mil, (317) 531-6102.

7.2 RESOURCES CONSULTED

- Environmental Data Resources, Inc. (EDR) Radius Map with GeoCheck® Report for the Forest Park ARC (15 June 2021).
- NETRONLINE's Environmental Radius Report for the Property (03 December 2021).
- EDR Aerial Photo Decade Package (October 2019).
- ASTM International E1527-00 (2005) "*Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process*"
- ASTM International E1903-97 (2002) "*Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process*".
- ASTM International D5746-98 (2016) "*Standard Classification of Environmental Condition of Property Area Types for Defense Base Closure and Realignment Facilities*".
- ASTM International D6008-96 (2014) "*Standard Practice for Conducting Environmental Baseline Surveys".*
- OFSM Division of Petroleum & Chemical Safety, UST Database (2021).

7.3 REPORTS CITED

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- Fort McCoy Archaeology Laboratory. 2000. Historic Architectural Assessment of the 90th Regional Support Command Facilities in Illinois. March 2000.
- Chicago Tribune 2005. Old torpedo factory hit by military site closings, Aamir Madhani, Tribune staff reporter. September 2005.
- Naval Reserve Center 2006. Environmental Condition of Property Report for the Naval Reserve Center, Forest Park Illinois. May 2006.
- MWH Americas Inc., 2009. Final Sanitary and Storm Sewer Video Inspection Report. July 2009.
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- Forest Park Review 2016. Forest Park's claim to Kahn, Renowned U.S. architect built the AMER torp munitions plant. February 2016.
- Radiological Site Assessment Report, Plexus Scientific Corporation. December 2020.
- Asbestos-Containing Material Survey Update Report (Final), SIA Solutions and MEC^X, Inc. August 2021.
- Office of the Illinois State Fire Marshal (OSFM), Division of Petroleum & Chemical Safety, UST Search: Facility Details for Naval Reserve Center. June 2021.

APPENDIX A - FIGURES

ECP Report

Figure 1
Site Location Map

Forest Park AFRC
Forest Park, IL

Legend

Approximate Property Boundary

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Copyright:© 2013 National Geographic Society, i-cubed

N

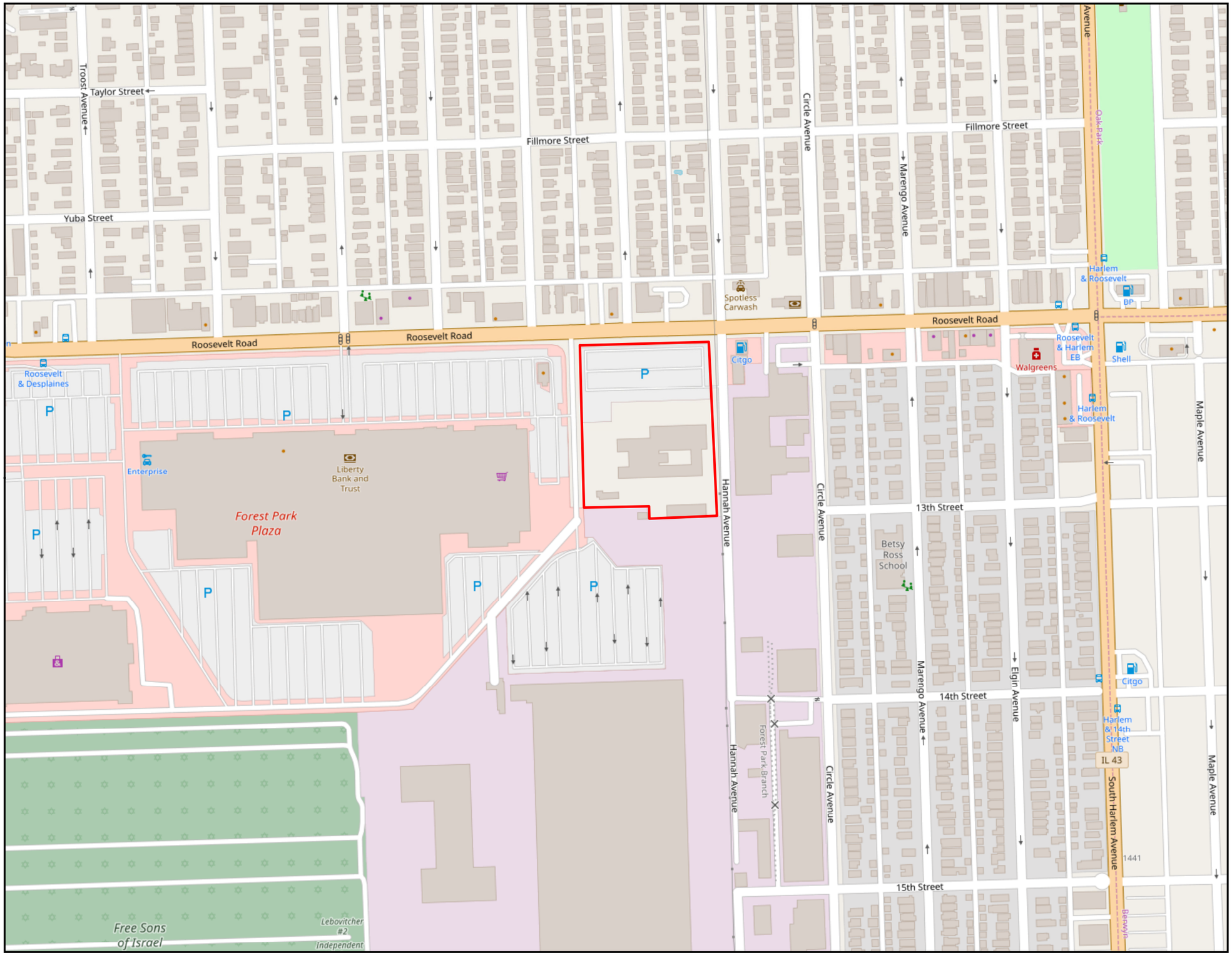
0 800 1,600 3,200
Feet

Coordinate System: StatePlane Illinois East
Datum: North American 1983
Units: Foot US

Document Name: 1-ForestPark_SiteLoc

11/25/2019

SIA



ECP Report

Figure 2
Site Vicinity Map

Forest Park AFRC
Forest Park, IL

Legend

Approximate Site Boundary

Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA

N

0 170 340 680

Feet

Coordinate System: StatePlane Illinois East
Datum: North American 1983
Units: Foot US

Document Name: 2-ForestPark_SiteVicinity

11/25/2019

SIA

ECP Report

Figure 3
Site Map

Forest Park AFRC
Forest Park, IL

Legend

Approximate Site Boundary

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS,

N

0 40 80 160

Feet

Coordinate System: StatePlane Illinois East
Datum: North American 1983
Units: Foot US

Document Name: 3-ForestPark_SiteMap

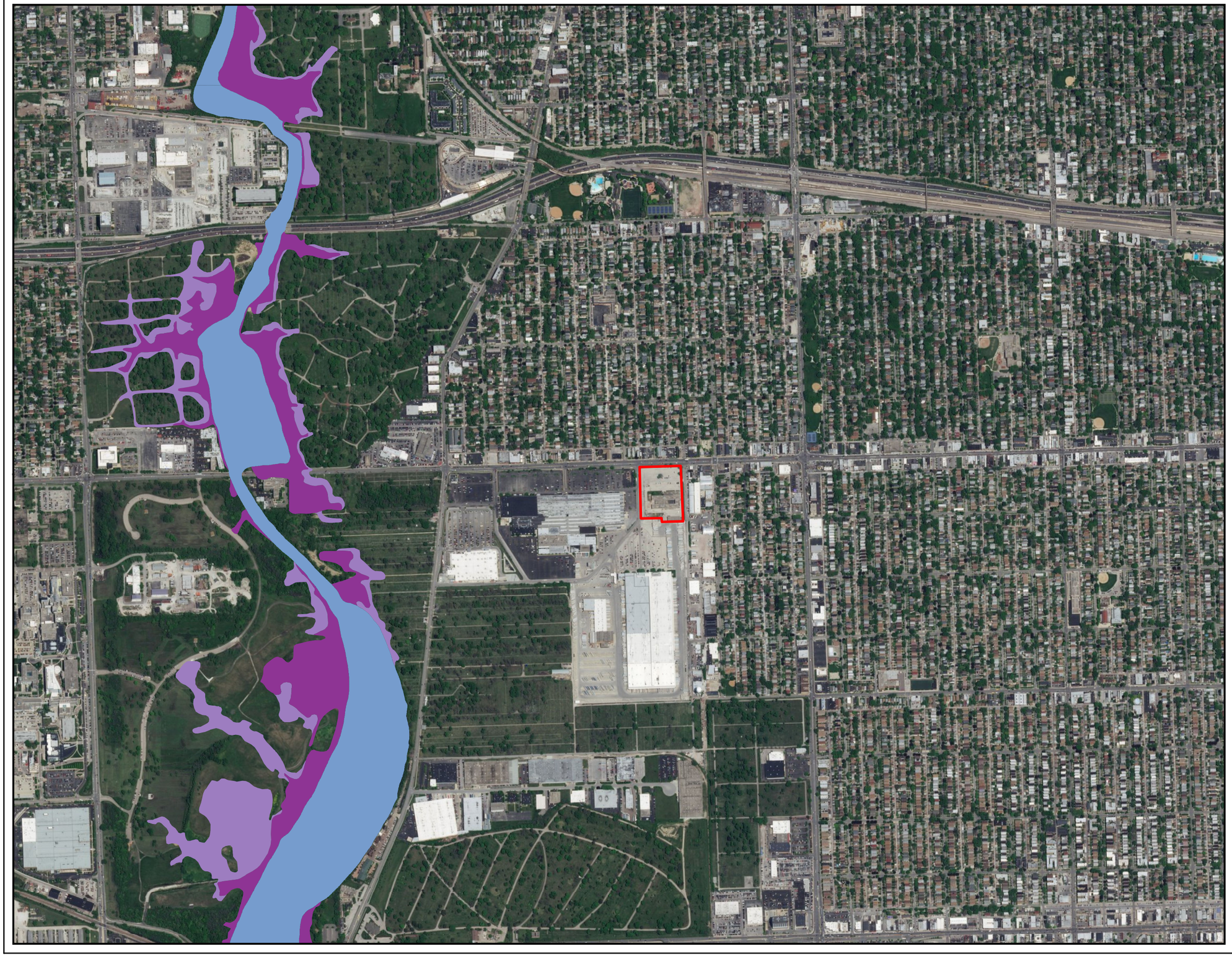
11/25/2019

SIA

ECP Report

Figure 4
Floodplain Map

Forest Park AFRC
Forest Park, IL



Legend

- Approximate Site Boundary
- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

N

0 500 1,000 2,000
Feet

Coordinate System: StatePlane Illinois East
Datum: North American 1983
Units: Foot US

Document Name: 4-ForestPark_Floodplain

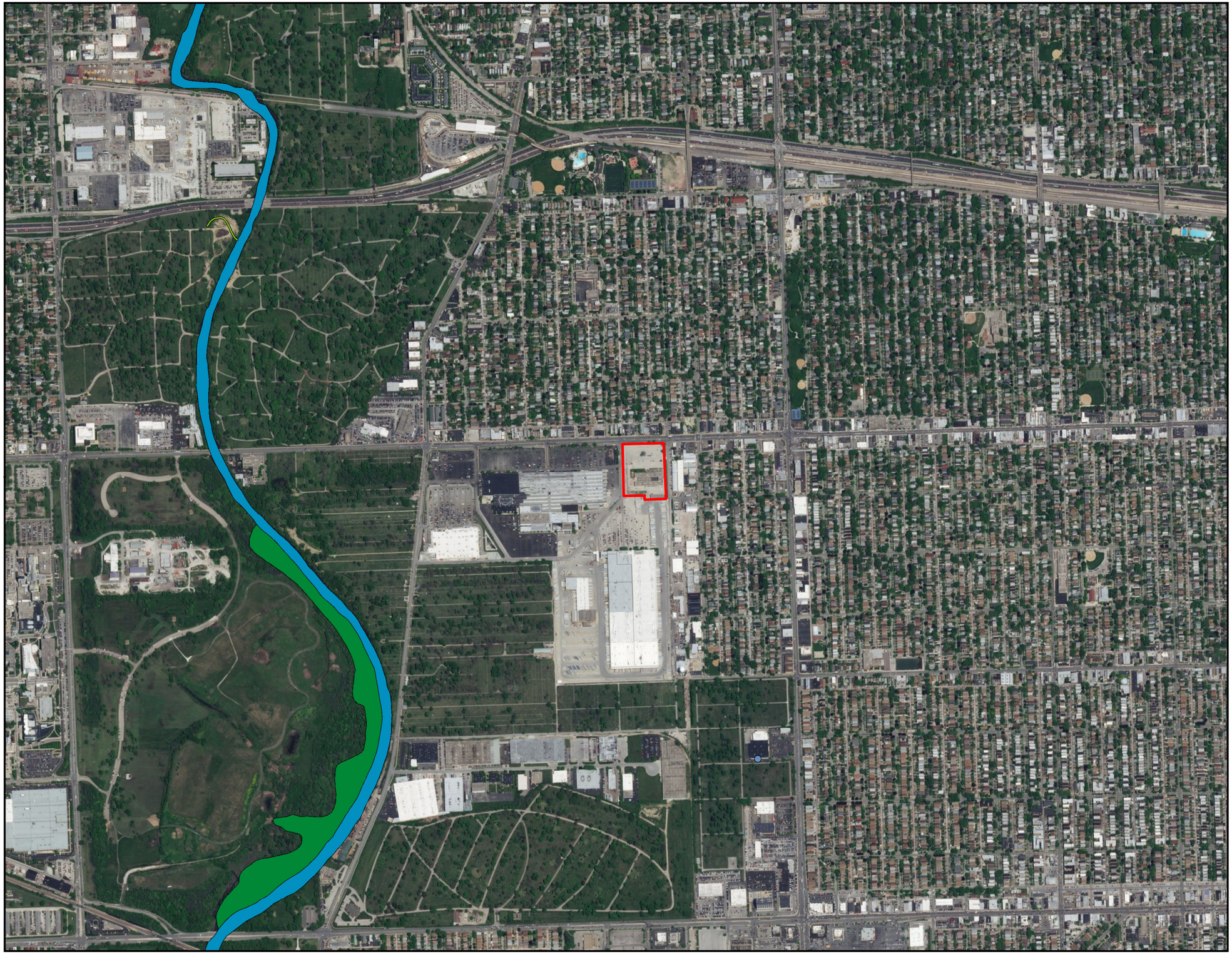
11/25/2019

SIA

ECP Report

Figure 5
Wetland Map

Forest Park AFRC
Forest Park, IL



Legend

Approximate Site Boundary

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Service Layer Credits: U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands_team@fws.gov

N

0 500 1,000 2,000
Feet

Coordinate System: StatePlane Illinois East
Datum: North American 1983
Units: Foot US

Document Name: 5-ForestPark_Wetland

11/25/2019

SIA

APPENDIX B - SITE VISIT PHOTOGRAPHS

Appendix B - Photograph Log
Environmental Condition of Property Update Report
Forest Park Armed Forces Reserve Center (IL027), Forest Park, IL
Site Inspection Dates: 17 October 2019 and 03 June 2021

1. Forest Park AFRC – looking southeast

2. Forest Park AFRC – looking southwest

3. Paved driveway and parking area – looking east

4. Parking area – looking west

5. Paved driveways, barricades and grass covered lawns – looking south

6. Parking area, municipal waste dumpsters – looking east

7. Pad mounted transformer – south side of the AFRC Building

8. Outside view of the Navy's submarine training (DCS) area – looking northeast

9. Shipping container near the AFRC. Old furniture is being stored in it.

10. Navy Storage Building-looking south

11. Paved driveway on the southside of the AFRC Building

12. Open space within the Admin Building

13. Adjacent property: gasoline station in the northeast corner, across Hannah Ave.

14. Paved parking areas and driveway in front of the Admin Building

15. Adjacent properties on the east side, across from Hannah Ave. (looking northeast)

16. Driveway on the eastside of the Admin Building, Hannah Ave., adjacent properties on the east and south sides

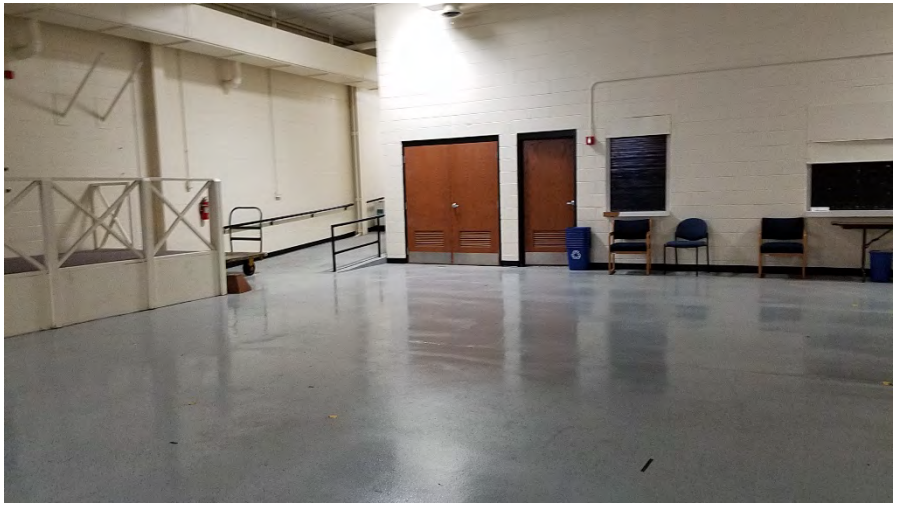
17. Portion of the Organizational Maintenance Shop (OMS) visible. Adjacent properties along Hannah Ave.

18. OMS and USPS Distribution Center in the background – looking southwest

19. A view of the USPS Distribution Center on the south side

20. Commercial properties on the west side (Living Fresh Market)

21. AFRC Building corridor, extending north-south

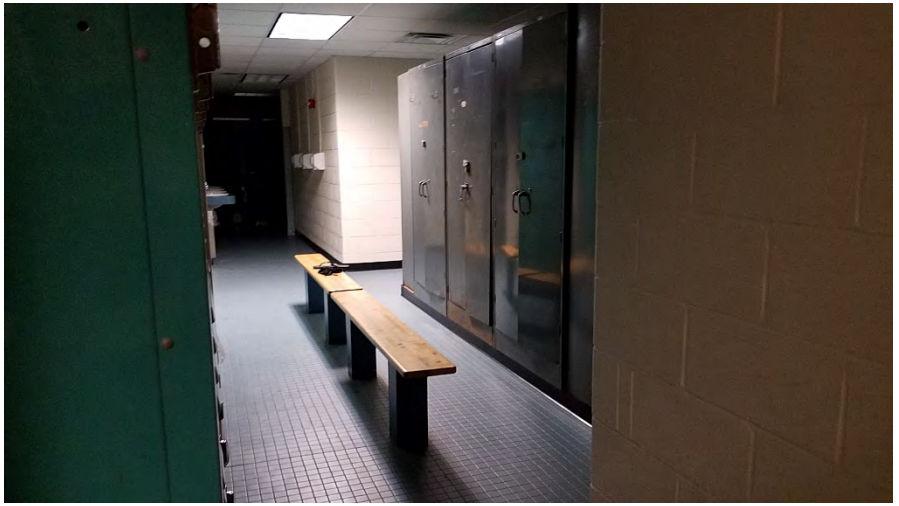


22. Assembly hall inside the Admin Building

23. One of the thermostats in the Admin Building

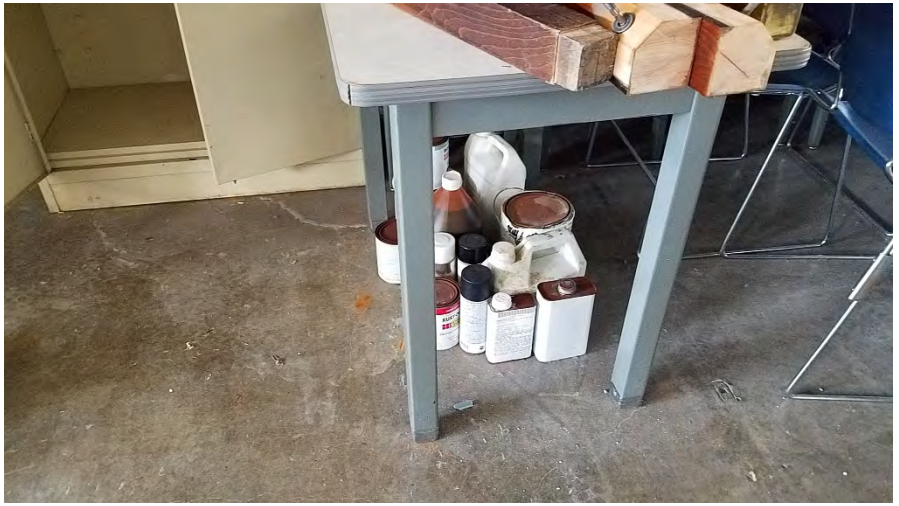
24. Another corridor in the AFRC Building. Green and black colored tiled flooring contains non-friable asbestos containing material (ACM)

25. Exposed insulation in a HVAC duct and utility pipes in the ceiling of a cleaning supplies storage room

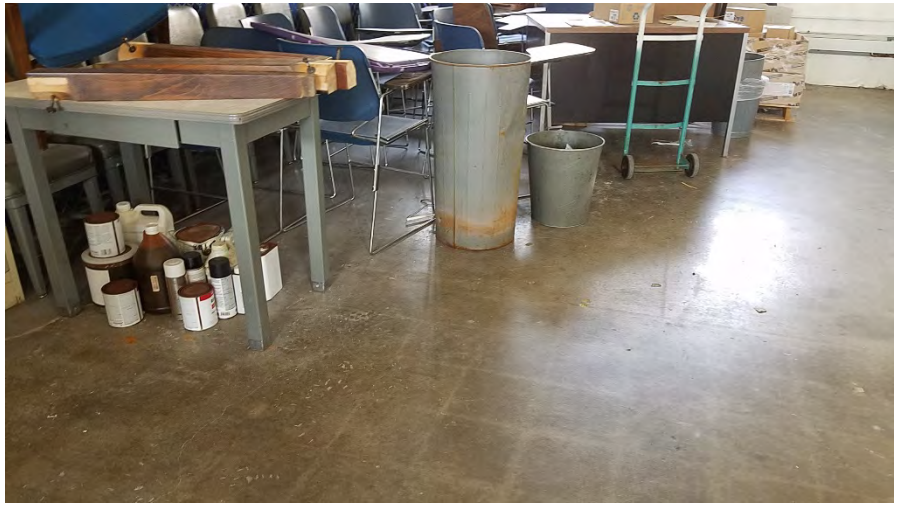


26. Typical restroom/locker room in the Admin Building.

27. Another corridor in the AFRC Building



28. Cleaning chemicals and solvents temporarily stored in Room 101 (Navy's deepsea training area) of the Admin Building. AFOS indicated that these items are ready for pickup and disposal



29. Another view of Room 101

30. A view of the Navy's deep-sea submarine training room

31. Entry door of the deep-sea submarine training unit

32. Entrance to the second level of the deep-sea submarine training unit

33. Carpeted flooring inside the office spaces of the Admin Building

34. 9-inch x 9-inch tile flooring in the kitchen. Mastic contains non-friable ACM (2006 ECP Report)

35. Office space with black and green alternating tile flooring. Drop ceiling and fluorescent lighting present across the office spaces in the Admin Building

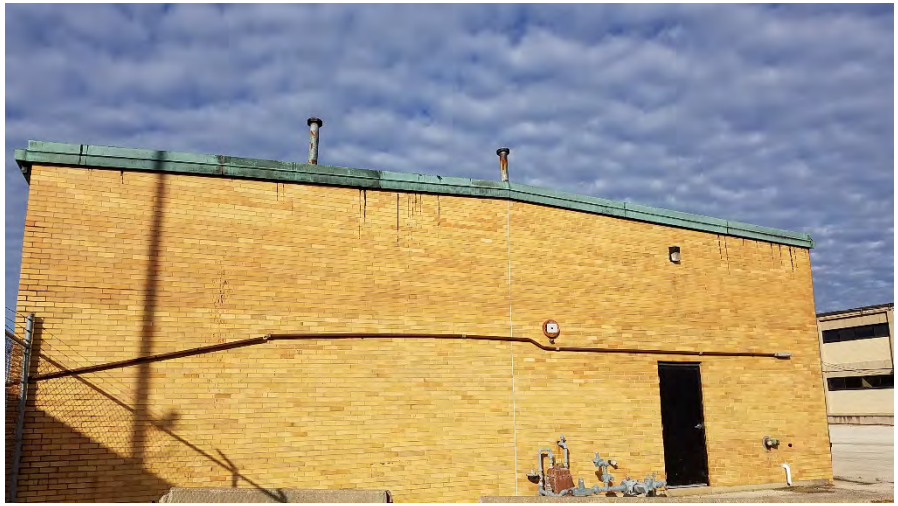
36. Training Room in the Admin Building

37. Another view of the classroom in the AFRC Building

38. Shared office spaces in the Admin Building

39. Mail Room in the AFRC Building

40. Janitorial supplies storage room



41. OMS – looking west

42. OMS access doors– looking east

43. Inside view of the storage room of the OMS

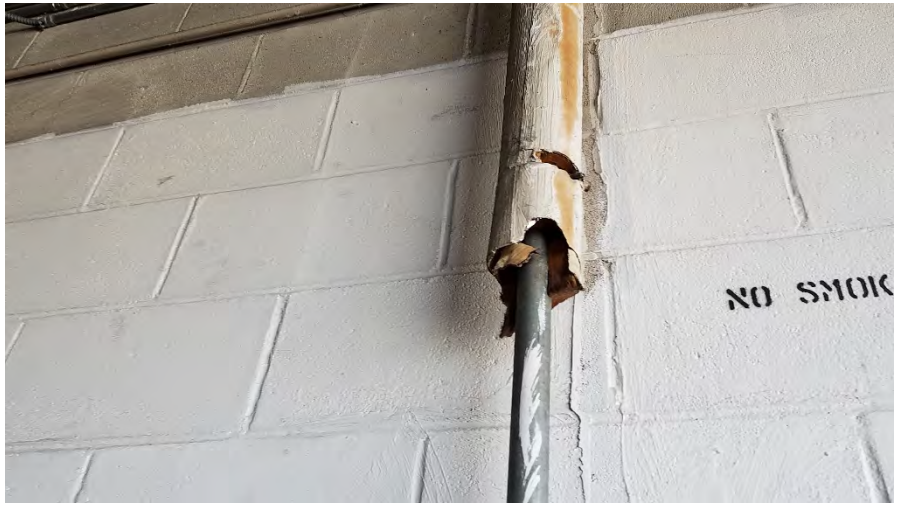
44. Old lawn mowing machine inside the storage room

45. Former Navy Pistol Range Building location

46. Ramp for accessing military vehicle's underbody for performing maintenance activities

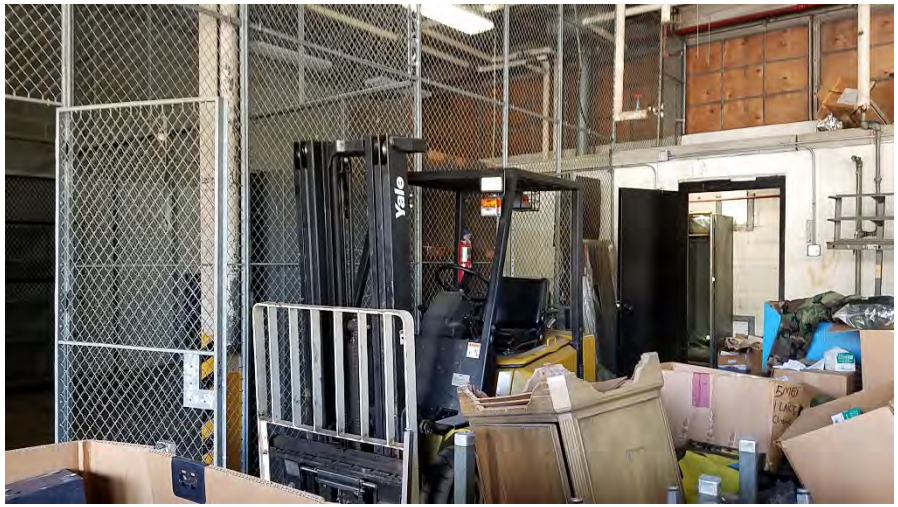
47. Metal sheet ceiling inside the OMS. Peeling paint and potentially damaged pipe insulation.

48. Printer cartridges stored inside the OMS

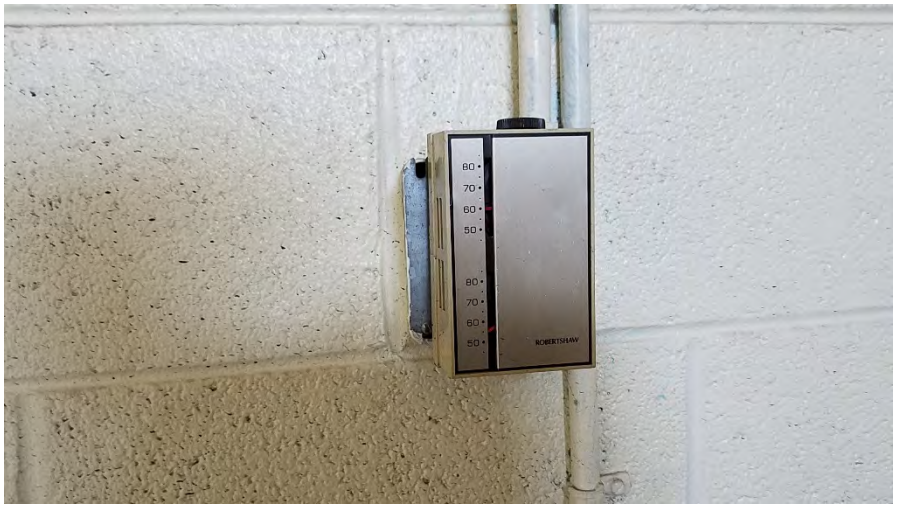


49. Damaged pipe insulation inside the OMS

50. Forklift parked inside the OMS.

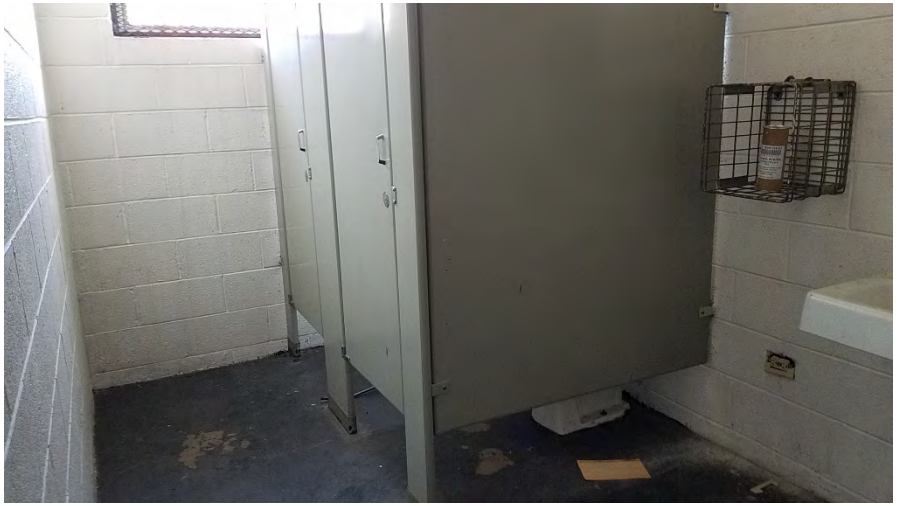


51. Another forklift present inside the OMS. Old office furniture and supplies stored in cardboard boxes waiting for disposal.



52. Old thermostat containing mercury switch located inside the OMS

53. A box of training chemical agent detector simulator present in the OMS



54. Restroom inside the OMS

55. Peeling paint from the metal ceiling of the OMS. Based on the age of the building, the paint may contain lead

56. Another view of the ceiling with peeling paint. HVAC piping and fluorescent lighting

57. Storage containers inside the OMS

58. Old office furniture and paper waste

59. Storage cages inside the OMS

60. General waste dumpsters inside the OMS

61. General all-purpose cleaning agent

62. Used spray cleaning agents cans

63. Flammable materials storage shelf inside the OMS

64. Two empty, gasoline containers were present inside the flammable materials storage shelf

65. Space heater inside the OMS

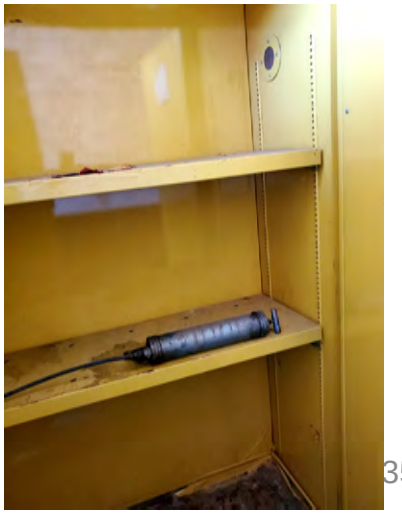
66. Abandoned gasoline powered generator present near the former wash rack area. No visible signs of leak or discoloration was observed around the generator. Below image from 03 June 2021 depicts absence of the generator in the area.

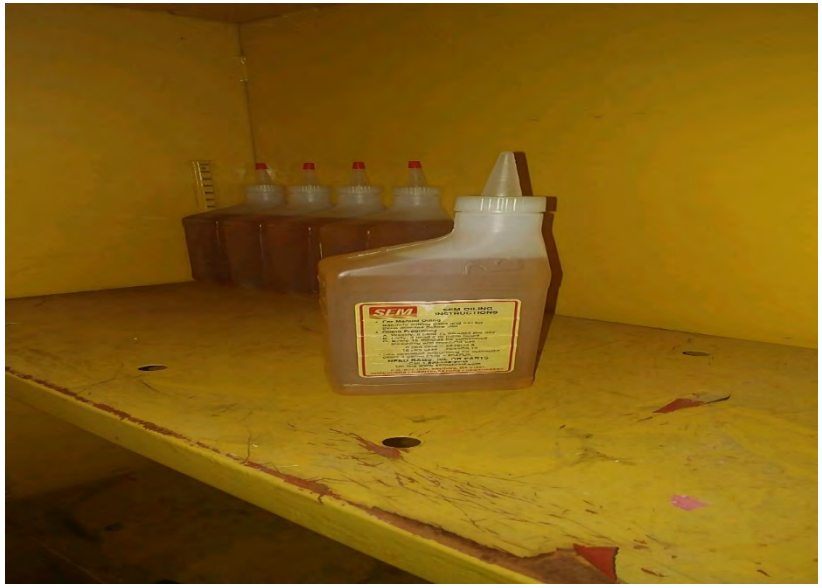
67. Exterior of Hazardous Materials Storage Room located behind the Navy Storage Building

68. Inside view of the Hazardous Materials Storage Room.

69. Hazardous materials storage cabinet 1 - charcoal lighter fluid, motor oil, degreaser, water canister. Below image from 03 June 2021 depicts absence of materials from the Navy Storage Building.

70. Hazardous materials storage cabinet 2 – shredder Oil, Tire pump. Below image from 03 June 2021 depicts absence of materials





71. Shredder oil in cabinet 2

72. Empty fuel containers

73. Propane tank appears to be empty

74. Outside the Hazardous Material Storage room

77. A view of the Navy's Storage Building, former Pistol Range Building and adjacent properties in the background

78. A view of the former wash rack area, former Pistol Range Building and the USPS Distribution Center in the background

79. Abandoned generator near the former washrack. USPS security guard building in the background (looking south)

80. Former Pistol Range Building and the Navy's Storage Building

81. Damaged Thermal System Insulation (TSI) in the boiler room in the Admin Building

82. Inside boiler room in the Admin Building

83. Boilers and other equipment

84. Piping wrapped with TSI

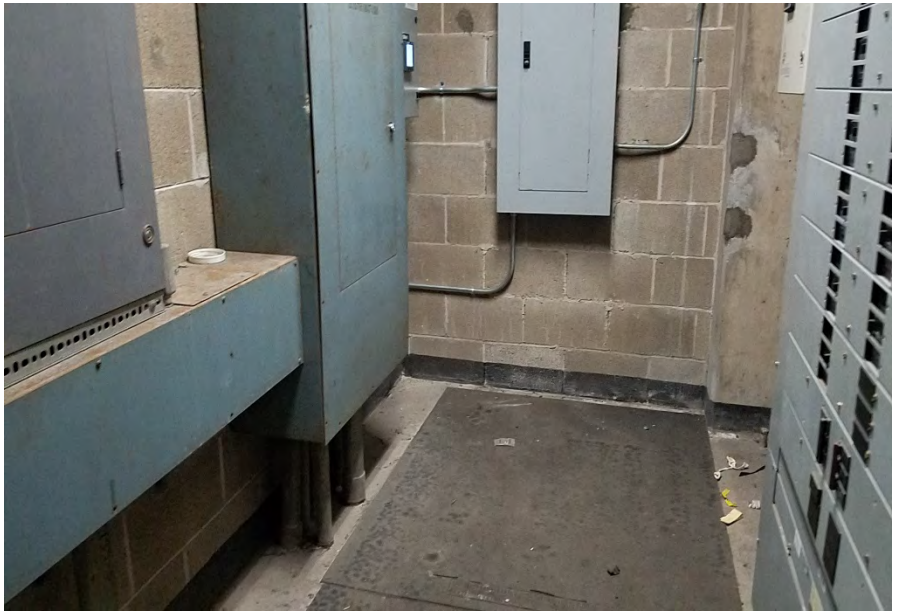
85. Damaged TSI in the boiler room

86. TSI on water distribution lines

87. Distribution system piping and valves in the boiler room

88. Piping in the utility trench inside the boiler room

89. Control panels and pumping equipment in the HVAC room



90. Electrical panels

91. Distribution pipes with TSI

92. Distribution piping and holding tank near the ceiling inside the HVAC room

93. Location of the former Pistol Firing Range. Grass covered earthen berm on the left-hand side. Storage Building in the background

94. Another view of the earthen berm. USPS Distribution facility in the background

95. AFRC Building entrance on the north side. Vault door to the left.

96. Inside Vault. Contents emptied in 2020.

APPENDIX C - INTERVIEW DOCUMENTATION

ECP INTERVIEW QUESTIONNAIRE

Property: Forest Park AFRC (IL027)
Interviewee (print name): Ms. Diann Shim
Employment Location: 88th Readiness Division
Title: Area Facilities Operation Specialist (aFOS)
Phone: 773-615-8502

_X_Key Site Manager ___Current/former employee ___Agency official

___Occupant/employee (Indicate duration of occupancy/employment:___ yr. __ mos.)

Interviewer (print name): Sarah-Emma Watkins/Aravind Marella
Employment Location: SIA Solutions
Title: Project Scientist/Environmental Professional
Phone: 908-705-1217/832-321-4927

Date of Interview: 17 October 2019 Via ___ phone _X_in person _X__ in writing

"Please be as specific as reasonably possible, and answer in good faith and to the extent of your knowledge"

1. Do any of the following documents exist for the property? ***(inquire prior to site visit)***

Document	Y	N	Document	Y	N
Environmental site assessments, PA, SI, etc.	X		Preparedness & Prevention Plans, e.g. SPCC, etc.		
Environmental audit reports			Hydrogeologic reports of property or surrounding area		
Environmental permits, e.g. solid waste disposal, haz waste disposal, wastewater, NPDES, air emissions			Govt. agency notices re: environmental non-compliance, past or current (CURRENT)		
UST / AST registrations		X	Notices re: environmental liens on property		
MSDSs			Haz waste generator notices or reports		
Community RTK plan			Geotechnical studies		
Safety plans			Other		

If yes, are they available for review? _X_ yes ___no

2. Is there any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?

   - None.

3. Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property?

- No.

4. Are you aware of any notices from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

   - No.

5. Was, or is, any of the operations listed below in existence on the property?

Operation	Y/N		Operation	Y/N	
Gasoline station			Medical/dental facility	X	
Motor repair facility	X		Junkyard or landfill		
Dry cleaners			Training area		
Photo developing lab			Waste TSD facility		
Plating shop			Waste processing or recycling		

6. Have there been any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemical or individual containers stored or used in the area in question?

   - Yes. Limited amounts of individual containers of paints and cleaners in the Administrative Building.

7. Are there drums, sacks, cartons, or other containers of chemicals located on the property?
   See attached photo log.

8. Was or is the property used for any waste generation? In which areas of the property were wastes generated? Were any areas of the property used for waste disposal activities?

   - This facility is a very small waste generator.

9. Was, or is, the property used as a firing or bombing range, or both?

   - The property was used as a firing range. However, the firing range was removed in 2003.

10. Have there been or are there storage tanks containing hazardous substances or petroleum products located on the property?

- A 15,000 gal heating oil UST was removed from the Property on 1/16/1991.

11. Have spills, leaks, or other releases of hazardous substances or petroleum products occurred to the best of your knowledge?

    - No. No spill response documentation.

12. Have unidentified waste materials, tires, automotive or industrial batteries, ordnance or any other waste materials been dumped, buried, or burned, or a combination thereof, on the property?

    - No.

13. What utility companies provide water service, sewer service, electric service, and gas service to the facility?
    Water: Village of Forest Park/Purchases from City of Chicago, which utilizes Lake Michigan water.
    Sewer: Village of Forest Park/ MWRD
    Electric: Commonwealth Edison (ComEd)
    Gas: Nicor Gas Company

14. What units currently occupy the facility and approximately how many full-time personnel are associated with each of those units?

    - The Property is occupied by units from the 318th Public Affairs, 330th Drill Sergeants and Navy and Army recruiters. The Civil Air Patrol and Sea Cadets utilize the AFRC for monthly meetings and some supply storage.

15. What typical types of operations are performed at the facility (i.e., administrative, logistics, classroom exercises, maintenance, etc.)?

    - Administrative, classroom exercises.

16. Do light ballasts on the Property contain PCBs? Is there documentation of light ballast removal?

    - Light ballasts are T8 and do not contain PCB's. Ballast were in the past replaced and disposed by the contracted maintenance team, who were required to maintain all required paperwork for disposal.

17. Does the Property contain a vault? Is the vault empty?

    - Yes. The vault is not empty, and will likely not be emptied until the units currently located there move to their new facilities.

SITE INSPECTION OBSERVATIONS

General Description of Structures:

See pictures

Adjacent Properties
(See EDR report)
North: W Roosevelt Road, Residential and Commercial Properties

South: Chicago Bulk Mail Center

East: Gas Station (NE), Sievert Electric Service & Sales, Southside Automotive, AFC Transport, Choice Truck Leasing, Jam Auto Body Center

West: Planet Fitness, Joseph Business School, Furniture Store

Access Vaults (if identified provide location): Inside the main building, near the north entrance

Storm Drains: (if identified provide location) throughout the Property (Village of Forest Park Storm Drain System);

Historic Uses of the Property: Naval Center, Army Reserve Center

Current Uses of the Property:

- Current use of the property is administrative and storage.

- Hazardous Substances and petroleum product uses at the Property:

- A 15,000 gal heating oil UST was removed on 1/16/1991. No record of ASTs being present on the Property.

Above/below grounds Storage Tanks at the Property: (Content, construction, condition, secondary containment)

Odors:

- N/A

Pools of Liquid:

- N/A

Drums:

Unidentified Hazardous Substance and petroleum product containers that might be a recognized environmental condition: (types, quantity, condition, etc.)

Handheld gasoline canister in OMS, various cleaning supplies and other containers in yellow OMS cabinet.

INTERIOR:

Heating and Cooling System: (fuel source (i.e. heating oil, **natural gas**, electric)

Stains or Corrosion: (Describe Staining or corrosion other than that caused by water)

- Staining under the speedaire in the mechanical room.

Drains and Sumps:

- 4 drains and lid have staining mechanical room

Suspected ACMs and condition:

- OMS building – pipe insulation.
- Janitor Closet Insulation Hanging down.

EXTERIOR:

Pits, Ponds, or Lagoons: (identify on Property and Adjacent, if used for waste disposal or treatment detailed discussion will be required.)

- None.

Stained soil and Pavement;

Staining in parking lot, and behind administrative building.
Some staining in the OMS building in the corner of the office. Suspect there may have been a boiler there.
Staining in cage on the far right – looked like fluid spilled from bottle.
Staining under Well McClain device.

Stressed Vegetation:

None.

Solid Waste: (Areas apparently filled or graded which may indicate waste disposal)

Waste and Storm water Discharges: (discharges or water or other liquid to or from the Property)

There were drains (washpad), but more research needed on where they led to.

Wells: (monitoring or drinking water production)
None.

Septic Systems: None.

Evidence of USTs: (vent pipes)
None.

PCBs:
The transformer outside did not have a "non-PCB" sign

Other Observations:

Multiple locations within the OMS, Garage, and Administrative Building had peeling paint. These included the garage doors, pipes within the garage, inside the deep-sea (DSea) Trainer, steps outside the DSea Trainer.

The OMS and the Garage still had some thermostats that may contain mercury.

- Army Garage – Army had full control of the garage.

3 Camo Generators in the OMS building as well as a space heater.

Yellow spill kit cabinet in the OMS building.

Ammunition disposal containers labeled "blanks only"

In Administrative building

- Boiler ruptured in 2010 – replaced with new boilers

MSDS List – Contractor Managing waste

Kitchen hasn't been used since 2013

Medical exam rooms – need additional information on Medical waste? There is no additional information to provide. Medical was strictly a U. S. Navy function and responsibility. When the building was transferred to the U. S. Army in 2007, these operations ceased.

IL027 Armed Forces Reserve Center, Forest Park, IL Hazardous Storage Room

Exterior of Hazardous Storage Room

Inside Full view of Hazardous Storage Room

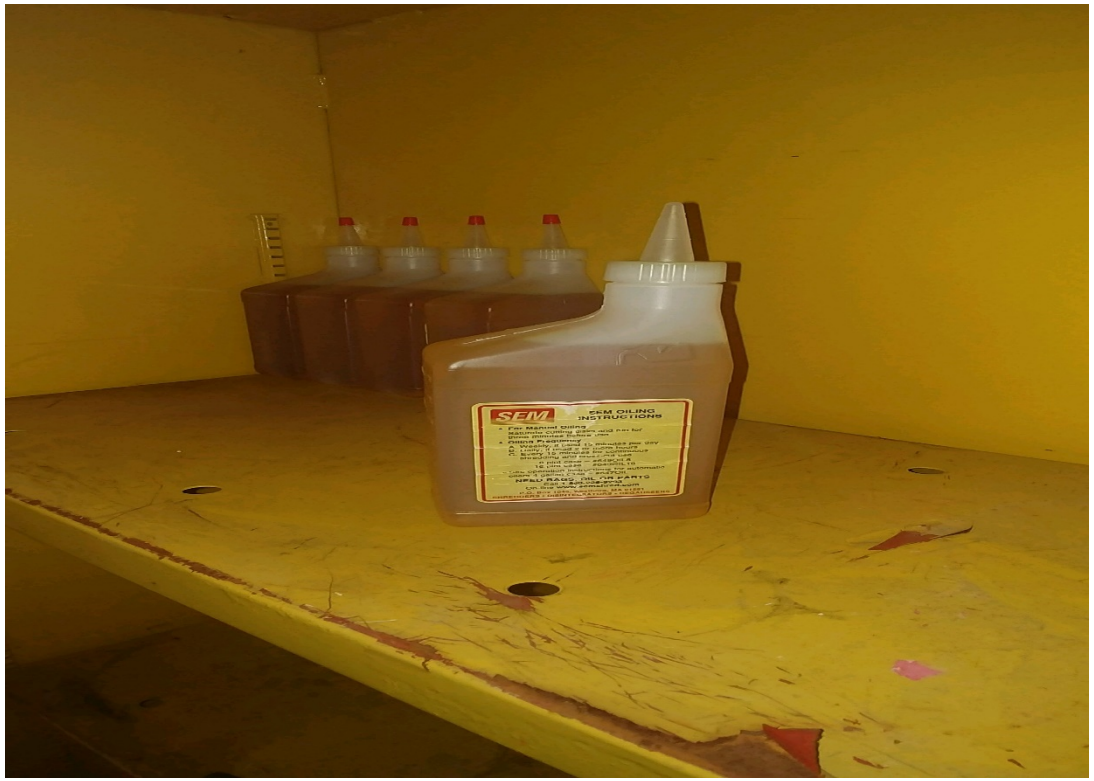
IL027 Armed Forces Reserve Center, Forest Park, IL Hazardous Storage Room

HAZMAT cabinet 1 - Charcoal lighter fluid, motor oil, degreaser, water canister

HAZMAT cabinet 2 – Shredder Oil, Tire pump

IL027 Armed Forces Reserve Center, Forest Park, IL Hazardous Storage Room

Shredder oil in cabinet 2



4 Empty fuel containers

IL027 Armed Forces Reserve Center, Forest Park, IL Hazardous Storage Room

Propane tank appears to be empty

ECP INTERVIEW QUESTIONNAIRE

Property: Forest Park AFRC (IL027)
Interviewee (print name): Andrea Pawlik
Employment Location: 88th RD, Forest Park, IL
Title: Area Environmental Protection Specialist
Phone: 317-531-6102

_X__Key Site Manager ___Current/former employee ___Agency official

___Occupant/employee (Indicate duration of occupancy/employment:___ yr. __ mos.)

Interviewer (print name): Sarah-Emma Watkins/Aravind Marella
Employment Location: SIA Solutions
Title: Project Scientist/Environmental Professional
Phone: 908-705-1217

Date of Interview: 29 October 2019 Via __X_ phone __in person ___ in writing

"Please be as specific as reasonably possible, and answer in good faith and to the extent of your knowledge"

1. Do any of the following documents exist for the property? ***(inquire prior to site visit)***

Document	Y	N	Document	Y	N
Environmental site assessments, PA, SI, etc.	X		Preparedness & Prevention Plans, e.g. SPCC, etc.		X
Environmental audit reports		X	Hydrogeologic reports of property or surrounding area		X
Environmental permits, e.g. solid waste disposal, haz waste disposal, wastewater, NPDES, air emissions		X	Govt. agency notices re: environmental non-compliance, past or current (CURRENT)		X
UST / AST registrations		X	Notices re: environmental liens on property		X
MSDSs	X		Haz waste generator notices or reports		X
Community RTK plan		X	Geotechnical studies		X
Safety plans		X	Other		

If yes, are they available for review? __ yes ___no

Ms. Pawlik does a rundown on an annual checklist.
All UST has been removed – closure report available.
MSDSs –OMS hasn't been used as an OMS in some time
- Ramp structure – no information on that

No environmental non-compliance
No Lien
No Generator
No Geotechnical Studies/Reports
HAZMAT Storage Area – nothing in it.

2. Is there any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?

   No.

3. Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property?

   No.

4. Are you aware of any notices from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

   No.

5. Was, or is, any of the operations listed below in existence on the property?

Operation	Y	N	Operation	Y	N
Gasoline station		X	Medical/dental facility		X
Motor repair facility	X		Junkyard or landfill		X
Dry cleaners		X	Training area		X
Photo developing lab		X	Waste TSD facility		X
Plating shop		X	Waste processing or recycling		X

6. Have there been any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemical or individual containers stored or used in the area in question?
   Yes, there are paint cans in the boiler room. Once the material is determined as waste – not really a schedule (as needed). Not being stored properly. DRMO – 30-60 days on pick-up.

7. Are there drums, sacks, cartons, or other containers of chemicals located on the property?

   Small containers of items that will be disposed.
   Batteries – for a computer
   Paints in DC diver
   Xerox ink cartridges
   Old MREs
   Lightbulbs – unsure if the

8. Was or is the property used for any waste generation? In which areas of the property were wastes generated? Were any areas of the property used for waste disposal activities?

This facility is a conditionally exempt very small quantity generator.

9. Was, or is, the property used as a firing or bombing range, or both?

   The property was used as a firing range. However, the firing range was removed in 2003.

10. Have there been or are there storage tanks containing hazardous substances or petroleum products located on the property?
    No.

11. Have spills, leaks, or other releases of hazardous substances or petroleum products occurred to the best of your knowledge?
    No.

12. Have unidentified waste materials, tires, automotive or industrial batteries, ordnance or any other waste materials been dumped, buried, or burned, or a combination thereof, on the property?
    No.

13. What utility companies provide water service, sewer service, electric service, and gas service to the facility?
    Water: Village of Forest Park
    Sewer: Village of Forest Park
    Electric: ComEd
    Gas: Nicor

14. What units currently occupy the facility and approximately how many full-time personnel are associated with each of those units?

USAR and Naval Reserve Center.

15. What typical types of operations are performed at the facility (i.e., administrative, logistics, classroom exercises, maintenance, etc.)?
    Currently, none. Previously, administration, classroom and training.

16. Do light ballasts on the Property contain PCBs? Is there documentation of light ballast removal?
    Unsure whether light ballasts containing PCBs have been removed. If they need to be replaced, the ballast containing PCBs is removed and replaced, but to Ms. Pawlik's knowledge the facility has not been overhauled.

17. Does the Property contain a vault? Is the vault empty?
    Yes, Ms. Pawlick was not allowed into the vault either
    Follow-up – Diann Shim

18. Building, Permitting
    No.

    Mold or mildew
    No.

    OMS
    Has been storage as long as she has managed the area (since 2016).
    Parking lots – parking military vehicles – no parked vehicles.

    Asbestos/LBP/
    There has not been any recent Asbestos/LBP work done. There used to be asbestos and lead several years ago.

ECP INTERVIEW QUESTIONNAIRE

Property: Forest Park AFRC (IL027)
Interviewee (print name): Ms. Andrea Pawlik
Employment Location: 88th Readiness Division
Title: Area Environmental Protection Specialist
Phone: 317-531-6102

__X_Key Site Manager ___Current/former employee ___Agency official

___Occupant/employee (Indicate duration of occupancy/employment:___ yr. __ mos.)

Interviewer (print name): Aravind Marella
Employment Location: SIA Solutions
Title: Project Scientist/Environmental Professional
Phone: 346-818-1172

Date of Interview: 30 June 2021 Via _x__ phone __in person __ in writing

"Please be as specific as reasonably possible, and answer in good faith and to the extent of your knowledge"

1. Do any of the following documents exist for the property? ***(inquire prior to site visit)***

Document	Y	N	Document	Y	N
Environmental site assessments, PA, SI, etc.	X		Preparedness & Prevention Plans, e.g. SPCC, etc.		
Environmental audit reports			Hydrogeologic reports of property or surrounding area		
Environmental permits, e.g. solid waste disposal, haz waste disposal, wastewater, NPDES, air emissions			Govt. agency notices re: environmental non-compliance, past or current (CURRENT)		
UST / AST registrations		X	Notices re: environmental liens on property		
MSDSs			Haz waste generator notices or reports		
Community RTK plan			Geotechnical studies		
Safety plans			Other		

If yes, are they available for review? _X_ yes ___no

2. Is there any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?

   - None.

3. Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property?

- No.

4. Are you aware of any notices from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

   - No.

5. Was, or is, any of the operations listed below in existence on the property?

Operation	Y/N		Operation	Y/N	
Gasoline station		X	Medical/dental facility		X
Motor repair facility	X		Junkyard or landfill		X
Dry cleaners		X	Training area		X
Photo developing lab		X	Waste TSD facility		X
Plating shop		X	Waste processing or recycling		X

6. Have there been any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemical or individual containers stored or used in the area in question?

   Batteries for computers, printer ink cartridges, small quantities of household cleaning chemicals, furniture are present in the OMS. All chemicals will be either transferred to DRMO for management and disposal. All furniture will stay at the Property.

   Update: Except for printer ink cartridges and furniture, all chemicals have been removed from the Property in 2020.

7. Are there drums, sacks, cartons, or other containers of chemicals located on the property?

   - See response above.

8. Was or is the property used for any waste generation? In which areas of the property were wastes generated? Were any areas of the property used for waste disposal activities?

   - This facility was a very small waste generator. Currently, the facility is unoccupied, and no special waste is being generated.

9. Was, or is, the property used as a firing or bombing range, or both?

   - The property was used as a firing range. However, the firing range was removed in 2003.

10. Have there been or are there storage tanks containing hazardous substances or petroleum products located on the property?

    - A 15,000-gal heating oil UST was removed from the Property on 1/16/1991. No additional documents available for review.

11. Have spills, leaks, or other releases of hazardous substances or petroleum products occurred to the best of your knowledge?

    - No. No spill response documentation.

12. Have unidentified waste materials, tires, automotive or industrial batteries, ordnance or any other waste materials been dumped, buried, or burned, or a combination thereof, on the property?

    - No.

13. What utility companies provide water service, sewer service, electric service, and gas service to the facility?
    Water: Disconnected. (Previously, Village of Forest Park/Purchases from City of Chicago, which utilizes Lake Michigan water.
    Sewer: Village of Forest Park/ MWRD
    Electric: Commonwealth Edison (ComEd)
    Gas: Disconnected (previously Nicor Gas Company)

14. What units currently occupy the facility and approximately how many full-time personnel are associated with each of those units?

    - No units are present at the Property.
      [Previously, the Property is occupied by units from the 318th Public Affairs, 330th Drill Sergeants and Navy and Army recruiters. The Civil Air Patrol and Sea Cadets utilize the AFRC for monthly meetings and some supply storage.]

15. What typical types of operations are performed at the facility (i.e., administrative, logistics, classroom exercises, maintenance, etc.)?

    - None.

16. Do light ballasts on the Property contain PCBs? Is there documentation of light ballast removal?

    - Light ballasts are T8 and do not contain PCB's. Ballasts, in the past were replaced and disposed by the contracted maintenance team, who were required to maintain all required paperwork for disposal.

17. Does the Property contain a vault? Is the vault empty?
    - Yes. The vault is empty.

SITE INSPECTION OBSERVATIONS

General Description of Structures:

See pictures

Adjacent Properties
(See EDR report)
North: W Roosevelt Road, Residential and Commercial Properties

South: Chicago Bulk Mail Center

East: Gas Station (NE), Sievert Electric Service & Sales, Southside Automotive, AFC Transport, Choice Truck Leasing, Jam Auto Body Center

West: Grocery Store, Joseph Business School, Furniture Store

Access Vaults (if identified provide location): Inside the main building, near the north entrance

Storm Drains: (if identified provide location) throughout the Property (Village of Forest Park Storm Drain System);

Historic Uses of the Property: Naval Center, Army Reserve Center

Current Uses of the Property:

- Current use of the property is none.

- A 15,000-gal heating oil UST was removed on 1/16/1991. No record of ASTs being present on the Property.

Above/below grounds Storage Tanks at the Property: (Content, construction, condition, secondary containment)

Odors:

- N/A

Pools of Liquid:
- N/A

Drums:

None present during the 2nd site inspection.

INTERIOR:

Heating and Cooling System: Currently, none.

Stains or Corrosion: (Describe Staining or corrosion other than that caused by water)

Drains and Sumps:
- 4 drains and lid have staining mechanical room

Suspected ACMs and condition:

- OMS building – pipe insulation.
- Janitor Closet Insulation Hanging down. See 2021 ACM Survey Update report by SIA/MECx

EXTERIOR:

Pits, Ponds, or Lagoons: (identify on Property and Adjacent, if used for waste disposal or treatment detailed discussion will be required.)

- None.

Stained soil and Pavement;

None

Stressed Vegetation:

None.

Solid Waste:

Waste and Storm water Discharges: (discharges or water or other liquid to or from the Property)

Storm drains connected to the Forest Park system

Wells: (monitoring or drinking water production)
None.

Septic Systems: None.

Evidence of USTs: (vent pipes)
None.

PCBs:
The transformer outside did not have a "non-PCB" sign, but it was installed in 2000s, therefore, PCBs are not suspected to be present in the transformer.

Other Observations:

Multiple locations within the OMS, Garage, and Administrative Building had peeling paint. These included the garage doors, pipes within the garage, inside the deep-sea (DSea) Trainer, steps outside the DSea Trainer.

The OMS and the Garage still had some thermostats that may contain mercury.

- Army Garage – Army had full control of the garage.
- Old diesel operated forklift.
- Camo Generators in the OMS building as well as a space heater.
- Yellow spill kit cabinet in the OMS building.
- Empty ammunition disposal containers labeled "blanks only".
- Printer ink cartridges
- Furniture

- Empty hazmat storage cabinets

In Administrative building
- Boiler removed.

MSDS List – Contractor Managing waste

Kitchen hasn't been used since 2013

ECP INTERVIEW QUESTIONNAIRE

Property: Forest Park AFRC (IL027)
Interviewee (print name): Ms. Diann Shim
Employment Location: 88th Readiness Division
Title: Area Facilities Operation Specialist (aFOS)
Phone: 773-615-8502

__X_Key Site Manager ___Current/former employee ___Agency official

___Occupant/employee (Indicate duration of occupancy/employment:___ yr. __ mos.)

Interviewer (print name): Aravind Marella
Employment Location: SIA Solutions
Title: Project Scientist/Environmental Professional
Phone: 346-818-1172

Date of Interview: 03 June 2021 Via ___ phone _X_in person _X__ in writing

"Please be as specific as reasonably possible, and answer in good faith and to the extent of your knowledge"

1. Do any of the following documents exist for the property? ***(inquire prior to site visit)***

Document	Y	N	Document	Y	N
Environmental site assessments, PA, SI, etc.	X		Preparedness & Prevention Plans, e.g. SPCC, etc.		
Environmental audit reports			Hydrogeologic reports of property or surrounding area		
Environmental permits, e.g. solid waste disposal, haz waste disposal, wastewater, NPDES, air emissions			Govt. agency notices re: environmental non-compliance, past or current (CURRENT)		
UST / AST registrations		X	Notices re: environmental liens on property		
MSDSs			Haz waste generator notices or reports		
Community RTK plan			Geotechnical studies		
Safety plans			Other		

If yes, are they available for review? _X_ yes ___no

2. Is there any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?

   - None.

3. Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property?

- No.

4. Are you aware of any notices from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

   - No.

5. Was, or is, any of the operations listed below in existence on the property?

Operation	Y/N		Operation	Y/N	
Gasoline station		X	Medical/dental facility		X
Motor repair facility	X		Junkyard or landfill		X
Dry cleaners		X	Training area		X
Photo developing lab		X	Waste TSD facility		X
Plating shop		X	Waste processing or recycling		X

6. Have there been any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemical or individual containers stored or used in the area in question?

   - None.

7. Are there drums, sacks, cartons, or other containers of chemicals located on the property?

   - None.

8. Was or is the property used for any waste generation? In which areas of the property were wastes generated? Were any areas of the property used for waste disposal activities?

   - This facility was a very small waste generator. Currently, the facility is unoccupied, and no special waste is being generated.

9. Was, or is, the property used as a firing or bombing range, or both?

   - The property was used as a firing range. However, the firing range was removed in 2003.

10. Have there been or are there storage tanks containing hazardous substances or petroleum products located on the property?

- A 15,000-gal heating oil UST was removed from the Property on 1/16/1991.

11. Have spills, leaks, or other releases of hazardous substances or petroleum products occurred to the best of your knowledge?

    - No. No spill response documentation.

12. Have unidentified waste materials, tires, automotive or industrial batteries, ordnance or any other waste materials been dumped, buried, or burned, or a combination thereof, on the property?

    - No.

13. What utility companies provide water service, sewer service, electric service, and gas service to the facility?
    Water: Disconnected. (Previously, Village of Forest Park/Purchases from City of Chicago, which utilizes Lake Michigan water.
    Sewer: Village of Forest Park/ MWRD
    Electric: Commonwealth Edison (ComEd)
    Gas: Disconnected (previously Nicor Gas Company)

14. What units currently occupy the facility and approximately how many full-time personnel are associated with each of those units?

    - No units are present at the Property.
      [Previously, the Property is occupied by units from the 318th Public Affairs, 330th Drill Sergeants and Navy and Army recruiters. The Civil Air Patrol and Sea Cadets utilize the AFRC for monthly meetings and some supply storage.]

15. What typical types of operations are performed at the facility (i.e., administrative, logistics, classroom exercises, maintenance, etc.)?

    - None.

16. Do light ballasts on the Property contain PCBs? Is there documentation of light ballast removal?

    - Light ballasts are T8 and do not contain PCB's. Ballast was in the past replaced and disposed by the contracted maintenance team, who were required to maintain all required paperwork for disposal.

17. Does the Property contain a vault? Is the vault empty?

    - Yes. The vault is empty.

SITE INSPECTION OBSERVATIONS

General Description of Structures:

See pictures

Adjacent Properties
(See EDR report)
North: W Roosevelt Road, Residential and Commercial Properties

South: Chicago Bulk Mail Center

East: Gas Station (NE), Sievert Electric Service & Sales, Southside Automotive, AFC Transport, Choice Truck Leasing, Jam Auto Body Center

West: Grocery Store, Joseph Business School, Furniture Store

Access Vaults (if identified provide location): Inside the main building, near the north entrance

Storm Drains: (if identified provide location) throughout the Property (Village of Forest Park Storm Drain System);

Historic Uses of the Property: Naval Center, Army Reserve Center

Current Uses of the Property:

- Current use of the property is none.

- A 15,000-gal heating oil UST was removed on 1/16/1991. No record of ASTs being present on the Property.

Above/below grounds Storage Tanks at the Property: (Content, construction, condition, secondary containment)

Odors:

- N/A

Pools of Liquid:
- N/A

Drums:

None present during the 2nd site inspection.

INTERIOR:

Heating and Cooling System: Currently, none.

Stains or Corrosion: (Describe Staining or corrosion other than that caused by water)

Drains and Sumps:
- 4 drains and lid have staining mechanical room

Suspected ACMs and condition:

- OMS building – pipe insulation.
- Janitor Closet Insulation Hanging down.

EXTERIOR:

Pits, Ponds, or Lagoons: (identify on Property and Adjacent, if used for waste disposal or treatment detailed discussion will be required.)

- None.

Stained soil and Pavement;

None

Stressed Vegetation:

None.

Solid Waste:

Waste and Storm water Discharges: (discharges or water or other liquid to or from the Property)

There were drains (washpad), but more research needed on where they led to.

Wells: (monitoring or drinking water production)
None.

Septic Systems: None.

Evidence of USTs: (vent pipes)
None.

PCBs:
The transformer outside did not have a "non-PCB" sign, but it was installed in 2000s, therefore, PCBs are not suspected to be present in the transformer.

Other Observations:

Multiple locations within the OMS, Garage, and Administrative Building had peeling paint. These included the garage doors, pipes within the garage, inside the deep-sea (DSea) Trainer, steps outside the DSea Trainer.

The OMS and the Garage still had some thermostats that may contain mercury.

- Army Garage – Army had full control of the garage.
- Old diesel operated forklift.
- Camo Generators in the OMS building as well as a space heater.
- Yellow spill kit cabinet in the OMS building.
- Empty ammunition disposal containers labeled "blanks only".
- Printer ink cartridges
- Furniture
- Empty hazmat storage cabinets

In Administrative building

- Boiler removed.

MSDS List – Contractor Managing waste

Kitchen hasn’t been used since 2013

ECP INTERVIEW QUESTIONNAIRE

Property: Forest Park AFRC (IL027)
Interviewee (print name): Ms. Andrea Pawlik
Employment Location: 88th Readiness Division
Title: Area Environmental Protection Specialist
Phone: 317-531-6102

__X_Key Site Manager ___Current/former employee ___Agency official

___Occupant/employee (Indicate duration of occupancy/employment:___ yr. __ mos.)

Interviewer (print name): Aravind Marella
Employment Location: SIA Solutions
Title: Project Scientist/Environmental Professional
Phone: 346-818-1172

Date of Interview: 30 June 2021 Via _x__ phone __in person __ in writing

"Please be as specific as reasonably possible, and answer in good faith and to the extent of your knowledge"

1. Do any of the following documents exist for the property? ***(inquire prior to site visit)***

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UST / AST registrations		X	Notices re: environmental liens on property		
MSDSs			Haz waste generator notices or reports		
Community RTK plan			Geotechnical studies		
Safety plans			Other		

If yes, are they available for review? _X_ yes ___no

2. Is there any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?

   - None.

3. Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property?

- No.

4. Are you aware of any notices from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

   - No.

5. Was, or is, any of the operations listed below in existence on the property?

Operation	Y/N		Operation	Y/N	
Gasoline station		X	Medical/dental facility		X
Motor repair facility	X		Junkyard or landfill		X
Dry cleaners		X	Training area		X
Photo developing lab		X	Waste TSD facility		X
Plating shop		X	Waste processing or recycling		X

6. Have there been any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemical or individual containers stored or used in the area in question?

   Batteries for computers, printer ink cartridges, small quantities of household cleaning chemicals, furniture are present in the OMS. All chemicals will be either transferred to DRMO for management and disposal. All furniture will stay at the Property.

   Update: Except for printer ink cartridges and furniture, all chemicals have been removed from the Property in 2020.

7. Are there drums, sacks, cartons, or other containers of chemicals located on the property?

   - See response above.

8. Was or is the property used for any waste generation? In which areas of the property were wastes generated? Were any areas of the property used for waste disposal activities?

   - This facility was a very small waste generator. Currently, the facility is unoccupied, and no special waste is being generated.

9. Was, or is, the property used as a firing or bombing range, or both?

   - The property was used as a firing range. However, the firing range was removed in 2003.

10. Have there been or are there storage tanks containing hazardous substances or petroleum products located on the property?

    - A 15,000-gal heating oil UST was removed from the Property on 1/16/1991. No additional documents available for review.

11. Have spills, leaks, or other releases of hazardous substances or petroleum products occurred to the best of your knowledge?

    - No. No spill response documentation.

12. Have unidentified waste materials, tires, automotive or industrial batteries, ordnance or any other waste materials been dumped, buried, or burned, or a combination thereof, on the property?

    - No.

13. What utility companies provide water service, sewer service, electric service, and gas service to the facility?
    Water: Disconnected. (Previously, Village of Forest Park/Purchases from City of Chicago, which utilizes Lake Michigan water.
    Sewer: Village of Forest Park/ MWRD
    Electric: Commonwealth Edison (ComEd)
    Gas: Disconnected (previously Nicor Gas Company)

14. What units currently occupy the facility and approximately how many full-time personnel are associated with each of those units?

    - No units are present at the Property.
      [Previously, the Property is occupied by units from the 318th Public Affairs, 330th Drill Sergeants and Navy and Army recruiters. The Civil Air Patrol and Sea Cadets utilize the AFRC for monthly meetings and some supply storage.]

15. What typical types of operations are performed at the facility (i.e., administrative, logistics, classroom exercises, maintenance, etc.)?

    - None.

16. Do light ballasts on the Property contain PCBs? Is there documentation of light ballast removal?

    - Light ballasts are T8 and do not contain PCB's. Ballasts, in the past were replaced and disposed by the contracted maintenance team, who were required to maintain all required paperwork for disposal.

17. Does the Property contain a vault? Is the vault empty?
    - Yes. The vault is empty.

SITE INSPECTION OBSERVATIONS

General Description of Structures:

See pictures

Adjacent Properties
(See EDR report)
North: W Roosevelt Road, Residential and Commercial Properties

South: Chicago Bulk Mail Center

East: Gas Station (NE), Sievert Electric Service & Sales, Southside Automotive, AFC Transport, Choice Truck Leasing, Jam Auto Body Center

West: Grocery Store, Joseph Business School, Furniture Store

Access Vaults (if identified provide location): Inside the main building, near the north entrance

Storm Drains: (if identified provide location) throughout the Property (Village of Forest Park Storm Drain System);

Historic Uses of the Property: Naval Center, Army Reserve Center

Current Uses of the Property:

- Current use of the property is none.

- A 15,000-gal heating oil UST was removed on 1/16/1991. No record of ASTs being present on the Property.

Above/below grounds Storage Tanks at the Property: (Content, construction, condition, secondary containment)

Odors:

- N/A

Pools of Liquid:
- N/A

Drums:

None present during the 2nd site inspection.

INTERIOR:

Heating and Cooling System: Currently, none.

Stains or Corrosion: (Describe Staining or corrosion other than that caused by water)

Drains and Sumps:
- 4 drains and lid have staining mechanical room

Suspected ACMs and condition:

- OMS building – pipe insulation.
- Janitor Closet Insulation Hanging down. See 2021 ACM Survey Update report by SIA/MECx

EXTERIOR:

Pits, Ponds, or Lagoons: (identify on Property and Adjacent, if used for waste disposal or treatment detailed discussion will be required.)

- None.

Stained soil and Pavement;

None

Stressed Vegetation:

None.

Solid Waste:

Waste and Storm water Discharges: (discharges or water or other liquid to or from the Property)

Storm drains connected to the Forest Park system

Wells: (monitoring or drinking water production)
None.

Septic Systems: None.

Evidence of USTs: (vent pipes)
None.

PCBs:
The transformer outside did not have a "non-PCB" sign, but it was installed in 2000s, therefore, PCBs are not suspected to be present in the transformer.

Other Observations:

Multiple locations within the OMS, Garage, and Administrative Building had peeling paint. These included the garage doors, pipes within the garage, inside the deep-sea (DSea) Trainer, steps outside the DSea Trainer.

The OMS and the Garage still had some thermostats that may contain mercury.

- Army Garage – Army had full control of the garage.
- Old diesel operated forklift.
- Camo Generators in the OMS building as well as a space heater.
- Yellow spill kit cabinet in the OMS building.
- Empty ammunition disposal containers labeled "blanks only".
- Printer ink cartridges
- Furniture

- Empty hazmat storage cabinets

In Administrative building
- Boiler removed.

MSDS List – Contractor Managing waste

Kitchen hasn't been used since 2013

ECP INTERVIEW QUESTIONNAIRE

Property: Forest Park AFRC (IL027)
Interviewee (print name): Ms. Diann Shim
Employment Location: 88th Readiness Division
Title: Area Facilities Operation Specialist (aFOS)
Phone: 773-615-8502

__X_Key Site Manager ___Current/former employee ___Agency official

___Occupant/employee (Indicate duration of occupancy/employment:___ yr. __ mos.)

Interviewer (print name): Aravind Marella
Employment Location: SIA Solutions
Title: Project Scientist/Environmental Professional
Phone: 346-818-1172

Date of Interview: 03 June 2021 Via ___ phone _X_in person _X__ in writing

"Please be as specific as reasonably possible, and answer in good faith and to the extent of your knowledge"

1. Do any of the following documents exist for the property? ***(inquire prior to site visit)***

Document	Y	N	Document	Y	N
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Environmental audit reports			Hydrogeologic reports of property or surrounding area		
Environmental permits, e.g. solid waste disposal, haz waste disposal, wastewater, NPDES, air emissions			Govt. agency notices re: environmental non-compliance, past or current (CURRENT)		
UST / AST registrations		X	Notices re: environmental liens on property		
MSDSs			Haz waste generator notices or reports		
Community RTK plan			Geotechnical studies		
Safety plans			Other		

If yes, are they available for review? _X_ yes ___no

2. Is there any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?

   - None.

3. Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property?

- No.

4. Are you aware of any notices from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

   - No.

5. Was, or is, any of the operations listed below in existence on the property?

Operation	Y/N		Operation	Y/N	
Gasoline station		X	Medical/dental facility		X
Motor repair facility	X		Junkyard or landfill		X
Dry cleaners		X	Training area		X
Photo developing lab		X	Waste TSD facility		X
Plating shop		X	Waste processing or recycling		X

6. Have there been any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemical or individual containers stored or used in the area in question?

   - None.

7. Are there drums, sacks, cartons, or other containers of chemicals located on the property?

   - None.

8. Was or is the property used for any waste generation? In which areas of the property were wastes generated? Were any areas of the property used for waste disposal activities?

   - This facility was a very small waste generator. Currently, the facility is unoccupied, and no special waste is being generated.

9. Was, or is, the property used as a firing or bombing range, or both?

   - The property was used as a firing range. However, the firing range was removed in 2003.

10. Have there been or are there storage tanks containing hazardous substances or petroleum products located on the property?

- A 15,000-gal heating oil UST was removed from the Property on 1/16/1991.

11. Have spills, leaks, or other releases of hazardous substances or petroleum products occurred to the best of your knowledge?

    - No. No spill response documentation.

12. Have unidentified waste materials, tires, automotive or industrial batteries, ordnance or any other waste materials been dumped, buried, or burned, or a combination thereof, on the property?

    - No.

13. What utility companies provide water service, sewer service, electric service, and gas service to the facility?
    Water: Disconnected. (Previously, Village of Forest Park/Purchases from City of Chicago, which utilizes Lake Michigan water.
    Sewer: Village of Forest Park/ MWRD
    Electric: Commonwealth Edison (ComEd)
    Gas: Disconnected (previously Nicor Gas Company)

14. What units currently occupy the facility and approximately how many full-time personnel are associated with each of those units?

    - No units are present at the Property.
      [Previously, the Property is occupied by units from the 318th Public Affairs, 330th Drill Sergeants and Navy and Army recruiters. The Civil Air Patrol and Sea Cadets utilize the AFRC for monthly meetings and some supply storage.]

15. What typical types of operations are performed at the facility (i.e., administrative, logistics, classroom exercises, maintenance, etc.)?

    - None.

16. Do light ballasts on the Property contain PCBs? Is there documentation of light ballast removal?

    - Light ballasts are T8 and do not contain PCB's. Ballast was in the past replaced and disposed by the contracted maintenance team, who were required to maintain all required paperwork for disposal.

17. Does the Property contain a vault? Is the vault empty?

    - Yes. The vault is empty.

SITE INSPECTION OBSERVATIONS

General Description of Structures:

See pictures

Adjacent Properties
(See EDR report)
North: W Roosevelt Road, Residential and Commercial Properties

South: Chicago Bulk Mail Center

East: Gas Station (NE), Sievert Electric Service & Sales, Southside Automotive, AFC Transport, Choice Truck Leasing, Jam Auto Body Center

West: Grocery Store, Joseph Business School, Furniture Store

Access Vaults (if identified provide location): Inside the main building, near the north entrance

Storm Drains: (if identified provide location) throughout the Property (Village of Forest Park Storm Drain System);

Historic Uses of the Property: Naval Center, Army Reserve Center

Current Uses of the Property:

- Current use of the property is none.

- A 15,000-gal heating oil UST was removed on 1/16/1991. No record of ASTs being present on the Property.

Above/below grounds Storage Tanks at the Property: (Content, construction, condition, secondary containment)

Odors:

- N/A

Pools of Liquid:
- N/A

Drums:

None present during the 2nd site inspection.

INTERIOR:

Heating and Cooling System: Currently, none.

Stains or Corrosion: (Describe Staining or corrosion other than that caused by water)

Drains and Sumps:
- 4 drains and lid have staining mechanical room

Suspected ACMs and condition:

- OMS building – pipe insulation.
- Janitor Closet Insulation Hanging down.

EXTERIOR:

Pits, Ponds, or Lagoons: (identify on Property and Adjacent, if used for waste disposal or treatment detailed discussion will be required.)

- None.

Stained soil and Pavement;

None

Stressed Vegetation:

None.

Solid Waste:

Waste and Storm water Discharges: (discharges or water or other liquid to or from the Property)

There were drains (washpad), but more research needed on where they led to.

Wells: (monitoring or drinking water production)
None.

Septic Systems: None.

Evidence of USTs: (vent pipes)
None.

PCBs:
The transformer outside did not have a "non-PCB" sign, but it was installed in 2000s, therefore, PCBs are not suspected to be present in the transformer.

Other Observations:

Multiple locations within the OMS, Garage, and Administrative Building had peeling paint. These included the garage doors, pipes within the garage, inside the deep-sea (DSea) Trainer, steps outside the DSea Trainer.

The OMS and the Garage still had some thermostats that may contain mercury.

- Army Garage – Army had full control of the garage.
- Old diesel operated forklift.
- Camo Generators in the OMS building as well as a space heater.
- Yellow spill kit cabinet in the OMS building.
- Empty ammunition disposal containers labeled "blanks only".
- Printer ink cartridges
- Furniture
- Empty hazmat storage cabinets

In Administrative building

- Boiler removed.

MSDS List – Contractor Managing waste

Kitchen hasn’t been used since 2013

APPENDIX D - SUPPORTING REPORTS AND DOCUMENTATION

- AFRC 1979-1981. IL027 Forest Park Armed Forces Reserve Center (AFRC), Forest Park, Illinois. NEPA Documents (NEPA 1979-1981).
- United States Army Toxic and Hazardous Materials Agency (USATHAMA) Waste Site Characterization Study, U.S. Army Property Waste Site Summary. August 1990.
- AFRC 1990. US Army Toxic and Hazardous Materials Agency (USATHAMA) Property Report (August 1990).
- AFRC 1995. Internal Environmental Assessment of Forest Park Armed Forces Reserve Center (May 1995).
- Pre-Renovation Hazardous Materials Investigation Rifle Range, Naval Reserve Center, Forest Park, IL (April 1997).
- Fort McCoy Archaeology Laboratory. 2000. Historic Architectural Assessment of the 90th Regional Support Command Facilities in Illinois. March 2000.
- Chicago Tribune 2005. Old torpedo factory hit by military site closings, Aamir Madhani, Tribune staff reporter. September 2005.
- Naval Reserve Center 2006. Environmental Condition of Property Report for the Naval Reserve Center, Forest Park Illinois. May 2006.
- MWH Americas Inc., 2009. Final Sanitary and Storm Sewer Video Inspection Report. July 2009.
- CH2M HILL 2009. Asbestos, Polychlorinated Biphenyl, Lead-Based Pain, and Radon Survey Report for IL027 Forest Park Armed Forces Reserve Center. December 2009.
- Record of Environmental Consideration: 2011-0127, Repair or Replace Existing Transformer, 88th RSC. February 2011.
- USFWS 2019. Information for Planning and Consultation (2019).
- Village of Forest Park 2016, 2017 and 2018. Annual Drinking Water Report for Calendar Year 2016, 2017 and 2018.
- Forest Park Review 2016. Forest Park's claim to Kahn, Renowned U.S. architect built the AMER torp munitions plant, February 2016.
- Radiological Site Assessment Report, Plexus Scientific Corporation, December 2020.
- Asbestos-Containing Material Survey Update Report (Final), SIA Solutions and MEC^{x}, Inc., June 2021.

Armed Forces Reserve Center
7402 W. Roosevelt Road
Forest Park, IL 60130

COMMAND: 86th ARCOM

LOCATION: Residential/Industrial

LAND & BUILDINGS: 2 acres, leased from Navy
2 buildings, leased from Navy, 21211 sq ft

PERSONNEL STRENGTH: AST- 2
IDT-115

UNITS TRAINING: 479th PS Company

SOURCES OF AIR POLLUTION: One stationary source of air pollution as well as military and civilian vehicles.

WATER: Domestic- Municipal
Storm- Municipal
Sanitary Sewerage- Municipal

SOLID WASTES: 100 Cu Yd of administrative and food service wastes generated each year and picked up by contractor twice each week.

HAZARDOUS WASTES: 10 gallons generated each year stored and removed by contractor.

ECOLOGY: ½ acre of grass

NOISE: Military and civilian vehicles and helicopter flights approximately three times each year.

PESTICIDES &HERBICIDES: None used.

SOCIOECONOMIC: No adverse impact.

LAND USE: Army, Navy, and Coast Guard Reserve Center

Moskala USAR Center
2025 E. 71st Street
Chicago, IL 60649

COMMAND: 86th ARCOM

LOCATION: Commercial

LAND & BUILDINGS: 1 acre, government owned
1 building, government owned, 57423 sq ft

AVERAGE PERSONNEL STRENGTH: AST & Military- 13
IDT -400

UNITS TRAINING: 5034th USAR School
7th JAG Det
374th Convention Center
232nd MI Det
468th MI Det
408th MI Det
300th AG Det

SOURCES OF AIR POLLUTION: One stationary source of air pollution as well as military and civilian vehicles.

WATER: Domestic- Municipal
Storm- Municipal
Sanitary Sewerage- Municipal

SOLID WASTES: 411 Cu Yd of administrative and food service wastes generated each year and picked up by contractor once each week.

HAZARDOUS WASTES: 60 gallons of waste oil generated and sent to AMSA Shop for disposal.

ECOLOGY: In completely built-up area of Chicago.

NOISE: Military and civilian vehicles

PESTICIDES AND HERBICIDES: Administered by contractor.

SOCIOECONOMIC: No adverse impact.

LAND USE: Reserve Center and USAR School.

AFZO-FE-EN

23 August 1979

EP&SD FILE COPY

Mr. Bob Hess
US Army Facilities Engineer Office
7402 W. Roosevelt
Forest Park, IL 60130

Dear Mr. Hess,

The inclosed statement covers the environmental considerations of the proposed stationing of two (2) CBR teams. This statement is provided in reference to our phone conversation of 16 August 1979.

Sincerely,

MANSUR H. CHEEMA
Environmental Engineer

DEPARTMENT OF THE ARMY
HEADQUARTERS FORT SHERIDAN
FORT SHERIDAN, ILLINOIS 60037

AFZO-FE-EE

23 August 1979

STATEMENT OF CATEGORICAL EXCLUSIONS

(Prepared in accordance with interim DA policy guidance implementing the council on environmental quality (CEQ) regulations DAEN-ZCE, dated 1 Aug 79)

NAME OF PROPOSED ACTION:

Proposed stationing of two Chemical/Biological/Radiological (CBR) Teams at US Army Center, Arlington Heights, Illinois.

DESCRIPTION OF ACTION:

The purpose of this action is to activate and station, at US Army Reserve Center, Arlington Heights, a CBR Reconnaissance Team (5 personnel) and a CBR Staff Team.

The two teams will be tasked with the responsibility of CBR reconnaissance of the site of a nuclear, chemical, or biological attack, and providing advisory and planning services. Existing administrative space will be utilized. The action is, basically, of administrative nature.

CATAGORICAL EXCLUSION:

The proposed action, based on sound judgment, is of such an environmentally insignificant nature that it does not clearly meet the threshold for requiring an Environmental Assessment (EA) or Environmental Impact Statement (EIS). Therefore, an EA or EIS is not required.

Mansur H Cheema

MANSUR H. CHEEMA, P.E.
Environmental Engineer

Incl 1

DEPARTMENT OF THE ARMY
HEADQUARTERS, 86TH U.S. ARMY RESERVE COMMAND
7402 WEST ROOSEVELT ROAD
FOREST PARK, ILLINOIS 60130

AFKB-AC-CE-EN

17 October 1980

STATEMENT OF CATEGORICAL EXCLUSIONS
(Prepared in accordance with interim DA policy guidance implementing the Council on Environmental Quality (CEQ) regulations (DAEM-ZCE, dated 1 Aug 79)

NAME OF PROPOSED ACTION:

Proposed stationing of a Court-Martial Team (HA) at 2LT R. H. Stephens AFRC, Urbana, IL.

DESCRIPTION OF ACTION:

The purpose of this action is to station at 2LT R. H. Stephens AFRC, Urbana, Illinois, a Court-Martial Team (HA) (6 personnel). The team is tasked to perform as a self-contained unit all operational aspects of General Court-Martial cases.

CATAGORICAL EXCLUSION:

The proposed action, based on sound judgement, is of such an environmentally insignificant nature that it does not clearly meet the threshold for requiring an Environmental Assessment (EA) or Environmental Impact Statement (EIS). Therefore, an EA or EIS is not required.

ROBERT A. HESS
MAJ, EN, USAR
Chief Engineer Division

INFO COPY

DEPARTMENT OF THE ARMY
HEADQUARTERS, 86TH U.S. ARMY RESERVE COMMAND
7402 WEST ROOSEVELT ROAD
FOREST PARK, ILLINOIS 60130

AFKB-AC-CE-EN

8 March 1981

STATEMENT OF CATEGORICAL EXCLUSIONS
(Prepared in accordance with interim DA policy guidance implementing the Council on Environmental Quality (CEQ) regulations (DAEM-ZCE, dated 1 Aug 79)

NAME OF PROPOSED ACTION:

Proposed restationing of the 7th Military Law Center from Moskala USAR Center to Building 900, Fort Sheridan, Illinois.

DESCRIPTION OF ACTION:

The purpose of this action is to restation at Building 900, Fort Sheridan, Illinois, the 7th Military Law Center (18 personnel). The 7th Military Law Center is tasked to provide, administration, control and operational supervision of Judge Advocate cellular units.

CATAGORICAL EXCLUSION:

The proposed action, based on sound judgement, is of such an environmentally insignificant nature that it does not clearly meet the threshold for requiring and Environmental Assessment (EA) or Environmental Impact Statement (EIS). Therefore, an EA or EIS is not required.

ROBERT A. HESS
MAJ, EN, USAR
Chief Engineer Division

AFKB-AC-CE-EN (4Dec80) 1st Ind Mr. Hess/ag/926-3854
SUBJECT: Environmental Quality Rapid Survey Data Assessment

HQS, 86th USARCOM, 7402 W. Roosevelt Road, Forest Park, IL 60130
30 December 1980

TO: Commander, Fort Sheridan, ATTN: Environmental Office, Fort Sheridan, IL 60037

1. Inclosed is the completed survey sheet.

2. The point of contact for the Army at the Forest Park USAFRC is Mr. Hess, Engineer Technician, (312) 926-3854/3080. The point of contact for the Navy is SK1 Moore, (312) 771-7010.

FOR THE COMMANDER:

JAMES A. MUETING
Supervisory Logistics
Management Specialist

CF:
OIC, Forest Park AFRC

DEPARTMENT OF THE ARMY
HEADQUARTERS FORT SHERIDAN
FORT SHERIDAN, ILLINOIS 60037

AFZO-DEH-EN

DEC 1980

SUBJECT: Environmental Quality Rapid Survey Data Assessment

SEE DISTRIBUTION

1. All US Army Reserve Centers in Fort Sheridans area of responsibility must assess the impact of their action's on the Environmental Quality under the provisions of AR 200-2.

2. Enclosed is an "Environmental Rapid Survey Data Sheet" with some aids to help in filling out the form. Most items on this form are self explanatory, i.e. circle and fill data in the appropriate place. If non applicable, write N/A. Please note that estimates are permissible. If one of the category estimates are not possible at this time, omit and complete the rest of the form. With this system the rate of chance of the pollution potential for your facility can therefore be constantly studied for irregularities and updated annually to meet changes in Federal, State and Local regulation.

3. You are requested to complete and return this report NLT 15 Jan 80. Reports should be directed to:

Commander
Fort Sheridan
ATTN: Environmental Office, Bldg 119
Fort Sheridan, IL 60037

Should you need any further information or explanation regarding this report, please feel free to contact Environmental Office (312) 926-2719 or AV 459-2719. Your cooperation in this matter is appreciated and should bring mutual benefit.

FOR THE COMMANDER:

John M. Delgado
JOHN M. DELGADO
Assistant Adjutant

1 Incl
as

DISTRIBUTION:
G, S (All US Army Reserve Centers supported by Ft. Sheridan) w/incl

FACILITIES ENGINEERING

ENVIRONMENTAL RAPID SURVEY DATA SHEET

FORT SHERIDAN, IL.

DATE 30 DEC 80

INSTALLATION NAME Forest Park Armed Forces Reserve Center PHONE # 926-3854/3080

1. LOCATION Forest Park, IL 60130 Contact Mr. Robert Hess Activities: Normal Training/Admin. for USAR & USNR Personnel Below

Installation Map (*Available) Not Available IMCCL

2. AIR	a. Smoke, mist, particulate, odor, etc. b. Est. Amt/Tons/Yr. 0 c. Location N/A d. Control Equip. Used (No X) Yes Type e. Emergency Episode Plan on File (No X) *Yes
3. DRAINAGE	a. Sanitary Sewer Drainage No (Yes X) Other b. Est. Amt. Gal./Yr. (No idea X) c. Location Center, OMS, wash rack. Type d. Control Equip. Used (No X) Yes Type (Separator, Etc.)
4. WATER ELECTRIC	Water Used 151.5M (G/Yr) Electric Used 420,040 (KWH/Yr)
5. SOLID WASTE	a. Gen Refuse, Garbage, etc. b. Est. Amt/Tons or CU YD/Yr. 124,800 Cu yds/yr c. Location d. Control Equip Used No (Yes X) Type 2 ea 600 yd dumpsters/2 per week. (Dumpster, Etc.) e. Segregated Waste Disposal Plan (No X) *Yes Amt $/Yr Amt Recycled Mat'l Tons/Yr
6. RADIATION	a. Plutonium, cobalt 60, Other N/A b. Levels of Contamination- (Curies or Subunits, etc.) N/A c. Location N/A d. Control N/A e. Microwave Oven Leakage Ck. Date N/A f. Emergency Plan No *Yes N/A

Circle & Fill in Appropriate Place
* Obtain Copy

FORM #4

7. NOISE	a. Continuous, on-off N/A b. Heard inside Outside 1/2 Blk Away 1 Blk Away N/A c. Location N/A d. Controls Used No X Yes Type.
8. PESTICIDES TOXIC & HAZARDOUS WASTE	a. Oil, Solvent, Paint, Coatings, Residue, Acid, Anti-freeze, etc. b. Amt. LB or GAL/Yr. 5 Gal/yr Oil) / 10 Gal/yr Paint) See inventory sheet. INCL 2 c. Location d. Certified Pesticide Applicator (No X) Yes Card Issuance Date Expiration N/A Issuing Authority FEPA Other N/A Spill Prevention Control and Counter Measure Plan *Yes No N/A Waste Disposal Plan No Yes N/A Inventory List No *Yes (Measurable Characteristics) Ignitable, Corrosive, Toxic N/A Reactive(when mixed with water, etc.) N/A
9. TRANSFORMER LEAKAGE	No Yes Location N/A
10. SOIL EROSION	No Yes Location N/A
11. FUEL DATA AMT./YR.	Gas 413,327.9 M BTUS/YR., Oil# 2 , 4-534.37 M BTUS Coal Tons %Sulfur
12. ENVIRONMENTAL ASSESSMENT PER AR-200-1 Pg.2-3	No (*Yes) ON FILE AT PT. SHERIDAN
13. DOES COMMAND HAVE A PROGRAM TO ASSURE SUFFICIENT PERSONNEL ARE TRAINED IN REQUIREMENTS OF NEPA PER AR 20-3, AR-200-2	No Yes In Process
14. PERMIT STATUS WATER, AIR, ETC.	(NoneX) *On File No.
15. SUMMARY ACTION	Not Required, Held in Abeyance(More data needed) N/A Required(What Kind) N/A Environmental Office (312) 926-2719 N/A
16. RAPID SURVEY*** OPERATING FLOW CHART	Make simple flow chart of activity showing point emission sources(✓) for Air, Water, Noise, Solid Waste, Radiation, Toxic and Hazardous Waste, Soil Erosion, Etc.. (Sample Attached) INCL 3

***If this is not possible omit. Further evaluation will follow with a visit by the Environmental Office.

DATE 30 DEC 80

LIQUID/SOLID WASTE INVENTORY SHEET

Waste Name	Approximate Gals or Lbs/Yr	Disposal Method Scavenger or Other (Name)
Oil	5 Gal/yr	added to vehicles
Varnish		
Solvent		
Paint	10 Gal/yr	put on walls
Antifreeze		
Infectious		
Pesticide		
Herbicide		
Fungicide		
Other (Name)		
Gen. Garbage		C. Groot Auto Disposal -Berwyn, IL

Name of Installation Forest Park AFRC

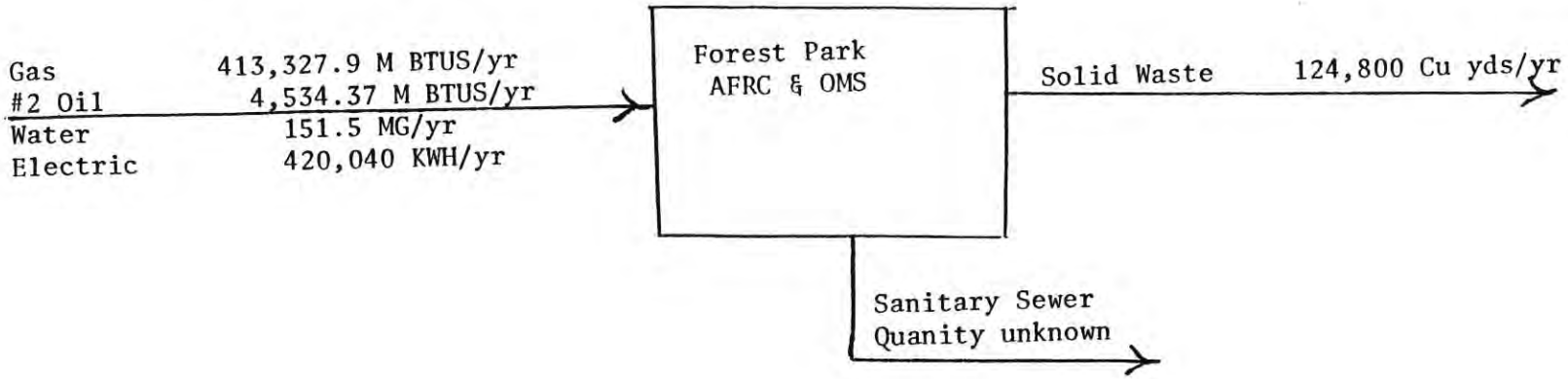
Contact Mr, Hess Phone 926-3854/3080

Please send above data to:
Environmental Office
Bldg 119, Ft. Sheridan, IL 60037

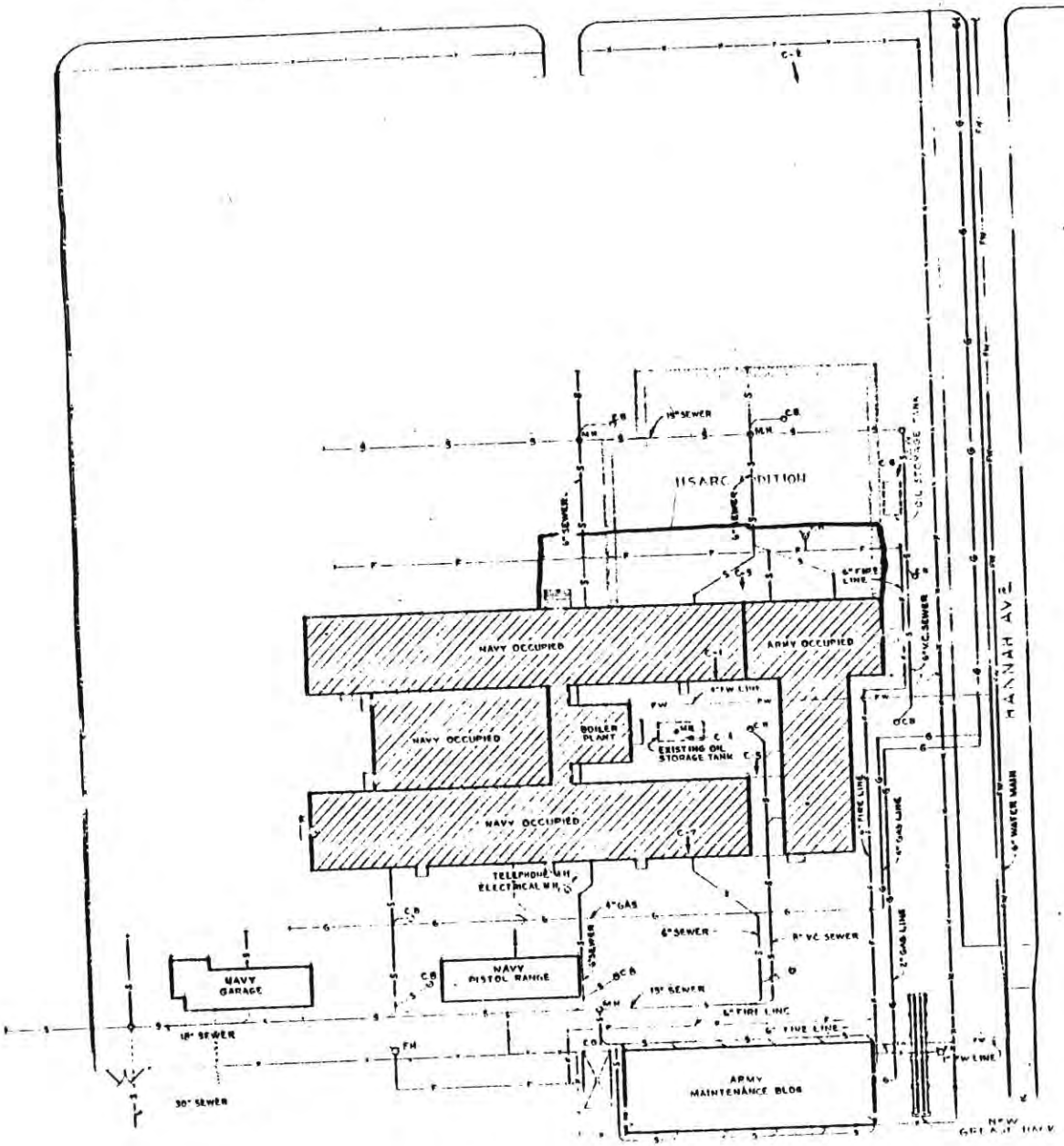
For Assistance Call: (312) 926-2719

(Attach to Annual Environmental Rapid Survey)

IMCL2

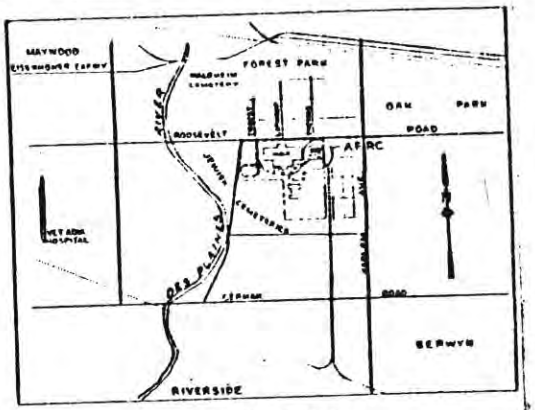

Gas
#2 Oil
Water
Electric
413,327.9 M BTUS/yr
4,534.37 M BTUS/yr
151.5 MG/yr
420,040 KWH/yr
Forest Park
AFRC & OMS
Solid Waste
124,800 Cu yds/yr
Sanitary Sewer
Quanity unknown

ROOSEVELT ROAD



PLAN

SCALE: 1" = 30'



VICINITY MAP

SCALE IN MILES

LEGEND
EXISTING

FRESH WATER	FW
FIRE WATER	F
SEWER LINES	S
GAS LINES	G
CATCH BASIN	CB
MANHOLE	MH
FIRE HYDRANT	FH
PHOTOGRAPH LOCATIONS	C-1
BUILDING	

DRAWINGS IN THIS FOLIO HAVE BEEN REDUCED TO ONE HALF THE ORIGINAL SCALE

SYMBOL	DESCRIPTION	DATE
	REVISIONS	

DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

DESIGNED BY: T.J.C.
DRAWN BY: L.M.R.
CHECKED BY: E.J.C.
SUBMITTED:
APPROVED:
CHIEF, ENGINEERING DIVISION

US ARMY RESERVE CENTER
FOREST PARK, ILLINOIS

UTILITY & SITE PLAN

DATE: MAY, 1

CHIEF, REAL ESTATE DIVISION

MAP AS SHOWN

SEQUENCE NO.

DEPARTMENT OF THE ARMY
HEADQUARTERS, 86TH U S ARMY RESERVE COMMAND
7402 WEST ROOSEVELT ROAD
FOREST PARK, ILLINOIS 60130

AFKB-AC-CE-EN

18 November 1979

SUBJECT: Forest Park USAFRC Heli-Stop

Chief of U.S. Naval Reserve
New Orleans, LA 70146

1. Reference: Letter, Chief of Naval Reserve, New Orleans, LA, Code 23, 11000, Ser 11086, dated 27 December 1978.

2. The Environmental Engineer, Fort Sheridan, IL, has requested Aberdeen Proving Grounds to assist in formulating an environmental impact statement for helicopter operations at Forest Park USAFRC. This new EIS will supercede and expand on that portion of the EIS currently in effect. The current EIS is sufficient for helicopter operations until such time as the new EIS is completed.

3. The area that will be used for the heli-stop will be swept and sealed by army personnel prior to the initiation of helicopter operations.

4. A determination has been made by the Facility Engineers, Fort Sheridan, IL, that the type of helicopter operations planned for Forest Park USAFRC will in no way be detrimental to the underground utilities in the area.

5. The legal and financial responsibility for helicopter operations at Forest Park, IL are covered under the Federal Tort Claims Act, and should be amplified in the inter-service support agreement.

6. The size of the heli-stop will be 50' X 50'. This area is included in the 300' X 500' area that has been authorized for use as a landing site.

WILBER J. BUNTING
MG, USAR
Commander

CF:
Fifth U.S. Army, ATTN: AFKB-LG-E
Facilities Engineer, Fort Sheridan, ATTN: Environmental Engineer/Mr. Chema
AVN Flight Facility, AF26
OIC, Forest Park USAFRC

NOV 20 1979

DEPARTMENT OF THE ARMY
HEADQUARTERS, 86TH U S ARMY RESERVE COMMAND
7402 WEST ROOSEVELT ROAD
FOREST PARK, ILLINOIS 60130

Mr. Hess/ag/926-3854

AFKB-AC-CE-EN

18 September 1979

SUBJECT: Environmental Assessment, Forest Park Heli-Stop

Commander
Fort Sheridan
ATTN: AFZO-FE
Fort Sheridan, IL 60037

1. Request an environmental assessment be prepared for a Heli-Stop at Forest Park, IL. Information pertinent to the Heli-Stop is at Incl 1.

2. For additional information, the point of contact at this headquarters is Mr. Robert A. Hess, 926-3854/3080.

FOR THE COMMANDER:

JAMES A. MUETING
Supervisory Log Mgmt Spec

1 Incl
as

Mr. Hess/ag/926-3854

AFKB-AC-CE-EN

18 September 1979

SUBJECT: Environmental Assessment, Forest Park Heli-Stop

Commander
Fort Sheridan
ATTN: AFZO-FE
Fort Sheridan, IL 60037

1. Request an environmental assessment be prepared for a Heli-Stop at Forest Park, IL. Information pertinent to the Heli-Stop is at Incl 1.

2. For additional information, the point of contact at this headquarters is Mr. Robert A. Hess, 926-3854/3080.

FOR THE COMMANDER:

1 Incl
as

JAMES A. MUETING
Supervisory Log Mgmt Spec

DCSLOG *
FLETCHER
COFS
ASF
IN REPLY REFER TO: RF-2 *

DEPARTMENT OF THE NAVY
CHIEF OF NAVAL RESERVE
NEW ORLEANS, LOUISIANA 70146

Code 23
11000
Ser 11086
27 DEC 1978

From: Chief of Naval Reserve
To: Commander, 86th U. S. Army Reserve Command, Building 144, Central and Wilice Roads, Arlington Heights, IL 60005

Subj: Helicopter Operations at NAVMARCORESCEN Forest Park, IL

Ref: (a) CNAVRES ltr Code 13 11000 Ser 8343 of 15 Sep 1978

Encl: (1) NORTHNAVFACENGCOM ltr Code 2022 11010 of 7 Dec 1978

1. By reference (a) CNAVRES requested NORTHNAVFACENGCOM to determine whether or not helicopter operations at the reserve center in Forest Park would require a candidate environmental impact statement (CEIS) and to make any other appropriate comments.

2. Enclosure (1) is the reply received from NORTHNAVFACENGCOM which concludes that a CEIS is required. Other problem areas cited in enclosure (1) are resealing or paving of the parking area, underground utilities that may be damaged by the operation, legal and financial responsibility of the operations and the size of the helipad.

3. CNAVRES has no objection to the helicopter operations provided the problems cited in enclosure (1) can be resolved in an acceptable manner and necessary FAA approval can be obtained.

S. W. COSTON
DEPUTY CHIEF OF STAFF
FOR RESOURCES

Copy to:
NORTHNAVFACENGCOM (w/o encl)
NAVRESREDCOM REG Thirteen (Code 07)
NAVMARCORESCEN Forest Park, IL
HQ US ARMY, Ft Sam Houston, TX

incl

DEPARTMENT OF THE NAVY
NORTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
PHILADELPHIA, PENNSYLVANIA 19112

TELEPHONE NO.
Autovon 443
215-755-4807

Code 2022
11010

7 DEC 1978

From: Commanding Officer, Northern Division, Naval Facilities Engineering Command
To: Chief of Naval Reserve, New Orleans, LA

Subj: Helicopter Operations at NAVMARCORESCEN Forest Park, IL

Ref: (a) CNAVRES ltr Code 13 11000 Ser 8343 of 15 Sep 78
(b) HQ, Fifth US Army ltr AFKB-TR-A of 24 Aug 78
(c) CO NORTHNAVFACENGCOM ltr Code 2022 11010 of 13 Jun 78

1. Reference (a) requested that Northern Division, Naval Facilities Engineering Command make a determination on the necessity of a Candidate Environmental Impact Statement (CEIS) for the subject project. Reference (b) contended that the aircraft type (OH-58, Jet Ranger) and the infrequent usage (5 per month) precluded requirement for an impact statement. The concern of this office, as expressed in reference (c), is that the noise generated by these operations will be offensive to adjacent property owners, and as such, will become controversial. Until a detailed Environmental Assessment is completed that conclusively shows that the project and the attendant noise and safety problems, inherent in all flight operations, is neither environmentally degrading or controversial, a CEIS is considered necessary.

2. In addition to the above determination, the following comments are provided on the subject project:

a) The ravelling of the existing bituminous parking area raises the possibility of loose gravel being ingested by an engine or propelled at nearby property or personnel. It is advisable, depending on the extent of deterioration, that the entire parking area be resealed or repaved prior to the start of helicopter operations.

b) There are believed to be drainage sewers under the parking area. These should be located and the effect of impact loading on these pipes analysed prior to establishment of a landing site.

c) The Army must assume all legal and financial responsibility for the helicopter operations.

Encl (1)

7 DEC 197

Subj: Helicopter Operations at NAVMARCORESCEN Forest Park, IL

d) The FAA letter referenced in reference (b) refers to a "300' by 500' SW-NE asphalt helipad". The Army is now proposing to establish a 50' by 50' landing site. These conditions may invalidate the original approval.

ALAN C. VALENTI
By direction

Copy to:
NAVRESREDCOM REG Thirteen (Code 07)
NAVMARCORESCEN Forest Park, IL

DCSLOG
Fletcher
CofS
RF 1

DEPARTMENT OF THE NAVY
CHIEF OF NAVAL RESERVE
NEW ORLEANS, LOUISIANA 70146

IN REPLY REFER TO:
Code 13
11000
Ser 8343
15 SEP 1978

From: Chief of Naval Reserve
To: Commanding Officer, Northern Division, Naval Facilities Engineering Command

Subj: Helicopter Operations at NAVMARCORESCEN Forest Park, IL

Encl: (1) HQ, Fifth U. S. Army, Ft. Sam Houston, TX first end AFKB-TR-A of 24 Aug 1978 w/encls

1. By enclosure (1), the Army concludes that an impact statement should not be required for the proposed helicopter operations at the reserve center, Forest Park, Illinois, due to the limited operations (less than five per month). The Army has further stated that the operations will be carried out during daylight hours only and will adhere to Army and FAA requirements.

2. It is requested that NORTHNAVFACENGCOM make a determination on whether or not helicopter operations at the reserve center would require a candidate environmental impact statement and any other comment(s) as appropriate.

C. W. GATES
By direction

Copy to:
NAVRESREDCOM REG Thirteen (Code 07)
NAVMARCORESCEN Forest Park, IL
HQ 86th U. S. Army Reserve Command

AFKB-TR-A (1 Aug 78) 1st Ind
SUBJECT: Helicopter Operations at NAVMARCORESCEN Forest Park, IL

HQ, Fifth US Army, Ft Sam Houston, TX 78234 24 AUG 1978

TO: Chief, Naval Reserve, New Orleans, LA 70146

1. Recommend approval.

2. The helicopter operations on the proposed site, being limited to the OH-58 (Jet Ranger), and the limited number of operations per month (less than five per month), should preclude the requirement for an impact statement.

FOR THE COMMANDER:

Wayne Y Katayama

WAYNE Y KATAYAMA
CPT, AGC
ADMIN OFFICER

2 Incl
nc

Enclosure (|)

DEPARTMENT OF THE ARMY
HEADQUARTERS, 86th U.S. ARMY RESERVE COMMAND
CENTRAL-WILKE RD, BUILDING No. 144
ARLINGTON HEIGHTS, ILLINOIS 60005

AFKB-AC-CE-AVN 1 August 1978

SUBJECT: Helicopter Operations at NAVMARCORESCEN Forest Park, IL

Commander
Fifth U. S. Army
ATTN: AFKB-TR-A
Fort Sam Houston, TX, 78234

1. Reference NAVMARCORESCEN Forest Park letter FP: JFW:ka 3314 Ser 118 of 30 March 1978.

2. The subject letter mentions several conditions that would adversely affect helicopter operations at NAVMARCORESCEN Forest Park, Illinois. The intent of this letter is to address these conditions and request authorization for Army helicopter operation on a limited basis.

3. The following proposed actions satisfy Army and Federal Aviation Administration requirements and hopefully, will eliminate the concern shown in paragraph 2 of the basic correspondence:

a. A fifty by fifty landing area will be resurfaced and marked to distinguish it from the remainder of the parking lot and comply with Army TM 5-803-4 for a limited use helipad. A sketch of the proposed area is attached as Inclosure-1.

b. Lighting is not necessary as operations will be during daylight hours and VFR weather only.

c. A wind sock will be appropriately displayed for accurate wind direction information.

d. AR 420-90, paragraph 5-5, eliminates the need for crash crew/aircraft fire fighting equipment when operations are under forty per day. Less than five operations per month is expected. The only requirement is the availability of a portable fire extinguisher.

e. Communications equipment is not required for a limited use helipad.

f. The Federal Aviation Administration has previously approved helicopter operations into NAVMARCORESCEN Forest Park, Illinois and their letter is attached as Inclosure-2.

AFKB-AC-CE-AVN 1 August 1978
SUBJECT: Helicopter Operations at NAVMARCORESCEN Forest Park, IL

Communications with the FAA Great Lakes Regional Office (312-694-4500, extension 4474) verified that Case No. 73-GL-322-NRA is still valid.

g. The only aircraft allowed to land at the site will be the OH-58 (Jet Ranger). Its maximum gross weight is 3,000 pounds, thus the area used for the helipad will not be over stressed.

4. With the understanding that all mentioned criteria will be strictly adhered to, and the 86th USARCOM will be fully responsible for its operation, recommend this request for authorization to establish a helipad at NAVMARCORESCEN Forest Park, Illinois, be forwarded for consideration to Chief, Naval Reserve, New Orleans, Louisiana, 70146.

2 Incls
as

WILBER J BUNTING
Brigadier General, USAR
Commanding

CF: 1 ea-
Commanding Officer, Naval and Marine Corps Reserve Center, Forest Park, IL
Commander, Naval Reserve REadiness Command Region THIRTEEN, Great Lakes, IL
Commanding Officer, Northern Div., Naval Facilities Engineering Command, Philadelphia, PA
Commander, ARR-V, Ft. Sheridan, IL

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

GREAT LAKES REGION
2300 EAST DEVON AVENUE
DES PLAINES, ILLINOIS 60018

FEB 7 1974

USAR Flight Facility
DuPage County Airport
West Chicago, Illinois 60185

Re: USAR Flight Center
Forest Park, Illinois
Case No. 73-GL-322-NRA

Gentlemen:

This letter will acknowledge the receipt of the "Notice of Landing Area Proposal", FAA Form 7480-1, dated September 18, 1973, proposing the establishment of a landing facility near Chicago (Forest Park), Illinois, known as USAR Flight Center, described as a 300' x 500' SW-NE asphalt helipad, private use, not open to the public, at Latitude 41°51'52", Longitude 87°48'35", elevation 620'.

The Federal Aviation Administration has conducted an aeronautical study to determine the effect on the safe and efficient use of the navigable airspace by aircraft. Based upon this aeronautical study, we have no objection to the proposal from the standpoint of the safe and efficient use of airspace by aircraft provided operations are restricted to daylight hours only and ingress/egress routes are established in the south, southwest, and west quadrants only.

This determination expires in eighteen (18) calendar months from the date of this letter unless otherwise extended, revised, terminated, or the project constructed before that date.

If you have any questions or desire assistance of any kind, please contact us. Our telephone number is 312-694-4500, extension 4474.

Enclosures #1 by reference is incorporated herein and made part of this airspace determination.

FAA Form 5010-2 is enclosed for your use. Please return the completed 5010-2 form to this office prior to operational use of this airport.

Sincerely,

Louis H. Yates

LOUIS H. YATES
Chief, Planning Section
Chicago Airports District Office

Enclosures

Inclosure-2

DEPARTMENT OF THE NAVY
CHIEF OF NAVAL RESERVE
NEW ORLEANS, LOUISIANA 70146

IN REPLY REFER TO:
Code 13
11000
Ser 6263
27 JUN 1978

THIRD ENDORSEMENT on NAVMARCORESCEN Forest Park ltr FP:JFW:ka 3314 Ser 118 of 30 Mar 1978

From: Chief of Naval Reserve
To: Commander, 86th U. S. Army Reserve Command, Building 144, Central and Wilice Roads, Arlington Heights, IL 60005

Subj: Helicopter Operations at NAVMARCORESCEN Forest Park, IL

1. Forwarded with concurrence.

C. W. GATES
By direction

Copy to:
NORTHNAVFACENGCOM
NAVRESREDCOM REG Thirteen (Code 07)
NAVMARCORESCEN Forest Park, IL
CDR, 479th PSC

DEPARTMENT OF THE NAVY
NORTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
PHILADELPHIA, PENNSYLVANIA 19112

TELEPHONE NO.
Autovon 443
215-755-4807

Code 2022
11010

13 JUN 1978

SECOND ENDORSEMENT on CO NAVMARCORESCEN Forest Park, IL ltr FP:JFW:ka
Ser 118 of 30 Mar 78

From: Commanding Officer, Northern Division, Naval Facilities Engineering Command
To: Commander, 86th U.S. Army Reserve Command, Building 144, Central and Wilice Roads, Arlington Heights, IL 60005
Via: Chief of Naval Reserve, New Orleans, LA

Subj: Helicopter Operations at NAVMARCORESCEN Forest Park, IL

Ref: (a) NAVFAC P-272, Definitive Designs for Naval Shore Facilities
(b) OPNAVINST 6240.3E

1. Forwarded for continuing review. There is insufficient land available at N&MCRC Forest Park for the establishment of permanent helicopter operations in accordance with aircraft safety criteria of reference (a). Also, the noise generated by such operations in this urbanized area would be offensive to the adjoining property owners. Further, the addition of helicopter operations to the Reserve Center would constitute a mission change and, therefore, would require a candidate environmental impact statement in accordance with reference (b). Unless these requirements are met, this office cannot support the establishment of a helicopter landing area at N&MCRC Forest Park.

ALLEN J. STEWART
By direction

Copy to:
NAVMARCORESCEN Forest Park
CDR, 479th PSC
COMNAVRESREDCOM REGION 13

DEPARTMENT OF THE NAVY
COMMANDER, NAVAL RESERVE READINESS COMMAND
REGION 13
GREAT LAKES, ILLINOIS 60088

00:js
11000
Ser 1087
03 APR

FIRST ENDORSEMENT on CO, NAVMARCORESCEN Forest Park, IL ltr FP:JFW:ka
Ser 118 of 30 MAR 78

From: Commander, Naval Reserve Readiness Command Region THIRTEEN
To: Commander, 86th U.S. Army Reserve Command, Building 144, Central and Wilice Roads, Arlington Heights, IL 60005
Via: (1) Commanding Officer, Northern Division, Naval Facilities Engineering Command (Code 20)
(2) Chief of Naval Reserve

Subj: Helicopter Operations at NAVMARCORESCEN Forest Park, IL

1. Readdressed and forwarded for technical review and coordination. This command concurs with the points stated. All costs incurred in establishing a satisfactory helicopter operations capability must be funded by the user.

R.L. BESKIND

Copy to:
NAVMARCORESCEN Forest Park, IL
CDR, 479th PSC

DEPARTMENT OF THE NAVY
NAVAL AND MARINE CORPS RESERVE CENTER
7410 W ROOSEVELT ROAD
FOREST PARK, ILLINOIS 60130

FP:JFW:ka
3314
Ser 118
30 Mar 1978

From: Commanding Officer, Naval and Marine Corps Reserve Center, Forest Park, IL
To: Commander, 86th US Army Reserve Command, Bldg 144, Central and Wilice Roads, Arlington Heights, IL 60005
Via: Commander, Naval Reserve Readiness Command Region THIRTEEN (Code 07), Great Lakes, IL

Subj: Helo ops at N&MCRC Forest Park

1. It has recently come to my attention that the Army Reserve component at N&MCRC Forest Park has requested or is in the process of requesting helo troop lift support services from Forest Park to an off-site drilling location during the June - July time frame. On the same subject, it is also my understanding that the Army Reserve component may also be contemplating utilizing helicopters as a normal mode of transportation for general and senior officers subsequent to occupancy of the Army Reserve wing presently under construction.

2. It is the purpose of this letter to invite your attention to certain conditions at N&MCRC Forest Park which impact adversely on contemplated helo ops at Forest Park:

a. The parking lot (landing area) is covered by a thin layer of gravel, thereby presenting the real danger of engine ingestion or property damage/personnel injury to civilians on nearby, heavily traveled Roosevelt Road.

b. The parking lot (landing area) is neither marked nor lighted for helicopter operations.

c. There is no wind sock or direction indicator.

d. There are neither crash crew/aircraft fire fighting equipment nor adequately trained personnel in attendance at Forest Park.

e. There are neither communications equipment nor personnel to man such equipment available to N&MCRC Forest Park.

FP:JFW:ka
3314
Ser 118
30 Mar 1978

Subj: Helo ops at N&MCRC Forest Park

f. There is no FAA approval for use of N&MCRC Forest Park as a helo pad.

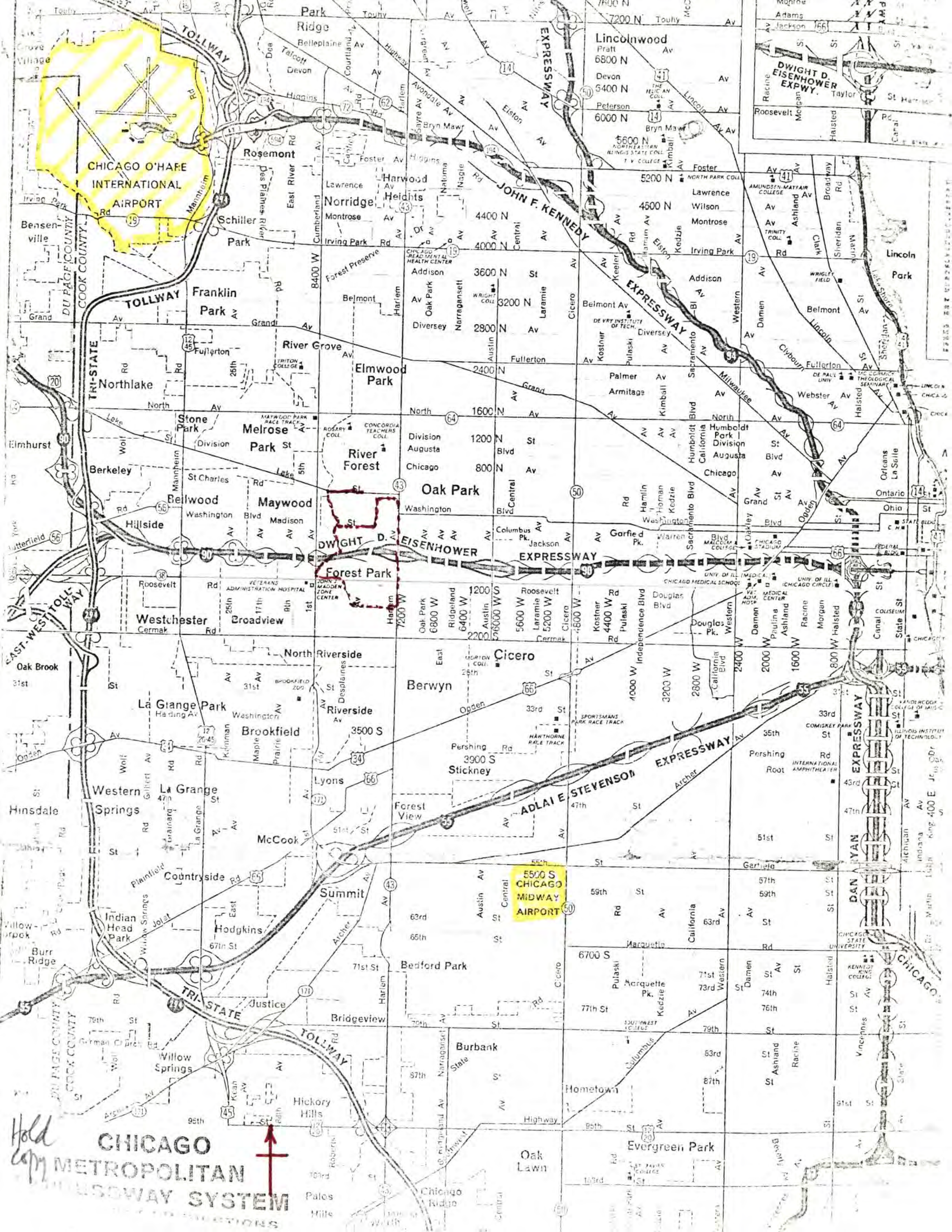
g. The parking lot has not been stressed for the unusual weight which can be caused by helo ops.

3. In short, until and/or unless the minimum safety requirements can be satisfied and the respective services certify N&MCRC Forest Park for helo ops it is my recommendation that helo ops be prohibited at this facility. Additionally, while it is a stated goal at this center to support our sister services (the Army and Coast Guard at Forest Park) as much as possible - and our working relationships continue to be excellent - manpower constraints on the active duty Navy station keeper force necessarily dictate that any proposed flight ops should be an Army funded, manned and maintained program.

J. F. White

J. F. WHITE

Copy to:
CDR, 479th PSC



CHICAGO METROPOLITAN
SYSTEM
CHICAGO O'HARE INTERNATIONAL AIRPORT
5500 S CHICAGO MIDWAY AIRPORT
JOHN F. KENNEDY EXPRESSWAY
DWIGHT D. EISENHOWER EXPRESSWAY
DWIGHT D. EISENHOWER EXPWY.
ADLAI E. STEVENSON EXPRESSWAY
DAN RYAN EXPRESSWAY
TRI-STATE TOLLWAY
EAST-WEST TOLLWAY
DU PAGE COUNTY
COOK COUNTY
Rosemont
Norridge
Harwood Heights
Schiller Park
Franklin Park
River Grove
Elmwood Park
Northlake
Stone Park
Melrose Park
River Forest
Oak Park
Forest Park
Berkeley
Bellwood
Maywood
Hillside
Westchester
Broadview
North Riverside
Cicero
Berwyn
Riverside
La Grange Park
Brookfield
Lyons
Stickney
Forest View
McCook
Western Springs
La Grange
Hinsdale
Countryside
Summit
Indian Head Park
Hodgkins
Burr Ridge
Justice
Bedford Park
Bridgeview
Burbank
Willow Springs
Hickory Hills
Hometown
Evergreen Park
Oak Lawn
Palos Hills
Chicago Ridge
Lincolnwood
Lincoln Park
Elmhurst
Oak Brook
Bensenville
Elk Grove Village
Hold copy

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

GREAT LAKES REGION
2300 EAST DEVON AVENUE
DES PLAINES, ILLINOIS 60018

FEB 7 1974

USAR Flight Facility
DuPage County Airport
West Chicago, Illinois 60185

Re: USAR Flight Center
Forest Park, Illinois
Case No. 73-GL-322-NRA

Gentlemen:

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If you have any questions or desire assistance of any kind, please contact us. Our telephone number is 312-694-4500, extension 4474.
5[illegible]4 - 4490

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FAA Form 5010-2 is enclosed for your use. Please return the completed 5010-2 form to this office prior to operational use of this airport.

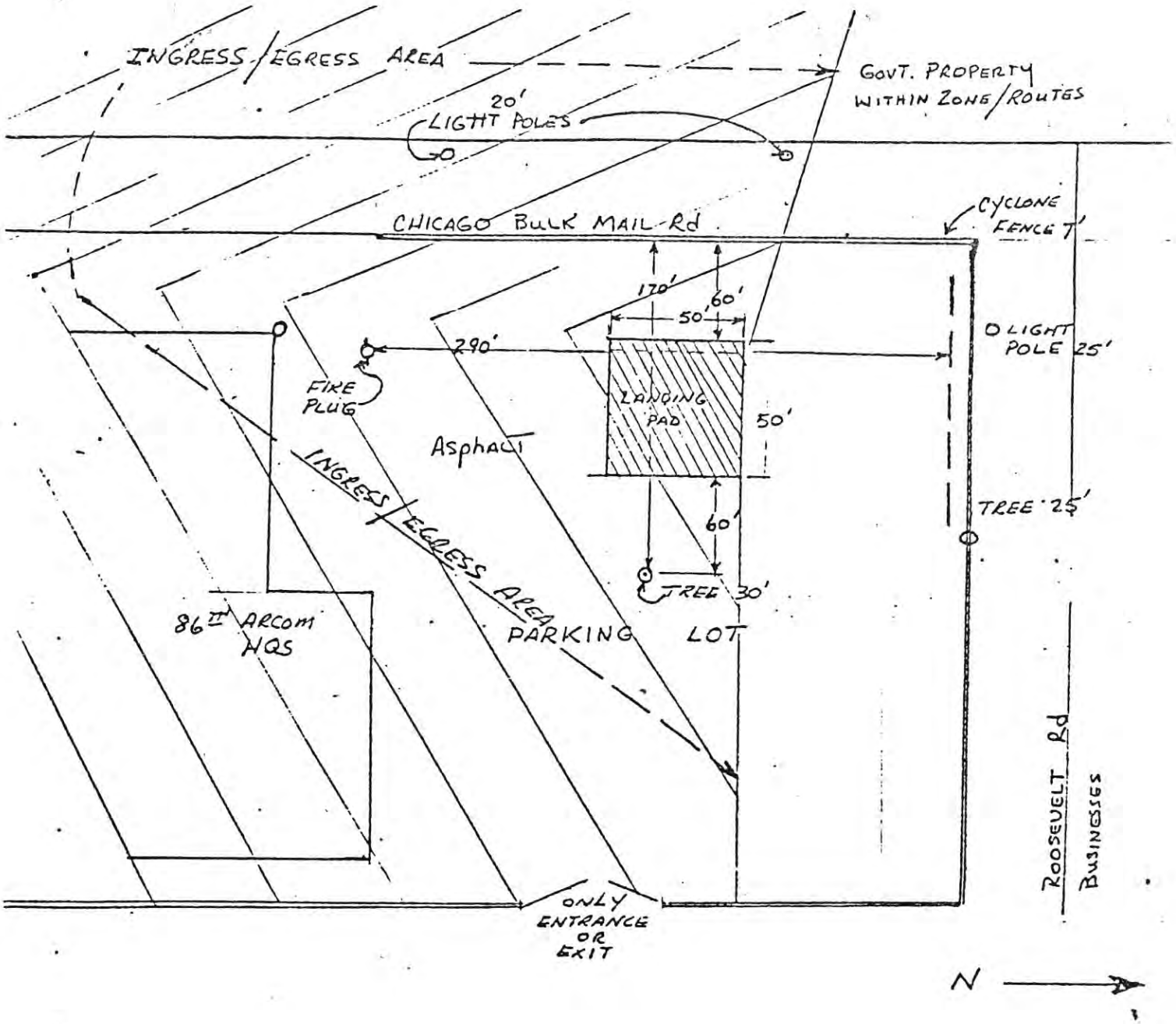
Sincerely,

Louis H. Yates

LOUIS H. YATES
Chief, Planning Section
Chicago Airports District Office

Enclosures

Inclosure-2



PROPOSED 86TH ARCOM LANDING PAD FOREST PARK IL
NOT TO SCALE

Inclosure-1

27 NOT IN DSERTS + DOESN'T NEED TO BE
Sites 1+2 should be RC

USATHAMA Property Report

Property Number: 1700C
FFIS Number : IL-2105XXXXX

Name : AFRC FOREST PARK
Address: 7402 WEST ROOSEVELT ROAD

FOREST PARK
IL 60130-2587

Coord.: 41DEG 52MIN N 87DEG 48MIN W

Date of Printing: 08/07/90
Last Update: 08/07/90

Nearest Town : FOREST PARK
Population : 15,200

Base Population : 200
Command : 4TH ARMY

EPA Region : 5

Support Facility: FORT SHERIDAN

Environmental Coordinator Name : ROBERT WITTE
Environmental Coordinator Address: HQ FORT SHERIDAN
BUILDING 119
ATTN: AFKE-ZO-DE

FORT SHERIDAN
IL 60037-5000

Environmental Coordinator Phone : (312)926-2446

Date of Form Response : 02/28/90

Name of Respondee : ROBERT DONNICK
Title : SUPERVISORY STAFF ADMIN
Time Associated : 10 YEARS

Surface Water Uses: RECREATION: DESPLAINS RIVER: 1/2 MILE

Ground Water Uses : USABLE, BUT NOT USED

Comments : NAVY OWNED AFRC. NAVY RESPONSIBLE FOR TANKS, UTILITIES, AND FIRING RANGE. MOST ARMY RESERVE MAINTENANCE OCCURS AT ORELAND PARK AMSA 45. ASBESTOS TESTING NOVEMBER, 1989; RESULTS UNAVAILABLE AT TIME OF SURVEY 2/90.

Number of Waste Sites: 2

Maximum Score : 0.7

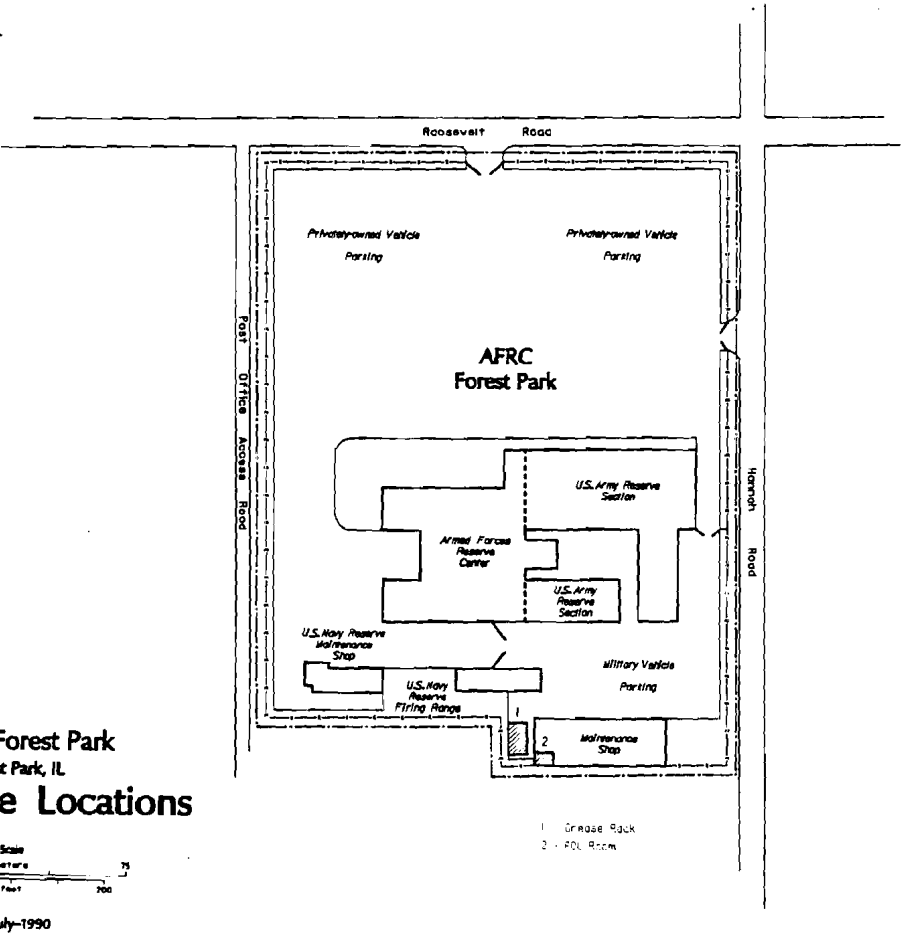
Confidence Factor : C

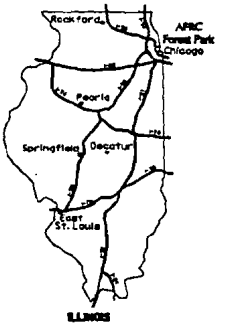
USATHAMA Waste Site Report

Date of Printing: 08/07/90
Last Update: 08/07/90

Property Number: 1700C Property Name: AFRC FOREST PARK

Site Number	Site Name	Waste Site Characterization	ISM Scores	Comments	IRP Status
1	GREASE RACK	Type: OIL AND GREASE Qty: NONE CURRENTLY GENERATED Permit: NONE	Ground Water : Surface Water: Air Quality : Total Score :	WOODEN RACK OVER CONCRETE HAS NO DRAIN, CURB OR OTHER CONTAINMENT. RACK INACTIVE SINCE PRIOR TO 1981. SITE NOT SCORED DUE TO INACTIVITY.	PA : I SI : N RI : N FS : N RD : N
2	POL ROOM	Type: OIL, PAINT, GREASE Qty: 10 GALLONS Permit: NONE	Ground Water : 0.5 Surface Water: 1.1 Air Quality : 0.0 Total Score : 0.7	ROOM INSIDE MAINTENANCE SHOP HAS CONCRETE FLOOR, NO FLOOR DRAIN, NO CURB AT DOOR. LARGEST CONTAINER IS 1 GALLON.	PA : I SI : N RI : N FS : N RD : N





AFRC Forest Park

Forest Park, IL

Waste Site Locations

Scale

0 Meters 75

0 Feet 200

17-July-1990

USATHAMA

U.S. Army Toxic and Hazardous Materials Agency

ENCL

AFRC-AIL-EN (200-1) 13 MAY 1995

MEMORANDUM FOR Engineer, HQ, 86th USARCOM, 7402 W. Roosevelt Forest park, IL 60130

SUBJECT: Internal Environmental Assessment of Forest Park Armed Forces Reserve Center

a. An Internal Environmental Assessment was conducted on 02 April, 1995 at the Forest Park AFRC located in Forest Park, IL. This assessment was performed by SFC Arnold L. Brodsky, Engineer NCO, of the HQ., 86th USARCOM, Forest Park, IL. The Facility Environmental Compliance Officer, MAJ Bixler, accompanied the Team throughout this assessment.

b. Army Regulation 200-1, paragraph 12-8b(3) requires that USAR facilities receive an internal assessment at the midpoint of the external assessment 4 year cycle. The external assessment was conducted on 3-4 December 1991 by the by the 416 Engineer Command St. Louis Facility Engineer Team.

c. The assessment process consisted of reviewing the previous External Environmental Assessment Report dated 19 September 1992; interviewing the Facility Manager; and conducting a complete walkthrough of the facility including the parking lot.

d. A list of continuing negative findings as during the 3-4 December, 1991 assessment is as follows:

1. The switch for the exhaust fan to the flammable material storage room is located inside rather than outside and adjacent to the door.

2. Periodic inspections of all the stormwater drains is the responsibility of the Navy.

e. A list of positive findings formerly negative is as follows:

1. The waste oil which was improperly stored was removed approximately one year prior to this date thought the 86th USARCOM.

2. This Facility has spill kits in the Motor Pool area ad Major Bixler & Ms. Pawlak of the 86th USARCOM are trained in responding to spills.

3. Safety Kleen has properly removed for recycling , all solvents.

4. All flammable and combustible materials are stored properly in cabinets in the Motor Pool with "No Smoking" signs and fire extinguishers nearby.

AFRC-AIL-EN (200-1) 13 MAY 1995
SUBJECT: Internal Environmental Assessment of Forest Park AFRC
Forest Park, IL

5. Oxygen tanks formerly found to be unsecured in the boiler room have been removed. Oxygen tanks are not routinely stored at this Facility.

6. Major Bixler has both the SPCCP and the ISCP available.

7. Periodic spill response exercises are being conducted. The response team includes Major Bixler and Ms. Pawlak.

8. A radon test was conducted by the Environmental office of Ft. McCoy, with no readings above the EPA action level.

9. Use of pesticides by Facility Personnel is not occurring.

10. This Facility does not require an ICUZ Study since they do not conduct any live fire, aircraft operations or any other sources of excessive noise.

11. This Facility has a Mitigation and Monitoring Plan overseen by the Navy which is the Custodial Organization.

f. OTHER

A list of previous positive findings that are continuing to be positive:

1. The 86th ARCOM still has an on going recycling program at this facility for paper and cans.

2. Copies of MSDS's are available for all for chemicals stored at this facility.

3. All fire extinguishers are inspected yearly and in working order.

This is an extremely well kept and clean facility. The Facility Manager and Major Bixler along with his staff in the last two years have obviously improved many of the many former deficiencies found as well as continued to maintain an excellent example of environmental compliance.

Arnold L. Brodsky
SFC, USAR
Engineer NCO

Copy furnished:
Facility Manager-Navy

United States Navy
Non-Housing Assessment Radon Distribution
Martin Marietta Energy Systems
EFD: 8

UIC	Facility Name	# of Detectors	Radon Concentration (Pci/L) 0 to 4	4 to 20	>20	>4	Highest
N62028	NAVMARCORESCEN TRENTON NJ	11	11	0	0	0	3.2
N62032	NAVRESCEN HUTCHINSON KS	11	11	0	0	0	2.0
N62033	NAVRESCEN OSHKOSH WI	11	11	0	0	0	1.7
N62035	NAVMARCORESCEN MILWAUKEE WI	9	9	0	0	0	3.3
N62037	GREAT LAKES PWC IL	8	8	0	0	0	0.6
N62039	NAVRESCEN JOPLIN MO	2	2	0	0	0	0.6
N62040	NAVRESCEN WICHITA KS	11	11	0	0	0	0.3
N62044	NAVMARCORESCEN DES MOINES IA	5	5	0	0	0	1.5
N62046	NAVMARCORESCEN GARY IN	11	11	0	0	0	0.4
N62047	NAVRESCEN DUBUQUE IA	10	9	1	0	1	4.3
N62048	NAVRESCEN PORTSMOUTH OH	11	11	0	0	0	1.1
N62052	NAVRESCEN SHEBOYGAN WI	10	10	0	0	0	0.5
N62053	NAVRESCEN CADILLAC MI	11	11	0	0	0	0.7
N62054	NAVMARCORESCEN KANSAS CITY MO	11	11	0	0	0	0.9
N62055	NAVMARCORESCEN DAYTON OH	11	11	0	0	0	3.5
N62057	NAVRESCEN DULUTH MN	11	11	0	0	0	2.0
N62058	NAVMARCORESCENFTSNL ST PAUL MN	11	11	0	0	0	2.6
N62060	NAVMARCORESCEN DANVILLE IL	11	10	1	0	1	4.5
N62066	NAVRESCEN LACROSSE WI	11	11	0	0	0	1.1
N62073	NAVMARCORESCEN FORT WAYNE IN	11	11	0	0	0	3.0
N62076	NAVRESCEN TERRE HAUTE IN	11	11	0	0	0	2.4
N62078	NAVMARCORESCEN LOUISVILLE KY	11	10	1	0	1	4.4
N62080	NAVRESCEN SOUTHFIELD MI	11	11	0	0	0	0.6
N62082	NAVMARCORESCEN GRAND RAPIDS MI	11	11	0	0	0	1.3
N62084	NRC FORT CUSTER MI	11	11	0	0	0	2.3
N62085	NAVMARCORESCEN LANSING MI	5	5	0	0	0	0.9
N62088	NAVRESCEN SAGINAW MI	11	11	0	0	0	0.5
N62090	NAVRESCEN ST JOSEPH MO	8	8	0	0	0	0.8
N62092	NAVMARCORESCEN AKRON OH	10	9	1	0	1	5.3
N62094	NAVMARCORESCEN CINCINNATI OH	10	10	0	0	0	0.4
N62095	NAVMARCORESCEN COLUMBUS OH	11	10	1	0	1	4.2
N62098	NAVMARCORESCEN YOUNGSTOWN OH	11	11	0	0	0	0.9
N62100	NAVMARCORESCEN MADISON WI	11	11	0	0	0	0.2
N62130	NAVMARCORESCEN DENVER CO	10	10	0	0	0	0.6
N62142	NAVRESCEN CHEYENNE WY	11	11	0	0	0	0.7
N62154	NAVMARCORESCEN SAVANNAH GA	11	11	0	0	0	1.1
N62248	NAVMARCORESCEN LUBBOCK TX	11	10	1	0	1	4.5
N62257	NAVMARCORESCEN ABILENE TX	10	10	0	0	0	0.4
N62375	NAVMARCORESCEN GREENVILLE SC	10	6	4	0	4	10.0
N62378	NAVRESCEN CLEVELAND OH	10	10	0	0	0	0.3
N62603	FLEMINEWARTRACEN CHARLESTON SC	152	150	2	0	2	13.8
N62701	NAVSURFWPNCENDET FT LAUDERDALE	21	21	0	0	0	0.7
N62741	NAVSCSCOL ATHENS GA	591	589	2	0	2	4.6
N62748	NAVMARCORESCE WACO TX	11	10	1	0	1	7.6
N62757	NMCRC FOREST PARK IL	10	10	0	0	0	0.4
N62795	SUPSHIP PASCAGOULA MS	146	146	0	0	0	1.5

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Pre-Renovation
Hazardous Materials Investigation
Rifle Range
Naval Reserve Center
Forest Park, Illinois

Contract No. SC 6284.03

prepared for:
Knight Architects Engineers Planners, Inc.
Public Infrastructure Facilities Group
549 West Randolph Street
Chicago, Illinois 60661

prepared by:
Cape Environmental Management Inc
102 Wilmot Road
Suite 160
Deerfield, IL 60015

Contact: Kurt Gates, CIH, CSP
Vice President

847/405-9600

April 1997

EXECUTIVE SUMMARY

Cape Environmental Management Inc (Cape) was retained by Knight Architects Engineers and Planners to provide a hazardous materials investigation that included an asbestos-containing materials investigation of the roof, lead-based paint (LBP) on interior and exterior components, soil/sand lead bulk samples and lead dust wipe samples. The investigation was performed to identify hazardous materials that may be impacted by the proposed renovation of the Rifle Range located at Naval Reserve Center in Forest Park, Illinois.

Asbestos-containing material investigation of the roof of the Rifle Range Facility indicated the roof flashing and mastic/tar around the roofing vent containing asbestos. No other asbestos-containing materials were identified on the roof of the facility.

Lead-based paint will be impacted by the renovation, because OSHA defines lead in paint as any paint with lead present. Lead was present in each component sampled. Therefore, Cape's lead design will disclose all paint lead concentrations sampled and require the contractor comply with OSHA's lead standards (29CFR1926.62).

Lead dust contamination was also identified in the facility. Cape's assessment included the collection of dust wipe samples that indicated lead contaminated dust throughout the facility.

The scope of work dated, February 11, 1997, indicated the collection of up to 10 soil/sand samples to determine total lead concentrations. The facility as-builts indicated that the flooring between the shooting line and the target wall was dirt with a sand pit next to the target wall. Cape identified the facility floor to be a concrete slab at the time of the investigation. Because of the concrete floor throughout the facility, Cape collected additional lead dust wipe samples to determine if the concrete surface was contaminated. However, Cape did not collect borings below the concrete slab. If this concrete slab was installed after the area was used as a shooting range, it is possible that lead contaminated soil exists below the slab. Abatement of the dust contamination will permit the building to be renovated, but will not address possible contamination below the concrete slab.

Our scope was limited to asbestos in roofing materials. It is possible that other asbestos-containing materials may be present in the facility. Other hazardous materials may also be present in the facility that may be impacted by the renovation activities. These materials may include, but are not limited to lead below the concrete floor and PCB-containing ballasts.

PISTOL RANGE BUILDING 101 REHABILITATION

Naval Reserve Center
Forest Park, Illinois

EXISTING BUILDING ASSESSMENT

April 14, 1997

KNIGHT
Knight Architects, Engineers, Planners Inc.

Pistol Range Building 101 Rehabilitation
Naval Reserve Center, Forest Park, Illinois

Existing Building Assessment

I. Project Summary:

Repair and renovate the existing Pistol Range building in order to provide new interior work spaces including three offices, two classrooms, a toilet room and mechanical space for a new HVAC system, electrical panel boards and other required electrical, mechanical and plumbing systems.

II. Assessment of Existing Conditions

A survey team was sent to the site to observe and assess the existing architectural, structural, mechanical and electrical conditions of the building. The following observations and recommendations have been made for repair and renovation of the building.

A. Exterior Walls:
Exterior masonry walls show signs of cracking. Brick in a number of locations is missing or cracked and exposed concrete masonry in some locations is damaged. There are a number of openings in the walls for ventilation equipment and exhausters. The southwest corner of the foundation is badly cracked.

Recommendation: All the exterior masonry will be cleaned and tuckpointed. Missing or damaged brick or concrete masonry will be replaced to match the existing brick adjacent. The ventilation equipment and exhausters will be abandoned and the openings filled. Cracks in the foundation walls shall be repaired and patched. Existing wood doors and trim will be removed and replaced with painted, insulated hollow metal doors and frames. The existing lintels will be reused but cleaned and painted.

B. Roof Deck:
The existing roof deck is composed of precast planks and appears to be in adequate condition. A mechanical unit heater has been hung from the deck and penetrates it in one location. A number of minor pieces of equipment, lighting, etc. are hung from the deck. The underside of the deck has lead dust covering it.

Recommendation: Patch and fill any minor holes and cracks. Repair and fill the opening at the location of the existing unit heater. The deck must be cleaned and the lead dust adhered to it must be abated.

C. Roofing:

The roofing above the deck is in bad and deteriorated condition and has not been maintained for a long time. The wood fasciae are rotting and the gutter and downspouts have all but completely deteriorated.

Recommendation: The entire roof including existing rotted wood fasciae, gutters and downspouts will be removed and replaced. A new EPDM single ply roof, fully ballasted, will be installed along with anodized aluminum trim, flashing, fasciae, gutters and downspouts. Asbestos has been found in portions of the roofing.

D. Building Interior:

The building interior is presently cluttered with a plethora of furniture, supplies and garbage. The Owner may choose to remove and salvage these items otherwise they will be removed and abandoned. A firing stand and a substantial steel target backstop are located inside the building. There is mechanical and electrical equipment and fixtures are in disrepair. The existing floor slab is badly cracked and spalled and rises up at one end over two feet. The walls and floor are covered with lead dust.

Recommendation: The furniture, equipment, wiring and other material inside the building will be removed and abandoned. The steel firing stand and target backstop will be removed. Any holes or damage made to the adjacent concrete masonry walls will be repaired. The entire slab will be removed and replaced with a flat slab on grade. A sound deadening fabric covers the interior walls and will be removed. The walls and underside of the roof deck will be abated, cleaned and sealed.

C. Regulated Waste:

Asbestos containing materials have been found in the building and will need to be removed and disposed of per OSHA requirements. In addition, lead based paint and lead dust has been found throughout the facility and will need to be abated also. See Appendix for the asbestos assessment report.

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VOLUME I

Asbestos Survey of The Naval Reserve Center Forest Park, Illinois

Main Building, Pistol Range, and Two Storage Sheds

Contract No. N62467-94-D-1127
Delivery Order No. 0024

prepared for:

Department of the Navy
Southern Division
Naval Facilities Engineering Command
PO Box 10068
Charleston, SC 29411-0068

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prepared by:

Cape Environmental Management Inc
91 Noll Street
Waukegan, Illinois 60085

Contact Person:
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Asbestos Survey of
The Naval Reserve Center
Forest Park, Illinois

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VOLUME I

INTRODUCTION

Cape Environmental Management Inc (CAPE) was retained by Southern Division (South Div), Naval Facilities Engineering Command (NAVFACENGCOM), to conduct an asbestos-containing material (ACM) survey in compliance with 40 CFR Part 763, Asbestos-Containing Materials in Schools; Final Rule and Notice, commonly referred to as the Asbestos Hazard Emergency Response Act (AHERA), and to develop an asbestos inventory at selected Naval Reserve facilities. This Asbestos Survey report (Delivery Order No. 0024) presents the results of the 4 buildings at the Naval Reserve Center, Forest Park, Illinois.

The sampling criteria established for this project required sample collection and laboratory analysis of suspect ACM on the interiors of the buildings, with the following exceptions:

1) Sampling was not performed where the sampling could damage the integrity or usability of the material or potentially create a significant asbestos exposure (i.e., transite-type materials, flexible duct connectors, etc.). These materials were assumed to be ACM.
2) To confirm the presence or absence of asbestos inside doors typically requires destructive sampling which can damage the structural integrity of the doors. Therefore, doors with fire rating labels located in areas where fire doors are generally expected to be installed such as mechanical rooms, stairwells, entrances and exits to buildings were noted and shown as an assumed asbestos-containing material. Fire doors can be comprised of other types of insulating materials other than asbestos to achieve the fire rating, therefore confirmation sampling is recommended prior to disturbance or disposal of doors assumed to contain asbestos.

Although not specifically in the Scope of Work for this contract, CAPE also included partial identification of building exterior suspect ACM as a courtesy, such as transite-type material, cementitious type plasters and window caulking. Roofing material was not included in this survey.

This project included photographs of each ACM homogeneous area and single line CAD drawings showing approximate location of collected samples and ACM locations. Drawings are provided on 11" x 17" size drawings. Pipe systems with asbestos-containing insulation are also illustrated on the drawings.

Federal safety and health regulations were adhered to during collection of suspect ACM samples. Collected samples were sent to and analyzed by Cape Environmental Management Inc, which served as the primary laboratory. Quality Control (QC) samples (approximately 10% of total samples) were sent to and analyzed by Keter Analytical Laboratory. Both CAPE and Keter successfully participate in the National Voluntary Laboratory Accreditation Program (NVLAP) for asbestos bulk sample analysis administered by the National Institute for Standards and Technology (NIST).

The following is a discussion of the facility rating/ranking section included in this report. Each facility was assessed by building, in order of highest priority (for corrective action). The ratings are based on Navy criteria established in NEESA 70.2-010, Asbestos Facility Inventory/Assessment Protocol (Appendix A). A Facility Rating Score is determined for each building by first reviewing that building's

homogeneous area rating scores. The homogeneous area with the highest rating score determines the overall Facility Rating Score.

Following the Asbestos Facility Rating/Ranking Summary, a Discussion of Building Cost Estimates is presented.

The asbestos survey data is presented in eight parts within the tabbed section for each facility surveyed.

Part 1 presents the Building Data (including Cost Estimates) for Suspect Asbestos-Containing and Assumed Asbestos-Containing Material (ACM) (generated in MS Access) which includes:

⇒ Building number
⇒ Building area (square feet)
⇒ Year built
⇒ Building type
⇒ Facility rating score
⇒ Facility location
⇒ Homogeneous area information (includes the following):

- Homogeneous area (HA) number
- ACM rating score
- HA description
- HA location
- HA quantity
- Degree of friability
- Recommended response actions
- Initial repair cost
- Annual O&M cost
- Removal cost
- Replacement cost
- Total cost for removal and replacement (including design and construction monitoring costs)
- Recommended response action cost

Part 2 consists of Floor Plans Showing Approximate Sample Locations and Locations of Asbestos-Containing Materials.

Part 3 consists of the Asbestos Inventory Summary (NEESA Form 3900/51), which presents the homogeneous areas identified in each building, the homogeneous area location and asbestos presence or absence. Other information provided includes the year built, building type, building significance, asbestos program manager's name and phone number, inspector's name, phone number, signature and EPA accreditation number, survey date and comment section.

Part 4 consists of the Asbestos Homogeneous Area Summary (NEESA Form 3900/52). This section provides detailed information including identification and categorization of each homogeneous area in each building.

Part 5 presents representative Photographs of Asbestos-Containing Material (Homogeneous Areas).

Part 6 consists of the Navy developed DAP/MIS forms which are designed for project management and tracking of recommendations, and budgeting cost estimates for corrective actions.

Part 7 presents Bulk Sample Quality Control Results, Bulk Sample Chain Of Custody Documentation and Laboratory Bulk Sample Analysis Results.

Part 8 consists of certifications of the laboratories and personnel used on this project.

Appendix A contains the NEESA 70.2-010, Asbestos Facility Inventory/Assessment Protocol and Appendix B contains the Directions/Guidelines for Completing Abbreviated DAP/MIS Format.

Representative samples were collected and analyzed by Polarized Light Microscopy (PLM) to assess asbestos content for each suspect asbestos-containing material in each facility. Samples that were determined to have an asbestos content of 2% or less were further analyzed by the Point Count analytical method to more accurately assess the asbestos content. Floor covering with mastic was the only suspect material assessed as having an asbestos content of 2 % or less. The floor coverings that were assessed as less than 2 % asbestos were further analyzed by the Point Count analytical method. The Point Count sample results are incorporated in this report.

Representative samples were collected from plaster and gypsum board with joint compound construction walls and ceilings in accordance with the Scope of Work. Because of the large number of possible renovations, patches and changes to walls and ceilings during the life of the buildings and the difficulty in determining the homogeneity of painted plaster materials or gypsum board with joint compound, it is possible that some homogeneous areas of suspect materials may not have been identified and/or sampled within the scope of this project. It is recommended that if specific locations of patched or renovated areas are known or suspected to exist, then more extensive sampling and analysis of these suspect wall and ceiling materials may be conducted to clearly delineate the specific location of the ACM or to further confirm the absence of asbestos in these materials that are targeted for renovation, demolition or any type of significant disturbance.

Certain homogeneous areas may be comprised of more than one distinct layer of material. Typical examples of these materials include plaster, pipe insulation and gypsum board with joint compound. The Environmental Protection Agency issued a clarification to their National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements (40 CFR Part 61) in the January 5, 1994 Federal Register. The clarification states "In general when a sample consists of two or more distinct layers of materials, each layer should be treated separately and the results reported by layer." The notable exception in the NESHAP clarification is gypsum board with joint compound. The clarification states "when joint compound and/or tape is applied to wallboard it becomes an integral part of the wallboard and in effect becomes one material forming a wall system. Therefore, where a demolition or renovation impacts such a wall system, a composite analysis of the wall system should be conducted."

However, even though EPA does not regulate a wall system containing less than 1% asbestos as an ACM, OSHA does not permit composite sampling for any material including wall systems. Therefore, OSHA requires controls associated with any wall system if any layer contains over 1% asbestos, even if the composite analysis indicates less than 1% asbestos. For the purposes of this report if one or more layers of a material is determined to contain greater than one percent asbestos, the material is treated as an asbestos-containing material in the report, including gypsum board and joint compound although the composite analysis may contain less than one percent asbestos. As explained in the NESHAP clarification, for demolition or renovation purposes of wall system the gypsum board and joint compound can be treated as a composite material, therefore prior to a renovation or demolition additional composite sampling and analysis of the wall system may be conducted to determine if special handling and disposal requirements are necessary.

In locations where recommended response actions (other than Operations and Maintenance (O&M) Program) cannot be completed within one year, and immediate isolation of the ACM is not required, it is recommended that periodic reinspection be conducted at least annually, to document changes in the condition of the ACM. In situations where response actions (other than O&M Program) are recommended and where ACM are rarely accessed (e.g., crawl space, attic (non-plenum), etc.), implementation schedules for response actions may be extended where appropriate if the materials remain isolated with access restricted to properly trained personnel.

ASBESTOS FACILITY RATING/RANKING SUMMARY

The facility rating scores are based on the homogeneous area of ACM in each facility which is rated highest priority for corrective action. See Appendix A for a detailed discussion of the requirements and procedures of the Asbestos Facility Inventory/Assessment Protocol Rating/Ranking System. When developing an asbestos removal program, consideration should be given to the recommended response actions for all ACM in each facility in addition to just the facility ranking (which is based solely on the one highest priority homogeneous area of ACM). It should be noted that a facility with a high ranking may contain significant quantities of ACM (non-friable or friable in good condition) that do not individually warrant a high ranking. These materials should receive a lower priority for asbestos removal. Also, based on this rating/ranking system, a facility may get an overall low ranking, but could have small quantities of ACM (accessible friable or damaged) that should get immediate attention, including removal. The algorithm assessment factors evaluated in the rating/ranking system are as follows:

Material condition
Quantity
Friability
Exposure potential
Number of personnel exposed
Building significance
Percent asbestos

Based on these assessment factors, the data base program will perform the algorithm and assign an individual Rating/Ranking number to each ACM. The prefix to the Rating/Ranking number will describe the condition of the ACM on the day of the survey. Listed below are the abbreviated prefix letters and the condition category they represent:

SD	=	Significantly Damaged
D	=	Damaged
PD	=	Potential for Damage

As required by the Asbestos Facility Inventory/Assessment Protocol procedures in Appendix A, considerable professional judgment must be rendered in the interpretation of the numerical algorithm results, especially since the overall facility rating score is based solely on the highest priority rated material and does not consider the number, quantity and condition of any other ACM which may be present in each building.

DISCUSSION OF BUILDING COST ESTIMATES

The spreadsheet(s) on the following page(s) provides initial repair, annual Operations & Maintenance (O&M) Program, removal and replacement costs for each asbestos-containing material (ACM) identified in the facility. Enclosure or encapsulation is not typically recommended by CAPE as appropriate response actions because they are usually not cost effective alternatives based on the characteristics of typical ACM and typical building life cycles. The cost for either of these options is approximately 60% to 70% of removal costs, and the associated 40% mark-up costs are still incurred. The removal and replacement subtotal cost presented on the spreadsheet(s) represents a contractor bid cost for the removal and replacement of all identified ACM in the facility, and includes labor, overhead, materials and insurance. Costs for initial repair (where recommended) and annual O&M Program are also provided (since removal may not be implemented immediately) and are based on the following formulas:

Initial Repair Cost	=	Percent of Damaged Material multiplied by Removal and Replacement Cost
Annual O&M Program Cost	=	2% of Removal plus Replacement Cost

Additional project costs are added to the subtotal costs as appropriate for a total asbestos abatement cost for each response action. These additional costs include 40% mark-up on asbestos removal and repair costs to budget for contingency, design, air monitoring and construction administration fees. The 20% mark-up on replacement costs is provided to budget for contingency, design, and construction administration fees. These markups are appropriate for larger sized projects (greater than $10,000). As the size of the project becomes smaller, the percent (%) markup will be larger.

The removal and replacement costs and recommended response action costs discussed above and presented in the spreadsheet(s) on the following page(s) are also provided in Part 6, form DAP/MIS, block 9 in the following format (example):

	Design	Construction
Removal/Replacement	34K	100K
Repair	4K	10K
O&M		2K
Total	38K	112K

The costs in the "Construction" column are the Subtotal costs from the spreadsheet (i.e.: Removal Cost-70k, Replacement Cost-30k, Removal/Replacement Cost = 100K), and the costs in the "Design" column are the Additional Asbestos Removal/Repair Costs @ 40% and the Additional Replacement Costs @ 20% from the spreadsheet, as discussed in the second paragraph above.

In this example, the 34k Design cost for Removal/Replacement is the sum of the 40% mark-up for contingency, design, air monitoring, etc., on the removal subtotal cost (70k) and the 20% mark-up for contingency, design, etc. on the replacement subtotal cost (30k). 40% x 70k = 28k, 20% x 30k = 6k, 28k + 6k = 34k. The 4k Design cost for Repair is the 40% mark-up on the repair subtotal cost (10k).

It should be noted that the building cost estimates will be affected over time by a number of factors including but not limited to general economic conditions and the inflation rate and specific economic conditions (including seasonal) which could vary within the asbestos abatement industry. The building cost estimates provided in this survey report are current for the year 1997. The building cost estimates should be evaluated on a yearly basis and adjusted as necessary. Additionally, these budgetary cost estimates are based on average size projects ($10,000 - $50,000). Unit costs typically increase for smaller projects and decrease for larger projects.

BUILDING #: 100
BUILDING AREA (SF): 76201
YEAR BUILT: 1955
BUILDING TYPE: ADMINISTRATION

BUILDING DATA (INCLUDING COST ESTIMATES) FOR ASBESTOS-CONTAINING AND ASSUMED ASBESTOS-CONTAINING MATERIAL (ACM)

FACILITY RATING SCORE: SD50

HA NO	ACM RATING SCORE	HA DESCRIPTION	HA LOCATION	HA QUANTITY	DEGREE OF FRIABILITY	RECOMMENDED RESPONSE ACTION	INITIAL REPAIR COST	ANUAL O&M COST	REMOVAL COST	REPLACE-MENT COST	REMOVAL & REPLACE-MENT COST	RESPONSE ACTION RECOMMENDED COST
1	PD10	9'x9' FLOOR TILE/MASTIC, BLACK	ROOM # 102, 2ND FLOOR SOUTHEAST CORRIDOR	150 SF	NON	O&M PROGRAM	-	100	750	375	1,125	-
2	PD4	9'x9' FLOOR TILE/MASTIC, TAN	ROOM # 179, 180, 1B1	400 SF	NON	O&M PROGRAM	-	100	1,200	1,000	2,200	-
3	PD4	9'x9' FLOOR TILE/MASTIC, GRAY	ROOM # 121, 122, 239 - 255	6500 SF	NON	O&M PROGRAM	-	715	19,500	16,250	35,750	-
5	PD12	12'x12' FLOOR TILE/MASTIC, WHITE/SPECKLE	ROOM # 119, 206, 210, 212, 261, 265, 267, 270	2500 SF	NON	O&M PROGRAM	-	275	7,500	6,250	13,750	-
6	PD10	12'x12' FLOOR TILE/MASTIC, WHITE/STREAKS	ROOM # 120	300 SF	NON	O&M PROGRAM	-	100	900	750	1,650	-
7	PD10	12'x12' FLOOR TILE/MASTIC, BLACK AND WHITE ALTERNATING	ROOM # 120	300 SF	NON	O&M PROGRAM	-	100	900	750	1,650	-
8	PD12	12'x12' FLOOR TILE/MASTIC, TAN/SPECKLE	ROOM # 114, 202, 257, 262, 264, 266, 268, 271	2500 SF	NON	O&M PROGRAM	-	275	7,500	6,250	13,750	-
9	PD12	12'x12' FLOOR TILE/MASTIC, GREEN/STREAKS	ROOM # 179, 180, 189, 192, 202, 263	1200 SF	NON	O&M PROGRAM	-	135	3,600	3,000	6,600	-
12	PD13	12'x12' FLOOR TILE/MASTIC, GREEN BLACK ALTERNATING	THROUGHOUT	41000 SF	NON	O&M PROGRAM	-	4,510	123,000	102,500	225,500	-
23	SD50	PIPING INSULATION ON HEATING SYSTEM (MAGNESIA-TYPE)	1ST FLOOR NORTHEAST ARMY SIDE, BOILER ROOM AND CLOSET (109)	1000 LF	HIGH	REPAIR	2,600	520	15,000	11,000	26,000	2,600

KEY: EA = EACH; LF = LINEAR FEET; SF = SQUARE FEET; O&M = OPERATIONS AND MAINTENANCE; HA = HOMOGENEOUS AREA; N/A = NOT APPLICABLE; ACM = ASBESTOS-CONTAINING MATERIAL

NOTE: THESE BUDGETARY COST ESTIMATES ARE BASED ON MINIMUM SIZE PROJECT OF APPROXIMATELY $5,000.00 (CONSTRUCTION COST).
IN CASE OF A BUILDING WITH A SMALL AMOUNT OF ACM (LESS THAN $5,000.00 CONSTRUCTION COST), SEVERAL BUILDINGS SHOULD BE COMBINED INTO A SINGLE PROJECT FOR COST EFFECTIVENESS.
THE ABATEMENT COST INCLUDES A MINIMUM COST OF $750 PER HOMOGENEOUS MATERIAL TO COVER MOBILIZATION/SETUP COST.
THE REPLACEMENT COST INCLUDES A MINIMUM COST OF $300 PER HOMOGENEOUS MATERIAL TO COVER MOBILIZATION/SETUP COST.

* 40% MARK-UP FOR ADDITIONAL ASBESTOS REMOVAL/REPAIR COSTS (CONTINGENCY, DESIGN, AIR MONITORING AND CONSTRUCTION ADMINISTRATION FEES)

** [illegible]% MARK-UP FOR ADDITIONAL REPLACEMENT COSTS (CONTINGENCY, DESIGN, AND CONSTRUCTION ADMINISTRATION FE[illegible]

BUILDING #: 100
BUILDING AREA (SF): 76201
YEAR BUILT: 1955
BUILDING TYPE: ADMINISTRATION

BUILDING DATA (INCLUDING COST ESTIMATES) FOR ASBESTOS-CONTAINING AND ASSUMED ASBESTOS-CONTAINING MATERIAL (ACM)

FACILITY RATING SCORE: SD50

HA NO	ACM RATING SCORE	HA DESCRIPTION	HA LOCATION	HA QUANTITY	DEGREE OF FRIABILITY	RECOMMENDED RESPONSE ACTION	INITIAL REPAIR COST	ANUAL O&M COST	REMOVAL COST	REPLACE-MENT COST	REMOVAL & REPLACE-MENT COST	RESPONSE ACTION RECOMMENDED COST
24	D32	PIPING INSULATION ON DOMESTIC WATER SYSTEM (CARDBOARD-TYPE)	CLOSET (109)	500 LF	MODERATE	REPAIR	1,300	260	7,500	5,500	13,000	1,300
25	D34	PIPE FITTING INSULATION ON DOMESTIC WATER SYSTEM (CARDBOARD-TYPE)	CLOSET (109)	100 EA	HIGH	REPAIR	770	155	4,200	3,500	7,700	770
26	D31	PIPE FITTING INSULATION ON ON FIBERGLASS (HEATING SYSTEM)	THROUGHOUT 1ST FLOOR ARMY SIDE	200 EA	HIGH	REPAIR	1,540	310	8,400	7,000	15,400	1,540
28	D31	PIPE FITTING INSULATION ON ROOF DRAINS (CARDBOARD-TYPE RUNS)	THROUGHOUT	25 EA	HIGH	REPAIR	750	100	1,050	875	1,925	750
29	PD4	MASTIC ON SINK	ROOM # 109	1 EA	NON	O&M PROGRAM	-	100	750	300	1,050	-
32	D32	PIPING INSULATION ON ROOF DRAINS (CARDBOARD-TYPE)	THROUGHOUT	50 LF	HIGH	REPAIR	750	100	750	550	1,300	750
		SUBTOTAL					$7,710	$7,855	$202,500	$165,850	$368,350	$7,710
		ADDITIONAL ASBESTOS REMOVAL/REPAIR COST @ 40%*					$3,085	$0	$81,000	$0	$147,340	$3,085
		ADDITIONAL REPLACEMENT COSTS @ 20%**					$1,545	$0	$0	$33,170	$73,670	$1,545
		TOTAL ASBESTOS ABATEMENT COSTS					**$12,340**	**$7,855**	**$283,500**	**$199,020**	**$589,360**	**$12,340**

KEY: EA = EACH; LF = LINEAR FEET; SF = SQUARE FEET; O&M = OPERATIONS AND MAINTENANCE; HA = HOMOGENEOUS AREA; N/A = NOT APPLICABLE; ACM = ASBESTOS-CONTAINING MATERIAL

NOTE: THESE BUDGETARY COST ESTIMATES ARE BASED ON MINIMUM SIZE PROJECT OF APPROXIMATELY $5,000.00 (CONSTRUCTION COST).
IN CASE OF A BUILDING WITH A SMALL AMOUNT OF ACM (LESS THAN $5,000.00 CONSTRUCTION COST), SEVERAL BUILDINGS SHOULD BE COMBINED INTO A SINGLE PROJECT FOR COST EFFECTIVENESS.
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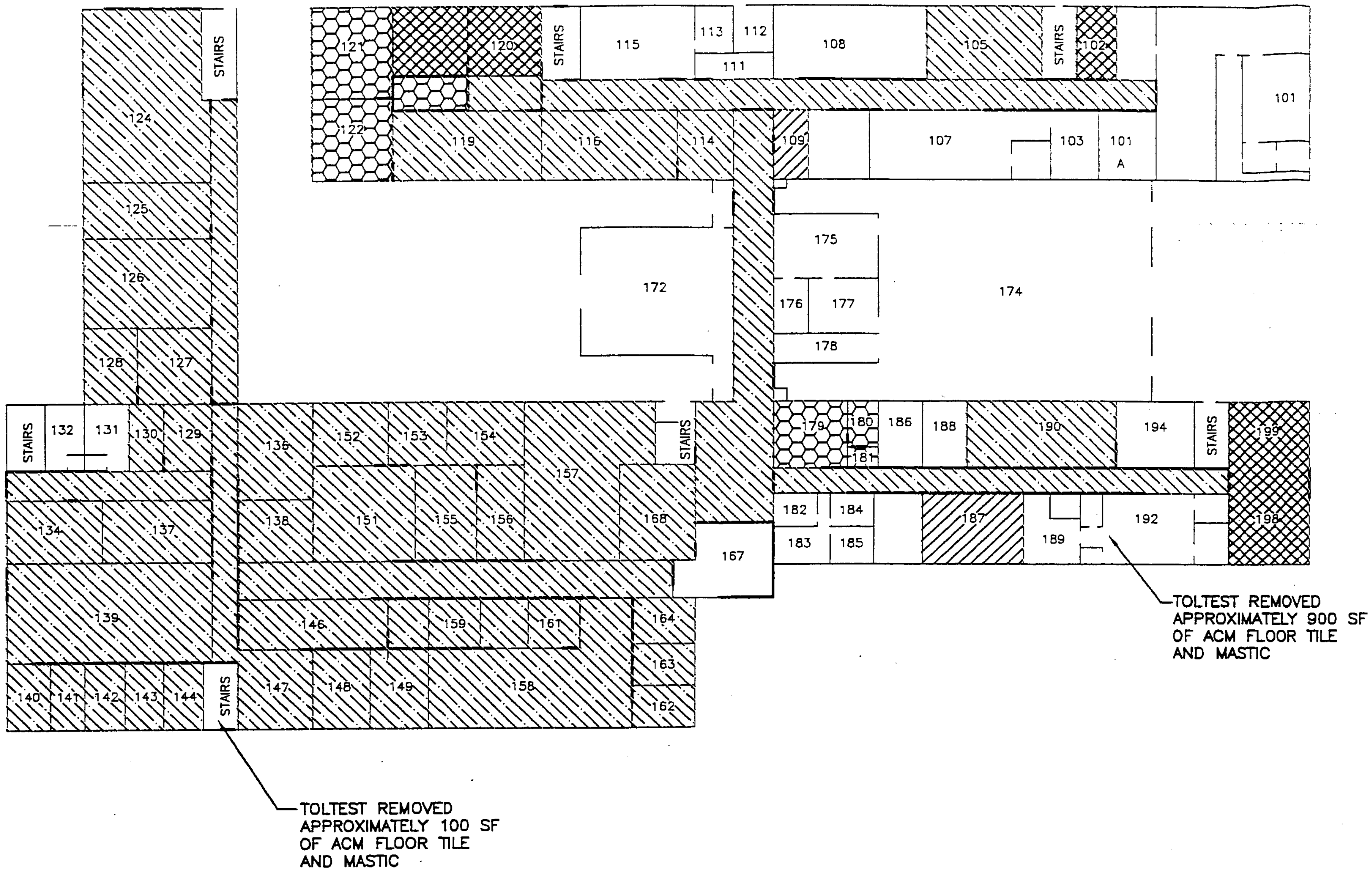
THE REPLACEMENT COST INCLUDES A MINIMUM COST OF $300 PER HOMOGENEOUS MATERIAL TO COVER MOBILIZATION/SETUP COST.

* 40% MARK-UP FOR ADDITIONAL ASBESTOS REMOVAL/REPAIR COSTS (CONTINGENCY, DESIGN, AIR MONITORING AND CONSTRUCTION ADMINISTRATION FEES)

** 20% MARK-UP FOR ADDITIONAL REPLACEMENT COSTS (CONTINGENCY, DESIGN, AND CONSTRUCTION ADMINISTRATION FEES)

Part 2

Floor Plans Showing Approximate Sample Location and Location of Asbestos-Containing Materials



LEGEND

ASBESTOS-CONTAINING-MATERIALS (ACM)
IDENTIFIED ON FLOORS AND WALLS
INCLUDING TOTAL QUANTITIES:

- FLOOR COVERING WITH MASTIC (1000 SQ.F)
- FLOOR COVERING (1200 SQ.F.)
- DOUBLE LAYERED FLOOR COVERING WITH MASTIC (1200 SQ.F.)
- FLOOR COVERING MASTIC (25000 SQ.F.)
- LOCATION OF SAMPLES COLLECTED

MAIN BUILDING – FIRST FLOOR PLAN
SCALE: 1/32"=1'-0"

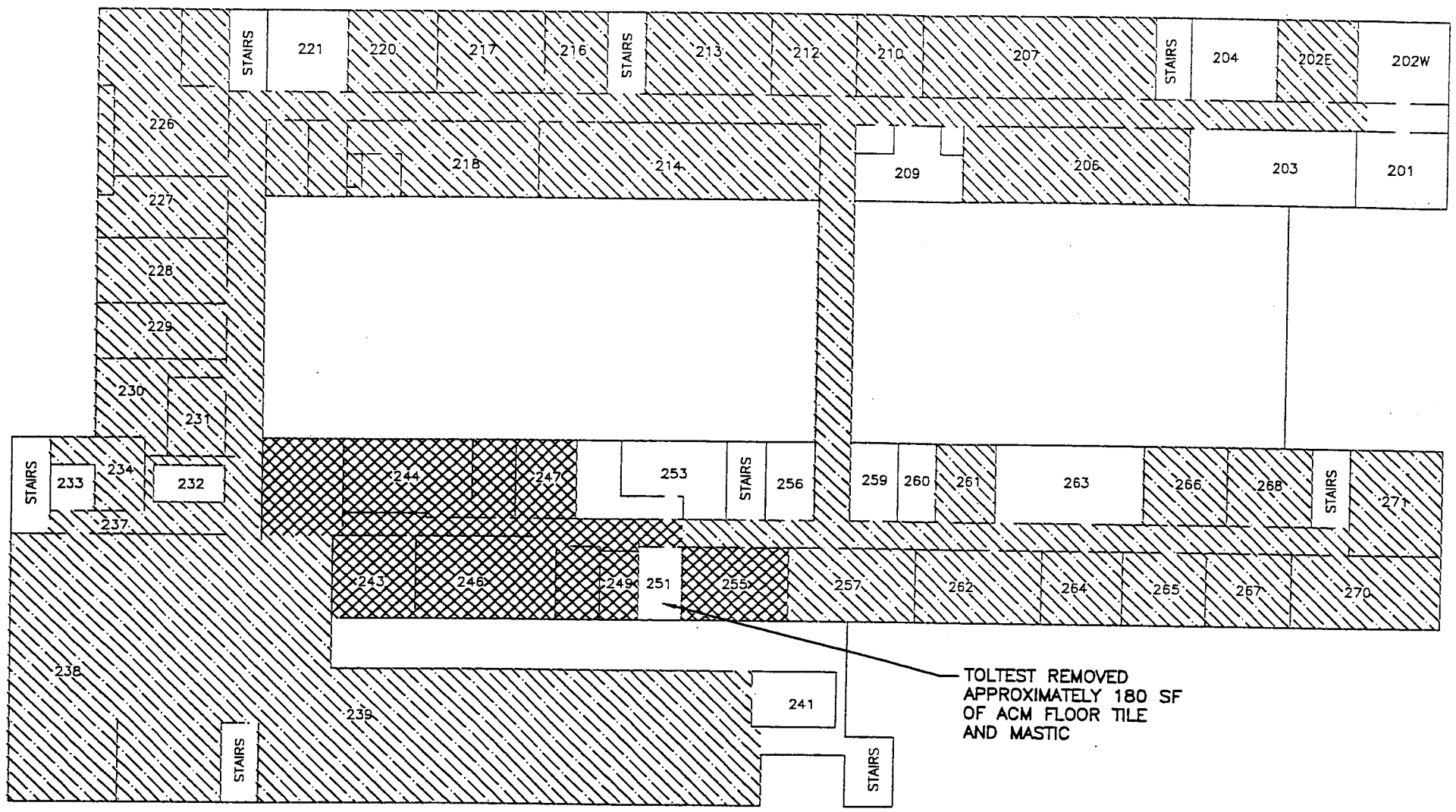
GRAPHIC SCALE
0 32' 64' 96'
SCALE: 1/32" = 1'-0"

Department of the Navy
Naval Facilities
Engineering Command

NAVAL TRAINING CENTER, GREAT LAKES, ILLINOIS

TOLTEST INC.

TITLE: ASBESTOS ABATEMENT/REPAIR AND REPLACEMENT NAVAL RESERVE CENTER FOREST PARK, ILLINOIS ACM LOCATION PLAN – FIRST FLOOR	
SUBMITTED BY: TOLTEST, INC.	DATE: 09 MAR. 01
SCALE: 1" = 32'	
DESIGNED BY: M. GRAF	CHECKED BY:
DATE:	
DRAWN BY: HALL-KIMBRELL	APPROVED BY:
DATE:	
DELIVERY ORDER NO:	DWG NO: 40844-1-F
SHEET NO: 1 of 3	



MAIN BUILDING – SECOND FLOOR PLAN
SCALE: 1/32"=1'-0"

LEGEND

ASBESTOS-CONTAINING MATERIALS (ACM)
IDENTIFIED ON FLOOR AND WALLS
INCLUDING TOTAL QUANTITIES:

FLOOR COVERING WITH MASTIC (5,000 SQ.F.)

FLOOR COVERING MASTIC (20,000 SQ.F.)

GRAPHIC SCALE

0 32' 64' 96'

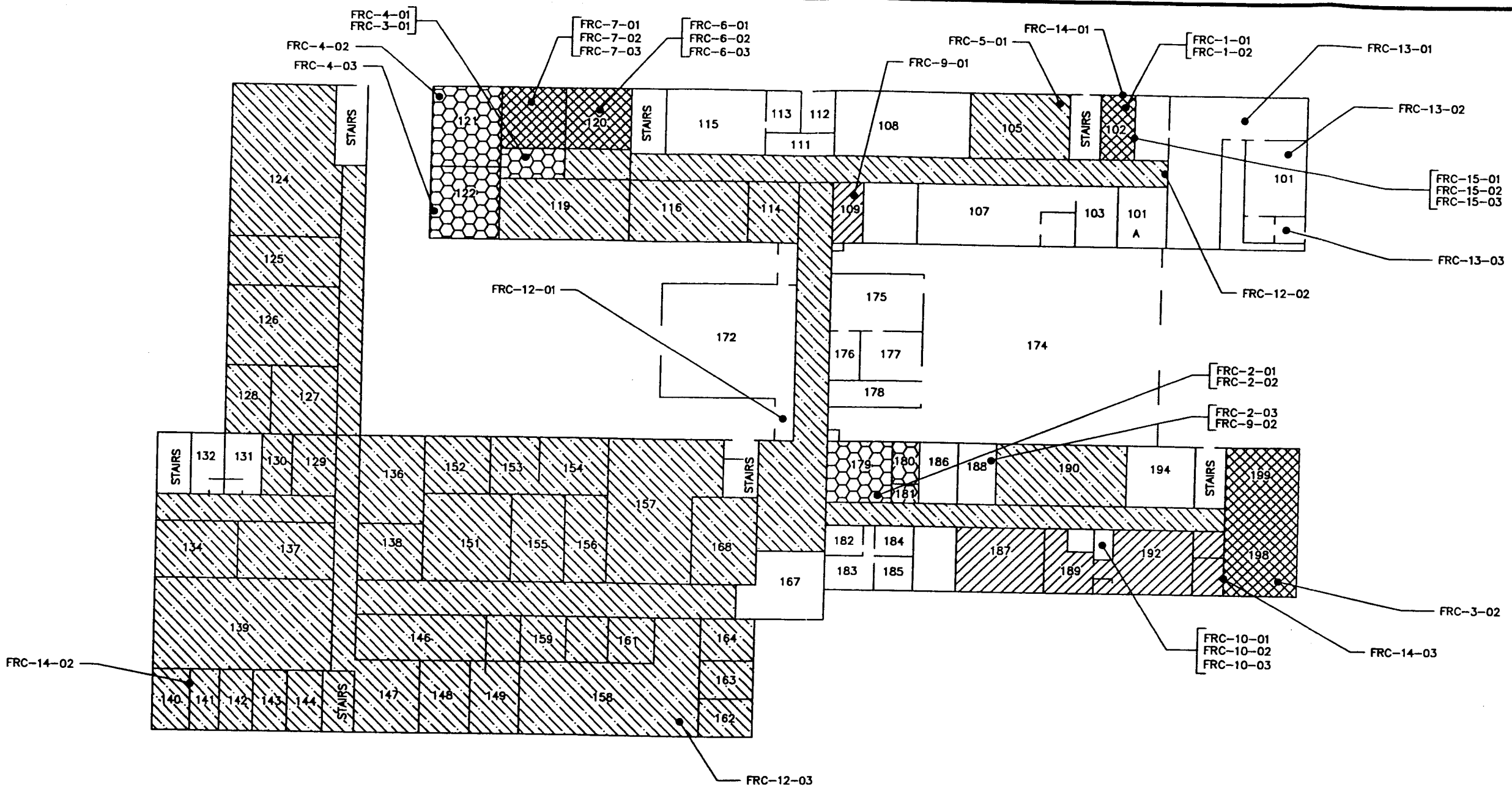
SCALE: 1/32" = 1'-0"

SUBMITTED BY: TOLTEST, INC. DATE: 09 MAR. 01
DESIGNED BY: M. GRAF CHECKED BY: DATE:
DRAWN BY: HALL-KIMBRELL APPROVED BY: DATE:
DELIVERY ORDER NO: DWG NO: 40844-2-F SHEET NO: 2 of 3

TITLE: ASBESTOS ABATEMENT/REPAIR AND REPLACEMENT
NAVAL RESERVE CENTER
FOREST PARK, ILLINOIS
ACM LOCATION PLAN – SECOND FLOOR

Department of the Navy
Naval Facilities
Engineering Command

NAVAL TRAINING CENTER, GREAT LAKES, ILLINOIS



MAIN BUILDING – FIRST FLOOR PLAN
SCALE: 1/32"=1'-0"

NORTH

LEGEND

ASBESTOS CONTAINING MATERIALS (ACM)
IDENTIFIED ON FLOORS AND WALLS
INCLUDING TOTAL QUANTITIES:

- FLOOR COVERING WITH MASTIC (1000 SQ.F)
- FLOOR COVERING (1200 SQ.F.)
- DOUBLE LAYERED FLOOR COVERING WITH MASTIC (1200 SQ.F.)
- FLOOR COVERING MASTIC (25000 SQ.F.)
- LOCATION OF SAMPLES COLLECTED

TYPICAL CAPE SAMPLE I.D. No.

FRC-1-01

- UNIQUE SAMPLE I.D. No.
- HOMOGENEOUS AREA No.
- BUILDING NUMBER

GRAPHIC SCALE

0 32' 64' 96'

SCALE: 1/32" = 1'-0"

CAPE ENVIRONMENTAL MANAGEMENT INC.
CHICAGO, ILL (847)-405-9600
DSGN DR D.TARANTUL M.BERGOLD
SUPV K.GATES CH ENGR
SUBMITTED BY (NAVY MEMBER-TITLE) DATE
DSC BR HD
PE DIR

REV. DESCRIPTION | PREP BY | DATE APPRVD

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
SOUTHERN DIVISION
CHARLESTON, S.C.

A-E SERVICES FOR COMPREHENSIVE SURVEY AT NAVAL RESERVE CENTERS, FOREST PARK, IL
MAIN BUILDING - FIRST FLOOR PLAN
FLOOR AND WALLS

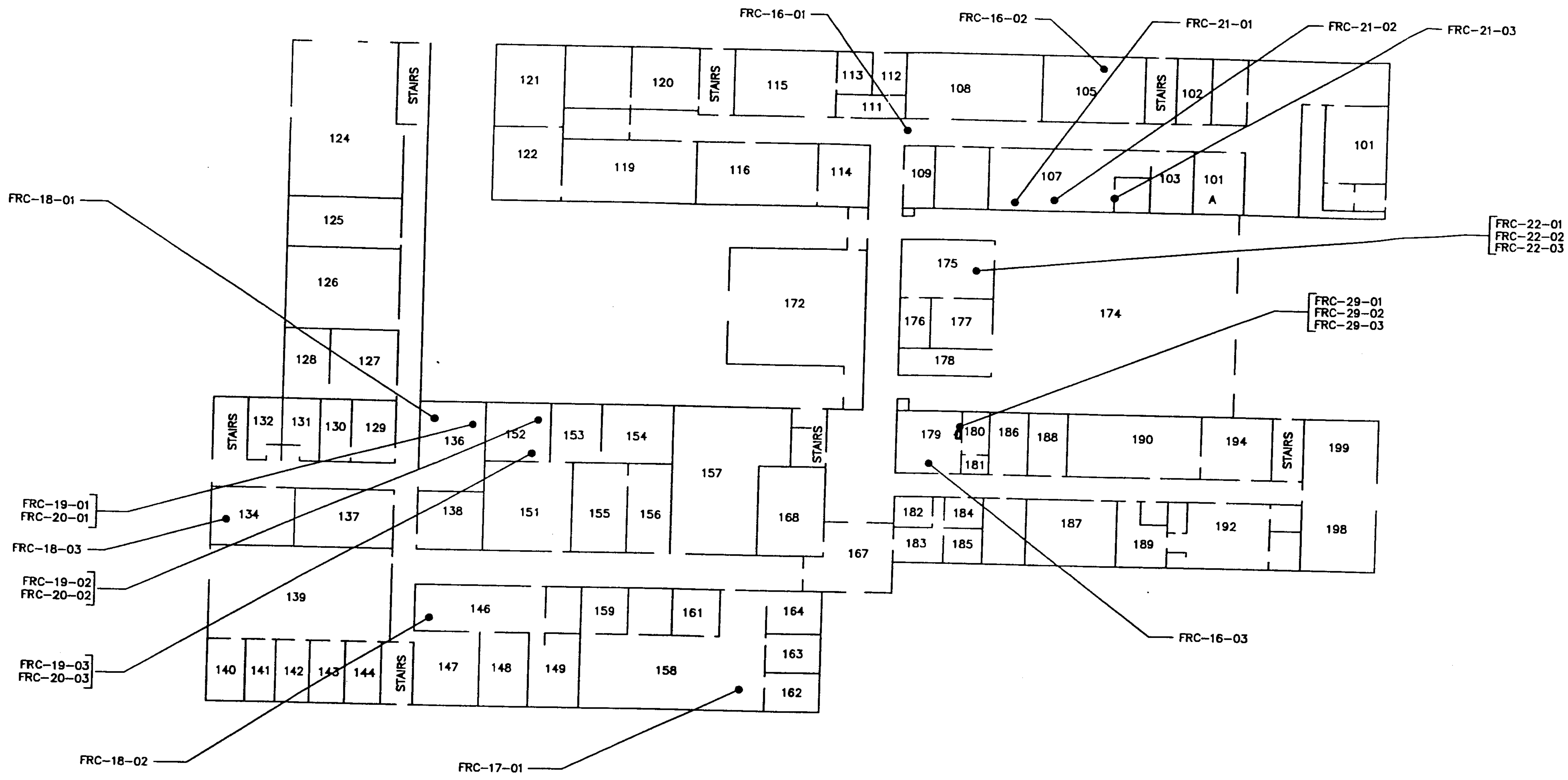
APPROVED DATE
EFD FOR COMMANDER, NAVFAC
DATE
OFFICER IN CHARGE
APPROVED NAVFAC

SEAL AREA

RECORD DRAWING DATE

CODE I.D. NO. 80091
DRAWING SIZE: B
SPEC. NO. N/A
CONSTRN. CNTR. NO. N/A
NAVFAC DRAWING NO. N/A
SHEET 1 OF 6

RFC-ASB-1



MAIN BUILDING – FIRST FLOOR PLAN
SCALE: 1/32"=1'-0"

NORTH

LEGEND

ASBESTOS CONTAINING MATERIALS (ACM) IDENTIFIED ON SINK

MASTIC ON SINK (1 EA)

LOCATION OF SAMPLES COLLECTED

TYPICAL CAPE SAMPLE I.D. No.
FRC-1-01
- UNIQUE SAMPLE I.D. No.
- HOMOGENEOUS AREA No.
- BUILDING NUMBER

GRAPHIC SCALE
0 32' 64' 96'
SCALE: 1/32" = 1'-0"

CAPE ENVIRONMENTAL MANAGEMENT INC.
CHICAGO, ILL (847)405-9600
DSGN | DR | D.TARANTUL | CHK | N.BRIGUD
SUPV K.OATES | CH ENGR
SUBMITTED BY (FIRM MEMBER-TITLE) | DATE
DC | BR HD
FPE | DIR

REV. | DESCRIPTION | PREP BY | DATE APPRVD

APPROVED | DATE | OFFICER IN CHARGE

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
SOUTHERN DIVISION
CHARLESTON, S.C.

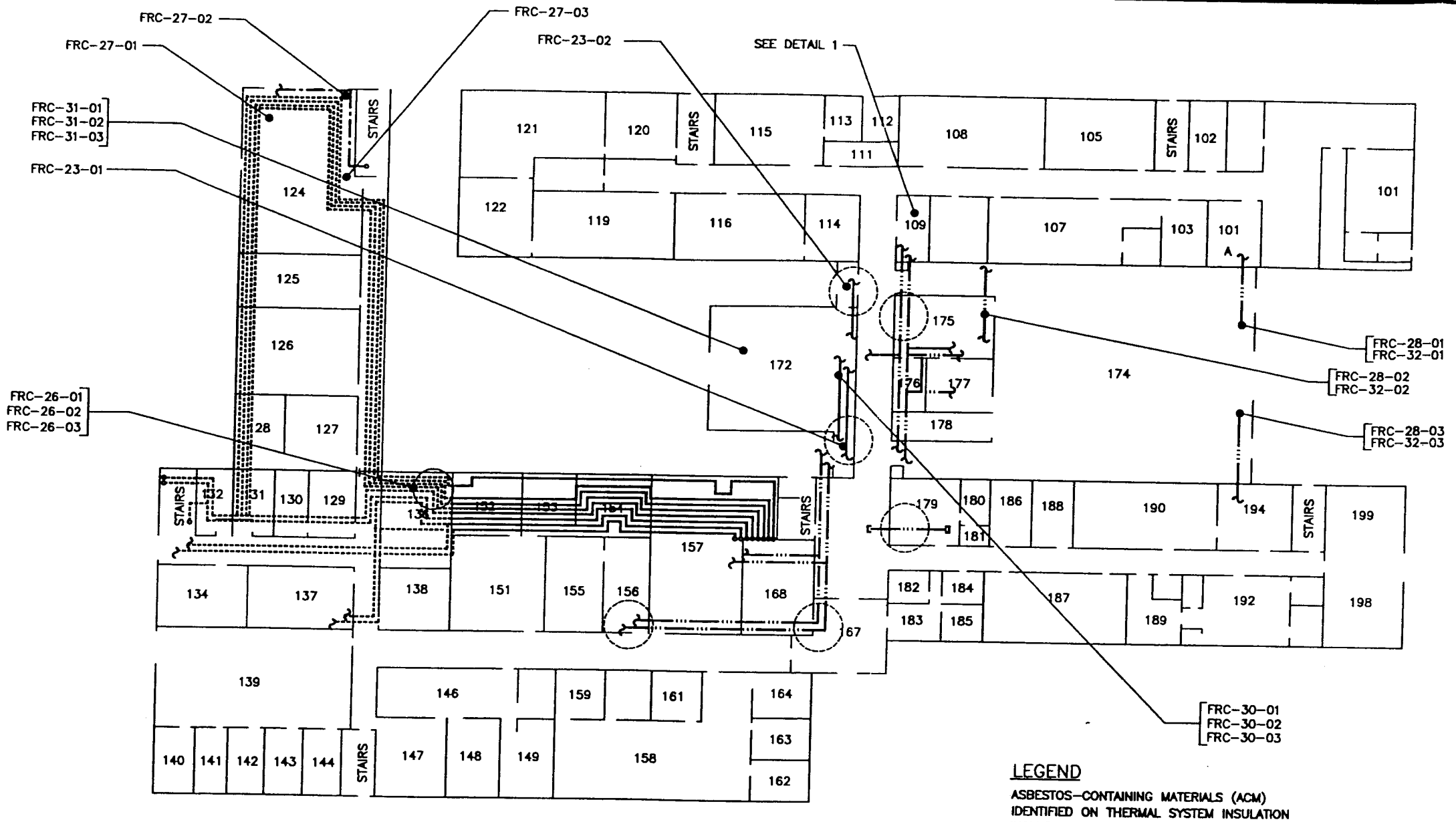
A-E SERVICES FOR COMPREHENSIVE SURVEY AT NAVAL RESERVE CENTERS, FOREST PARK, IL
MAIN BUILDING – FIRST FLOOR PLAN
CEILINGS AND MISCELLANEOUS

APPROVED | DATE | EFD FOR COMMANDER, NAVFAC

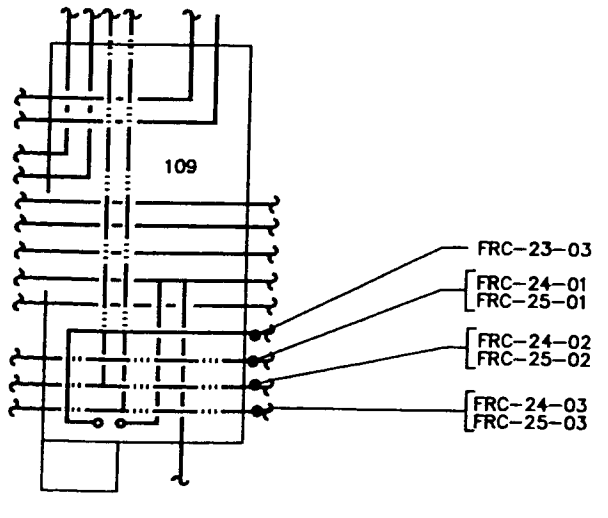
SEAL AREA

RECORD DRAWING DATE	
CODE I.D. NO.	80091
DRAWING SIZE:	B
SPEC. NO.	N/A
CONSTRN. CNTR. NO.	N/A
NAVFAC DRAWING NO.	N/A
SHEET 2	OF 6

RFC-ASB-2



DETAIL 1
ROOM 109 – PARTIAL PLAN
SCALE: 1/8"=1'00"



MAIN BUILDING – FIRST FLOOR PLAN
SCALE: 1/32"=1'-0"

NORTH

LEGEND

ASBESTOS-CONTAINING MATERIALS (ACM)
IDENTIFIED ON THERMAL SYSTEM INSULATION
INCLUDING TOTAL QUANTITIES:

- PIPE INSULATION ON HEATING SYSTEM (MAGNESIA TYPE) (1000 LF)
- PIPE INSULATION ON DOMESTIC WATER SYSTEM (CARBOARD TYPE) (500 LF)
- PIPE FITTING INSULATION (FIBERGLAS RUNS) ON HEATING SYSTEM (200 EA)
- PIPE FITTING INSULATION (FIBERGLAS RUNS) ON DOMESTIC WATER SYSTEM (1000 EA)
- PIPE TURNS UP/DOWN
- PIPE CONTINUES
- DAMAGED MATERIAL
- LOCATION OF SAMPLES COLLECTED

TYPICAL CAPE SAMPLE I.D. No.
FRC-1-01
- UNIQUE SAMPLE I.D. No.
- HOMOGENEOUS AREA No.
- BUILDING NUMBER

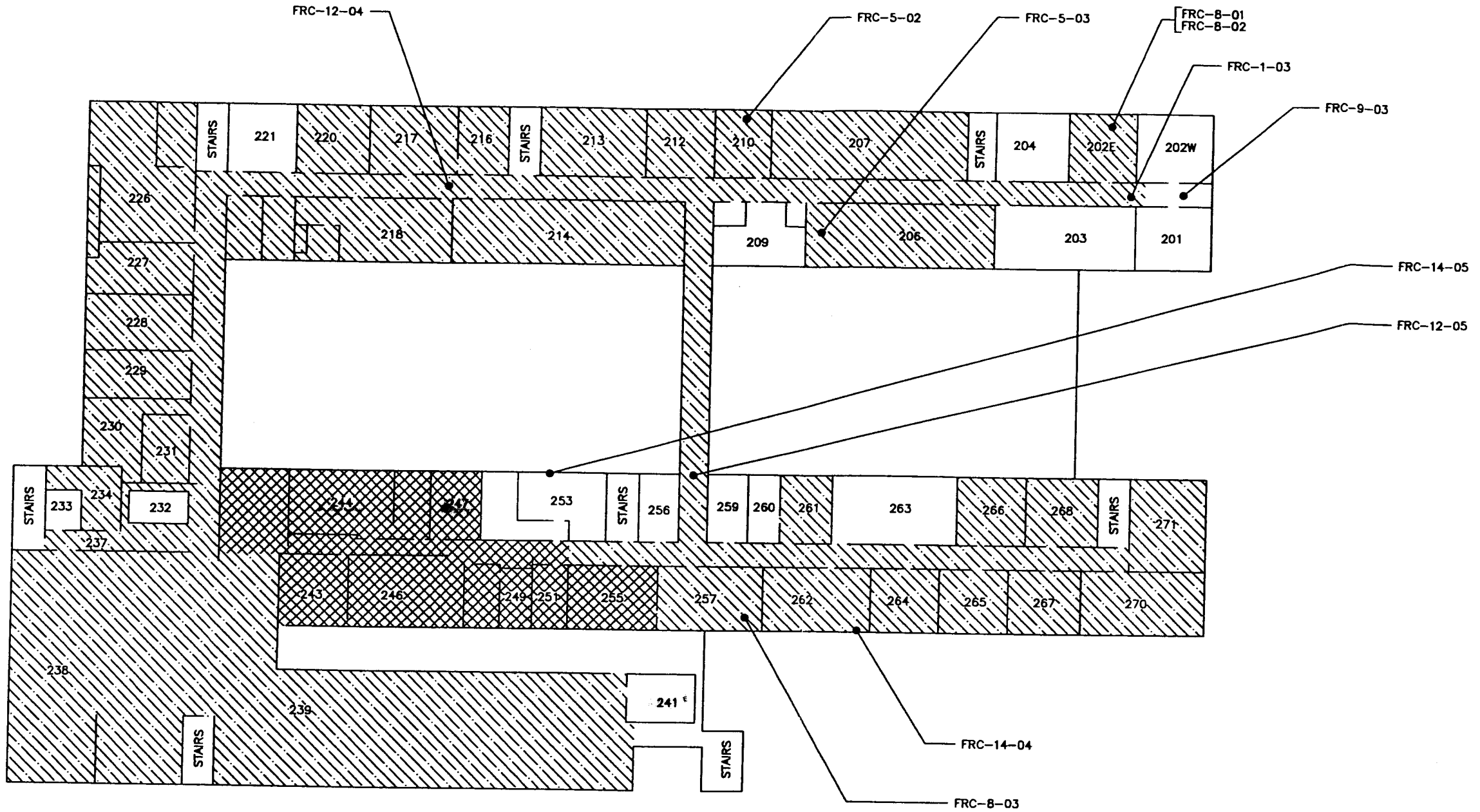
GRAPHIC SCALE
0 32' 64' 96'
SCALE: 1/32" = 1'-0"

CAPE ENVIRONMENTAL MANAGEMENT INC.
CHICAGO, ILL (847)405-9600
DSGN DR CHK D.ZARANTONELLO
SUPV A.GATES CH DWR K.BERGQUIST
SUBMITTED BY (PRINT NAME/TITLE) DATE
DC DR HD
PE DR

PREP BY DATE APPRVD
REV. DESCRIPTION APPROVED

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
SOUTHERN DIVISION
CHARLESTON, S.C.
A-E SERVICES FOR COMPREHENSIVE SURVEY AT NAVAL RESERVE CENTERS, FOREST PARK, IL
MAIN BUILDING – FIRST FLOOR PLAN
THERMAL SYSTEM INSULATION
DATE
APPROVED
FTD FOR COMMANDER, NAVFAC
DATE
APPROVED
SEAL AREA
OFFICER IN CHARGE
DATE

RECORD DRAWING DATE
CODE I.D. NO. 80091
DRAWING SIZE: B
SPEC. NO. N/A
CONSTRN. CNTR. NO. N/A
NAVFAC DRAWING NO. N/A
SHEET 3 OF 6
RFC-ASB-3



MAIN BUILDING – SECOND FLOOR PLAN
SCALE: 1/32"=1'-0"

NORTH

TYPICAL CAPE SAMPLE I.D. No.
FRC-1-01

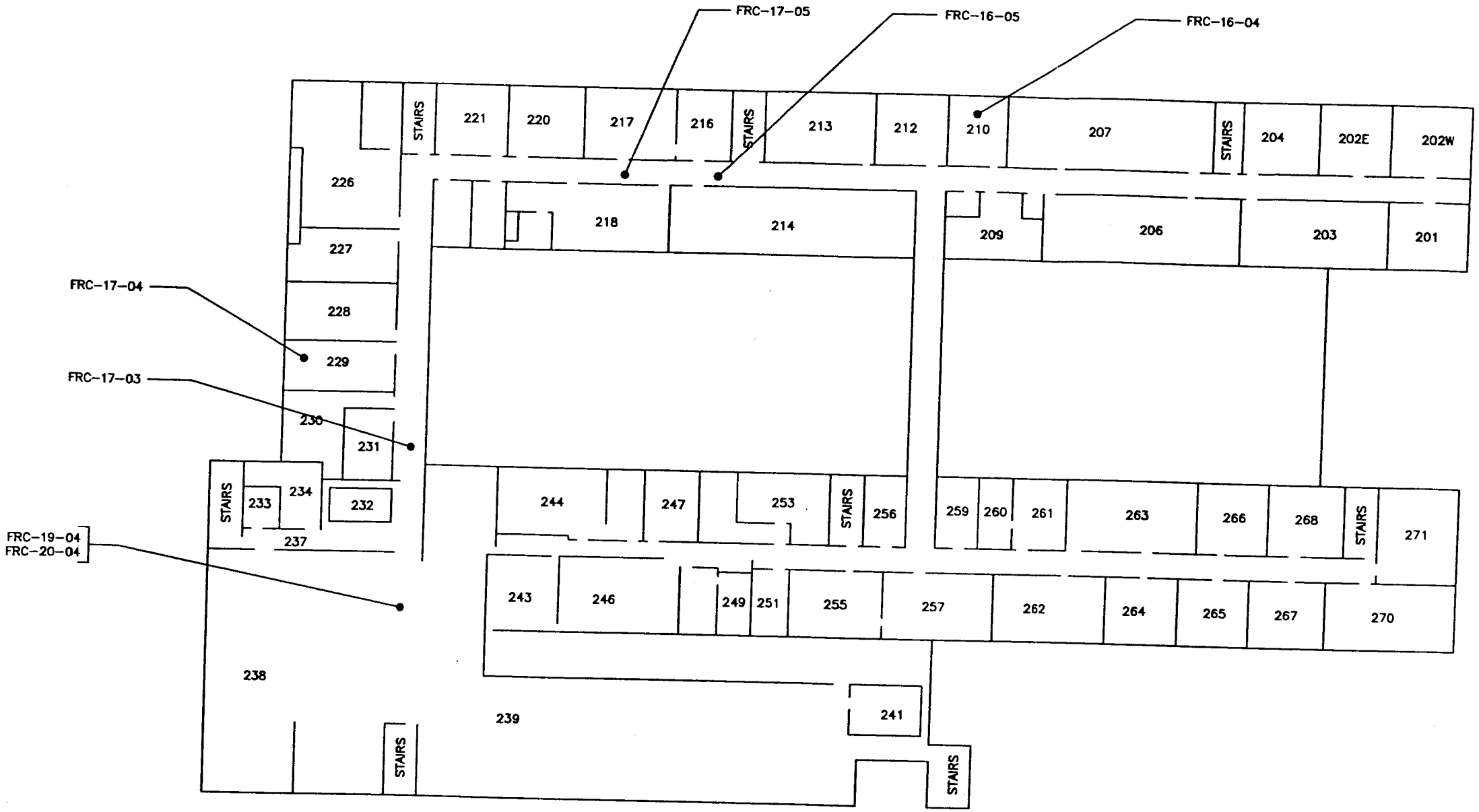
- UNIQUE SAMPLE I.D. No.
- HOMOGENEOUS AREA No.
- BUILDING NUMBER

GRAPHIC SCALE
0 32' 64' 96'
SCALE: 1/32" = 1'-0"

LEGEND
ASBESTOS-CONTAINING MATERIALS (ACM)
IDENTIFIED ON FLOOR AND WALLS
INCLUDING TOTAL QUANTITIES:

- FLOOR COVERING WITH MASTIC (5,000 SQ.F.)
- FLOOR COVERING MASTIC (20,000 SQ.F.)
- LOCATION OF SAMPLES COLLECTED

CAPE ENVIRONMENTAL MANAGEMENT INC.
CHICAGO, ILL (847)405-9600
DSGN DK CH D.TARANTUL SUPV K.GATES
SUBMITTED BY (NAVY MEMBER-TITLE) DATE
EIC BR HD
FPC DIR
DATE APPR'D
PREP BY
REV. DESCRIPTION
DATE OFFICER IN CHARGE
NAVAL FACILITIES ENGINEERING COMMAND
DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
CHARLESTON, S.C.
A-E SERVICES FOR COMPREHENSIVE SURVEY AT NAVAL RESERVE CENTERS, FOREST PARK, IL
MAIN BUILDING - SECOND FLOOR PLAN
FLOOR AND WALLS
APPROVED DATE
EFD FOR COMMANDER, NAVFAC
SEAL AREA
RECORD DRAWING DATE
CODE I.D. NO. 80091
DRAWING SIZE: B
SPEC. NO. N/A
CONSTRN. CNTR. NO. N/A
NAVFAC DRAWING NO. N/A
SHEET 4 OF 8
FRC-ASB-4



MAIN BUILDING – SECOND FLOOR PLAN
SCALE: 1/32"=1'-0"

NOTE:
NO ASBESTOS-CONTAINING CEILINGS/MISCELLANEOUS MATERIALS WERE IDENTIFIED ON THIS FLOOR

TYPICAL CAPE SAMPLE I.D. No.
FRC-1-01
UNIQUE SAMPLE I.D. No.
HOMOGENEOUS AREA No.
BUILDING NUMBER

GRAPHIC SCALE
0 32' 64' 96'
SCALE: 1/32" = 1'-0"

CAPE ENVIRONMENTAL MANAGEMENT INC.
CHICAGO, ILL. (847)405-9900
DSGN DR
CHK D.TARANTOLA
SUPV K.GATES
CH ENGR N.BRIGLIO
SUBMITTED BY (PRINT NAME-TITLE) DATE
DC BR HD
PIC DR
PREP BY DATE APPRVD
OFFICER IN CHARGE
DATE

REV.	DESCRIPTION	DATE	APPROVED

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
SOUTHERN DIVISION
CHARLESTON, S.C.

A-E SERVICES FOR COMPREHENSIVE SURVEY AT NAVAL RESERVE CENTERS, FOREST PARK, IL
MAIN BUILDING - SECOND FLOOR PLAN
CEILINGS AND MISCELLANEOUS

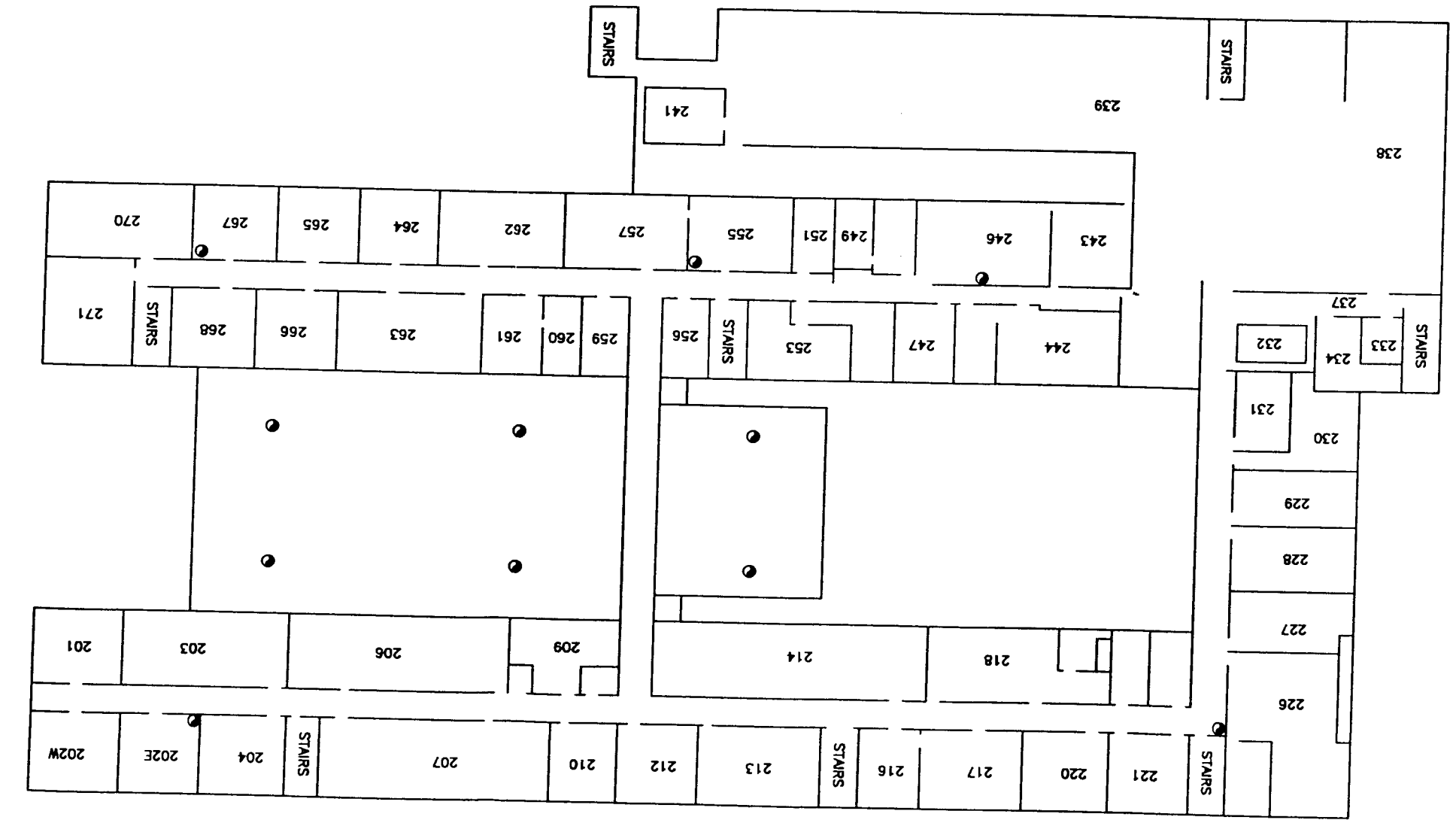
APPROVED DATE
EFD FOR COMMANDER, NAVFAC

SEAL AREA

RECORD DRAWING DATE
CODE I.D. NO. 80091
DRAWING SIZE: B
SPEC. NO. N/A
CONSTRN. CNTR. NO. N/A
NAVFAC DRAWING NO. N/A
SHEET 5 OF 8
FRC-ASB-5

MAIN BUILDING - SECOND FLOOR PLAN

SCALE: 1/32" = 1'-0"



LEGEND

ASBESTOS-CONTAINING MATERIALS (ACM) IDENTIFIED ON THERMAL SYSTEM INSULATION INCLUDING TOTAL QUANTITIES:

● PIPE INSULATIONON ON ROOF DRAINS (50 LF)

GRAPHIC SCALE

SCALE: 1/32" = 1'-0"

0 32' 64' 96'

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
CHARLESTON, S.C.
NAVAL FACILITIES ENGINEERING COMMAND

A-E SERVICES FOR COMPREHENSIVE SURVEY AT NAVAL RESERVE CENTERS, FOREST PARK, IL
MAIN BUILDING - SECOND FLOOR PLAN
THERMAL SYSTEM INSULATION

APPROVED
DATE
OFFICER IN CHARGE

RFC FOR COMMANDER, NAVFAC

REV. DESCRIPTION | PREP BY | DATE APPRVD

CAPE ENVIRONMENTAL MANAGEMENT INC.
CHICAGO, ILL
(847)405-9600
DSGN DR DRWN DR
SUPV
SUBMITTED BY (PRINT NAME-TITLE) DATE
BR HD
DR

DATE
OFFICER IN CHARGE

RECORD DRAWING DATE

DRAWING SIZE: D
CONTRACT NO. N/A
SPEC. NO. N/A
CONSTRUCTION CNTR. NO.
N/A
NAVFAC DRAWING NO.
N/A
SHEET 6 OF 6

RFC-ASB-6

BUILDING #: 2
BUILDING AREA (SF): 6528
YEAR BUILT: 1955
BUILDING TYPE: SUPPLY

BUILDING DATA (INCLUDING COST ESTIMATES) FOR ASBESTOS-CONTAINING AND ASSUMED ASBESTOS-CONTAINING MATERIAL (ACM)

FACILITY RATING SCORE: PD10

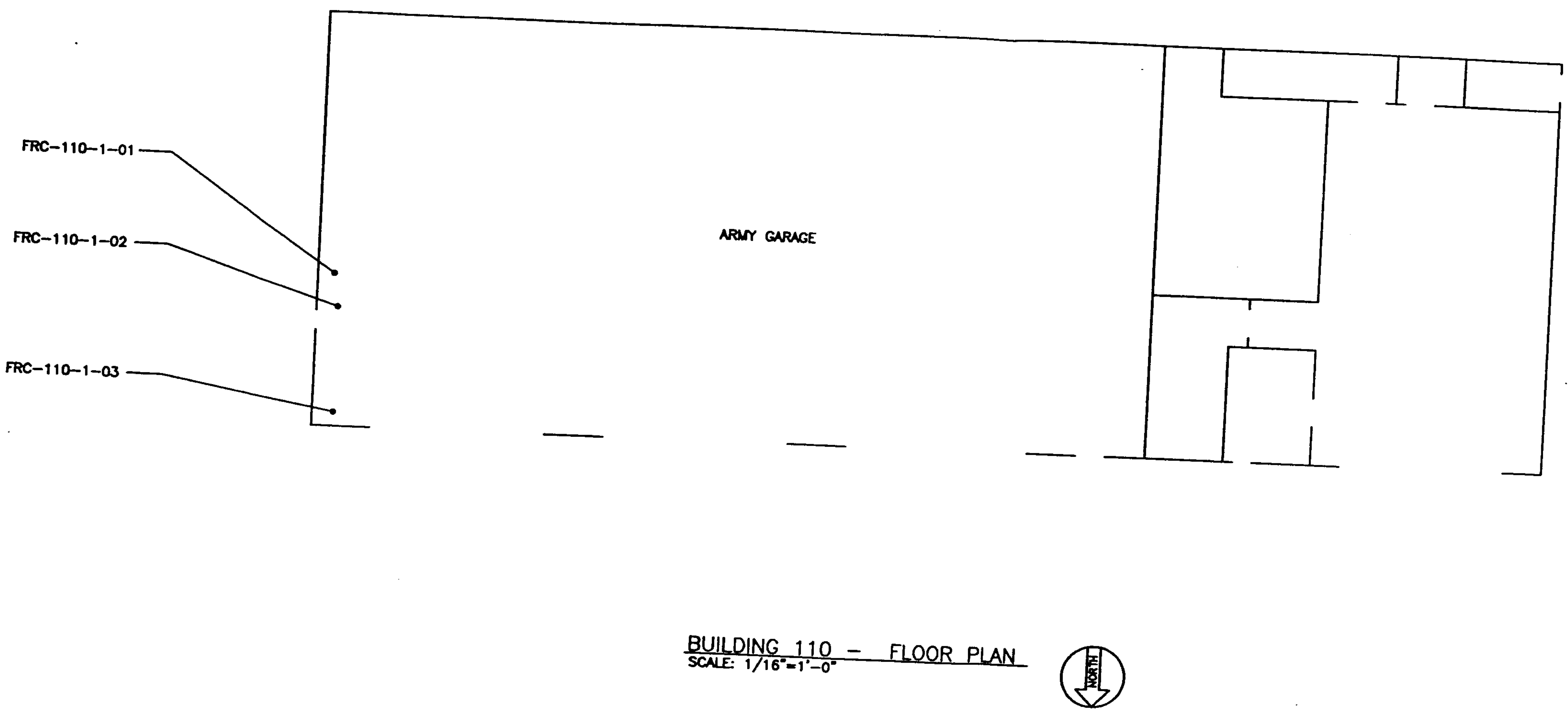
HA NO	ACM RATING SCORE	HA DESCRIPTION	HA LOCATION	HA QUANTITY	DEGREE OF FRIABILITY	RECOMMENDED RESPONSE ACTION	INITIAL REPAIR COST	ANUAL O&M COST	REMOVAL COST	REPLACE-MENT COST	REMOVAL & REPLACE-MENT COST	RESPONSE ACTION RECOMMENDED COST
2	PD10	WINDOW PUTTY	EXTERIOR WINDOWS	800 LF	NON	O&M PROGRAM	-	100	1,600	800	2,400	-
		SUBTOTAL					$0	$100	$1,600	$800	$2,400	$0
		ADDITIONAL ASBESTOS REMOVAL/REPAIR COST @ 40%*					$0	$0	$640	$0	$960	$0
		ADDITIONAL REPLACEMENT COSTS @ 20%**					$0	$0	$0	$160	$480	$0
		TOTAL ASBESTOS ABATEMENT COSTS					$0	$100	$2,240	$960	$3,840	$0

KEY: EA = EACH; LF = LINEAR FEET; SF = SQUARE FEET; O&M = OPERATIONS AND MAINTENANCE; HA = HOMOGENEOUS AREA; N/A = NOT APPLICABLE; ACM = ASBESTOS-CONTAINING MATERIAL

NOTE: THESE BUDGETARY COST ESTIMATES ARE BASED ON MINIMUM SIZE PROJECT OF APPROXIMATELY $5,000.00 (CONSTRUCTION COST).
IN CASE OF A BUILDING WITH A SMALL AMOUNT OF ACM (LESS THAN $5,000.00 CONSTRUCTION COST), SEVERAL BUILDINGS SHOULD BE COMBINED INTO A SINGLE PROJECT FOR COST EFFECTIVENESS.
THE ABATEMENT COST INCLUDES A MINIMUM COST OF $750 PER HOMOGENEOUS MATERIAL TO COVER MOBILIZATION/SETUP COST.
THE REPLACEMENT COST INCLUDES A MINIMUM COST OF $300 PER HOMOGENEOUS MATERIAL TO COVER MOBILIZATION/SETUP COST.

* 40% MARK-UP FOR ADDITIONAL ASBESTOS REMOVAL/REPAIR COSTS (CONTINGENCY, DESIGN, AIR MONITORING AND CONSTRUCTION ADMINISTRATION FEES)

** 20% MARK-UP FOR ADDITIONAL REPLACEMENT COSTS (CONTINGENCY, DESIGN, AND CONSTRUCTION ADMINISTRATION FEES)



BUILDING 110 – FLOOR PLAN
SCALE: 1/16"=1'-0"

TYPICAL CAPE SAMPLE I.D. No.
FRC-110-1-01
UNIQUE SAMPLE I.D. No.
HOMOGENEOUS AREA No.
BUILDING NUMBER

GRAPHIC SCALE
0 16' 32' 48'
SCALE: 1/16" = 1'-0"

NOTE:
ASBESTOS-CONTAINING WINDOW PUTTY MATERIAL IDENTIFIED ON ALL EXTERIOR WINDOWS (800 LF)

CAPE ENVIRONMENTAL MANAGEMENT INC.
CHICAGO, IL (847)405-9800

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
SOUTHERN DIVISION
CHARLESTON, S.C.
A-E SERVICES FOR COMPREHENSIVE SURVEY AT NAVAL AND MARINE RESERVE CENTERS, FOREST PARK, IL
BUILDING 110 – FLOOR PLAN

DSGN	
DR	D.TARANTUL
CHK	N.BRIGLIO
SUPV	K.OATES
CH ENGR	
SUBMITTED BY (FIRM MEMBER-TITLE)	DATE
EIC	
BR HD	
FPE	
DIR	

REV.	DESCRIPTION	PREP BY	DATE APPRVD

APPROVED / DATE / OFFICER IN CHARGE
APPROVED / DATE / E/D FOR COMMANDER, NAVFAC
SEAL AREA

RECORD DRAWING DATE	
CODE I.D. NO.	80091
DRAWING SIZE:	B
SPEC. NO.	N/A
CONSTRN. CNTR. NO.	N/A
NAVFAC DRAWING NO.	N/A
SHEET 1	OF 1

FRC-110-ASB-1

ENVIRONMENTAL COMPLIANCE EVALUATION

NAVAL AND MARINE CORPS RESERVE CENTER FOREST PARK, ILLINOIS

19 JUNE 1997

Southern Division
Naval Facilities Engineering Command
Charleston, South Carolina 29419-9010

TABLE OF CONTENTS

INTRODUCTION

Location: The Naval Reserve Center (NRC) Forest Park is located at 7410 W. Roosevelt Road, Forest Park, Illinois. The facility is composed of four buildings and surrounding parking areas occupying approximately 6.5 acres of property in an underdeveloped business area. The activity has occupied this location since 1955. The activity currently has one tenant (Army).

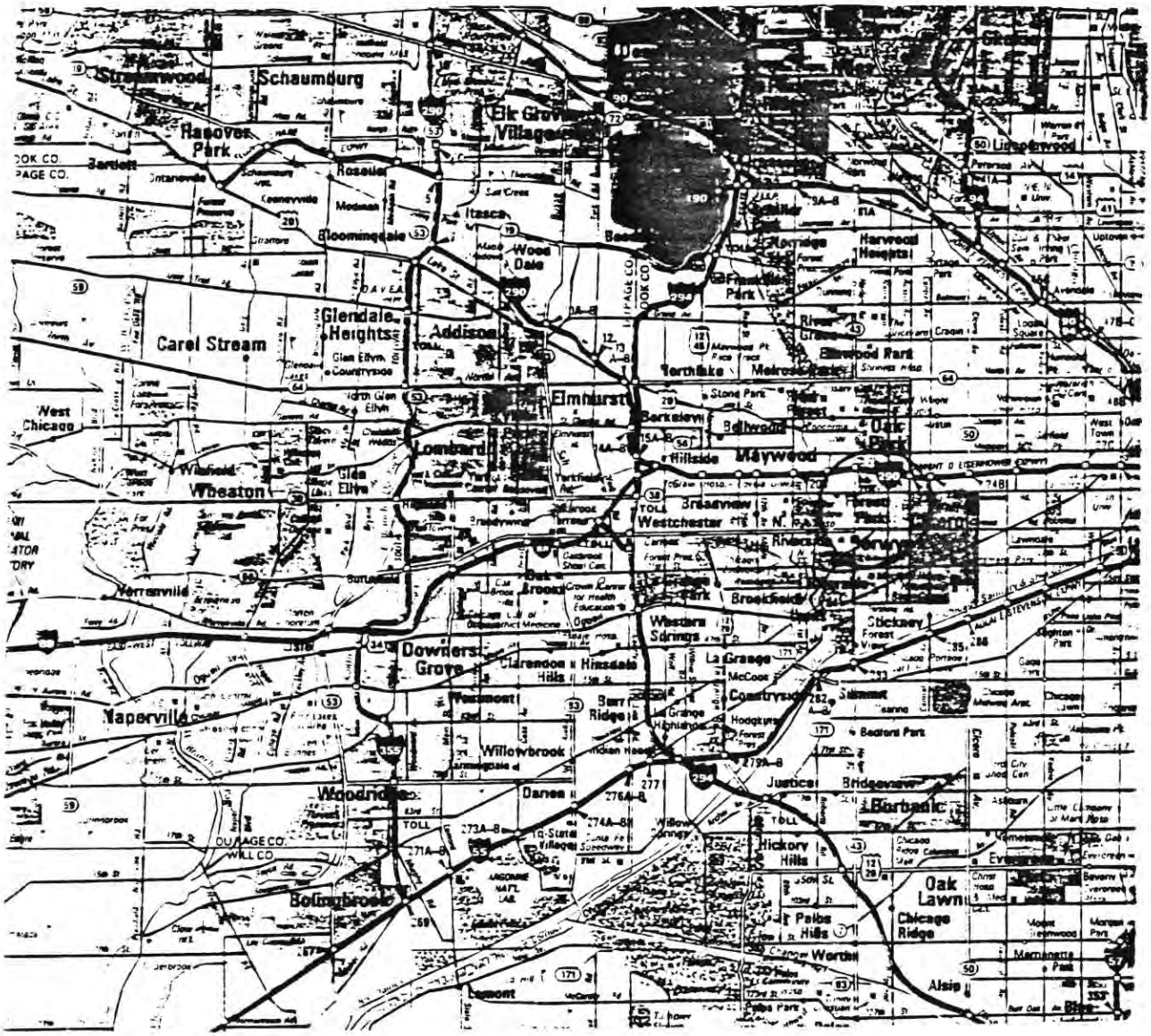
Background: The ECE program is a CNO initiative to identify activity environmental compliance deficiencies, provide recommendations for corrective action, and establish a basis for future budgets. ECE's are being performed Navy-wide over a three year cycle to identify overall environmental compliance trends, funding deficiencies, and resource needs.

The ECE program is a three-tier program with: 1) an annual self-audit (Tier I), 2) the "Tier II" ECE audit (conducted once very three years), and 3) Tier III, IG inspections. The Tier II ECE audit is an on-site evaluation performed by the major claimant with the assistance of environmental specialists from the cognizant engineering field division (EFD).

The ECE report is prepared by the EFD team and forwarded to the major claimant for review. The major claimant is responsible for concurrence with the EFD team recommendations, adding resource related findings and recommendations, and submitting the final report to the activity with copies of the executive summary to the responsible DIRFAC, the Regional Environmental Coordinator (REC) and NAVFACENGCOM.

ECE Report Format: Following "NAVFAC Guidance for Conducting Major Claimant Tier II Environmental Compliance Evaluations" (Oct 94), the ECE report consists of the introduction, an executive summary, a section of findings and recommendations, and a completed ECE Checklist of Federal Regulations and Navy Policy. For each checklist entry annotated with a "NO" and a corresponding finding number, the Findings/ Recommendations section contains a statement of deficiency, as well as recommended action to correct the identified deficiency. General recommendations which are denoted by "GEN" are not deficiencies of any regulations, but are provided as the team's guidance of best management practice.

VICINITY MAP



EXECUTIVE SUMMARY
NAVAL RESERVE CENTER FOREST PARK
ENVIRONMENTAL COMPLIANCE EVALUATION
19 JUNE 1997

Southern Division Naval Facilities Engineering Command (SOUTHDIV) conducted an Environmental Compliance Evaluation (ECE) of the Naval Reserve Center (NRC) Forest Park on 19 June 1997. This ECE was conducted at the request of the activity's major claimant, Commander Naval Reserve Force (COMNAVRESFOR). The purpose of the evaluation was to provide the major claimant and the Center with a comprehensive evaluation of the activity's compliance posture with Federal and State environmental laws and regulations, as well as Navy environmental policy. The facility space occupied by the Army (tenant) was included in this evaluation.

Nineteen (19) program areas were considered for evaluation by media representatives from SOUTHDIV. Fifteen (15) findings were identified in the following program areas: 1) Hazardous Materials Control and Management, 3; 2) Hazardous Waste, 5; 3) Pesticides, 3; 6) Potable Water, 1; 7) Solid Waste, 3. The following programs were without finding/ deficiency or were identified as being not applicable: Air, Asbestos, Cultural Resources, NEPA, Noise, Natural Resources, OHS, PCB's, Policy, Radon, UST's, and Wastewater. Responsible activity personnel were not available to conduct an evaluation of the Infectious Waste program area.

Overall, the environmental program for NRC Forest Park is in good shape. Two issues of significant concern were identified: 1) related to the dental clinic X-Ray development, and 2) Army personnel application of pesticides. These issues are addressed below in the findings summaries.

AIR - No findings were identified in this program area.

ASBESTOS - No findings were identified in this program area.

CULTURAL RESOURCES - In consideration of the age of the facility, this program area is not applicable to the facility.

HAZARDOUS MATERIALS, CONTROL, AND MANAGEMENT - Three findings were identified in this program area. These findings are related to maintaining copies of MSDS's for all HazMat stored on the facility (including host, tenant, and contractor materials), having MSDS's available at the point of use/storage, and having approved HazMat storage areas.

HAZARDOUS WASTES (INCLUDING POLLUTION PREVENTION) - Five findings were identified in this program area. These findings are all related to a lack of a HWMP for the facility. A HWMP should be developed for the facility, and implementation of the plan should specifically target initial waste stream determinations and maintaining Conditionally Exempt Small Quantity Generator (CESQG) status. Of particular concern was the identification of an X-Ray developer in use in the dental clinic of the activity. The discharge of

the unit has not been evaluated for status as HazWas or non-HazWas. This has the potential to affect the activity's generator status, and may also be a deficiency of waste water regulations/policy.

INFECTIOUS WASTE NATIONAL ENVIRONMENTAL PROTECTION ACT (NEPA) - This program area was not evaluated -- medical officer/personnel were not available for interview during the ECE. Recommend activity ensure that all medical wastes are tracked by date, quantity, and type of wastes as well as method of disposal. Note that a biohazard container was found in the solid waste dumpster. It was identified that the container had been used as a paint bucket. Activity identified this as a one-time event and would ensure this would not occur in the future.

NATURAL RESOURCES - No findings were identified in this program area.

NOISE - No findings were identified in this program area.

OIL AND HAZARDOUS SUBSTANCES - No findings were identified in this program area.

POLYCHLORINATED BIPHENYLS - No findings were identified in this program area.

PESTICIDES - Three findings were identified in this program area. Army personnel identified their application of pesticides. Applicators were/are not certified and not receiving medical surveillance. Activity does not maintain Pest Management Program/Plan necessary to support these activities. Recommend that activity halt application of pesticides (primarily herbicides) by tenant. Note that if pesticide application is handled under contract activity should as Best Management Practice track the type, quantity, and areas of application. Navy policy is currently be reviewed for reporting requirements including contractor applied pesticides.

POTABLE WATER - One finding was identified in this program area. Activity personnel identified that lead testing for water coolers and appropriate water taps had not been conducted. Note that activity identified no backflow preventers associated with the facility; it is recommended that activity review facility plans and local ordinances governing requirements for these devices. Additionally, the janitorial mop sinks had hose connections cut to 2-2.5 feet in length allowing for a potential cross-connection. It is recommended that the activity obtain hose-bib vacuum breakers to ensure a means of backflow prevention is in place.

POLICY/PROGRAM MANAGEMENT - No findings were identified in this program area.

RADON - No findings were identified in this program area.

SOLID WASTE - Three findings were identified in this program area. the activity does not have a Solid Waste Management Plan (SWMP) or Qualified Recycling Plan (QRP). It is recommended that a concise SWMP be developed for the facility, including the necessary components of a QRP. Activity also needs to ensure all dumpsters and solid waste containers are appropriately maintained and closed.

SPILL PREVENTION CONTROL AND COUNTERMEASURES - Under current facility processes and equipment, this program area is not applicable.

UNDERGROUND STORAGE TANKS - No UST's were identified for the facility.

WASTE WATER (INCLUDING STORM WATER) - No findings were identified in this program area; however, based upon waste stream determination of the X-Ray developer effluent, the activity may have been deficient in complying with various sections of 40 CFR 403. Effluent from the X-Ray developer should not be allowed to discharge to the sanitary sewer system. A waste stream determination should be performed and proper disposal (and/or treatment) methods should be identified.

ECE MEDIA RESULTS REPORT

ACTIVITY: NRC FOREST PARK **Date : 06/19/97 To 06/19/97**

PROGRAM	GROUP	YES	NO	N/A	N/R	GEN	TOTAL
AIR	AIR	6	0	2	0	0	8
ASB	ASB	4	0	0	0	0	4
CR	CR	0	0	0	0	1	1
HMC&M	HMC&M	18	3	3	0	0	24
HWASTE	HWCEX	2	3	0	1	1	7
HWASTE	HWOIL	1	0	1	5	0	7
HWASTE	HWPP	7	2	2	0	0	11
HWASTE	HWUSQH	0	0	15	0	0	15
INFECT	INFECT	0	0	0	0	1	1
NEPA	NEPA	2	0	0	0	0	2
NOISE	NOISE	1	0	0	0	0	1
NR	NR	0	0	0	0	1	1
OHS	OHS	1	0	0	0	0	1
PCB	PCB	0	0	0	0	1	1
PEST	PEST	4	3	6	4	0	17
POLICY	POLICY	11	0	7	0	0	18
PW	PW	0	1	2	2	1	6
RADON	RADON	3	0	0	0	0	3
SPCC	SPCC	0	0	0	0	1	1
SW	SWGEN	8	3	1	1	0	13
UST	UST	0	0	0	0	1	1
WW	WW	0	0	5	0	1	6
Total:		68	15	44	13	9	149

ECE FINDINGS/RECOMMENDATIONS
NRC FOREST PARK

Date : 06/19/97 To 06/19/97

Program: CR
Auditor: PAUL J. CAMPBELL

FINDING NUMBER	FINDING/RECOMMENDATION
GEN 001	RECOMMENDATION: In consideration of age of the facility, cultural resources is not an applicable program area.

ECE FINDINGS/RECOMMENDATIONS
NRC FOREST PARK

Date : 06/19/97 To 06/19/97

Program: HMC&M
Auditor: PAUL J. CAMPBELL

FINDING NUMBER	FINDING/RECOMMENDATION
HMC&M 001	FINDING: Per 29 CFR 1910.1200 (g)(1) and OPNAV 4110.2, the activity did not have MSDS's available for each HazMat in storage. RECOMMENDATION: Per 29 CFR 1910.1200 (g)(1) and OPNAV 4110.2, the activity should ensure MSDS's are readily available at a centralized location for all HazMat on the facility (host, tenant, and contractor materials included).
HMC&M 002	FINDING: Per 29 CFR 1910.1200 (g)(8) and OPNAV 4110.2, activity does not have MSDS's available at point of use/storage for all HazMat on facility. RECOMMENDATION: Per 29 CFR 1910.1200 (g)(8) and OPNAV 4110.2, activity should obtain complete copies of MSDS's for all HazMat stored on the facility (host, tenant, and contractor materials). These MSDS's are to be made available at the point of use and/or storage of the materials.
HMC&M 003	FINDING: Per OPNAV 4110.2, activity does not have list of approved HazMat storage areas. RECOMMENDATION: Per OPNAV 4110.2, activity should develop list of approved HazMat storage areas (to include host, tenant, and contractor materials). It is recommended that this be incorporated with updating the AUL and obtaining complete copies of MSDS's. Recommend that activity group centralized MSDS files by their respective designated HazMat storage location.

ECE FINDINGS/RECOMMENDATIONS
NRC FOREST PARK

Date : 06/19/97 To 06/19/97

Program: HWASTE
Auditor: PAUL J. CAMPBELL

FINDING NUMBER	FINDING/RECOMMENDATION
HW 001	FINDING: Per 40 CFR 261.5 (a) and (g), activity does not have a Hazardous Waste Management Plan (HWMP) or similar mechanism in place for waste stream determination and tracking of HazWas generation and disposal. RECOMMENDATION: Per 40 CFR 261.5 (a) and (g), activity should develop a HWMP with support/guidance from DIRFAC MW. Activity should implement the HWMP to ensure that HazWas generation and/or storage do not exceed CESQG requirements.
HW 002	FINDING: Per 40 CFR 261.5 (c) and (d) and as identified above, waste stream determination for HazWas generated and disposed of has not been addressed. RECOMMENDATION: Per 40 CFR 261.5 (c) and (d), the activity should ensure waste stream determinations are performed for all processes generating solid and potentially HazWas.
HW 003	FINDING: Per OPNAV 5090.1B 12-5.3, the activity does not have an up-to-date HWMP. RECOMMENDATION: Per OPNAV 5090.1B 12-5.3, activity should develop an up-to-date HWMP addressing all HazWas streams (host, tenant, and contractor).
HW 004	FINDING: Per OPNAV 5090.1B 3-5.2, quantities of various products (i.e. aerosol can of TCE in Navy HazMat storge, expiration date 1992) had passed expiration/retesting date and were still in stock. RECOMMENDATION: Per OPNAV 5090.1B 3-5.2, activity should review mission required processes (host and tenant) and associated HazMat required. Where HazMat is not required or is beyond or approaching shelf-life dates, activity should appropriately dispose of excess/unnecessary HazMat.
HW 005	FINDING: Per OPNAV 5090.1B 3-5.2(4), activity has not modified HazMat shelf-life dates where expired. RECOMMENDATION: Per OPNAV 5090.1B 3-5.2, activity should seek to modify HazMat shelf-life dates (where expired or approaching expiration/retest dates). Recommend activity contact resources at Great Lakes for support.
GEN 001	RECOMMENDATION: As part of waste stream determinations, the activity needs to review the

FINDING NUMBER	FINDING/RECOMMENDATION
GEN 001	**(Continuation)** X-Ray development process associated with the dental clinic services. First, the development process itself generates effluent which is currently being piped to the sink for disposal through the sanitary sewer. Secondly, the rollers for the developer are being washed in the sink, also generating effluent disposed of via the sanitary sewer. Activity has not performed waste stream determination on this process. 40 CFR 403.12(p) requires the activity to notify EPA, the State, and the Publicly Owned Treatment Works (POTW) of any discharge of HazWas to the POTW sewer system. It is very likely that effluent from both processes would be characteristic hazardous waste and must be counted towards the monthly generation quantities. Disposal of the waste must be appropriately addressed. If the waste is determined non-HazWas, the activity would still be required to comply with other portions of 40 CFR 403 and any discharge requirements specified by the POTW.

FINDING NUMBER	FINDING/RECOMMENDATION
GEN 001	RECOMMENDATION: Medical officer/personnel were not available for interview during the ECE; therefore, this program was not evaluated. NOTE: a biohazard bucket (infectious waste container) was found in the solid waste dumpster behind the primary facility building. It was determined that the bucket had been used for a paint bucket. Activity stated that this was a one-time incident and would ensure this would not occur in the future.

FINDING NUMBER	FINDING/RECOMMENDATION
GEN 001	RECOMMENDATION: Activity does not manage natural resources or maintain forestable property.

FINDING NUMBER	FINDING/RECOMMENDATION
GEN 001	RECOMMENDATION: PCB-free letter or survey not found or identified during site visit. Activity should confirm with local utility provided that transformers are PCB-free. Additionally, in consideration of the age of the facility, many light fixtures may contain PCB-ballast. Recommend that when activity is performing waste stream determinations under HazWas program, they consider light fixture ballast and determine appropriate disposal method based upon local solid waste disposal regulations/policies.

FINDING NUMBER	FINDING/RECOMMENDATION
PEST 001	FINDING: Per 40 CFR 152.10 and 40 CFR 171.3, Army personnel identified that individuals applying pesticides are not certified. RECOMMENDATION: Per 40 CFR 152.10 and 40 CFR 171.3, if the practice of applying pesticides is to continue, activity should ensure all pesticide applicators are certified. Additionally, medical monitoring will be required for all personnel routinely applying pesticides.
PEST 002	FINDING: Per 40 CFR 171.7 and DOD Dir 4150.7, no records of pesticide use identified. RECOMMENDATION: Per 40 CFR 171.7 and DOD DIR 4150.7, activity requires records for all pesticide applications. If activity continues use of pesticides, a log including type of pesticide, quantity, date, and areas of application should be kept.
PEST 003	FINDING: Per 40 CFR 171.8, activity does not have a Pest Management Plan. (Necessary for the application of pesticides on the facility.) RECOMMENDATION: Per 40 CFR 171.8, if pesticides application is to continue, a Pest Management Plan should be developed for the facility. DOD Dir 4150.7 and OPNAV 6250.4A provide guidance on necessary issues/components of an appropriate Pest Management Plan.

ECE FINDINGS/RECOMMENDATIONS
NRC FOREST PARK

Date : 06/19/97 To 06/19/97

Program: PW
Auditor: PAUL J. CAMPBELL

FINDING NUMBER	FINDING/RECOMMENDATION
PW 001	FINDING: Per OPNAV 5090.1B 8-5.3, activity identified that appropriate sampling has not been performed. RECOMMENDATION: Per OPNAV 5090.1B 8-5.3, activity should sample all water coolers and appropriate water taps (those used for drinking water purposes, such as galley sinks). Recommend activity contact DIRFAC MW for funding/support/guidance.
GEN 001	RECOMMENDATION: Ref. OPNAV 5090.1B 8-4 and 8-5, mop-sinks in janitorial closests had hose connections cut to approximately 2-2.5 feet in length, allowing for a cross-connection when water is in the sink. It is recommended that the activity obtain hose-bib vacuum breakers to ensure a means of backflow prevention.

FINDING NUMBER	FINDING/RECOMMENDATION
GEN 001	RECOMMENDATION: Based on current facility processes and equipment, the activity does not meet the threshold requirements for an SPCC Plan.

FINDING NUMBER	FINDING/RECOMMENDATION
SW 001	FINDING: Per OPNAV 5090.1B 14-5.2, activity does not have a Solid Waste Management Plan (SWMP). RECOMMENDATION: Per OPNAV 5090.1B 14-5.2, activity should develop SWMP addressing regulatory requirements, waste characterization, source reduction, recycling, storage and disposal. Recommend that activity consult DIRFAC MW for support/guidance.
SW 002	FINDING: Per OPNAV 5090.1B 14-5.4.1, the activity does not have a documented recycling plan in place. RECOMMENDATION: Per OPNAV 5090.1B 14-5.4.1, recommend the activity address the recycling issues in the development of the SWMP.
SW 003	FINDING: Per 40 CFR 243.200 (1)(a), activity exterior solid waste container was not appropriately covered. RECOMMENDATION: Per 40 CFR 243.200 (1)(a), activity should ensure all waste containers are covered in order to prevent intrusion by rodents/pests and storm water.

ECE FINDINGS/RECOMMENDATIONS
NRC FOREST PARK

Date : 06/19/97 To 06/19/97

Program: UST
Auditor: PAUL J. CAMPBELL

FINDING NUMBER	FINDING/RECOMMENDATION
GEN 001	RECOMMENDATION: No underground storage tanks identified for this facility.

FINDING NUMBER	FINDING/RECOMMENDATION
GEN 001	RECOMMENDATION: Activity operates an X-RAY developer as part of the dental clinic services. At the time of the ECE the developer effluent was discharged directly to the sink (for disposal to the sanitary sewer). Additionally, it was evident that the rollers for the developer had been/were being cleaned in the sink. A waste stream determination should be performed to identify the wastes of these two processes as either Hazardous or non-Hazardous Wastes. Under 40 CFR 403.12(p) the activity is required to notify EPA, the State, and the POTW of any dischages of HazWas to the sanitary sewer system. Regardless of Haz/non-Haz status, the activity may be required to comply with other portions of 40 CFR 403 and POTW discharge limits, noting that dilution is not an acceptable method of treatment (40 CFR 403.6(d)).

STANDARD ECE AUDIT - NRC FOREST PARK
FEDERAL REGULATIONS AND POLICY

Auditor: PAUL J. CAMPBELL **Date : 06/19/97 To 06/19/97**

REGULATORY CITATION	AUDITOR'S CHECKLIST - AIR	Y/N N/A N/R	COMMENTS	FIND #
OPNAVINST 5090.1B 5-6.5(c)	Does the facility: (1) ensure that all permits and compliance statements for operations are signed by a responsible official; and, (2) develop host/tenant agreements to ensure tenants will comply with CAA regulations?	N/A	2 boilers at 4.2 MBTU = 8.4 MBTU, which is below threshold requirement for permit of 1MMBTU. (MBTU = thousand BTU, MMBTU = million BTU).	
OPNAVINST 5090.1B 5-6.5 (e)	Does the facility budget sufficient resources to maintain and demonstrate compliance with permit requirements and notify state and local authorities of all instances of noncompliance?	N/A		
OPNAVINST 5090.1B 5-6.5 (l), (m) and (n)	Does the facility: (1) ensure motor vehicles and other mobile sources comply with applicable emissions standards; (2) develop and implement transportation control measures as required by the SIP; and, (3) furnish proof of compliance with all state I/M programs for vehicles operated on the facility where applicable?	YES	Vehicle emissions tested at Great Lakes.	
OPNAVINST 5090.1B 5-6.5 (o)	Does the facility implement and maintain proper adjustments in stationary heating and power plant operations to reduce total emissions?	YES	Regular contract maintenance.	
	40 CFR PART 82 - OZONE DEPLETING SUBSTANCES	YES	Via Great Lakes.	
40 CFR 82.34 (a) (2)	Does the activity ensure that persons servicing or repairing MVAC's are properly trained and certified by a technician certification program approved by the EPA.			
40 CFR 82.42 (a)(1)	Does the activity ensure that all persons repairing or servicing MVAC's have certified to the EPA that they are properly using approved equipment and have been properly trained. Certification takes the form of a statement signed by the owner of the equipment or another responsible officer and sets forth the elements given in 82.42(a)(1) i thru iii.	YES	Via Great Lakes.	
	SUBPART F - RECYCLING AND EMISSIONS REDUCTIONS	YES	Via contract.	
40 CFR 82.154	Does the activity ensure that persons responsible for maintaining servicing, repairing and disposing of appliances are not releasing Class I or Class II substances into the atmosphere unless they are considered de minimis releases as defined under 40 CFR 82.154.			
OPNAVINST 5090.1B 6-6.9.1	Does the facility have a plan to phase out air-conditioning, refrigeration, and facility fire-fighting systems using Class I ODSs and replace or convert then to an EPA SNAP approved refrigerant with an ozone depletion potential of .05 or less by 31 Dec 2000?	YES	No regulated Class I ODS's identified during ECE.	

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REGULATORY CITATION	AUDITOR'S CHECKLIST - ASB	Y/N N/A N/R	COMMENTS	FIND #
SECNAVINST 5212.10A	Are insulation/asbestos related records retained indefinitely?	YES	Records maintained between activity and DIRFAC MW.	
CNO ltr 5090 Ser 454/ 6U395735 of 4 Nov 86	Has a comprehensive survey for asbestos containing material (ACM) been conducted?	YES	Report dated 4 June 1997.	
OPNAVINST 5100.23B CH-4	Are asbestos Operation and Maintenance (O&M) Plans developed which ensure: - that known and suspected asbestos containing materials are regularly evaluated to minimize employee exposure until abatement actions are completed; - that damage to asbestos containing materials from facility renovations, and cleaning and maintenance operations are avoided; and - that repair and removal operations of asbestos containing materials, encountered during facility renovations, are performed correctly?	YES	Addressed as part of 4 June 97 survey/report. Activity should ensure that any projects affecting asbestos containing material (ACM) should be coordinated through DIRFAC MW.	
40 CFR 61.145 (a)	Are all structures thoroughly inspected for the presence of asbestos (including Category I and Category II nonfriable asbestos containing material) prior to demolition or renovation to determine applicable notification and emission control requirements? NOTE: Category I nonfriable asbestos-containing material (ACM) means packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos. Category II nonfriable ACM means any material, excluding Category I, containing more than 1% asbestos.	YES	Activity should coordinate all projects affecting ACM through DIRFAC MW.	

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Auditor: PAUL J. CAMPBELL **Date : 06/19/97 To 06/19/97**

REGULATORY CITATION	AUDITOR'S CHECKLIST - HMC&M	Y/N N/A N/R	COMMENTS	FIND #
OPNAVINST 4110.2 6 and 8.i - and - OPNAVINST 5090.1B 3-4.3	Has the activity established written plans and procedures for Hazardous Material Control and Management (HMC&M), and do the plans include the following: - identification of hazardous materials needed for mission requirements, and where feasible (with supporting economic analysis) substitution of less hazardous materials; - development of an hazardous material Authorized Use List and controls over hazardous material quantities used to reduce the generation of hazardous waste; - action necessary to reduce hazardous material required and stored; - review of Navy specifications to determine changes required to reduce hazardous material use; - identification and implementation of process changes and/or new processes which eliminate or reduce hazardous waste; - incorporation of all known information concerning hazardous materials, hazardous waste minimization, safety, health, and disposal guidance into all new operations and maintenance plans and manuals; - consolidation of hazardous material requirements of several commands and shore activities where practical to reduce hazardous material storage, handling, acquisition, etc; - identification of individuals responsible for hazardous materials, hazardous waste, and hazardous waste minimization programs; and - plans to control, track, or reduce materials in use, in storage or stock, or disposed of as hazardous waste?	YES	5 June 1996.	
OPNAVINST 4110.2 encl (2) 2.b	Does the activity's hazardous material Authorized Use List/inventory master list include the following information for all hazardous material used at the activity: - location where materials are used and stored; - quantity normally on hand; - stock number; - chemical or common name; and - disposal requirements?	YES	Activity currently updating AUL to ensure all bulleted items of this checklist question are included.	
29 CFR 1910.1200(e) - and - OPNAVINST 4110.2 7.b and 7.c	Has the activity developed a written Hazard Communication Program which covers the following: - labelling; - Material Safety Data Sheets; - training; - listing of hazardous materials present at the activity; - methods to inform employees of hazards on non-routine tasks; - methods to inform employees of hazards of chemicals in unlabeled pipes; and - methods to inform contractor employees of the activity HAZCOM Program?	YES	Addressed in 5 June 1996 plan. Recommend activity review to ensure plan is appropriately tailored to activity processes and facilities.	
29 CFR 1910.1200 (e)(4) - and -	Does the activity make the written Hazard Communication Program available, upon request, to employees, their designated representatives, and government officials?	YES		

REGULATORY CITATION	AUDITOR'S CHECKLIST - HMC&M	Y/N N/A N/R	COMMENTS	FIND #
OPNAVINST 4110.2 7.b, encl(1), and encl (3)	**(Continuation)**			
OPNAVINST 4110.2 8.i(7)	Does the activity limit open purchases of hazardous materials, regardless of the method employed, to purchases for which a suitable stock numbered product is unavailable from the supply system?	YES		
OPNAVINST 4110.2 8.i(7)	Is a Material Safety Data Sheet (MSDS) obtained from the manufacturer or supplier prior to an authorization for use of a new product?	YES		
29 CFR 1910.1200(g)(1) - and - OPNAVINST 4110.2 6.d, 8.c(8), 8.i(3) and encl (2) 2.c	Does the activity have a Material Safety Data Sheet (MSDS) for each hazardous material used?	NO	Per 29 CFR 1910.1200 (g)(1) and OPNAV 4110.2, the activity did not have MSDS's available for each HazMat in storage.	HMC&M 001
29 CFR 1910.1200(g) - and - OPNAVINST 4110.2 encl (1)	Has the activity established effective procedures for the review of Material Safety Data Sheets (MSDS) received to ensure that the data contained therein complies with the provisions of 29 CFR 1910.1200(g) and FED-STD 313c? NOTE: The primary purpose of this review is to verify that required MSDS data fields have been completed, rather than to verify/confirm the technical adequacy of data provided by the manufacturer/importer.	YES	Via Navy environmental point-of-contact. Utilizes HMIS.	
29 CFR 1910.1200(g)(8) - and - OPNAVINST 4110.2 encl(2) 2.c	Does the activity ensure Material Safety Data Sheets (MSDSs) are readily accessible during each work shift to employees when they are in their work areas?	NO	Per 29 CFR 1910.1200 (g)(8) and OPNAV 4110.2, activity does not have MSDS's available at point of use/storage for all HazMat on facility.	HMC&M 002
OPNAVINST 4110.2 8.i(5)	Does the activity identify to NAVSUP, via the Quality Deficiency Reporting System, unlabeled shipments or shipments without Material Safety Data Sheets?	N/A	No instances identified -- activity aware of requirement.	
OPNAVINST 4110.2 8.i(5) - and - 49 CFR 172.4	Has the activity established procedures to ensure that all hazardous materials used at the activity are properly and appropriately labeled under 29 CFR 1910.1200, NAVSUP guidance or procedures, and other applicable regulations of the DOT and OSHA?	YES		
29 CFR 1910.1200(f)(5) - and -	Does the activity ensure that each container of hazardous material in the workplace is properly labeled, tagged, or marked with the identity of the hazardous chemical(s) contained therein, and	YES		

REGULATORY CITATION	AUDITOR'S CHECKLIST - HMC&M	Y/N N/A N/R	COMMENTS	FIND #
OPNAVINST 4110.2 encl (2) 2.d	**(Continuation)** appropriate hazard warnings?			
OPNAVINST 4110.2 6.d	Does the activity ensure that unlabeled, incompletely labeled, or improperly labeled hazardous material received from manufacturers, vendors, or distributors are not accepted?	N/A	No specific instances identified. Activity is aware of requirement.	
OPNAVINST 5100.23C 0608e(2)	Has the activity established and implemented a local written training plan for hazard communication consistent with activity needs?	YES	Part of overview staff training.	
OPNAVINST 5100.23C 0602a	Does training of management personnel include an overview of hazardous material and hazardous waste control and management programs?	YES	Part of overview staff training.	
OPNAVINST 5100.23C 0602b	Does training of supervisors and employee representatives include Hazardous Material Control and Management (HMC&M)?	YES		
OPNAVINST 4110.2 8.i(6)	Has the activity implemented a regulatory compliance system to control and safeguard the labeling, collection, pickup, transportation, and ultimate disposal of hazardous materials?	YES		
29 CFR 1910.1200(b) - and - OPNAVINST 4110.2 5.c, 7.b, and 7.c	Does the activity provide employees with information and training on hazardous chemicals in their work area at the time of initial assignment, and whenever a new hazard is introduced into their work area?	YES		
29 CFR 1910.1200 - and - OPNAVINST 4110.2 5.c	Does the information and training provided on hazardous chemicals cover the following: - the requirements of the OSHA Hazard Communication Standard; - any operations in their work areas where hazardous chemicals are present; - the location and availability of the written hazard communication program, including the required list(s) of hazardous chemicals, and Material Safety Data Sheets; - methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area; - the physical and health hazards of the chemicals in the work area; - the measures employees can take to protect themselves from these hazards, including specific procedures the activity has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and - the details of the hazardous communication program developed by the activity, including an explanation of the labeling system and the Material Safety Data Sheet, and how employees can obtain and use the appropriate hazard	YES		

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Auditor: PAUL J. CAMPBELL **Date : 06/19/97 To 06/19/97**

REGULATORY CITATION	AUDITOR'S CHECKLIST - HMC&M	Y/N N/A N/R	COMMENTS	FIND #
	(Continuation) information?			
29 CFR 1910.1200 h - and - OPNAVINST 4110.2 5	Does the Occupational Safety and Health Office coordinate the activity HMC&M Program, and do departments/offices/shops/codes actively participate in the activity HMC&M Program?	YES	Monthly facilities meetings including tenant representative and Navy safety/HM/HW representative.	
OPNAVINST 4110.2 6.f	Are decisions as to use of hazardous materials or substitution of less hazardous material supported by an economic analysis, appropriate to the magnitude of the decision being made, and do such analyses include cost factors and intangibles such as savings from reduction in training and other hazardous material/hazardous waste related impacts?	YES		
OPNAVINST 4110.2 8.i(7)	In cases where a standard stock item is deemed inferior, do activity personnel notify the supply officer so corrective action can be initiated?	YES		
OPNAVINST 4110.2 8.i(10)	Does the activity report all HMC&M incidents which are a risk to the environment per OPNAVINST 5090.1B and those involving safety and health per OPNAVINST 5102.1C?	N/A	No instances identified. Activity is aware of requirement.	
OPNAVINST 4110.2 encl (2) 2.h	Has the Commanding Officer or designated representative approved hazardous material storage locations?	NO	Per OPNAV 4110.2, activity does not have list of approved HazMat storage areas.	HMC& 003

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REGULATORY CITATION	AUDITOR'S CHECKLIST - HWASTE	Y/N N/A N/R	COMMENTS	FIND #
40 CFR 261.5 (a) and (g)	Does the Conditionally Exempt Small Quantity Generator ensure that waste generation does not exceed 100 kg of hazardous waste in any calendar month, unless the generator complies with increased generator status standards?	NO	Per 40 CFR 261.5 (a) and (g), activity does not have a Hazardous Waste Management Plan (HWMP) or similar mechanism in place for waste stream determination and tracking of HazWas generation and disposal.	HW 001
40 CFR 261.5 (c) & (d)	When determining quantities of hazardous waste generated for Conditionally Exempt Small Quantity Generator status, does: (I) The facility ensure that the following wastes are NOT INCLUDED: - hazardous waste that is not subject to regulation; - hazardous waste subject only to the following sections of 40 CFR 262; * 40 CFR 262.11 (Hazardous Waste Determinations) * 40 CFR 262.12 (EPA Identification Number) * 40 CFR 262.40(c) (Record Keeping) * 40 CFR 262.41 (Biennial Reporting) - hazardous waste when it is removed from on-site storage; - hazardous waste produced by on-site treatment (including reclamation) of the facility's hazardous waste so long as the hazardous waste that was treated is counted once; and - spent materials that are generated, reclaimed, and subsequently reused on-site so long as such spent materials have been counted once; and (II) Does the facility ensure that the following wastes ARE INCLUDED: - hazardous waste that is subject to the requirements of 40 CFR 261.6(b) & (c) for recyclable materials; and - hazardous waste that is subject to 40 CFR 266 Subparts C, D, and F (recyclable material used in a manner constituting disposal, hazardous waste burned for energy recovery, and recyclable materials used for precious metal recovery)?	NO	Per 40 CFR 261.5 (c) and (d) and as identified above, waste stream determination for HazWas generated and disposed of has not been addressed.	HW 002
40 CFR 261.5 (g)(2)	If the Conditionally Exempt Small Quantity Generator accumulates at any time more than a total of 1000 kg of hazardous waste, has the generator ensured that all such accumulated wastes are managed in accordance with the special provisions of 40 CFR 262 (applicable to generators between 100 kg and 1000 kg of hazardous waste per calendar month) as well as the requirements of 40 CFR 263 through 266, 268, 270 and 124 and the applicable notification requirements of 3010 of RCRA?	N/R	Although activity has not apparently been performing waste stream determination, based upon the current operations it is unlikely they have or will exceed this limit. Activity should confirm generation and storage via waste stream determinations.	
OPNAVINST 5090.1B 12-5.3	Does the Conditionally Exempt Small Quantity Generator have an up-to-date Hazardous Waste Management Plan which contain the following: - identify applicable Federal, State and local regulations pertaining to the generation and management of HW; - identify training requirements, and describe procedures for obtaining training and maintaining training records; - assign responsibilities for the generation, designation, handling, treatment, disposal,	NO	Per OPNAV 5090.1B 12-5.3, the activity does not have an up-to-date HWMP.	HW 003

REGULATORY CITATION	AUDITOR'S CHECKLIST - HWASTE	Y/N N/A N/R	COMMENTS	FIND #
	(Continuation) and all documentation; - describe all HW generation and management procedures; and - include or reference HW minimization plan and goals ?			
OPNAVINST 5090.1B 12-4.1(g)	Does the Conditionally Exempt Small Quantity Generator prepare and submit Biennial Reports (EPA Form 8700.13A) by 1 March of each even numbered year (some states require annual reports rather than Biennial reports) ?	YES	Reporting handled via DIRFAC MW.	
OPNAVINST 5090.1B 12-5.4	Does the generator prepare an annual calendar year report and mail it by 1 February to the Naval Facility Engineering Service Command (NFESC) with a copy to the major claimant?	YES	Report handled via DIRFAC MW.	

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REGULATORY CITATION	AUDITOR'S CHECKLIST - HWASTE	Y/N N/A N/R	COMMENTS	FIND #
	STANDARDS FOR USED OIL GENERATORS	YES	Activity generates very small quantities of used oil associated with lawn maintenance equipment. Activity stated that used oil would be collected and tranported to DRMO.	
40 CFR 279.21 (a)	Does the generator ensure that hazardous waste is not mixed with used oil except as provided in 40 CFR 279.10 (b) ?			
40 CFR 279.22 (a)	Is used oil not stored in units other than tanks or containers or units subject to regulation under 40 CFR 264 or 265 ?	N/R		
40 CFR 279.22 (b)	Are containers and aboveground tanks used to store used oil: - in good condition; - not leaking (no visible leaks)	N/R		
40 CFR 279.22 (c)(1)	Are containers and aboveground tanks clearly labeled or marked with the words "USED OIL".	N/R		
40 CFR 279.22 (c)(2)	Are fill pipes used to transfer used oil to underground storage tanks labeled or marked clearly with words "USED OIL".	N/A		
40 CFR 279.22 (d)	Upon detection of a release to the environment not subject to the requirements of part 280, subpart F which has occurred after the effective date of the authorized used oil program for the state in which the release is located, does the generator perform the following cleanup steps: - stop the release; - contain the released used oil; - cleanup and manage properly the released used oil and other material; - repair or replace any leaking used oil storage containers or tanks prior to returning them to service.	N/R		
40 CFR 279.24	Except as provided in paragraphs (a) through (c) of this section, does the generator ensure that used oil is transported only by transporters who have obtained EPA identification numbers ?	N/R		

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REGULATORY CITATION	AUDITOR'S CHECKLIST - HWASTE	Y/N N/A N/R	COMMENTS	FIND #
OPNAVINST 5090.1B 3-4.1	Has the activity that is not scheduled for operational closure by 31 December 1997 developed a Pollution Prevention Plan by the 31 December 1995?	YES	27 Feb 1997 pen-and-inked copy. Final copy will be provided by DIRFAC MW. CO will sign when Plan is available.	
OPNAVINST 5090.1B 3-5.4	Does the Pollution Prevention Plan contain the following elements? - purpose - policy statement - applicability & scope - description of shore activity - plan management & administration - planned process improvements - priorities - potential barriers - other relevant requirements - CO approval/certification	YES		
40 CFR 262.41 (a) - and - 40 CFR 264.75 (h), (i) & (j) - and - 40 CFR 265.75 (h), (i) & (j) - and - OPNAVINST 5090.1B 3-4.1	After 31 Dec 1995, plan must document the activity's contribution to their agency's reduction goal. - describe efforts to reduce the volume and toxicity of waste generated; - contain a description of the changes in volume and toxicity achieved during the year compared to previous years; - and are the reports signed by the generator or authorized representative (as defined in 40 CFR 262, Appendix, Section V)?	YES		
OPNAVINST 5090.1B 3-5.2	Does the activity seek to reduce or eliminate excess and expired shelf-life hazardous materials?	NO	Per OPNAV 5090.1B 3-5.2, quantities of various products (i.e. aerosol can of TCE in Navy HazMat storge, expiration date 1992) had passed expiration/retesting date and were still in stock.	HW 004
OPNAVINST 5090.1B 3-5.2(1)	Has the activity developed local mechanisms to identify materials in use that are hazardous and limiting quantities of hazardous material that are procured and stored (i.e., AUL's)?	YES	It is apparent by current stock and expiration dates that activity is not procuring significant quantities of new materials.	
OPNAVINST 5090.1B 3-5.2(1)	Has the activity established methods for substituting less hazardous material or non-HM where possible?	YES		
OPNAVINST 5090.1B 3-5.2(3)	Has the activity developed and incorporated new technology or materials which have a reduced impact upon the environment, or safer and healthier impact or result in reduced emissions?	YES		
OPNAVINST 5090.1B 3-5.2(4)	Has the activity modified hazardous material (HM) shelf-life to reduce the generation of waste as a result of shelf-life expiration, where possible?	NO	Per OPNAV 5090.1B 3-5.2(4), activity has not modified HazMat shelf-life dates where expired.	HW 005
OPNAVINST 5090.1B 3-5.2(5)	Has the activity modified units of issue to reduce the generation of waste as a result of unused surplus material?	YES		
OPNAVINST	Are waste minimization certifications on hazardous	N/A	No HazWas manifests identified in field.	

REGULATORY CITATION	AUDITOR'S CHECKLIST - HWASTE	Y/N N/A N/R	COMMENTS	FIND #
5090.1B 12-5.6.1 - and - 40 CFR 262 Appendix - Manifest	**(Continuation)** waste manifests (stating that a waste minimization program is in place): - manually signed by the generator or an authorized representative of the generator; - is the authorization valid for the person signing; and - is there any visible evidence that the program is being implemented?			
40 CFR 264.73 (b)(9)	If the activity has a hazardous waste permit, does the operating record of the permitted facility contain a certification by the activity, not less often than annually, that the activity has a program in place to reduce the volume and toxicity of hazardous waste that is generated to the degree determined by the activity to be economically practicable; and the proposed method of treatment, storage, or disposal is that practicable method currently available to the activity which minimizes the present and future threat to human health and the environment?	N/A		

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REGULATORY CITATION	AUDITOR'S CHECKLIST - HWASTE	Y/N N/A N/R	COMMENTS	FIND #
	UNIVERSAL WASTE (SMALL QUANTITY HANDLER) SMALL QUANTITY HANDLER: A universal waste handler who does NOT accumulate more than 5,000 kilograms total of universal waste (Batteries, pesticides, or thermostats, calculated collectively) at any one time.	N/A	No universal waste generation identified. Note that Amry currently stored pesticides (herbicides) for application. After review of the process, it was determined that Army should not be applying pesticides. Activity should seek to turn in pestides to DRMO.	
40 CFR 273.11	Does the handler ensure that no universal waste is disposed, diluted or treated?			
40 CFR 273.13 (a)	Does the handler manage universal waste batteries in a way that prevents releases to the environment, as follows: - contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container that is closed, structurally sound, compatible with the contents of the battery, and lacks evidence of leakage spillage or damage; - only conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed: * sorting battery by type; * mixing battery types in one container; * discharging batteries so as to remove the electric charge; * regenerating batteries * disassembling batteries or battery packs into individual batteries or cells; * removing batteries from consumer products; or * removing electrolyte from batteries - determine whether any electrolyte and/or solid waste removed from batteries exhibit characteristics of hazardous waste identified in 40 CFR 261, subpart C.	N/A		
40 CFR 273.13 (b)	Does the handler manage universal waste pesticide in a way that prevents releases to the environment?	N/A		
40 CFR 273.13 (b)(1)(4)	Are universal waste pesticides contained in a container, transport vehicle or vessel that remains closed, structurally sound, compatible with the pesticide, and lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions?	N/A		
40 CFR 273.13 (b)(3)	Are universal waste contained in a tank that meets the requirements of 40 CFR part 265 subpart J?	N/A		
40 CFR 273.13 (c)(1)	Does the handler manage universal waste thermostats in a way that prevents releases tot he environment as follows: - contain any universal waste thermostat that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container that is closed, structurally sound, compatible with the contents of the thermostat, and that lacks evidence of leakage, spillage or damage that could cause leakage?	N/A		

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REGULATORY CITATION	AUDITOR'S CHECKLIST - HWASTE	Y/N N/A N/R	COMMENTS	FIND #
40 CFR 273.13 (c)(2)	Does the handler only remove mercury containing ampules from universal waste thermostats provided the handler: - removes mercury-containing ampules from universal thermostats in a manner designed to prevent breakage of the ampule - remove ampules only over or in a containment device; - ensure mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules, from the containment device to a container that meets the requirements of 40 CFR 262.34; - immediately transfer mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of 40 CFR 262.34; - ensure area in which ampules are removed is well ventilated and monitored to ensure compliance with OSHA exposure levels for mercury; - ensure that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures including transfer of mercury from containment devices to appropriate containers; - store removed ampules in closed, non leaking containers that are in good condition; - packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation.	N/A		
40 CFR 273.13 (c)(3)	Does the handler determine whether mercury or clean-up residues or other solid waste generated during the removal of mercury containing ampules exhibit characteristics of hazardous waste?	N/A		
40 CFR 273.14	Does the handler of universal waste label or mark the universal waste to identify the type of universal waste as specified in 40 CFR 273.14?	N/A		
40 CFR 273.15	Does the handler of universal waste accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler unless the requirements of 40 CFR 273.35 (b) are met?	N/A		
40 CFR 273.15 (c)	Is the generator able to demonstrate the length of time that the universal waste has been accumulated from the time it becomes a waste or is received?	N/A		
40 CFR 273.16	Does the handler of universal waste ensure that employees are thoroughly familiar with proper waste handling and emergency procedures?	N/A		
40 CFR 273.17 (a)	Does the generator immediately contain all releases of universal wastes and other residues from universal wastes?	N/A		
40 CFR 273.18 (a)	Does the handler of universal waste only ship waste to another universal waste handler or destination facility?	N/A		

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REGULATORY CITATION	AUDITOR'S CHECKLIST - HWASTE	Y/N N/A N/R	COMMENTS	FIND #
	(Continuation)			
40 CFR 273.18 (c)	If the handler offers universal waste for off-site transportation, that meet the definition of hazardous materials under 49 CFR 171 through 180, does the handler package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with applicable DOT regulations under 49 CFR parts 172 through 180?	N/A		

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REGULATORY CITATION	AUDITOR'S CHECKLIST - NEPA	Y/N N/A N/R	COMMENTS	FIND #
OPNAVINST 5090.1B 2-6.3(a)	Does the activity and/or the action proponent ensure projects and programs include funding for environmental documentation?	YES	Coordinated through DIRFAC MW.	
OPNAVINST 5090.1B 2-6.3(f)	Has the activity developed a sense of environmental responsibility and awareness of NEPA requirements among personnel who are engaged in planning, design, or construction of any undertaking which has the potential to have an impact on the environment.	YES	Activity aware of requirements -- would coordinate with DIRFAC MW.	

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REGULATORY CITATION	AUDITOR'S CHECKLIST - NOISE	Y/N N/A N/R	COMMENTS	FIND #
OPNAVINST 5090.1B 17-2.1 - and - EO 12088	Does the facility comply with all applicable property-line environmental noise limits established by Federal, State, and Local laws? NOTE: The Federal Noise Control Act of 1972 does not apply to military aircraft, combat equipment, and weapon systems.	YES	No processes of concern.	

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REGULATORY CITATION	AUDITOR'S CHECKLIST - OHS	Y/N N/A N/R	COMMENTS	FIND #
40 CFR 300.135 (i)	NON-OPA 90 FACILITIES (NOT MEETING OPA 90 THRESHOLD REQUIREMENTS) Does the facility have a spill response plan for petroleum related spills (OHS FRP)? Oil and Hazardous Substance Facility Response Plan, OHS FRP, should include: - the name and phone number of qualified response individual(s) - local/state/federal officials required to be notified during a spill - the facility's response equipment and location - the response personnel duties - immediate measures to secure the source of the discharge and to provide adequate containment of spill - Navy and/or other organizations (i.e. other DoD component, local Fire Department, private company) that will respond to spill event	YES	Activity has drafted "Hazardous Material Spill Contingency Plan" – expected to be finalized within next month.	

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REGULATORY CITATION	AUDITOR'S CHECKLIST - PEST	Y/N N/A N/R	COMMENTS	FIND #
40 CFR 152.15	Are all pesticides purchased registered by the manufacturer?	YES	i.e. Ortho products.	
40 CFR 156.10	Are pesticides used in accordance with label directions?	YES	Army personnel indicate use in accordance with specified directions.	
40 CFR 152.10 - and - 40 CFR 171.3	Are pesticides applied only by an applicator currently certified in the appropriate commercial categories by a Federal or approved State government agency certification program.	NO	Per 40 CFR 152.10 and 40 CFR 171.3, Army personnel identified that individuals applying pesticides are not certified.	PEST 001
40 CFR 171	Is a pesticide with a registration which has been suspended, canceled, or restricted (not to be confused with restricted-use pesticide) under 40 CFR 164, applied in accordance with the section for the particular pesticide listed in "SUSPENDED, CANCELED, AND RESTRICTED PESTICIDES", EPA, Office of Pesticides and Toxic Substances, Jan., 1989, 3rd Revision?	N/A	None identified.	
40 CFR 171.7 - and - DOD Dir 4150.7	Are records of use for restricted-use pesticides kept a minimum of two (2) years?	NO	Per 40 CFR 171.7 and DOD Dir 4150.7, no records of pesticide use identified.	PEST 002
40 CFR 170	Are worker protection standards met during hand labor operations in fields following the applica- tion of agricultural pesticides on Federal land and/or in Federally-sponsored pesticide programs (Ag Outleases)?	N/A		
40 CFR 172	Does a facility conducting research to support registration of either a new pesticide or a new use of a registered pesticide have a Federally issued Experimental Use Permit (EUP)?	N/A		
40 CFR 172	If applicable, is the facility operating in accordance with the Experimental Use Permit (EUP)?	N/A		
40 CFR 160	Is all pesticide research conducted to support applications for research or marketing permits, including research to support applications for pesticide registration and experimental use permits, conducted in compliance with Good Laboratory Practice Standards?	N/A		
40 CFR 156.10	Do labels on pesticide containers meet labelling requirements?	YES		
40 CFR 165.10	Are pesticides stored in accordance with label requirements?	YES		
40 CFR 165.7 through .9	Are pesticide containers and related wastes disposed of in accordance with label directions?	N/R	Did not review disposal practices with Army personnel. Indication was given that pesticide application will likely be halted. Activity should ensure that pesticide containers, residues, and waste products are appropriate handled and disposed of and included in	

REGULATORY CITATION	AUDITOR'S CHECKLIST - PEST	Y/N N/A N/R	COMMENTS	FIND #
	(Continuation)		HazWas waste stream determinations and generation rates as applicable.	
50 CFR 13 - and - 50 CFR 21	Are Depredation Permits present when control of migratory birds is performed?	N/A		
40 CFR 261.7	Are containers that have held an acute hazardous waste (listed in 40 CFR 261.33) triple rinsed before disposal in a general landfill?	N/R	Pesticide content not reviewed in field. Activity should include pesticide related wastes in waste stream determinations for HazWas.	
40 CFR 261.7	Are discarded pesticide products, container residues, and spill residues (list in 40 CFR 261.33) disposed of in accordance with 40 CFR 264 and 40 CFR 265?	N/R	This process not reviewed with activity during ECE. Activity should review disposal practices of pesticide related wastes when considering waste stream determinations.	
40 CFR 171.8	Does the activity have a written Pest Management Plan containing the information required by DOD Dir 4150.7 and OPNAVINST 6250.4A?	NO	Per 40 CFR 171.8, activity does not have a Pest Management Plan. (Necessary for the application of pesticides on the facility.)	PEST 003
40 CFR 171.8	Is the Pest Management Program reviewed periodically for compliance with the Pest Management Plan?	N/R	No Pest Management Program or Plan currently in existence for this activity. If activity continues pesticide application, a Pest Management Program and Plan should be developed.	

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REGULATORY CITATION	AUDITOR'S CHECKLIST - POLICY	Y/N N/A N/R	COMMENTS	FIND #
	GENERAL POLICIES AND RESPONSIBILITIES	YES		
OPNAVINST 5090.1B 1-2.1b	Are all Navy personnel (civilian and military), all tenants, and all contractors working for the Navy required to comply with applicable Federal, State, Local, and internal environmental laws, regulations, and policies?			
OPNAVINST 5090.1B 1-4.3.1c	When assessed a charge by a regulatory agency for a service, does the activity: - consult with legal counsel to ensure that the charge is a "fee" and not a "tax", and is lawful and in accordance with Navy policy; - make clear to the authority demanding payment, if the activity is questioning a charge, that the delay for review is not a reflection of Navy resistance to regulatory action, but is necessary because of legal issues that must be resolved before payment may lawfully be made; and - immediately reported to OP-45 and the Comptroller of the Navy should any regulatory agency refuse to issue or maintain a permit needed for lawful operation pending the Navy's legal review of the charge?	N/A	No instances identified.	
OPNAVINST 5090.1B 1-2.9 - and - OPNAVINST 5090.1B 1-4.3.2 - and - OPNAVINST 5090.1B Appendix B	Immediately upon receipt of any written or oral NOV, NON, Warning Letters/Notices, citizens suit, Consent Orders, or any other formal notice of deficiency of federal, state, or interstate, or local environmental control laws, does the Commanding Officer report the non-compliance in accordance with the procedures set forth in OPNAVINST 5090.1B, Appendix C?	N/A	No instances identified.	
OPNAVINST 5090.1B 1-2.9 - and - OPNAVINST 5090.1B Appendix B	When necessary, does the activity seek additional technical and legal support from the major claimant and/or cognizant EFD upon receipt of any oral, informal, or formal notice on non-compliance?	N/A		
OPNAVINST 5090.1B 1-2.10	Have authorized EPA or state/local environmental regulatory officials been allowed to enter onto the shore facility at reasonable times to conduct inspections and perform other regulatory duties?	N/A	No instances identified.	
OPNAVINST 5090.1B 1-2.8	Does the activity support the participation of its employees and officers in regional and community programs to prevent pollution; protect the environment; conserve natural, historic, and cultural resources; and address waste management issues?	YES		
OPNAVINST 5090.1B 1-3.6	As appropriate, has the activity submitted nominations for the CNO/Marine Corps Environmental Quality and Natural Resources Conservation Awards?	N/A	Activity will address as appropriate.	

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-and- OPNAVINST 5090.1B Appendix D	**(Continuation)**			
OPNAVINST 5090.1B 1-5.16d	Does the activity coordinate all important environmental and natural resources matters, especially violations, agreements, permit conditions, and demands for payment of fees, with the EFD, major claimant, state and regional environmental coordinators?	YES	Coordination through DIRFAC MW.	
OPNAVINST 5090.1B 1-4.6.1	Has the activity identified and budgeted sufficient resources to ensure environmental compliance requirements are integrated into all levels of activity management?	YES	Through DIRFAC MW.	
OPNAVINST 5090.1B 1-5.16g	Regarding environmental permits: - When applicable, has the Commanding Officer of the host command delegated authority to sign and hold permits of tenant commands; - are permit conditions coordinated with the affected tenant commands; and - if a tenant command holds a permit, are the permit conditions coordinated with the host command?	N/A		
	MANAGEMENT AND ORGANIZATION	YES	19 FEB 1991. Currently being updated.	
OPNAVINST 5090.1B 1-2.14	Are host/tenant agreements in place which define roles and responsibilities which exist with respect to environmental compliance; and do these agreements include provisions for: - ECEs; - NEPA documentation; - contact with regulatory agencies; - payment of fines/fees; - permit signatures/responsibilities; - hazardous waste management; - environmental/OSHA training; and - corrective actions and emergency response actions?			
OPNAVINST 5090.1B 1-2.14 -and- OPNAVINST 5090.1B 1-5.16g -and- OPNAVINST 5090.1B 2-16.13b	Does the Commanding Officer certify and sign all environmental permits?	N/A		
	FUNDING	YES	Via DIRFAC MW.	
OPNAVINST 5090.1B 1-5.16i	Have all routine, recurring environmental compliance costs (including staffing, training, and NEPA documentation costs) been planned, programmed, and budgeted via the appropriate claimant?			

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REGULATORY CITATION	AUDITOR'S CHECKLIST - POLICY	Y/N N/A N/R	COMMENTS	FIND #
	(Continuation)			
OPNAVINST 5090.1B 1-5.16h	Has the activity ensured all non-routine, nonrecurring environmental compliance requirements, including those funded by activity funds are forwarded in the form of a PCR exhibit to the appropriate Major Claimant for inclusion on the OMB A-106?	YES	Via DIRFAC MW.	
	ENVIRONMENTAL COMPLIANCE EVALUATIONS	YES	Last 14 JAN 1997.	
OPNAVINST 5090.1B 20-5.3 - and - OPNAVINST 5090.1B 20-6.4a	Has the activity performed an annual self-ECE? NOTE: The host activity self-ECEs must include tenant activities, even if a tenant has been exempted from conducting an ECE.			
OPNAVINST 5090.1B 20-6.4a	Was the Self-ECE report forwarded to the Commanding Officer (Contracting Officer's Technical Representative if a GOCO), and has this report been provided to major claimant IG teams?	YES		
OPNAVINST 5090.1B 20-6.4b	Based on ECEs, Federal and State regulatory agency inspection, and other information, have plans of action for achieving compliance been developed and executed?	YES	In coordinatio with efforts of DIRFAC MW.	
OPNAVINST 5090.1B 20-6.4d	Is environmental compliance a factor in the performance evaluations of appropriate personnel?	YES	Listed in collateral duties and covered under annual evaluations.	

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REGULATORY CITATION	AUDITOR'S CHECKLIST - PW	Y/N N/A N/R	COMMENTS	FIND #
OPNAVINST 5090.1B 8-5.3	Have all drinking water coolers been sampled for lead according to the "screening" and, if necessary, "full" protocol sampling procedures developed by COMNAVFACENGCOM in April 1990? NOTE: The above sampling should have already been accomplished for all drinking water coolers. If any water coolers have been replaced or will be replaced in the future or if new facilities are constructed with new water coolers, the same sampling requirements pertain to the replacement/new water coolers. The "screening" protocol is a single "first draw" sample after the cooler has been unused for a period of 6 to 8 hours. If the "screening" sample exceeds .015 ppm (15 ppb), the "full" protocol procedure requires that 3 samples per cooler be collected according to procedures outlined in the COMNAVFACENGCOM guidance.	NO	Per OPNAV 5090.1B 8-5.3, activity identified that appropriate sampling has not been performed.	PW 001
CNO/NAVFACHQ Directives	Is/was the laboratory performing analyses for lead certified for lead analyses?	N/R		
OPNAVINST 5090.1B 8-5.3	If the activity purchases drinking water from a municipal or private primary water supplier, has the activity notified the supplier of high lead levels (greater than 15 ppb) as confirmed by full protocol sampling?	N/R		
OPNAV 5090.1B 8-5.4, 8-4.7, & State/Local Regs	Does the activity have a written inventory of existing backflow preventers? NOTE: this should include: - facility (bldg) number - location (exterior/interior) to bldg - type of line serviced (domestic line, fire line, other equipment, etc.) - manufacturer type, size, model number, serial number	N/A	Activity identified that facility did not have backflow preventers. Recommend activity review facility plan and local ordinances governing requirements for these devices.	
OPNAV 5090.1B 8-5.4, 8-4.7 & State/Local Regs	Are existing backflow preventers inspected and tested on a routine basis by certified personnel (cross-connection control representatives)? (Are records maintained regarding inventory, certification, repair/maintenance, etc. of existing backflow preventers?)	N/A	Activity identified no backflow preventers on the facility.	

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REGULATORY CITATION	AUDITOR'S CHECKLIST - RADON	Y/N N/A N/R	COMMENTS	FIND #
OPNAVINST 5090.1B 5-5.7 - and - NAVSEC msg 191631Z Jan 89	Has the activity been screened or is it scheduled to be screened for radon concentrations?	YES	Results received 22 Sept 1994 -- activity within acceptable levels.	
OPNAVINST 5090.1B 5-5.7	If the activity is being assessed, have the radon detectors been placed in accordance with the building schedule forwarded by the Department of Energy's contractor and installed in accordance with the detector manufacturer's instructions?	YES		
OPNAVINST 5090.1B 5-5.7	If any structure is confirmed to have a radon concentration of more than four (4) picocurries per liter (pC/l), has the activity mitigated, or made plans to mitigate, the structure?	YES		

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REGULATORY CITATION	AUDITOR'S CHECKLIST - SW	Y/N N/A N/R	COMMENTS	FIND #
OPNAVINST 5090.1B 14-5.6	If the activity generates more than one ton of solid waste per day, does the activity provide a NAVY SOLID WASTE ANNUAL REPORT to NFESC (ie previously NEESA, with a copy to the major claimant) by 15 November of each year?	N/A		
40 CFR 241.100 (d)	If the activity does not own a solid waste landfill, is every effort made to dispose of solid waste at a facility in compliance with 40 CFR 241 requirements?	YES	Via contract.	
OPNAV 5090.1B 14-5.2	Has the activity developed a Solid Waste Management Plan (SWMP) which addresses: - legal and regulatory framework (reference) - waste characterization - existing collection and disposal systems - source reduction - recycling - waste treatment - contained disposal?	NO	Per OPNAV 5090.1B 14-5.2, activity does not have a Solid Waste Management Plan (SWMP).	SW 001
	RECYCLING	NO	Per OPNAV 5090.1B 14-5.4.1, the activity does not have a documented recycling plan in place.	SW 002
OPNAVINST 5090.1B 14-5.4.1	Does the activity have a single authorized qualified recycling program which includes segregation and recycling of the following materials: - scrap metal; - high-grade paper (Note - in addition to Navy policy, 40 CFR 246.200(1) requires recycling of high-grade paper at office facilities of over 100 office workers); - corrugated containers (Note - in addition to Navy policy, 40 CFR 246.202(1) requires recycling of corrugated containers if 10 or more tons are generated per month); and - aluminum cans? NOTE: Exceptions from recycling of these materials shall only be considered when a market analyses conducted by DRMO indicates that the materials cannot be sold, or an economic analysis indicates that net costs exceed net income plus avoided costs for disposal.			
40 CFR 246.201 (3)	If markets are available, does the activity separate glass, cans, and mixed paper at the source of generation and collect each separately for the purpose of recycling?	N/R	Activity should review this as part of SWMP/QRP development.	
	STORAGE AND COLLECTION	YES		
40 CFR 243.200 (1)(a)	Are all solid waste (or materials separated for recycling) stored so that they do not constitute a fire, health, or safety hazard; or provide food or harborage for vectors?			
40 CFR 243.200 (1)(a)	Is solid waste containing food wastes securely stored in covered or closed, nonabsorbent, leak-proof, durable, easily cleanable (if reusable) containers designed for safe handling?	NO	Per 40 CFR 243.200 (1)(a), activity exterior solid waste container was not appropriately covered.	SW 003

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REGULATORY CITATION	AUDITOR'S CHECKLIST - SW	Y/N N/A N/R	COMMENTS	FIND #
	(Continuation)			
40 CFR 243.200 (1)(a)	Are solid waste storage containers of sufficient size and numbers to contain all food wastes, rubbish, and ashes that a resident or other establishment generates in the period of time between collections?	YES		
40 CFR 243.200 (1)(a)	Are solid waste storage containers maintained in a clean condition so that they do not constitute a nuisance and to retard the harborage, feeding, and breeding of vectors?	YES		
40 CFR 243.200 (1)(c)	Does the activity meet reusable solid waste storage container requirements (shall not exceed 75 pounds when filled, and shall be capable of being serviced without the collector coming into physical contact with the solid waste)?	YES		
40 CFR 243.203 (1)	Is solid waste or recyclable material collected with sufficient frequency to inhibit the propagation or attraction of vectors and the creation of nuisances?	YES		
40 CFR 243.203 (1)	Is solid waste which contains food waste collected at a minimum of once during each week?	YES		
40 CFR 243.204 (1)	Is collection of solid waste or recyclable materials conducted in a safe, efficient manner?	YES		

STANDARD ECE AUDIT - NRC FOREST PARK
FEDERAL REGULATIONS AND POLICY

Auditor: PAUL J. CAMPBELL **Date : 06/19/97 To 06/19/97**

REGULATORY CITATION	AUDITOR'S CHECKLIST - WW	Y/N N/A N/R	COMMENTS	FIND #
	STORMWATER	N/A		
40 CFR 122.26 (b)(14) and (c)(2)(ii)	Does the activity have a NPDES permit for storm water discharges from industrial operations? (or as of 1 October 1992, applied for) NOTE: 40 CFR 122.26 and State regulations require that stormwater discharges associated with industrial operations be NPDES permitted by 1 Oct 1992. You may find that some activities do not have a permit because they chose the Group application process. The activities are in compliance with EPA and the State unless the State has informed them otherwise. The activities are waiting for the EPA to finalize the Multi-Section General Permit.			
40 CFR 122.26	If required, does the Activity have a Storm Water Pollution Prevention (SWPP) Plan and is it being implemented?	N/A		
40 CFR 122.26	Is the activity in compliance with the NPDES permit for storm water discharges?	N/A		
40 CFR 122.26 (a)(4)	If the facility discharges stormwater through a large or medium municipal separate storm sewer, has the facility notified the municipality in writing that it does so?	N/A		
40 CFR 122.26 (c)(1)(i)	Are construction projects involving the disturbance of 5 or more acres, that are part of a larger common plan of development, permitted for stormwater discharges. NOTE: Some states require a permit for less than 5 acres of land disturbing activity.	N/A		

PRE-ECE QUESTIONNAIRE

PLEASE PROVIDE A PRIMARY POINT OF CONTACT (POC) FOR EACH ENVIRONMENTAL MEDIA/PROGRAM AREA LISTED BELOW:

MEDIA/PROGRAM AREA	POINT OF CONTACT	PHONE #
AIR		
ASBESTOS		
CULTURAL RESOURCES		
EPCRA		
HAZARDOUS MATERIALS		
HAZARDOUS WASTE		
HAZWAS MINIMIZATION		
INFECTIOUS WASTE		
INSTALLATION RESTORATION		
NEPA		
NOISE		
NATURAL RESOURCES		
OIL & HAZARDOUS SUBSTANCES		
POLYCHLORINATED BIPHENOLS		
PESTICIDES		
ENVIR PROGRAM MANAGEMENT		
POTABLE WATER		
RADON		
SPILL PREVENTION/CONTROL		
SOLID WASTE		
UNDERGROUND STORAGE TANKS		
WASTEWATER		

Does the activity have any special concerns or areas with which we may assist while we are on-base? (list)

- Potential availability of funding for demolition of pistol range which has lead contamination.
-
-
-

AIR - Does the activity:	YES	NO	N/A	UNKNOWN
- have any air pollution sources, such as boilers, incinerators, paint spray booths, solvent cleaning operations, etc?	✓			
- have operating permits for any of its air pollution sources?			✓	
- conduct monitoring on any of its air pollution sources?		✓		
- have any air pollution sources which emit toxic pollutants?		✓		
- have any air pollution sources which emit volatile organic compounds?		✓		

Boilers for heating system

ASBESTOS - Does the activity:	YES	NO	N/A	UNKNOWN
- have a comprehensive inventory of buildings/ structures with Asbestos Containing Material (ACM)?	✓			
- store ACM prior to disposal?		✓		
- conduct asbestos abatement projects?		✓		

planned replacement / repairing damage tiles and pipe wrapping

CULTURAL RESOURCES - Has the activity:	YES	NO	N/A	UNKNOWN
- conducted an archeological/historical survey?	✓			

HAZARDOUS WASTE - Does the activity:	YES	NO	N/A	UNKNOWN
- generate any listed or characteristic hazardous waste? Indicate Generator Status : ___ LQG (>1000kg/month) ___ SQG (100 to 1000 kg/month) ___ Conditionally Exempt SQG (<100 kg/month)		✓		
- generate acutely hazardous waste in excess of 1 kg/month?		✓		
- have an EPA ID number?				
- store hazardous waste on-site? - Indicate length of storage: ___ up to 90 days ___ up to 180 days ___ up to 270 days		✓		
- have underground storage tanks (USTs) containing hazardous waste or oil?		✓		

- have any surface impoundments?		✓		
- treat or dispose of hazardous waste on-site? Indicate treatment/disposal method:		✓		
- transport its own waste off-site?		✓		

INFECTIOUS WASTE - Does the activity:	YES	NO	N/A	UNKNOWN
- have a hospital, medical or dental clinic, or any other activity which generates infectious waste?	✓			
- store infectious waste or accept infectious waste for storage?	✓			
- treat infectious waste on-site sterilization or incineration?		✓		
- transport infectious waste off-site for treatment and disposal?	✓			

INSTALLATION RESTORATION - Does the activity:	YES	NO	N/A	UNKNOWN
- have any sites which are being evaluated under the Navy's Installation Restoration (IR) program?				✓

NEPA - Does the activity:	YES	NO	N/A	UNKNOWN
- have a system in place to ensure NEPA requirements are fulfilled?			✓	

NOISE - Does the activity:	YES	NO	N/A	UNKNOWN
- generate any noise on-site which could be heard outside of the activity's fence line?		✓		

NATURAL RESOURCES - Does the activity:	YES	NO	N/A	UNKNOWN
- have natural resources under its control? Indicate Applicable Resources: - land - forestry - fish and wildlife - outdoor recreation		✓		

OIL AND HAZARDOUS SUBSTANCES - Does the activity:	YES	NO	N/A	UNKNOWN
- have the potential for an oil or hazardous substance release to the environment?		✓		

POLYCHLORINATED BIPHENYLS - Does the activity:	YES	NO	N/A	UNKNOWN
- have in use or storage (for reuse disposal) any PCBs/PCB-contaminated items items, (transformers, capacitors, lab electromagnets, hydraulic systems, lab standards/samples?		✓		

PESTICIDES - Does the activity:	YES	NO	N/A	UNKNOWN
- engage in any application of pesticides?		✓		
- store pesticides on-site?		✓		
- generate any pesticide wastes?		✓		

POLICY/ENVIRONMENTAL PROGRAM MANAGEMENT - Does the activity:	YES	NO	N/A	UNKNOWN
- conduct annual self-ECEs?		✓		

POTABLE WATER - Does the activity:	YES	NO	N/A	UNKNOWN
- obtain any portion of its drinking water from on-site wells or surface sources?		✓		
- provide any on-site drinking water treatment (such as disinfection or booster disinfection)?		✓		
- monitor its drinking water using an on-site laboratory?		✓		

RADON - Has the activity:	YES	NO	N/A	UNKNOWN
- been monitored for radon gas?	✓			

SPILL PREVENTION - Does the activity:	YES	NO	N/A	UNKNOWN
- have oil storage capacity in excess 42,000 gallons underground; 1,320 gallons aboveground; or 660 gallons in a single aboveground container?		✓		

SOLID WASTE - Does the activity:	YES	NO	N/A	UNKNOWN
- recycle aluminum cans, high-grade paper, corrugated containers, and scrap metal?		✓		
- dispose of any solid waste (including construction/demolition debris) at an on- site landfill?		✓		
- have a solid waste incinerator?		✓		
- have a composting facility?		✓		

Presently researching possible recycling however all efforts have been economically infeasible.

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW - Does the activity:	YES	NO	N/A	UNKNOWN
- store any Extremely Hazardous Substances (such as chlorine) in excess of Threshold Planning Quantities (example: Threshold Planning Quantity for chlorine is 100 pounds)?		✓		

UNITED STATES COAST GUARD REGULATIONS - Does the activity:	YES	NO	N/A	UNKNOWN
- have a facility for the transfer of oil in bulk to or from vessels with a capacity of 250 barrels or more?		✓		

UNDERGROUND STORAGE TANKS - Does the activity:	YES	NO	N/A	UNKNOWN
- have any undergound tanks which store (or have stored) petroleum, petroleum by-products, or hazardous substances?		✓		

WASTEWATER - Does the activity:	YES	NO	N/A	UNKNOWN
- discharge wastewater via an on-site Navy-Owned Treatment Plant (NOTP)?		✓		
- discharge wastewater to a publicly-owned treatment plant (POTP)?	✓			
- have any industrial wastewater discharges?				
- provide any on-site pretreatment of industrial discharges?		✓		
- monitor its wastewater discharges with an on-site laboratory?		✓		

DEPARTMENT OF THE NAVY
COMMANDER NAVAL SURFACE RESERVE FORCE, MIDWEST
NAVAL RESERVE READINESS COMMAND REGION THIRTEEN
2701 SHERIDAN ROAD
GREAT LAKES, IL 60088-2845

5090
Ser MW1/0024
15 Apr 99

From: Director of Facilities, COMNAVSURFRESFOR Midwest

Subj: TIER I SELF ENVIRONMENTAL COMPLIANCE EVALUATION (ECE) FOR NAVAL RESERVE CENTERS

Ref: (a) OPNAVINST 5090.1B Change 1

Encl: (1) ENVIRONMENTAL COMPLIANCE EVALUATION QUESTIONNAIRE

1. Per reference (a), Navy owned Reserve Centers must conduct an annual Tier I self ECE. To remain in compliance we require the completed Environmental Compliance Evaluation Questionnaire, Enclosure (1), returned NLT 17 May 1999 via e-mail or fax.

2. Point of contact is Ms. Debra L. Ladd at DSN 792-3767 or commercial (847) 688-3767/3647 fax 3642. E-mail address is ladd@cnrf.nola.navy.mil.

P. M. CORSELLO

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NAVAL AND MARINE CORPS RESERVE CENTER

ENVIRONMENTAL COMPLIANCE EVALUATION

QUESTIONNAIRE

January 1999

Director of Facilities,
COMNAVSURFRESFOR Midwest

This questionnaire, created by Mr. Richard Cathcart (Director of Facilities, Commander, Naval Surface Reserve Force, Southeast, Code 83), is the electronic version of the questionnaire developed by Southern Division, Naval Facilities Engineering Command.

NAVY AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL RISK SURVEY QUESTIONNAIRE

HOST ACTIVITY: Naval Reserve Center , Forest Park, IL

UIC: 62757

NAVRESREDCOM REGION: Thirteen

DIRFAC POINT OF CONTACT/PHONE NUMBER: Debra L. Ladd
(847) 688-3767/3647

ACTIVITY ADDRESS: 7410 West Roosevelt Road
Forest Park, IL 60130

TENANT ACTIVITIES (Include UICs): 6015th Garrison Support Unit W84114E
318th Army Public Affairs Unit W800C6
49th Army Military History Unit W52D4G
Army Reserve Customer Support Team

AVG # DAILY OCCUPANTS: 39

DRILLING RESERVISTS: Navy 437
Army 211

WORK SCHEDULE (i.e., Mon-Fri): Mon – Fri 0730 – 1600; -
Drill weekends (2x monthly) 0730 1630

WILL ACTIVITY CLOSE/RELOCATE IN THE NEXT TWO FISCAL YEARS: No

IS PROPERTY DOD-OWNED OR LEASED (state which): DOD owned

ACTIVITY CO: CDR Greory P. Hansen

ACTIVITY ENVIRONMENTAL POC: SK1 R. Lott

PHONE: (708) 771-700

FAX: (708) 771-7046

DATE QUESTIONNAIRE COMPLETED: 17 May 1999

NAVY AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL RISK SURVEY QUESTIONNAIRE

Naval Reserve Center, Forest Park, IL consists of 86,272 square feet of Navy owned property situated on 6.6 acres of land. The main building (100) is a two story permanent structure of 76,201 square feet originally constructed in 1962 and expanded in 1978. Building 101 is a secured pistol range comprising 1,697 square feet that was constructed in 1956 (facility is secured due to lead contamination and will potentially be demolished). Building 102 is the Navy Garage comprising 1,846 square feet and is a permanent structure constructed in 1963. Building 119 is the Army garage, a permanent structure comprising 6,528 square feet, constructed in 1964.

The buildings are being maintained in satisfactory condition. A center wide rehab project was completed in October 1996.

Currently, there is no industrial maintenance performed at Naval Reserve Center, Forest Park, IL. HVAC maintenance, pest control, pest control services, lawn maintenance, and janitorial services provided by civilian contractors.

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL RISK SURVEY QUESTIONNAIRE

	YES	NO	N/A
1. AIR POLLUTION			
a. Does the reserve center have any air emissions permits? If so, for what types of operations/sources?		**X**	
b. Does the reserve center maintain or operate any buildings with boilers or space heaters? If so, what size boilers (capacity in BTUH)? **30** What type of fuels fired (diesel, fuel oil, natural gas)? **Natural Gas**	**X**		
c. Does the reserve center have any fueling facilities (gasoline or diesel pumps for fueling vehicles and/or equipment)? If so, what type of fuel? How is it stored (underground/aboveground)? How much is stored (gallons)?		**X**	
d. Does the reserve center maintain any bulk petroleum, oil, lubricant (POL) storage facilities (fuel farms)? If so, what type pols? How are they stored (underground/aboveground)? What is the size of the tank(s)?		**X**	
e. Does the reserve center do any painting (open air or paint spray booth)? **Interior walls – interior latex paint** If so, what is painted and what type paint is used?	**X**		
f. Does the reserve center do any degreasing/parts washing? If so, what is degreased? What type solvent is used? If the center has a parts washer, is the service contracted?		**X**	
g. Does the reserve center store any hazardous liquids in bulk, for example, paint remover or dry cleaning fluid? If so, what types of liquid and how much?		**X**	
h. Does the reserve center have any fixed emergency power generators? If so, what size (KW or hp)? What fuel is used (gas, diesel, fuel oil, natural gas)?		**X**	

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL RISK SURVEY QUESTIONNAIRE

	YES	NO	N/A
1. AIR POLLUTION (continued)			
i. Is the reserve center responsible for maintaining and/or operating any of the following: solvent or sandblasting operations? paint stripping operations? plating or coating operations? soldering, brazing, or welding operations? casting operations? laboratories? fiberglass repairs or layups? woodworking/carpentry shop? incinerators, furnaces, or industrial ovens? fire fighting trainer?		 X X X X X X X X X	
j. Does the reserve center store and/or use chlorinated fluorocarbons (CFCs)?		X	
2. ASBESTOS			
a. Has the reserve center been inspected to identify asbestos - containing materials (ACM)? Year? **January 1995**	X		
b. Does the reserve center maintain an inventory of ACM?		X	
c. Has the ACM identified by the asbestos survey been labeled so as to make the ACM easily identifiable by maintenance personnel? **Floor tile mastic contains asbestos – no personnel exposure.**			X
d. Do active duty reserve center personnel remove ACM? If so, have they received proper training?		X	
e. Is the reserve center due to be replaced or renovated in the near future? If so, what is the approximate date?		X	
f. Has the reserve center designated a person to address asbestos- related problems? Name of contact: **ENCS M. Davis / SK1 R. Lott**	X		

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL RISK SURVEY QUESTIONNAIRE

	YES	NO	N/A
3. DRINKING WATER			
a. Does the reserve center get its drinking water from a source other than a municipality/public water supplier?		**X**	
b. If the answer to (a.) is yes, does the reserve center sample and monitor its drinking water? If so, what tests are run?			**X**
c. On the average, does the reserve center regularly have at least 25 people present daily at least 60 days out of the year?	**X**		
d. Has water from drinking water coolers been tested for lead content? List actions taken for any drinking water coolers found to supply water containing more than 15 parts per billion lead:		**X**	
e. Does the reserve center have any water-using processes/equipment (i.e., damage control trainers, hydraulic test stands, automatic vehicle wash stations, rinse water tanks, etc)? Please list: **Damage Control Trainer**	**X**		
4. HAZARDOUS MATERIALS *TYPICAL HAZARDOUS MATERIALS (HAZMAT): Ammunition, explosives, fuels, hydraulic oils, lubricating oils, paints, thinners, solvents, medical/pharmaceutical supplies, pesticides, asbestos, mercury, polychlorinated biphenyls (PCBs), etc.*			
a. Does the reserve center use any HAZMAT? Attach a separate list.	**X**		
b. Does the reserve center have the following: 1. A HAZMAT inventory?	**X**		
2. A HAZMAT control program manager?	**X**		
3. Designated HAZMAT storage lockers?	**X**		

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL RISK SURVEY QUESTIONNAIRE

	YES	NO	N/A
4. HAZARDOUS MATERIALS (continued)			
c. Does the reserve center practice HAZMAT control and management in accordance with OPNAVINST 4110.2 by: 1. Limiting purchases of HAZMAT via an "Authorized Use List"?	X		
2. Maintaining material safety data sheets (MSDSs) for all HAZMAT?	X		
3. Substituting less hazardous or non-hazardous materials for HAZMAT where feasible?	X		
4. Limiting quantities of HAZMAT stored?	X		
5. Training personnel on the proper use and disposal of HAZMAT at their worksites?	X		
5. HAZARDOUS WASTE *Hazardous Waste (HW) is defined by federal regulation in 40 CFR 261. TYPICAL HW: paints, thinners, solvents, aerosols, acids, corrosives, spent batteries, pesticides residue, various metallic compounds, etc.* *TYPICAL USED OILS: hydraulic fluid, motor oil, cutting fluid, etc. In some states, used oils are considered to be HW.*			
a. Does the reserve center generate used oils? What is the source of the used oils?		X	
b. Does the reserve center have a mechanism for preventing used oil from being contaminated with HW?			X
c. Are used oils recycled?			X
d. Are used oils burned?			X
e. Does the reserve center generate HW? (Identify by the quantity below) 1. Conditionally exempt small quantity generator (CESQG) <100 kg/mo? If a CESQG, are you familiar with the requirements of 40 CFR 261.5?		X	

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL RISK SURVEY QUESTIONNAIRE

	YES	NO	N/A
5. HAZARDOUS WASTE (continued)			
2. Small quantity generator (SQG) 100-1000 kg/mo? If a SQG, are you familiar with the requirements of 40 CFR 261.44?			X
3. Large quantity generator (LQG) >1000 kg/mo? If a LQG, are you familiar with the requirements of 40 CFR 260-268?			X
f. Does the reserve center have an EPA ID number? **IL6170023828** For N&MCR(R)C, is the number held by the Navy or Marine Corps?	X		
g. Does the reserve center have a HW Management Plan (HWMP)?		X	
h. If a SQG or LQG, does the reserve center have and maintain HW disposal manifests?			X
i. If a SQG or LQG, does the reserve center submit annual HW reports?			X
j. Does the reserve center have any HW transfer, accumulation, or storage areas? If so, what wastes are held and how much (volume, weight, etc.)?			X
k. Are wastes stored for longer than: (does not apply to CESQGs) 90 days? 180 days? 270 days?			X
l. Does the reserve center (if a CESQG) have a spill response plan for HW and/or HM?		X	
m. Do HW storage/accumulation areas have readily accessible spill kits, containment, identification, warning signs, and means of communication?			X

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL RISK SURVEY QUESTIONNAIRE

	YES	NO	N/A
5. HAZARDOUS WASTE (continued)			
n. Have personnel received proper training in handling HW?			**X**
o. Are HW storage containers: 1. In good condition?			**X**
2. Properly marked or labeled as to contents, with the words "Hazardous Waste" and accumulation start date?			**X**
3. Kept closed except when adding HW?			**X**
4. Is HW stored in a container designed for and compatible with the specific waste?			**X**
p. Does the reserve center transport its HW to the disposal site? If so, does the reserve center maintain disposal records?			**X**
q. If a CESQG, does the reserve center ensure that HW transported offsite is destined for a landfill which is permitted by, licensed by, or registered with the state to manage solid waste?			**X**
r. Does the reserve center generate Acute HW (AHW) (such as pesticides or herbicides)?		**X**	
s. If a CESQG, does the reserve center limit the AHW quantity generated to 1 kg?			**X**
6. MEDICAL/INFECTIOUS WASTE *TYPICAL MEDICAL/INFECTIOUS WASTE: blood, blood products, used needles, scalpels, bandages, dressings, cultures, etc.*			
a. Does the reserve center generate medical/infectious waste? If so, how much is generated in pounds per month? **Approx. 1 lb.**	**X**		
b. If applicable, is your medical/infectious waste segregated from other solid waste at the point of origin?	**X**		
c. How does the reserve center dispose of medical/infections waste, if applicable? **Medical waste delivered to Naval Hospital Great Lakes for disposal.**			

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL RISK SURVEY QUESTIONNAIRE

	YES	NO	N/A
7. POLICY & MANAGEMENT (OPNAVINST 5090.1B)			
a. Has the reserve center conducted an annual self-environmental compliance evaluation (ECE) and submitted the report to the Commanding Officer?	X		
b. Has the reserve center developed and distributed an Environmental Policy Statement/Instruction expressing the Command commitment to environmental compliance and quality?	X		
c. Has the reserve center submitted Pollution Control Report (PCR) exhibits for all nonroutine/nonrecurring environmental projects (remedial actions, corrective actions, air/water pollution controls, etc.) required by environmental laws or regulations or required to bring the center into compliance?			X
8. POLYCHLORINATED BIPHENYLS (PCBs)			
a. Does the reserve center own its electrical lines, poles, and transformers (distribution system)? If not, who owns them?	X		
b. Has the owner of the distribution system provided written documentation that the system is PCB-free? If not, has documentation been requested, in writing, from the owner?			X
c. Has the owner of the distribution system provided written documentation detailing which items contain PCBs? Do these items have "Contains PCBs" labels on them?			X
d. For reserve center-owned electrical distribution systems: 1. Have the oil-filled switches, transformers, and large high voltage (2000 volt +) capacitors been tested for PCBs?		X	
2. Is an inventory of all PCB items maintained, if applicable?			X
3. Are inspection records for all PCB items kept, if applicable?			X
4. Are an annual document log and records (i.e., manifests and certificates of disposal) maintained for PCB items, if applicable?			X

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL RISK SURVEY QUESTIONNAIRE

	YES	NO	N/A
9. SOLID WASTE			
a. Does the reserve center: 1. Have a solid waste disposal contract?	X		
2. Have a solid waste management plan?		X	
3. Have solid waste disposal manifests and/or records?		X	
4. Have a Qualified Recycling Plan (QRP)?		X	
5. Purchase recycled goods?	X		
6. Practice source reduction?		X	
7. Have a returnable beverage container program?	X		
8. Have onsite disposal of solid waste? If so, what kind of site?		X	
10. SPILL PREVENTION PROGRAMS			
a. Does the reserve center store, use, or generate hazardous substances?		X	
b. Does the reserve center store more than: 42,000 gallons of oil underground? 1,320 gallons of oil aboveground? 660 gallons of oil in a single aboveground container?		X	
c. Does the reserve center have: 1. A Spill Control and Countermeasures (SPCC) Plan?		X	
2. A Spill Contingency Plan (Oil and Hazardous Substances (OHS) Plan?		X	
3. A spill response team? If so, has the team received appropriate training?		X	
4. Spill cleanup equipment and supplies (absorbent materials, vacuum equipment, etc.)?		X	
5. Secondary containment (berm or impervious wall) around aboveground storage tanks?		X	

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL RISK SURVEY QUESTIONNAIRE

	YES	NO	N/A
10. SPILL PREVENTION PROGRAMS (continued)			
d. Have any spills of oil or hazardous substances occurred at the reserve center within the last six months?		**X**	
11. EMERGENCY PLANNING (SARA TITLE III)			
a. Does the reserve center store and/or use any extremely hazardous substances (EHSs)? If so, has the reserve center determined if any quantities stored exceed the threshold planning quantities (TPQs) for those EHSs?		**X**	
b. Does the reserve center voluntarily participate in state or local emergency planning initiatives?		**X**	
c. Has the reserve center designated a point of contact for the appropriate local emergency planning committee (LEPC) and the state emergency response commission (SERC)?		**X**	
12. UNDERGROUND STORAGE TANKS (USTs)			
a. Does the reserve center have: 1. Active (in use) USTs?		**X**	
2. Abandoned (out-of-service) USTs?		**X**	
3. A UST inventory?		**X**	
b. Are USTs registered with your state environmental regulatory agency?			**X**
c. Are active USTs equipped with leak detection, overfill protection, and spill prevention features/devices?			**X**
d. Have abandoned USTs been properly closed? *(NOTE: Proper closure includes emptying the UST or filling it with inert material, certifying that the surrounding soil has not been contaminated and notifying regulatory agencies, etc.)*			**X**

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL RISK SURVEY QUESTIONNAIRE

	YES	NO	N/A
13. WATER POLLUTION *INDUSTRIAL WASTEWATER is water used and contaminated by a process, equipment, or operation.* *TYPICAL INDUSTRIAL WASTEWATER SOURCES: vehicle washing operations, hydraulic pressure test stands, damage control trainers, fire fighting trainers, rinse tanks, boiler blowdown, etc.*			
a. Does the reserve center generate industrial wastewater?	X		
b. Is the reserve center's industrial and/or sanitary wastewater disposed of by a local municipal sewer authority? If not, where?	X		
c. Does the reserve center have: 1. Storm drains connected to: municipal storm drains? **Municipal storm drains** ditches leading to a body of water?	X		
2. Septic tank and tile field systems?		X	
3. Oil/water separators discharging to: storm drains? sanitary sewers?		X	
4. Vehicle wash operations draining to: storm drains? sanitary sewers?		X	
5. Vehicle maintenance areas draining to: storm drains? sanitary sewers?		X	
6. Outside vehicle, equipment, or material storage areas?	X		
d. Does the reserve center have any: 1. National Pollutant Discharge Elimination System (NPDES) wastewater and/or stormwater permits?		X	
2. Sanitary sewer discharge permits from a municipal authority?		X	
3. Septic tank system permits?		X	

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL RISK SURVEY QUESTIONNAIRE

	YES	NO	N/A
13. WATER POLLUTION (continued)			
e. List any industrial wastewater sources: **Damage Control Trainer**	**X**		
14. PESTICIDES			
a. Does the reserve center store or mix pesticides onsite? 1. If so, what chemicals are used?		**X**	
2. Where is the mixing done?			**X**
3. Who applies the pesticides?			**X**
b. Are pesticides operations contracted out?	**X**		
c. If a tenant, does the host handle pesticides application?			**X**

DEPARTMENT OF THE NAVY
COMMANDER NAVAL SURFACE RESERVE FORCE MIDWEST
NAVAL RESERVE READINESS COMMAND REGION THIRTEEN
2701 SHERIDAN ROAD
GREAT LAKES, IL 60088-5026

5090
Ser MW10/009
14 Jan 97

From: Director of Facilities, COMNAVSURFRESFOR Midwest

Subj: TIER I SELF ENVIRONMENTAL COMPLIANCE EVALUATION (ECE) FOR NAVAL RESERVE CENTERS

Ref: (a) OPNAVINST 5090.1B

Encl: (1) ENVIRONMENTAL COMPLIANCE EVALUATION QUESTIONNAIRE

1. Per reference (a), Navy owned Reserve Centers must conduct an annual Tier I self ECE unless exempted. To remain in compliance we require the completed Environmental Compliance Evaluation Questionnaire, Enclosure (1), returned NLT 14 February 1997.

2. Point of contact is Ms. Debra L. Ladd at DSN 792-3767 or commercial (847) 688-3767/3647.

S. G. MILLS

Distribution:
NAVRESREDCOM REG Thirteen
NAVRESREDCOM REG Sixteen
NAVMARCORESCEN Battle Creek
NAVMARCORESCEN Cincinnati
NAVRESCEN Cleveland
NAVMARCORESCEN Columbus
NAVRESCEN Forest Park
NAVMARCORESCEN Grand Rapids
NAVRESREDCEN Great Lakes
NAVMARCORESCEN Lansing
NAVMARCORESCEN Peoria
NAVMARCORESCEN Rock Island
NAVMARCORESCEN Saginaw
NAVMARCORESCEN Toledo
NAVRESREDCEN Denver
NAVMARCORESCEN Des Moines
NAVRESCEN Dubuque
NAVRESCEN Duluth
NAVMARCORESCEN Green Bay
NAVRESREDCEN Kansas City
NAVMARCORESCEN Madison
NAVMARCORESCEN Milwaukee
NAVMARCORESCEN Omaha
NAVMARCORESCEN St Paul
NAVMARCORESCEN Wichita

DATE RECEIVED				
CO		COC		
XO		RECRU		
ADMIN		SUPPLY	A	
MED		CCC		
TRAIN		PERS		
LIB				

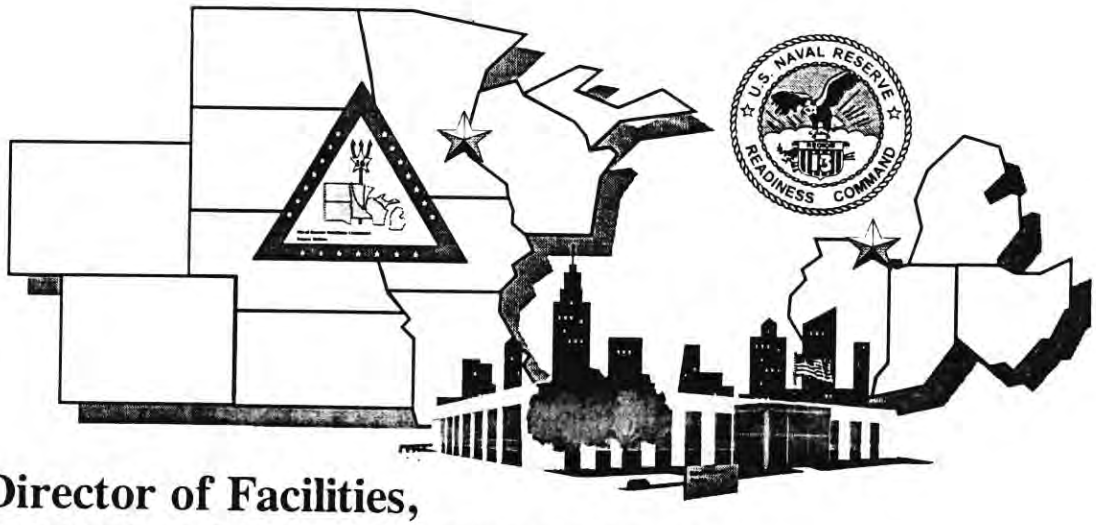
A=ACTION/I=INFO/R=RETAIN
RETURN TO ADMIN UNLESS MARKED "R"

SKI- Let's get this out before 2/7

NAVAL AND MARINE CORPS RESERVE CENTER

ENVIRONMENTAL COMPLIANCE EVALUATION QUESTIONNAIRE

January 1997



Director of Facilities,
COMNAVSURFRESFOR Midwest

This questionnaire, created by Mr. Richard Cathcart (Director of Facilities, Commander, Naval Surface Reserve Force, Southeast, Code 83), is the electronic version of the questionnaire developed by Southern Division, Naval Facilities Engineering Command.

NAVY AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL COMPLIANCE EVALUATION QUESTIONNAIRE

HOST ACTIVITY: NAVAL RESERVE CENTER, FOREST PARK

UIC: 62757

NAVRESREDCOM REGION: THIRTEEN

DIRFAC POINT OF CONTACT/PHONE NUMBER: Debra L. Ladd
(847) 688-3767/3642

ACTIVITY ADDRESS: 7410 W. ROOSEVELT RD.
FOREST PARK, IL. 60130

TENANT ACTIVITIES (Include UICs): 6015TH GARRISON SUPPORT UNIT W84114E
318TH ARMY PUBLIC AFFAIRS UNIT W800C6
49TH ARMY MILITARY HISTORY UNIT W52D4G
ARMY RESERVE CUSTOMER SUPPORT TEAM

AVG # DAILY OCCUPANTS: 39

DRILLING RESERVISTS: NAVY: 525
ARMY: 211

WORK SCHEDULE (i.e., Mon-Fri): 0630-1700 WEDNESDAY - FRIDAY; TUESDAY 0630- 2200
DRILL WEEKENDS 0600- 1730

WILL ACTIVITY CLOSE/RELOCATE IN THE NEXT TWO FISCAL YEARS: NO

IS PROPERTY DOD-OWNED OR LEASED (state which): OWNED

ACTIVITY CO: CDR DAVID D. THETFORD

ACTIVITY ENVIRONMENTAL POC: SK1 R.L. CRULL

PHONE: (708) 771-7010

FAX: (708) 771-7046

DATE QUESTIONNAIRE COMPLETED: 05 FEB 97

NAVY AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL COMPLIANCE EVALUATION QUESTIONNAIRE

GIVE A BRIEF DESCRIPTION OF YOUR CENTER (i.e., location, are you a tenant, types of industrial/maintenance work, etc.):

The Naval Reserve Center, Forest Park, IL presently consists of 86,272 square feet of Navy owned property situated on 6.6 acres of land. The main building (100) is a two story permanent structure of 76,201 square feet originally constructed in 1955 with additions in 1962 and 1978. Building 101 is the pistol range consisting of 1697 square feet, and is a permanent structure built in 1956. Building 102 is the Navy garage consisting of 1846 square feet, and is a permanent structure built in 1963. Building 110 is the Army garage consisting of 6528 square feet , also a permanent structure built in 1964.

The buildings are being maintained in satisfactory condition. A center wide rehab project was completed in October 96, however there are still ongoing repairs and maintenance due to the age of the buildings.

Currently there is no industrial maintenance performed at the Reserve Center, Forest Park, IL. HVAC maintenance, and Pest Control Services are performed by a civilian contractor. Lawn maintenance and janitorial services are provided by the acitve duty personnel.

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL COMPLIANCE EVALUATION QUESTIONNAIRE

	YES	NO	N/A
1. AIR POLLUTION			
a. Does the reserve center have any air emissions permits? If so, for what types of operations/sources?		XX	
b. Does the reserve center maintain or operate any buildings with boilers or space heaters? If so, what size boilers (capacity in BTUH)? 30 What type of fuels fired (diesel, fuel oil, natural gas)?	XX		
c. Does the reserve center have any fueling facilities (gasoline or diesel pumps for fueling vehicles and/or equipment)? If so, what type of fuel? How is it stored (underground/aboveground)? How much is stored (gallons)?		XX	
d. Does the reserve center maintain any bulk petroleum, oil, lubricant (POL) storage facilities (fuel farms)? If so, what type pols? How are they stored (underground/aboveground)? What is the size of the tank(s)?		XX	
e. Does the reserve center do any painting (open air or paint spray booth)? INTERIOR WALLS, INTERIOR LATEX If so, what is painted and what type paint is used?	XX		
f. Does the reserve center do any degreasing/parts washing? If so, what is degreased? What type solvent is used? If the center has a parts washer, is the service contracted?		XX	
g. Does the reserve center store any hazardous liquids in bulk, for example, paint remover or dry cleaning fluid? If so, what types of liquid and how much?		XX	
h. Does the reserve center have any fixed emergency power generators? If so, what size (KW or hp)? What fuel is used (gas, diesel, fuel oil, natural gas)?		XX	

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL COMPLIANCE EVALUATION QUESTIONNAIRE

	YES	NO	N/A
1. AIR POLLUTION (continued)			
i. Is the reserve center responsible for maintaining and/or operating any of the following: solvent or sandblasting operations? paint stripping operations? plating or coating operations? soldering, brazing, or welding operations? casting operations? laboratories? fiberglass repairs or layups? woodworking/carpentry shop? incinerators, furnaces, or industrial ovens? fire fighting trainer?		XX XX XX XX XX XX XX XX XX XX	
j. Does the reserve center store and/or use chlorinated fluorocarbons (CFCs)?		XX	
2. ASBESTOS			
a. Has the reserve center been inspected to identify asbestos-containing materials (ACM)? Year? JANUARY 95	XX		
b. Does the reserve center maintain an inventory of ACM?		XX	
c. Has the ACM identified by the asbestos survey been labeled so as to make the ACM easily identifiable by maintenance personnel?			N/A
d. Do active duty reserve center personnel remove ACM? If so, have they received proper training?		XX	
e. Is the reserve center due to be replaced or renovated in the near future? If so, what is the approximate date?		XX	
f. Has the reserve center designated a person to address asbestos-related problems? Name of contact: SK1 R.L. CRULL	XX		

NAVAL AND MARINE CORPS RESERVE CENTER
ENVIRONMENTAL COMPLIANCE EVALUATION QUESTIONNAIRE

	YES	NO	N/A
3. DRINKING WATER			
a. Does the reserve center get its drinking water from a source other than a municipality/public water supplier?		XX	
b. If the answer to (a.) is yes, does the reserve center sample and monitor its drinking water? If so, what tests are run?			XX
c. On the average, does the reserve center regularly have at least 25 people present daily at least 60 days out of the year?	XX		
d. Has water from drinking water coolers been tested for lead content? List actions taken for any drinking water coolers found to supply water containing more than 15 parts per billion lead:		XX	
e. Does the reserve center have any water-using processes/equipment (i.e., damage control trainers, hydraulic test stands, automatic vehicle wash stations, rinse water tanks, etc)? Please list: DAMAGE CONTROL TRAINER	XX		
4. HAZARDOUS MATERIALS *TYPICAL HAZARDOUS MATERIALS (HAZMAT): Ammunition, explosives, fuels, hydraulic oils, lubricating oils, paints, thinners, solvents, medical/pharmaceutical supplies, pesticides, asbestos, mercury, polychlorinated biphenyls (PCBs), etc.*			
a. Does the reserve center use any HAZMAT? FUEL FOR LAWN MOWERS Attach a separate list. PAINT, PAINT THINNER, CLEANING SUP.	XX		
b. Does the reserve center have the following: 1. A HAZMAT inventory?	XX		
2. A HAZMAT control program manager?	XX		
3. Designated HAZMAT storage lockers?	XX		

	YES	NO	N/A
4. HAZARDOUS MATERIALS (continued)			
c. Does the reserve center practice HAZMAT control and management in accordance with OPNAVINST 4110.2 by: 1. Limiting purchases of HAZMAT via an "Authorized Use List"?	XX		
2. Maintaining material safety data sheets (MSDSs) for all HAZMAT?	XX		
3. Substituting less hazardous or non-hazardous materials for HAZMAT where feasible?	XX		
4. Limiting quantities of HAZMAT stored?	XX		
5. Training personnel on the proper use and disposal of HAZMAT at their worksites?	XX		
5. HAZARDOUS WASTE *Hazardous Waste (HW) is defined by federal regulation in 40 CFR 261. TYPICAL HW: paints, thinners, solvents, aerosols, acids, corrosives, spent batteries, pesticides residue, various metallic compounds, etc.* *TYPICAL USED OILS: hydraulic fluid, motor oil, cutting fluid, etc. In some states, used oils are considered to be HW.*			
a. Does the reserve center generate used oils? What is the source of the used oils?		XX	
b. Does the reserve center have a mechanism for preventing used oil from being contaminated with HW?			XX
c. Are used oils recycled?			XX
d. Are used oils burned?			XX
e. Does the reserve center generate HW? (Identify by the quantity below) 1. Conditionally exempt small quantity generator (CESQG) <100 kg/mo? If a CESQG, are you familiar with the requirements of 40 CFR 261.5?		XX	

	YES	NO	N/A
5. HAZARDOUS WASTE (continued)			
2. Small quantity generator (SQG) 100-1000 kg/mo? If a SQG, are you familiar with the requirements of 40 CFR 261.44?			XX
3. Large quantity generator (LQG) >1000 kg/mo? If a LQG, are you familiar with the requirements of 40 CFR 260-268?			XX
f. Does the reserve center have an EPA ID number? For N&MCR(R)C, is the number held by the Navy or Marine Corps?		XX	
g. Does the reserve center have a HW Management Plan (HWMP)?		XX	
h. If a SQG or LQG, does the reserve center have and maintain HW disposal manifests?			XX
i. If a SQG or LQG, does the reserve center submit annual HW reports?			XX
j. Does the reserve center have any HW transfer, accumulation, or storage areas? If so, what wastes are held and how much (volume, weight, etc.)?			XX
k. Are wastes stored for longer than: (does not apply to CESQGs) 90 days? 180 days? 270 days?			XX
l. Does the reserve center (if a CESQG) have a spill response plan for HW and/or HM?		XX	
m. Do HW storage/accumulation areas have readily accessible spill kits, containment, identification, warning signs, and means of communication?			XX

	YES	NO	N/A
5. HAZARDOUS WASTE (continued)			
n. Have personnel received proper training in handling HW?			XX
o. Are HW storage containers: 1. In good condition?			XX
2. Properly marked or labeled as to contents, with the words "Hazardous Waste" and accumulation start date?			XX
3. Kept closed except when adding HW?			XX
4. Is HW stored in a container designed for and compatible with the specific waste?			XX
p. Does the reserve center transport its HW to the disposal site? If so, does the reserve center maintain disposal records?			XX
q. If a CESQG, does the reserve center ensure that HW transported offsite is destined for a landfill which is permitted by, licensed by, or registered with the state to manage solid waste?			XX
r. Does the reserve center generate Acute HW (AHW) (such as pesticides or herbicides)?		XX	
s. If a CESQG, does the reserve center limit the AHW quantity generated to 1 kg?			XX
6. MEDICAL/INFECTIOUS WASTE *TYPICAL MEDICAL/INFECTIOUS WASTE: blood, blood products, used needles, scalpels, bandages, dressings, cultures, etc.*			
a. Does the reserve center generate medical/infectious waste? If so, how much is generated in pounds per month? EST. 2LBS	XX		
b. If applicable, is your medical/infectious waste segregated from other solid waste at the point of origin?	XX		
c. How does the reserve center dispose of medical/infections waste, if applicable? TURNED IN TO NAVHOSP GLAKS			

	YES	NO	N/A
7. POLICY & MANAGEMENT (OPNAVINST 5090.1B)			
a. Has the reserve center conducted an annual self-environmental compliance evaluation (ECE) and submitted the report to the Commanding Officer? DEC 95	XX		
b. Has the reserve center developed and distributed an Environmental Policy Statement/Instruction expressing the Command commitment to environmental compliance and quality? YES:APRIL 96	XX		
c. Has the reserve center submitted Pollution Control Report (PCR) exhibits for all nonroutine/nonrecurring environmental projects (remedial actions, corrective actions, air/water pollution controls, etc.) required by environmental laws or regulations or required to bring the center into compliance?			XX
8. POLYCHLORINATED BIPHENYLS (PCBs)			
a. Does the reserve center own its electrical lines, poles, and transformers (distribution system)? If not, who owns them?	XX		
b. Has the owner of the distribution system provided written documentation that the system is PCB-free? If not, has documentation been requested, in writing, from the owner?			XX
c. Has the owner of the distribution system provided written documentation detailing which items contain PCBs? Do these items have "Contains PCBs" labels on them?			XX
d. For reserve center-owned electrical distribution systems: 1. Have the oil-filled switches, transformers, and large high voltage (2000 volt +) capacitors been tested for PCBs?		XX	
2. Is an inventory of all PCB items maintained, if applicable?			XX
3. Are inspection records for all PCB items kept, if applicable?			XX
4. Are an annual document log and records (i.e., manifests and certificates of disposal) maintained for PCB items, if applicable?			XX

	YES	NO	N/A
9. SOLID WASTE			
a. Does the reserve center: 1. Have a solid waste disposal contract?	XX		
2. Have a solid waste management plan?		XX	
3. Have solid waste disposal manifests and/or records?		XX	
4. Have a Qualified Recycling Plan (QRP)?		XX	
5. Purchase recycled goods?	XX		
6. Practice source reduction?		XX	
7. Have a returnable beverage container program?	XX		
8. Have onsite disposal of solid waste? If so, what kind of site?		XX	
10. SPILL PREVENTION PROGRAMS			
a. Does the reserve center store, use, or generate hazardous substances?		XX	
b. Does the reserve center store more than: 42,000 gallons of oil underground? 1,320 gallons of oil aboveground? 660 gallons of oil in a single aboveground container?		XX	
c. Does the reserve center have: 1. A Spill Control and Countermeasures (SPCC) Plan?		XX	
2. A Spill Contingency Plan (Oil and Hazardous Substances (OHS) Plan?		XX	
3. A spill response team? If so, has the team received appropriate training?		XX	
4. Spill cleanup equipment and supplies (absorbent materials, vacuum equipment, etc.)?		XX	
5. Secondary containment (berm or impervious wall) around aboveground storage tanks?		XX	

	YES	NO	N/A
10. SPILL PREVENTION PROGRAMS (continued)			
d. Have any spills of oil or hazardous substances occurred at the reserve center within the last six months?		XX	
11. EMERGENCY PLANNING (SARA TITLE III)			
a. Does the reserve center store and/or use any extremely hazardous substances (EHSs)? If so, has the reserve center determined if any quantities stored exceed the threshold planning quantities (TPQs) for those EHSs?		XX	
b. Does the reserve center voluntarily participate in state or local emergency planning initiatives?		XX	
c. Has the reserve center designated a point of contact for the appropriate local emergency planning committee (LEPC) and the state emergency response commission (SERC)?		XX	
12. UNDERGROUND STORAGE TANKS (USTs)			
a. Does the reserve center have: 1. Active (in use) USTs?		XX	
2. Abandoned (out-of-service) USTs?		XX	
3. A UST inventory?		XX	
b. Are USTs registered with your state environmental regulatory agency?			XX
c. Are active USTs equipped with leak detection, overfill protection, and spill prevention features/devices?			XX
d. Have abandoned USTs been properly closed? *(NOTE: Proper closure includes emptying the UST or filling it with inert material, certifying that the surrounding soil has not been contaminated and notifying regulatory agencies, etc.)*			XX

	YES	NO	N/A
13. WATER POLLUTION *INDUSTRIAL WASTEWATER is water used and contaminated by a process, equipment, or operation.* *TYPICAL INDUSTRIAL WASTEWATER SOURCES: vehicle washing operations, hydraulic pressure test stands, damage control trainers, fire fighting trainers, rinse tanks, boiler blowdown, etc.*			
a. Does the reserve center generate industrial wastewater?	XX		
b. Is the reserve center's industrial and/or sanitary wastewater disposed of by a local municipal sewer authority? If not, where?	XX		
c. Does the reserve center have: 1. Storm drains connected to: municipal storm drains? ditches leading to a body of water?	XX		
2. Septic tank and tile field systems?		XX	
3. Oil/water separators discharging to: storm drains? sanitary sewers?		XX	
4. Vehicle wash operations draining to: storm drains? sanitary sewers?		XX	
5. Vehicle maintenance areas draining to: storm drains? sanitary sewers?		XX	
6. Outside vehicle, equipment, or material storage areas?	XX		
d. Does the reserve center have any: 1. National Pollutant Discharge Elimination System (NPDES) wastewater and/or stormwater permits?		XX	
2. Sanitary sewer discharge permits from a municipal authority?		XX	
3. Septic tank system permits?		XX	

	YES	NO	N/A
13. WATER POLLUTION (continued)			
e. List any industrial wastewater sources: DAMAGE CONTROL TRAINER	XX		
14. PESTICIDES			
a. Does the reserve center store or mix pesticides onsite? 1. If so, what chemicals are used?		XX	
2. Where is the mixing done?			XX
3. Who applies the pesticides?			XX
b. Are pesticides operations contracted out?	XX		
c. If a tenant, does the host handle pesticides application?			XX

NAVAL

RESERVE

CENTER

FOREST PARK, IL

DATE: 5 Jun 97

NO OF PAGES: 14 (INCLUDING THIS PAGE)

FROM: SKI Lott x38

PHONE NO: (708) 771-7010
(708) 771-7011
(708) 771-7012

(312) 261-5025

FAX NO: (708) 771-7046

TO: Debra Ladd

SPECIAL INSTRUCTIONS: ECE

****
*** ACTIVITY REPORT ***
****

TRANSMISSION OK

TX/RX NO.	4960
CONNECTION TEL	18476883642
CONNECTION ID	REDCOM 13 16 FAC
START TIME	06/05 09:59
USAGE TIME	08'05
PAGES	15
RESULT	OK

DELIVERY ORDER CLOSURE REPORT

ASBESTOS ABATEMENT AT THE FOREST PARK NAVAL RESERVE TRAINING FOREST PARK, ILLINOIS

ENVIRONMENTAL JOB ORDER CONTRACT (EJOC)
CONTRACT NO. N68950-96-D-0052
DELIVERY ORDER No. 0110
TOLTEST PROJECT NO. 40291.01

Submitted to:

Department of the Navy
Naval Training Center (NTC) – Environmental Department
Building 1-A, 201 Decatur Avenue
Great Lakes, Illinois 60088-5600

Submitted by:

TOLTEST, INC.
1915 NORTH 12TH STREET
P.O. BOX 2186
TOLEDO, OHIO 43603-2186
(419) 241-7175

OCTOBER 2000

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APPENDIX A - TolTest Certifications and Accreditation's
APPENDIX B - Project Notification
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APPENDIX G - Updated ACM Location Map

ACRONYMS

ACM	Asbestos-Containing Material
AHERA	Asbestos Hazard Emergency Response Act
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
CFR	Code of Federal Regulations
DOT	Department of Transportation
ELPAT	Environmental Lead Proficiency Testing
EPA	Environmental Protection Agency
IDPH	Illinois Department of Public Health
IEPA	Illinois Environmental Protection Agency
f/cc	Fibers per cubic centimeter
GFI	Ground fault interrupter
GLNTC	Great Lakes Naval Training Center
HEPA	High Efficiency Particulate Air
HUD	Housing for Urban Development
HVAC	Heating, Ventilation and Air Conditioning
MCE	Mixed cellulose ester
MCRC	Marine Corps Reserve Center
MSDS	Material Safety Data Sheet
NESHAP	National Emission Standard for Hazardous Air Pollutants
NIOSH	National Institute for Occupational Safety and Health
NRC	Naval Reserve Center
NVLAP	National Voluntary Laboratory Audit Program
OSHA	Occupational Safety and Health Administration
PAT	Proficiency Testing
PCM	Phase Contrast Microscopy
PEL	Permissible Exposure Limit
PPE	Personal Protection Equipment
PVC	Polyvinyl Chloride
Poly	6-mil polyethylene sheeting
SOP	Standard Operating Procedure
STEL	Short Term Exposure Limit
TWA	Time Weighted Average

EXECUTIVE SUMMARY

This Delivery Order Closure Report (DOCR) has been prepared by TolTest, Inc. (TolTest) pursuant to the completion of all work duties for your Request for Proposal (RFP) dated July 19, 2000 and specific to Delivery Order (DO) 0110 regarding the "Asbestos Abatement at the Forest Park Naval Reserve Center, Forest Park, Illinois."

The work performed for this DO complies with the scope-of-work included within the aforementioned RFP. The areas requiring remediation are located at the Forest Park Naval Reserve Center (NRC), 7410 West Roosevelt Road, Forest Park, Illinois 60130. TolTest performed the following tasks to complete the required activities for this DO:

- Removed approximately 500 square feet (SF) of asbestos containing floor tile and mastic from the first and second floor stairwell landings. Quikrete Acrylic Concrete Cure & Seal was applied to the concrete after abatement activities. As per the Forest Park NRC's request the concrete floors were not to be retiled after abatement activities.
- Removed approximately three (3) linear feet (LF) of thermal system insulation (TSI) from two (2) roof drains on the second deck by glovebag methods. TolTest replaced the insulation with fiberglass insulation that will give the same insulating properties as the original TSI.
- Abated two (2) damaged pipe runs located in the stairwell on the first deck by glovebag methods. TolTest replaced the insulation with fiberglass insulation that will give the same insulating properties as the original TSI.
- Repaired 15 LF of damaged TSI of the roof drain located in the drill deck.
- Repaired damaged ACM fittings on the fiberglass pipe runs in room 179.
- Repaired one (1) SF of damaged insulation on the boiler jacket in the boiler room.

Background, personal, environmental and clearance air monitoring were performed during the asbestos abatement activities. Air monitoring results conducted during the duration of this project indicated airborne fiber levels to be at or below the United States Environmental Protection Agency (U.S. EPA) and the Illinois Environmental Protection Agency (IEPA) recommended safe levels of 0.01 fibers per cubic centimeter (f/cc) for asbestos fibers.

1.0 INTRODUCTION

This Delivery Order Closure Report (DOCR) describes the asbestos abatement and reinstallation activities performed by TolTest for the U.S. Navy during this Delivery Order (DO). These activities were performed throughout the stairwells and various rooms within the Forest Park Naval Reserve Center (NRC), located at 7410 West Roosevelt Road, Forest Park, Illinois. Field activities were performed by TolTest on September 11 and 12, 2000. Authorization to perform these services were pursuant to the U.S. Navy Request for Proposal (RFP) dated July 19, 2000 and specific to DO 0110 regarding the "Asbestos Abatement at the Forest Park Naval Reserve Center, Forest Park, Illinois."

1.1 Project Objective

The objective of this project was to abate asbestos-containing mastic and associated floor tile, repair damaged thermal systems insulation (TSI), and abate/reinsulate TSI from the roof drains and hot water lines while monitoring ambient air levels in conformance with federal, state, local and U.S. Navy policies and procedures. A detailed description of the activities performed can be found within the Executive Summary of this DOCR. The following procedures were adhered to by TolTest in order to complete this DO:

- The United States Environmental Protection Agency (U.S. EPA) regulations 40 Code of Federal Regulations (CFR) Part 763 and 40 CFR Part 61, Subpart M (The National Emission Standard for Hazardous Air Pollutants {NESHAP});
- The Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1926.1101, Asbestos Standards for Construction;
- The NAVFAC Asbestos Guide Spec 13281C; and
- Illinois Commercial and Public Buildings Asbestos Abatement Act.

TolTest conducted on-site air monitoring services per OSHA Class II abatement requirements in support of the asbestos abatement. The sampling cassettes were sent via FedEx freight by strict chain-of-custody command to Carnow, Conibear and Associates, Ltd. (CCA) located in Chicago, Illinois. CCA performed analysis by Phase Contrast Microscopy (PCM) following the National Institute of Occupational Safety and Health (NIOSH) 7400 Method).

1.2 Personnel

Supervision and oversight services were conducted by Mr. Michael Graf of TolTest during this project. Mr. Graf is an EPA certified and Illinois Asbestos Building Inspector and Management Planner and an Illinois licensed Air Sampling Professional (ASP).

Mr. Francisco Villagra of TolTest served as the on-site supervisor during the abatement project. Mr. Villagra is an EPA certified and Illinois licensed asbestos supervisor.

Messrs. Isiais Garcia and Luis Davila performed necessary labor to complete this DO. Messrs. Garcia and Davila are EPA certified and Illinois licensed asbestos workers.

TolTest's credentials are presented in Appendix A.

2.0 FIELD ACTIVITIES

This section describes the project specifications, notifications, asbestos air monitoring, oversight, engineering controls, equipment, and personal protective equipment utilized by TolTest.

2.1 Project Specifications

The scope-of-work for this project included the removal of asbestos-containing mastic and associated floor tile, abating TSI and repairing damaged TSI. Floor tile and mastic were removed manually with spuds and other various hand tools and the TSI was removed by appropriate glovebag methods. The scope-of-work for this project included the following tasks:

- Remove approximately 500 square feet (SF) of asbestos containing floor tile and mastic from the first and second floor stairwell landings. The floor tile is not to be replaced, the concrete is to be sealed with a concrete sealer as per the Forest Park NRC's request.
- Remove approximately three (3) linear feet (LF) of thermal system insulation (TSI) from eleven (11) roof drains on the second deck by glovebag methods. Replace insulation with a material that will give the same insulating properties as the TSI.
- Abate two (2) damaged pipe runs located in the stairwell on the first deck by glovebag methods. Replace insulation with a material that will give the same insulating properties as the TSI.
- Repair 15 LF of damaged TSI on the drill deck.
- Repair damaged ACM fittings on the fiberglass pipe runs in room 179.
- Repair one (1) SF of damaged insulation on the boiler jacket in the boiler room.

Abatement procedures were conducted according to the applicable U.S. EPA and IEPA regulations, and U.S. Navy policies and procedures.

2.2 Notification of Intent to Renovate/Demolish

Notification of Intent to Renovate/Demolish was required for this project as the abatement of non-friable asbestos materials exceeded the NESHAP threshold amount of 160 square feet and the IEPA threshold amount of 15 square feet. A copy of the notification submitted to the IEPA by TolTest is provided in Appendix B.

2.3 Field Activities

TolTest provided the following services prior to and during the asbestos abatement and installation activities:

- Performed a pre-abatement walk-through to confirm the scope-of-work;
- Obtained proof of TolTest employee's current physical examination records, signed by a physician stating physical suitability to wear a respirator, as well as the respiratory fit testing documentation. TolTest also provided proof of current training certificates from U.S. EPA-approved asbestos worker and contractor/supervisor courses;
- Registered visitors to the work site, including representatives from the U.S. Navy, TolTest, and regulatory agencies, by recording their name (printed and signed) and company or agency;
- Required an Illinois certified Asbestos Project Designer to review the asbestos abatement engineering controls to ensure that they were designed in accordance with the U.S. EPA regulations 40 CFR Part 763, and 40 CFR Part 61, Subpart M, and 77IAC 855, Asbestos Abatement for Public Schools and Private School in Illinois, and 225 ILCS 207, Illinois Commercial and Public Buildings Asbestos Abatement Act prior to initiating work;
- Conducted daily inspections of the work areas to document conformance with the applicable U.S. EPA and IEPA regulations, and U.S. Navy policies and procedure. Written documentation of the daily activities and safety logs at the site is included in Appendix C;
- Performed post-abatement visual inspections of the regulated work areas to ensure completion of the abatement and cleanliness; and
- Photographic documentation of pre and post work areas along with different abatement and reinstallation activities. Photographic documentation of abatement activities, as well as post abatement activities can be found in Appendix D.

2.4 Abatement Engineering Controls and Equipment

Engineering controls implemented by TolTest during the asbestos abatement activities to control the environment surrounding the regulated areas included the following:

- Entrances to work areas were demarcated with "Danger Asbestos Work Area" barrier tape and warning signs;
- Floors, walls and vents were covered with at least one layer of 6-mil polyethylene sheeting;
- A three chambered decontamination unit (clean room, shower room and dirty room) was erected within the north rest room for employee use;
- An Air Filtration Device (AFD) equipped with High Efficiency Particulate Absolute (HEPA) filter was utilized within the regulated areas and exhausted outside the building;
- Amended water was used to thoroughly wet ACM prior to and during removal; and
- ACM contaminated debris was double bagged in properly labeled bags prior to being placed in an enclosed roll-off box for proper disposal.

The abatement crew utilized the following equipment during the asbestos abatement:

1. various hand tools
2. hoses
3. airless sprayers
4. extension chords
5. duct tape
6. ground fault circuit interrupters (GFCI)
7. 6-mil polyethylene sheeting
8. 6-mil polyethylene waste bags marked as asbestos containing

2.5 Abatement Methods

During the asbestos abatement portion of this project, the workers utilized various methodologies to complete the abatement. This section describes those methods in detail.

While performing gross removal of the floor tile, workers wore full, disposable poly-spun tyvek coveralls and half-face respirators with HEPA cartridges. The floor was wetted with an amended solution and hand spuds were utilized to remove the floor tile. Most of the floor tile

was removed in whole pieces as demonstrated in Photograph No. 2 of Appendix D. The floor tile was placed in a black asbestos bag, then double bagged and goosenecked to be ready for disposal. A label with the facilities name and address was applied to the bag at this time.

To perform the mastic removal, a low odor solvent was applied to the mastic to soften the mastic. Squeegees and wire brushes were utilized to agitate the solvent over the mastic and collected using an absorbent material and bagged and disposed in the same manner as the floor tile.

After all abatement activities were complete, PPE, signs, banner tape, poly and other disposable materials utilized during abatement were disposed as ACM contaminated debris in the same manner as the floor tile.

2.6 Worker Protection

Personal protective equipment (PPE) utilized by abatement workers included:

- NIOSH approved half-face negative pressure respirators equipped with HEPA filters were utilized during wet, gross removal of floor tile and TSI glovebag removal;
- NIOSH approved dual cartridge half-face negative pressure respirators equipped with HEPA and organic vapor cartridges were utilized during mastic abatement activities;
- Full body disposable coveralls;
- Gloves, as appropriate; and
- Rubber soled boots.

3.0 AIR MONITORING

Air quality monitoring was performed during the abatement activities. Background, personal, environmental, and clearance samples were collected during the abatement activities to evaluate the fiber concentration in the ambient air. The air monitoring report results can be found in Appendix E.

3.1 Air Sample Analyses

Background, personal, environmental, and clearance samples were collected and analyzed on-site following the NIOSH 7400 Analytical Method (Phase Contrast Microscopy {PCM}). CCA is a participant in the NIOSH Proficiency Analytical Testing (PAT) Program for PCM. The results of the air monitoring are described in the air monitoring report as well as a copy of CCA's credentials can be found in Appendix E.

3.2 Air Monitoring Levels

Ambient air monitoring was performed during the abatement activities to ensure compliance with the U.S. EPA requirements and Navy policies and procedures. The air monitoring specifics are as follows:

- Environmental air sample results were compared to the U.S. EPA recommended stop work criteria standard of 0.05 fibers per cubic centimeter (f/cc) outside the work areas for asbestos;

- Personal sample results were compared to the OSHA Personal Exposure Limit (PEL) of 0.1 f/cc over an 8-hour time-weighted average (TWA) and 30-minute excursion limit of 1.0 f/cc for asbestos; and

- Clearance air sample results were compared to the U.S. EPA recommended air clearance standard of less than or equal to 0.01 f/cc for asbestos.

3.3 Background Air Monitoring Results

Background air samples collected prior to the start of work indicated airborne fiber levels of the facilities ambient air levels to be below 0.003 f/cc.

3.4 Environmental Air Monitoring Results

Environmental air samples collected outside the work area during the floor tile and mastic removal. The sample collected indicated airborne fiber levels to be at 0.05 f/cc. This level is at the EPA recommended stop work criteria of 0.05 f/cc outside the work area for asbestos. The high level of airborne fiber could have resulted from damaged ceiling panels and fiberglass insulation located above the sampling area along with strong wind currents within the building.

3.5 Personal Air Monitoring Results

Personal air monitoring results for all dates indicated that abatement worker exposures to airborne fibers were below the OSHA Permissive Exposure Limit (PEL) for asbestos of less than 0.01 f/cc over an 8-hour time-weighted average (TWA).

3.6 Clearance Air Monitoring Results

Two clearance samples were required to be collected for each regulated area that was established. A total of two (2) clearance samples were collected. All clearance samples indicated fiber levels to be below the U.S. EPA recommended clearance level of 0.1 f/cc. This level is above the EPA clean air requirements of 0.01 f/cc, however, the analysis of the samples occurred after the project had been completed. These high airborne fiber levels could also have resulted from the damaged ceiling panels within the work area. During the removal process of this stairwell, the weather outside consisted of severe rain and wind gusts. The roof above the work area leaked and damage to the ceiling panels and drywall walls was already present. These are also factors to consider as to why the clearance results were high.

Refer to Appendix E for the results describing the air monitoring statistical information.

4.0 REINSTALLATION AND REPAIR ACTIVITIES

TolTest was required to reinsulate the TSI removed from the roof drains located on the 2nd floor and the hot water lines located within the stairwell. TolTest reinsulated the pipes with fiberglass insulation.

The areas where the floor tile and mastic had been abated did not require reinstalling new floor tile and mastic as per the Forest Park NRC's request. Quikrete Acrylic Concrete Cure and Seal was applied as per manufacturers directions to the concrete after floor tile and mastic removal activities had been completed.

Repairs were made to the roof drain of the drill deck, elbow insulation of room 179 and to the boiler jacket. Repairs were made by wetting and applying Lag-Kloth to the damaged areas. After the lag-Kloth had been properly applied, Lag-Kote was applied to the Lag-Kloth and overlying to the existing insulation. The Lag-Kote is a thick latex type paint utilized to aid the Lag-Kloth's adherence to the surface it is applied to.

Material Safety Data Sheet's for the materials utilized for the repair portions of this project can be found in Appendix F.

5.0 POST WORK ACTIVITIES

The following section summarizes the final inspection and waste disposal activities.

5.1 Final Inspection

At the conclusion of the abatement activities, TolTest performed a visual inspection of the regulated work areas before installation activities could occur. Each area was carefully inspected for complete removal of asbestos-containing materials and cleanliness of the surfaces. Each area passed the visual inspections prior to the commencement of the installation activities.

Inspections were also performed after the reinstallation of the reinsulation activities to ensure that all areas had been installed correctly and that the materials demonstrated quality workmanship. All areas that had been reinstalled with new fiberglass insulation were observed to be in acceptable condition.

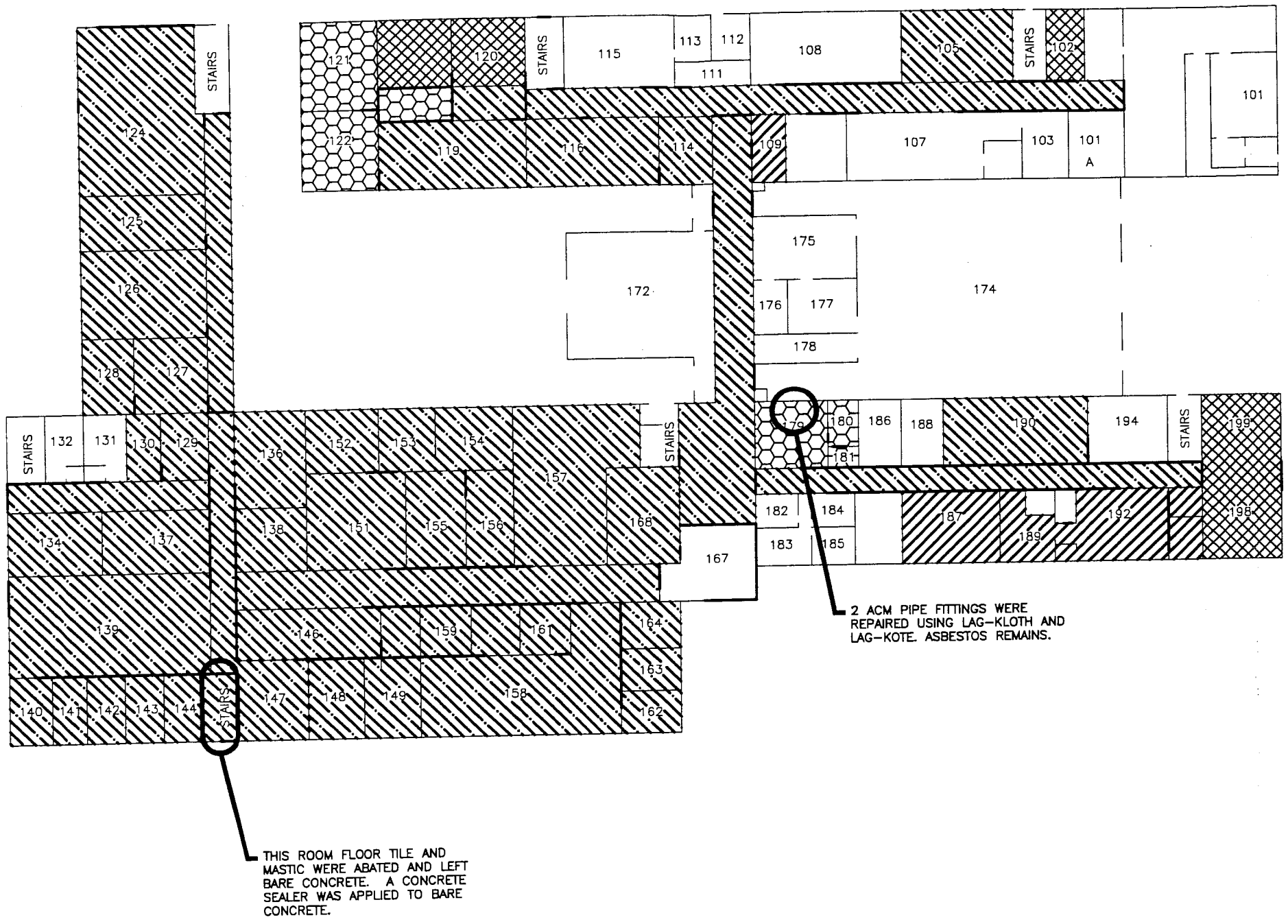
A final inspection was conducted on October 5, 2000 to finalize work completion of all work activities for this project. Attending this final inspection were; Mr. Michael Graf, TolTest Project Manager; and Mr. Matthew Slack, U.S. Navy Contracting Officer's Technical Representative (COTR).

6.0 CONCLUSION

The work performed for this DO complies with the scope-of-work included within the aforementioned RFP. The areas requiring remediation are located at the Forest Park Naval Reserve Center (NRC), 7410 West Roosevelt Road, Forest Park, Illinois 60130. TolTest performed the following tasks to complete the required activities for this DO:

- Removed approximately 500 square feet (SF) of asbestos containing floor tile and mastic from the first and second floor stairwell landings. Quikrete Acrylic Concrete Cure & Seal was applied to the concrete after abatement activities. As per the Forest Park NRC's request the concrete floors were not to be retiled after abatement activities.
- Removed approximately three (3) linear feet (LF) of thermal system insulation (TSI) from two (2) roof drains on the second deck by glovebag methods. TolTest replaced the insulation with fiberglass insulation that will give the same insulating properties as the original TSI.
- Abated two (2) damaged pipe runs located in the stairwell on the first deck by glovebag methods. TolTest replaced the insulation with fiberglass insulation that will give the same insulating properties as the original TSI.
- Repaired 15 LF of damaged TSI of the roof drain located in the drill deck.
- Repaired damaged ACM fittings on the fiberglass pipe runs in room 179.
- Repaired one (1) SF of damaged insulation on the boiler jacket in the boiler room.

Background, personal, environmental and clearance air monitoring were performed during the asbestos abatement activities. Air monitoring results conducted during the duration of this project indicated airborne fiber levels to be at or below the United States Environmental Protection Agency (U.S. EPA) and the Illinois Environmental Protection Agency (IEPA) recommended safe levels of 0.01 fibers per cubic centimeter (f/cc) for asbestos fibers.



LEGEND

ASBESTOS CONTAINING MATERIALS (ACM)
IDENTIFIED ON FLOORS AND WALLS
INCLUDING TOTAL QUANTITIES:

- FLOOR COVERING WITH MASTIC (1000 SQ.F)
- FLOOR COVERING (1200 SQ.F.)
- DOUBLE LAYERED FLOOR COVERING WITH MASTIC (1200 SQ.F.)
- FLOOR COVERING MASTIC (25000 SQ.F.)
- LOCATION OF SAMPLES COLLECTED

MAIN BUILDING – FIRST FLOOR PLAN

SCALE: 1/32"=1'-0"

GRAPHIC SCALE

0 32' 64' 96'

SCALE: 1/32" = 1'-0"

SUBMITTED BY: TOLTEST, INC.
DESIGNED BY:
DRAWN BY:
DELIVERY ORDER NO:
DATE: 28 SEPT. 00
CHECKED BY: M. GRAF
APPROVED BY:
DWG NO: 40291-1-F
SCALE: 1" = 32'
DATE
DATE
SHEET NO: 1 of 3

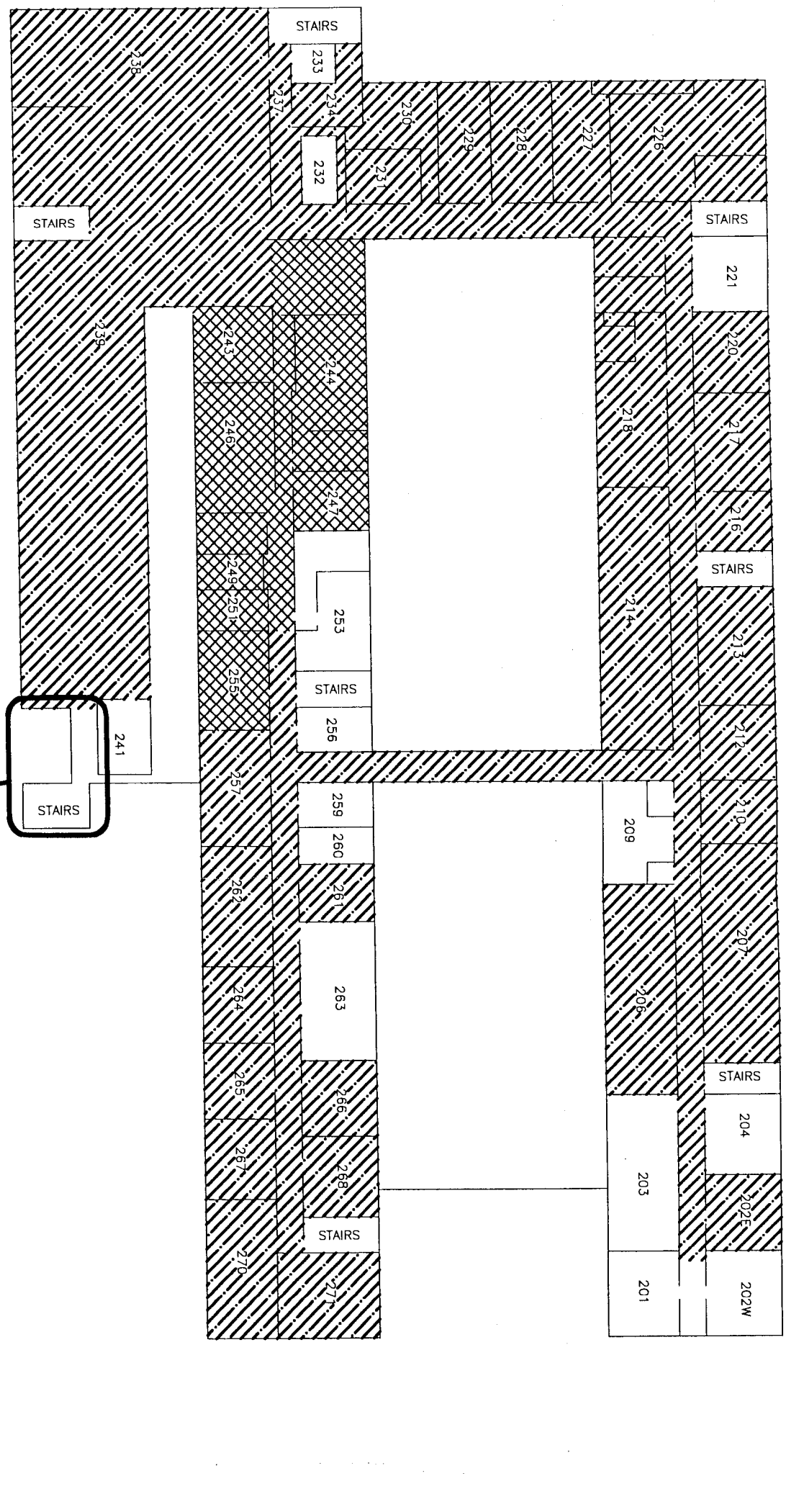
TITLE: ASBESTOS ABATEMENT/REPAIR AND REPLACEMENT
NAVAL RESERVE CENTER
FOREST PARK, ILLINOIS

ACM LOCATION PLAN – FIRST FLOOR

Department of the Navy
Naval Facilities
Engineering Command

NAVAL TRAINING CENTER, GREAT LAKES, ILLINOIS

TOLTEST, INC.



MAIN BUILDING – SECOND FLOOR PLAN

SCALE: 1/32"=1'-0"

FLOOR TILE AND MASTIC WERE REMOVED AND LEFT BARE CONCRETE. A CONCRETE SEALER WAS APPLIED TO BARE CONCRETE.

LEGEND

ASBESTOS-CONTAINING MATERIALS (ACM) IDENTIFIED ON FLOOR AND WALLS INCLUDING TOTAL QUANTITIES:

FLOOR COVERING WITH MASTIC (5,000 SQ.F.)

FLOOR COVERING MASTIC (20,000 SQ.F.)

GRAPHIC SCALE

0 32' 64' 96'

SCALE: 1/32" = 1'-0"

TOLTEST, INC.

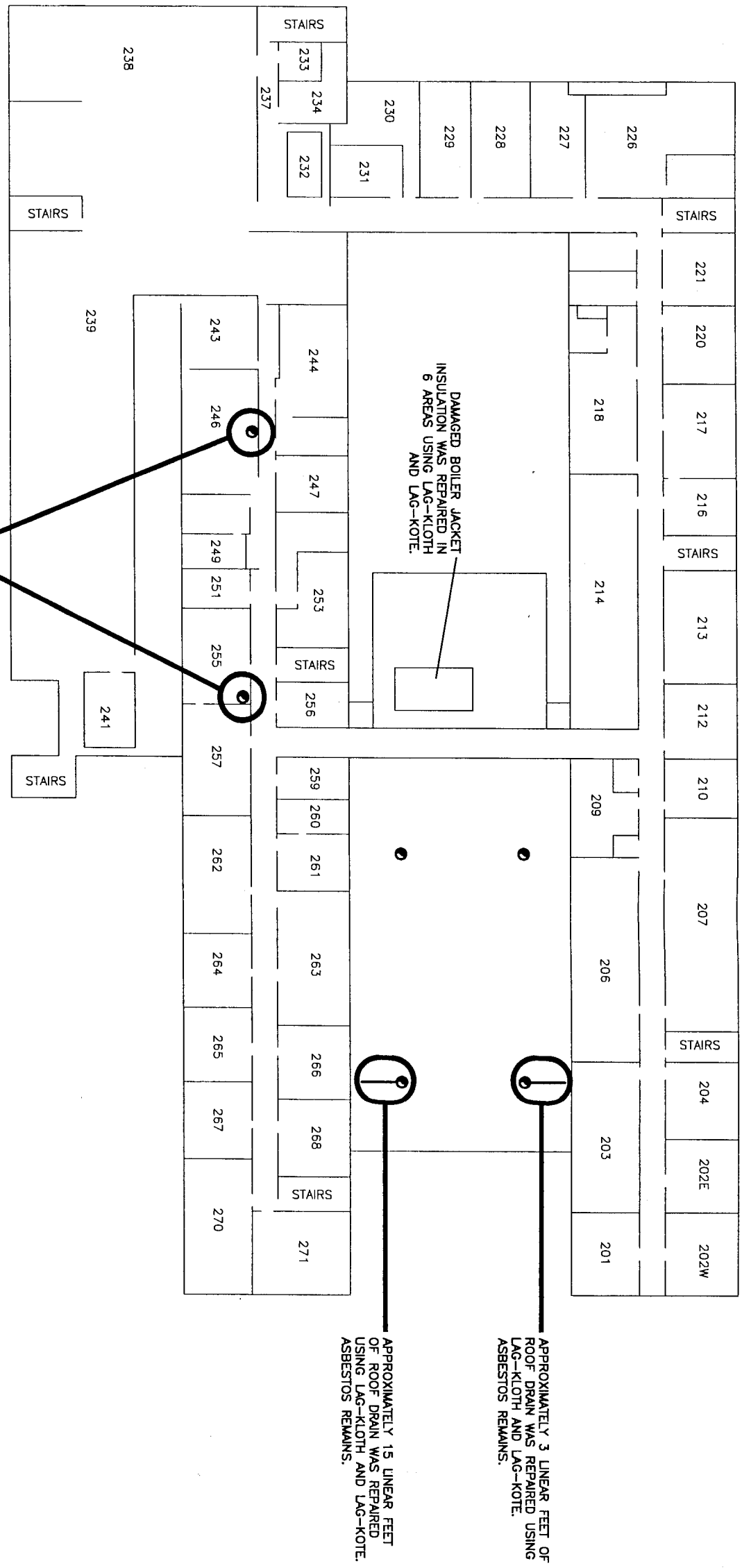
Department of the Navy
Naval Facilities
Engineering Command

NAVAL TRAINING CENTER, GREAT LAKES, ILLINOIS

TITLE:
ASBESTOS ABATEMENT/REPAIR AND REPLACEMENT
NAVAL RESERVE CENTER
FOREST PARK, ILLINOIS

ACM LOCATION PLAN – SECOND FLOOR

SUBMITTED BY: TOLTEST, INC.	DATE: 26 SEPT. 00	SCALE: 1" = 32'	
DESIGNED BY: M. GRAF	CHECKED BY:	DATE:	
DRAWN BY: HALL-KIMBRELL	APPROVED BY:	DATE:	
DELIVERY ORDER NO:	DWG NO: 40291-2-F	SHEET NO: 2 of 3	



MAIN BUILDING — SECOND FLOOR PLAN
SCALE: 1/32" = 1'-0"

LEGEND

● PIPE INSULATIONON ON ROOF DRAINS (50 LF)

GRAPHIC SCALE

0 32' 64' 96'

SCALE: 1/32" = 1'-0"

TOLTEST, INC.	Department of the Navy Naval Facilities Engineering Command NAVAL TRAINING CENTER, GREAT LAKES, ILLINOIS	TITLE: ASBESTOS ABATEMENT/REPAIR AND REPLACEMENT NAVAL RESERVE CENTER FOREST PARK, ILLINOIS SECOND FLOOR PLAN	SUBMITTED BY: TOLTEST, INC.	DATE: 26 SEPT. 00
			DESIGNED BY: M. GRAF	CHECKED BY:
			DRAWN BY: HALL-KIMBRELL	APPROVED BY:
			DELIVERY ORDER NO:	DWG NO: 40291-2-T

SCALE: 1" = 32' | DATE: | DATE: | SHEET NO: 3 of 3

DELIVERY ORDER CLOSURE REPORT

ASBESTOS FLOOR TILE ABATEMENT
AT THE
FOREST PARK NAVAL RESERVE TRAINING
FOREST PARK, ILLINOIS

ENVIRONMENTAL JOB ORDER CONTRACT (EJOC)
CONTRACT NO. N68950-00-D-0200
DELIVERY ORDER No. 0011
TOLTEST PROJECT NO. 40844.01

Submitted to:

Department of the Navy
Naval Training Center (NTC) – Environmental Department
Building 1-A, 201 Decatur Avenue
Great Lakes, Illinois 60088-5600

Submitted by:

TOLTEST, INC.
1915 NORTH 12TH STREET
P.O. BOX 2186
TOLEDO, OHIO 43603-2186
(419) 241-7175

MARCH 2001

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ACRONYMS

ACM	Asbestos-Containing Material
AHERA	Asbestos Hazard Emergency Response Act
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
CFR	Code of Federal Regulations
DO	Delivery Order
DOCR	Delivery Order Closure Report
DOT	Department of Transportation
ECG	Environmental Consulting Group, Inc.
ELPAT	Environmental Lead Proficiency Testing
EPA	Environmental Protection Agency
f/cc	Fibers per cubic centimeter
GFI	Ground fault interrupter
GLNTC	Great Lakes Naval Training Center
HEPA	High Efficiency Particulate Air
HVAC	Heating, Ventilation and Air Conditioning
IAC	Illinois Administrative Code
IDPH	Illinois Department of Public Health
IEPA	Illinois Environmental Protection Agency
MCE	Mixed Cellulose Ester
MCRC	Marine Corps Reserve Center
MSDS	Material Safety Data Sheet
NESHAP	National Emission Standard for Hazardous Air Pollutants
NIOSH	National Institute for Occupational Safety and Health
NRC	Naval Reserve Center
NVLAP	National Voluntary Laboratory Audit Program
OSHA	Occupational Safety and Health Administration
PAT	Proficiency Analytical Testing
PCM	Phase Contrast Microscopy
PEL	Permissible Exposure Limit
PPE	Personal Protection Equipment
PVC	Polyvinyl Chloride
Poly	6-mil polyethylene sheeting
RFP	Request for Proposal
SF	Square Foot
SOP	Standard Operating Procedure
STEL	Short Term Exposure Limit
TWA	Time Weighted Average

EXECUTIVE SUMMARY

This Delivery Order Closure Report (DOCR) has been prepared by TolTest, Inc. (TolTest) pursuant to the completion of all work duties for the U.S. Navy's Request for Proposal (RFP) dated November 1, 2000 and specific to Delivery Order (DO) 0011 regarding the "Asbestos Floor Tile Abatement at the Forest Park Naval Reserve Center, Forest Park, Illinois," located at the Forest Park Naval Reserve Center (NRC), 7410 West Roosevelt Road, Forest Park, Illinois 60130. The work performed for this DO complies with the scope-of-work included within the aforementioned RFP. TolTest performed the following tasks on February 26, 2001 to complete the required activities for this DO:

- Removed approximately 870 square feet (SF) of asbestos-containing floor tile and mastic from Rooms 189 and 192 of the Forest Park NRC.
- Removed approximately 180 SF of asbestos-containing floor tile and mastic from Room 251 of the Forest Park NRC.
- Spray applied a lock down encapsulating liquid on all surfaces after abatement.
- Performed on-site air monitoring and clearance air testing in conformance with OSHA Class II abatement requirements in support of asbestos abatement.
- Performed a final inspection on March 5, 2001 to finalize work completion of all work activities for this project. Mr. Michael Graf, TolTest Project Manager and Mr. Matthew Slack, the U.S. Navy Point of Contact, conducted this inspection and concluded that the asbestos removal was performed satisfactorily.
- Arranged for asbestos waste to be transported on March 7, 2001 to the Woodland RDF Landfill in South Elgin, Illinois by Waste Management. The manifest for disposal was approved and signed by Mr. Slack.
- Updated the existing asbestos survey documenting the removal that was performed for this asbestos abatement project. A letter was mailed to the Forest Park NRC to update the facilities current asbestos survey.

Environmental Consulting Group, Inc. (ECG) performed the air monitoring during the asbestos abatement activities. Clearance air test results did not exceed the Illinois Environmental Protection Agency (IEPA) and United States Environmental Protection Agency (EPA) required clearance level of 0.01 f/cc for asbestos.

1.0 INTRODUCTION

This Delivery Order Closure Report (DOCR) describes the asbestos floor tile and mastic abatement activities performed by TolTest for the U.S. Navy during this Delivery Order (DO). These activities were performed in rooms 189, 192 and 251 of the Forest Park Naval Reserve Center (NRC), located at 7410 West Roosevelt Road, Forest Park, Illinois. Authorization to perform these services were pursuant to the U.S. Navy Request for Proposal (RFP) dated November 1, 2000 and specific to DO 0011 regarding the "Asbestos Floor Tile Abatement at the Forest Park Naval Reserve Center, Forest Park, Illinois." TolTest performed the field activities on February 26, 2001.

1.1 Project Objective

The objective of this project was to abate asbestos-containing floor tile and associated mastic while monitoring ambient air levels in conformance with Federal, State, Local and U.S. Navy policies and procedures. A detailed description of the activities performed can be found within Section 2.0 of this DOCR.

The following procedures were adhered to by TolTest to complete this DO:

- The United States Environmental Protection Agency (EPA) regulations 40 Code of Federal Regulations (CFR) Part 763 and 40 CFR Part 61, Subpart M (The National Emission Standard for Hazardous Air Pollutants {NESHAP});
- The Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1926.1101, Asbestos Standards for Construction;
- The U.S. Army Corps of Engineers Safety Manual EM385.1;
- The U.S. Army Corps of Engineers Guide Specification 13280, Asbestos Abatement;
- 77 Illinois Administrative Code (IAC) 855, Asbestos Abatement of Public and Private Schools; and
- 225 Illinois ILCS 207, Illinois Commercial and Public Buildings Asbestos Abatement Act.

Environmental Consulting Group, Inc. (ECG) conducted on-site air monitoring services per OSHA Class II abatement requirements in support of the asbestos abatement. ECG perform on-site analysis of airborne fiber levels during abatement activities by Phase Contrast Microscopy (PCM) following the National Institute of Occupational Safety and Health (NIOSH) 7400 Method. ECG also performed the final air testing.

1.2 Personnel

Supervision and oversight services were conducted by Mr. Michael Graf of TolTest during this project. Mr. Graf is an EPA accredited and State of Illinois Licensed Asbestos Supervisor, Building Inspector and Management Planner. Messrs. Omar Jop, Ocatavio Cruz and Marcelino Bisosa of TolTest performed the labor activities for the abatement activities and are EPA accredited and State of Illinois Licensed Asbestos Workers. TolTest's personnel credentials and Asbestos Contractor License are presented in Appendix A.

Mr. Thad Ryniak of ECG provided on-site air monitoring and visual inspections during this project. Mr. Ryniak is trained in the NIOSH 582 Equivalency for Sampling and Evaluating Airborne Asbestos Dust. Mr. Ryniak's credentials are presented in Appendix B.

2.0 FIELD ACTIVITIES

This section describes the project specifications, notifications, asbestos air monitoring, oversight, engineering controls, equipment, and personal protective equipment utilized by TolTest for this project. Field activities for this project commenced on February 26, 2001 and were completed on the same day.

2.1 Project Specifications

The scope-of-work for this project was to remove asbestos-containing floor tile and associated mastic. Floor tile and mastic were removed manually with spud bars, poly brushes, squeegees, mastic remover, water and other various hand tools. The scope-of-work for this project consisted of the following tasks:

- Remove approximately 870 square feet (SF) of asbestos containing floor tile and mastic from Rooms 189 and 192 of the Forest Park NRC.
- Remove approximately 180 SF of asbestos containing floor tile and mastic from Room 251 of the Forest Park NRC.
- Perform asbestos on-site air monitoring and clearance air monitoring in conformance with OSHA Class II abatement requirements in support of asbestos abatement.
- Arranged for asbestos waste to be transported to the Woodland RDF Landfill located in Elgin, Illinois by Waste Management.
- Update the existing asbestos survey documenting the abatement of the aforementioned asbestos-containing floor tile and mastic. The updated ACM Location Map can be found in Appendix C.

TolTest was not responsible for any reinstallation activities for this project.

Abatement procedures were conducted according to applicable EPA and IEPA regulations, and U.S. Navy policies and procedures.

2.2 Notification of Demolition and Renovation

Notification of Demolition and Renovation was submitted to the IEPA on February 1, 2001. This notification was required since the quantity of material to be removed exceeded the NESHAP threshold amount of 160 square feet. A copy of this notification can be found in Appendix D.

2.3 Field Activities

Field activities for this project were performed and completed on February 26, 2001. TolTest provided the following services prior to and during the asbestos abatement activities:

- Performed a pre-abatement walk-through to confirm the scope-of-work;
- Obtained proof of TolTest associate's current physical examination records, signed by a physician stating physical suitability to wear a respirator, as well as the respiratory fit testing documentation. TolTest also provided proof of current training certificates from EPA-approved asbestos worker and contractor/supervisor courses, and current State of Illinois Asbestos Licenses;
- Registered visitors to the work site, including representatives from the U.S. Navy, Forest Park NRC, TolTest, and regulatory agencies, by recording their name (printed and signed) and company or agency;
- Required an Illinois accredited and licensed Asbestos Project Designer to review the asbestos abatement engineering controls to ensure that they were designed in accordance with the EPA regulations 40 CFR Part 763, 40 CFR Part 61, Subpart M, and the IEPA prior to initiating work;
- Conducted daily inspections of the work areas to document conformance with the applicable EPA and IEPA regulations, and U.S. Navy policies and procedure. Written documentation of the daily activities at the site is included in Appendix E;
- Performed post-abatement visual inspections of the regulated work areas with ECG to ensure completion of the abatement and cleanliness of the area; and
- Photographic documentation of the abatement activities, which can be found in Appendix F.

2.4 Abatement Engineering Controls and Equipment

Engineering controls implemented by TolTest during the asbestos abatement activities to control the environment surrounding the regulated areas included the following:

- Entrances to work areas were demarcated with "Danger Asbestos Work Area" barrier tape and warning signs;
- Critical barriers were erected over the walls and vents with at least one layer of 6-mil polyethylene sheeting to prevent fugitive fiber release to the building or environment;
- Amended water was used to thoroughly wet ACM prior to and during removal;
- An HEPA filtered vacuum was utilized during clean up activities; and
- ACM contaminated debris was double bagged in properly labeled waste bags prior to being placed in an enclosed roll-off box for proper disposal.

The abatement crew utilized the following equipment during the asbestos abatement:

1. various hand tools
2. hoses
3. airless sprayers
4. extension chords
5. duct tape
6. poly brushes
7. Chem-Safe 100 Low Odor Mastic Remover
8. ground fault circuit interrupters (GFCI)
9. 6-mil polyethylene sheeting
10. 6-mil polyethylene waste bags preprinted with DOT labels

2.5 Abatement Methods

During the asbestos abatement portion of this project, the workers utilized various methodologies to complete the abatement. This section describes those methods in detail.

While performing gross removal of the floor tile, workers wore full, disposable poly-spun tyvek coveralls and half-face respirators with HEPA/Organic Vapor combination cartridges. The floor was wetted with an amended solution and hand spuds were utilized to remove the floor tile. Most of the floor tile was removed in whole, intact pieces. The floor tile was placed into black asbestos waste bags, then double bagged and goosenecked to be ready for disposal.

To perform the mastic removal, Chem-Safe 100 Low Odor Mastic Remover was applied to the mastic to soften the mastic. Squeegees and poly brushes were utilized to agitate the solvent over the mastic and collected using an absorbent material and placed into asbestos waste bags, double bagged then goosenecked to be ready for disposal.

Once all the bags were ready to be transport to the roll-off box, the bags were wet wiped then affixed with a label identifying the owner of the waste and the address from which the waste originated. Disposal procedures are further detailed in Section 4.2 of this DOCR.

After the abatement had been performed and the areas clear of debris, an encapsulating liquid was spray applied to all surfaces within the regulated work areas to lock down any potential fibers that may still be airborne.

After the abatement activities were complete, personal protective equipment, signs, banner tape, poly and other disposable materials utilized during the abatement were disposed as asbestos contaminated debris in the same manner as the floor tile and mastic.

2.6 Worker Protection

Personal protective equipment (PPE) utilized by the abatement workers during the floor tile and mastic abatement and clean up activities included:

- NIOSH approved dual cartridge half-face negative pressure respirators equipped with HEPA/Organic Vapor combination cartridges;
- Full body disposable coveralls;
- Safety glasses;
- Gloves, as appropriate; and
- Rubber soled steel toe boots.

3.0 AIR MONITORING

Air quality monitoring was performed during the asbestos abatement activities. Baseline, personal, environmental, and clearance samples were collected during the abatement activities to evaluate the fiber concentration in the ambient air. Air monitoring was conducted during the abatement activities performed on February 26, 2001. The air monitoring report from ECG is presented in Appendix G.

3.1 Air Sample Analyses

Baseline, personal, environmental, and clearance samples were collected and analyzed on-site in accordance with NIOSH 7400 Analytical Method (Phase Contrast Microscopy {PCM}). ECG is a participant in the NIOSH Proficiency Analytical Testing (PAT) Program for PCM. The results of the air monitoring are described in the air monitoring report presented in Appendix G.

3.2 Air Monitoring Levels

Ambient air monitoring was performed during the abatement activities to ensure compliance with the EPA and IEPA requirements and U.S. Navy policies and procedures. The air monitoring specifics are as follows:

- Environmental air sample results were compared to the EPA recommended stop work criteria standard of 0.05 fibers per cubic centimeter (f/cc) outside the work areas for asbestos;
- Personal sample results were compared to the OSHA Personal Exposure Limit (PEL) of 0.1 f/cc for asbestos; and
- Clearance air sample results were compared to the EPA recommended air clearance standard of less than or equal to 0.01 f/cc for asbestos.

3.3 Baseline Air Monitoring Results

Baseline air samples collected prior to the start of work indicated airborne fiber levels of the facilities ambient air levels to be less than 0.01 f/cc.

3.4 Environmental Air Monitoring Results

Environmental air samples were collected inside and outside the regulated area during the floor tile and mastic removal. The samples collected inside the work area indicated airborne fiber levels to be less than 0.0109 f/cc. The samples collected outside the work area indicated airborne fiber levels to be less than 0.01 f/cc. These levels are below the EPA recommended stop work criteria of 0.05 f/cc outside the work area for asbestos.

3.5 Personal Air Monitoring Results

Personal air monitoring results indicated airborne fiber levels to be less than 0.01 f/cc. This fiber level indicates that abatement worker exposure to airborne fibers were below the OSHA Permissible Exposure Limit (PEL) for asbestos of less than 0.1 f/cc.

3.6 Clearance Air Monitoring Results

Three (3) clearance samples were collected for this project. One (1) clearance sample was collected from room 189, one (1) clearance sample was collected from room 192 and one (1) clearance sample was collected from the hallway outside room 251. All clearance samples indicated fiber levels to be below the EPA required clearance level of 0.01 f/cc for re-occupancy.

Refer to Appendix G for the air monitoring statistical information.

4.0 POST WORK ACTIVITIES

The following section summarizes the final inspection and waste disposal activities.

4.1 Final Inspection

At the conclusion of the abatement activities performed on February 26, 2001, TolTest and ECG performed a visual inspection of the regulated work areas after encapsulation and prior to clearance sampling. Each area was carefully inspected for complete removal of asbestos-containing materials and cleanliness of the surfaces. Each area passed the visual inspection satisfactorily.

A final inspection was conducted on March 5, 2001 to finalize work completion of all work activities for this project. Mr. Michael Graf, TolTest Project Manager and Mr. Matthew Slack, the U.S. Navy Point of Contact, were in attendance for this inspection. This inspection concluded that the asbestos removal was performed satisfactorily.

4.2 Waste Disposal

Waste Management delivered a 42-yard enclosed roll-off box to the site on February 26, 2001. Prior to any waste bags being placed into the roll-off box, TolTest lined it with securing 6-mil poly to the inside of it with duct tape and spray adhesive. All waste was double bagged with an appropriate 6-mil poly black waste bag preprinted with appropriate DOT labels. Each bag was goosenecked to create an airtight seal within the bag and a label applied to the outside of the bag indicating the owner of the waste and the address from where the waste was generated.

The asbestos-containing waste materials were transported by Waste Management and disposed at the Woodland RDF Landfill located in South Elgin, Illinois. The Woodland RDF Landfill is an approved disposal facility by the Great Lakes Naval Training Center. Mr. Slack approved and signed the manifest for disposal. The Waste Shipment Record (WSR) is included in Appendix H.

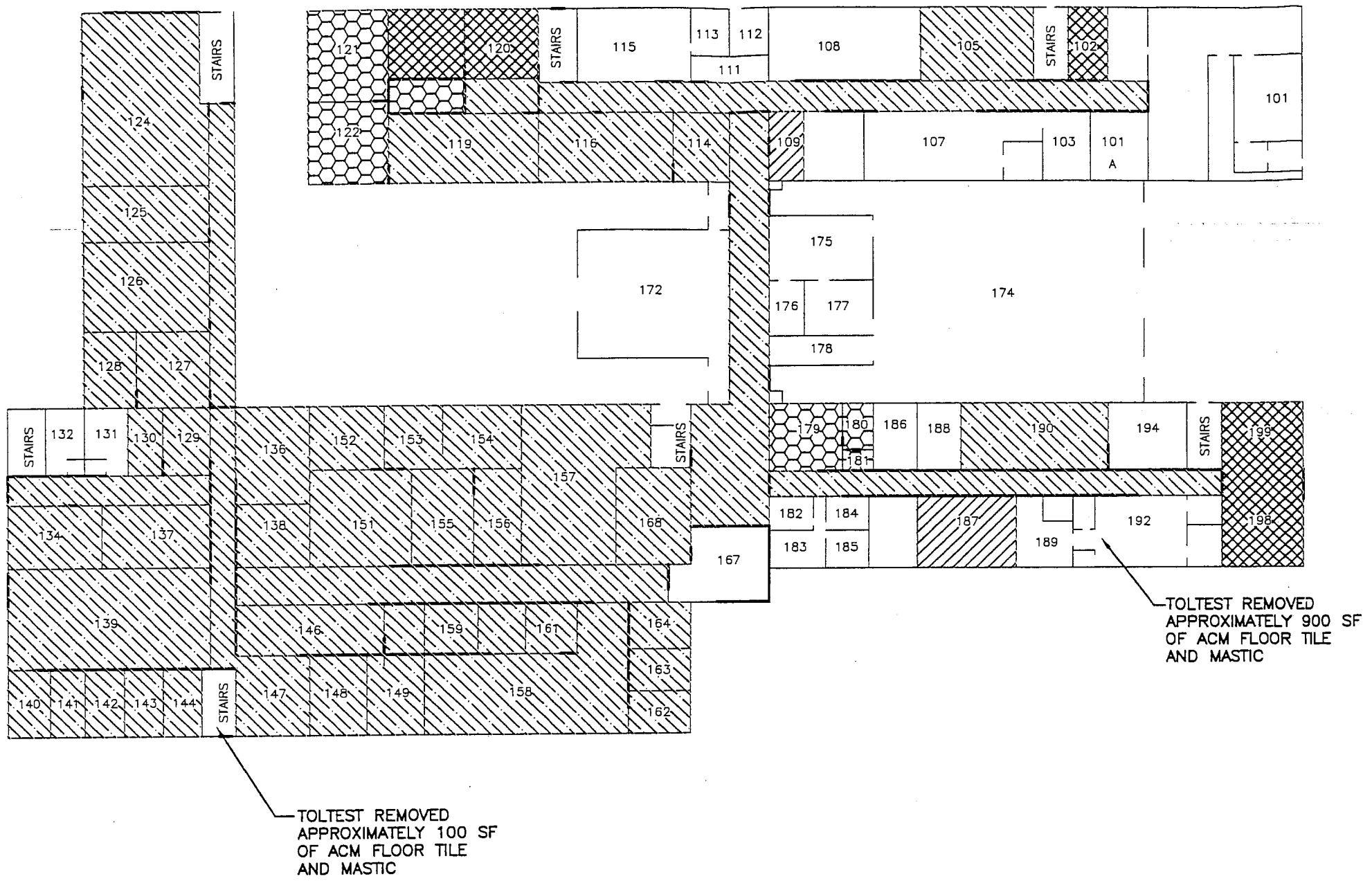
5.0 CONCLUSION

The work performed for this DO complies with the scope-of-work included within the aforementioned RFP. The areas requiring abatement are located at the Forest Park Naval Reserve Center (NRC), located at 7410 West Roosevelt Road, Forest Park, Illinois 60130. TolTest performed the following tasks on February 26, 2001 to complete the required activities for this DO:

- Removed approximately 870 square feet (SF) of asbestos-containing floor tile and mastic from Rooms 189 and 192 of the Forest Park NRC.
- Removed approximately 180 SF of asbestos-containing floor tile and mastic from Room 251 of the Forest Park NRC.
- Spray applied a lock down encapsulating liquid on all surfaces after abatement.
- Perform asbestos on-site air monitoring and clearance air monitoring in conformance with OSHA Class II abatement requirements in support of asbestos abatement.
- Performed a final inspection on March 5, 2001 to finalize work completion of all work activities for this project. Mr. Michael Graf, TolTest Project Manager and Mr. Matthew Slack, the U.S. Navy Point of Contact, were in attendance for this inspection. This inspection concluded that the asbestos removal was performed satisfactorily.
- Arranged for asbestos waste to be transported on March 7, 2001 to the Woodland RDF Landfill in South Elgin, Illinois by Waste Management. The manifest for disposal was approved and signed by Mr. Matt Slack, the U.S. Point of Contact for this project.
- Updated the existing asbestos survey documenting the removal that was performed for this asbestos abatement project. A letter was mailed to the Forest Park NRC to update the facilities current asbestos survey.

TolTest was not responsible for any reinstallation activities for this project.

Baseline, personal, environmental and clearance air monitoring were performed during the asbestos abatement activities by ECG. Clearance air test results did not exceed the EPA and IEPA required clearance level of 0.01 f/cc for asbestos.



LEGEND

ASBESTOS-CONTAINING MATERIALS (ACM)
IDENTIFIED ON FLOORS AND WALLS
INCLUDING TOTAL QUANTITIES:

- FLOOR COVERING WITH MASTIC (1000 SQ.F)
- FLOOR COVERING (1200 SQ.F.)
- DOUBLE LAYERED FLOOR COVERING WITH MASTIC (1200 SQ.F.)
- FLOOR COVERING MASTIC (25000 SQ.F.)
- LOCATION OF SAMPLES COLLECTED

MAIN BUILDING – FIRST FLOOR PLAN
SCALE: 1/32"=1'-0"

GRAPHIC SCALE
0 32' 64' 96'
SCALE: 1/32" = 1'-0"

TITLE: ASBESTOS ABATEMENT/REPAIR AND REPLACEMENT
NAVAL RESERVE CENTER
FOREST PARK, ILLINOIS
ACM LOCATION PLAN – FIRST FLOOR

SUBMITTED BY: TOLTEST, INC. DATE: 09 MAR. 01
DESIGNED BY: M. GRAF CHECKED BY:
DRAWN BY: HALL-KIMBRELL APPROVED BY:
DELIVERY ORDER NO: DWG NO: 40844-1-F
SCALE: 1" = 32' DATE:
DATE: SHEET NO: 1 of 3

Department of the Navy
Naval Facilities
Engineering Command
NAVAL TRAINING CENTER, GREAT LAKES, ILLINOIS

02 ECE SELF INSP

Environmental Standards of Excellence/Environmental Management System Anyalysis/FY02 Self Inspection

This information is due at Close of Business 30 Jan 02 @ DIRFAC MW/NC Please contact Mr. Bruce Mack @ 847/688-3767 if you have any questions

Center Name: Naval Reserve Center Forest Park Center CO: CDR Gregory Hansen
Date: 24 January 2002

Name of Contact Person filling out questionnaire: CDR Gregory Hansen Contact Telephone Number: (708) 771-3002
Center UIC: 62757

Are you a tenant? ☐ Host? ☒ Both? ☐

If the center is a host please provide the name(s) of tenant commands:
6015th Garrison Support Unit W8411E
318th Army Public Affairs Unit W800C6
49th Army Military History Unit W52D4G 2nd of 329 9th brig 1/division
Army Reserve Customer Support Team 88th RRC AGR.
and organization: All units assigned to U. S. Army Reserve

Average number of personnel present on a NON-drill day? 39

Average number of drilling reservists? 530

How many days per month are drills held? 2

Does the center have its own site-specific environmental policy? Note: This question is specific to policies prepared and implemented at the center or host level and not Navy, RESFOR or REDCOM policies or procedures

☒ YES **If yes, please attach a copy of the policy.**
☐ NO

Does the center or host have its own site-specific environmental program? Examples of a site specific program might be a set of instruction, procedures or checklist related to environmental management issues prepared and implemented a

the center or host level and do not include Navy, RESFOR or REDCOM policies or procedures.

☒ YES
☐ NO

Does the center have a program manager responsible for environmental compliance?

☒ YES Program Manager Name: CDR Gregory Hansen
☐ NO Program Manager Telephone Number: (708) 771 - 3002

Does the Center maintain a central record (The "Green Binder with environmental information in it)?

☒ YES
☐ NO

Check all of the following information contained in the "Green Binder: Note: Many of the following will not apply to the majority of centers.

☐ Air Operating Permit
☐ Backflow Preventer Records
☒ Commanding Officer's Policy Statement
☐ Drinking Water Test Results
☒ ECE (Environmental Compliance Evaluation (Tier 1) Inspection Results
☐ Environmental Scoreboard
☐ GMT Attendance Sheets
☒ Hazardous Material Control & Management Instruction
☒ Hazardous material Storage Area, CO Approval Letter
☐ Hazardous Waste Annual Report
☒ Hazardous Waste Management Plan

- ☐ Hazardous Waste Minimization Program (HAZMIN) Instructions
- ☐ I/M Emission Test Results
- ☐ ISSA (Interservice Support Agreement)
- ☐ OHS (Oil & Hazardous Substances) Spill Contingency Plan
- ☒ P2 (Pollution Prévention) Plan
- ☐ PCB Annual Report
- ☒ Radon Test Results
- ☒ REDCOM Environmental Instruction
- ☒ Solid Waste Management Plan
- ☒ Spill Contingency Plan
- ☐ SPCC (Spill Prevention Control & Countermeasures) Plan
- ☐ UST (Underground Storage Tank) Management Plan
- ☐ UST Permit

Air Pollution Issues

Does the center have any air permits? ☐ YES ☒ NO

If YES, what is the permit for? Please provide permit number: and expiration date(s):

How many heating units does the center have? 2

What is each unit's output rating in BTU's or MBTU's (million BTU's) 30 BTU's

Are the heating units forced air? ☐ or boilers? ☒

Does the center do any painting other than normal building painting? ☐ YES ☒ NO

If so, please describe:

Does the center have a paint spray booth? ☐ YES ☒ NO

Does the center have any fixed emergency power generators? ☐ YES ☒ NO

Does the center have any ozone depleting substrates (i.e. such as Freon, R-11, R-12, or other Chlorofluorocarbons or CFC's) on site?

☒ YES
☐ NO

Note: The most typical location for such substances would be in the center cooling system. All air conditioning contractors are required by law to maintain records of any CFC containing systems that they repair or service.

Does the center contain any asbestos materials building materials?

☒ YES
☐ NO

If yes, does the center have an asbestos management plan? ☒ YES
All repair or removal of asbestos containing material performed through outside contract services ☐ NO
If yes, does the center have surveys or reports showing the location(s) of asbestos materials? ☒ YES ☐ NO

Has the center been tested for the presence of Radon? ☒ YES ☐ NO

Does the center maintain a copy of the results of the Radon analyses?
☒ YES ☐ NO

Does the center have any center prepared, procedures or checklists specific to environmental air issues?

☐ YES
☒ NO

Drinking Water

What is the source of the centers drinking water? ☒ Municipal water supply? ☐ well? ☐ other?

If the center relies on a well, has it been tested? ☐ YES ☐ NO

If YES, what is the date of the last test? , and what parameters was the water tested for?

Is the center water supply line equipped with backflow preventers?
☐ YES ☒ NO
Note: Backflow preventers are usually installed right before or after the water meter and are specially designed automatic valves which prevent water from the center from being drained away in the event of a water main break or other low pressure problem in the municipal water system.

If the center (is equipped with backflow preventers have they been inspected by a qualified plumber?
☐ YES If YES, what is the date of the last inspection
☐ NO

Hazardous Materials

Does the center use hazardous materials i.e. HAZMAT? ☒ YES ☐ NO

If YES, does the center have a HAZMAT inventory? ☒ YES ☐ NO

If YES, please attach a copy of the HAZMAT inventory to this questionnaire. If NO please provide a list of hazardous materials stored at the center and estimated average quantities on hand and attach it to this questionnaire.

Does the center have material safety data sheets for all Hazmat at the property?
☒ YES
☐ NO
☐ N/A - NO HAZMAT on site

Does the center file any reports on its storage of HAZMAT with local, state, federal or other authorities?
☐ YES If yes, with whom
☒ NO

Hazardous Waste

Does the center generate hazardous waste? ☒ YES ☐ NO
Note: Generally hazardous wastes are disposed of by arrangement with specialty disposal firms and are shipped with special tracking manifests.

If YES, approximately how many pounds, drums or kilograms of hazardous waste does the center generate every year? 50 Pounds

Does the center have a hazardous waste generators identification number?
☐ YES If yes, please list the identification number
☒ NO

How does the center dispose of its hazardous waste?
☐ NA No hazardous waste on site
☒ Commercial Disposal Company,
☐ Through host command
☐ Other Arrangement (please specify in the following section)

Does the center file any reports or maintain any permits regarding storage or generation of hazardous waste with local, state, federal or other authorities?
☐ YES - If yes, with whom
☒ NO

Used Oil

Does the facility generate used oil? ☐ YES ☒ NO

- If YES, approximately how many gallons of waste oil are generated annually?

- If yes, does the center file any reports or maintain any permits regarding storage or generation of used oil with local, state, federal or other authorities?
  ☐ YES If yes, with whom
  ☐ NO

- If yes, how does the center dispose of its waste oil?

- ☒ NA No waste oil on site
- ☐ Commercial Disposal Company,
- ☐ Through host command
- ☐ Other Arrangement (please specify in the following section)

Medical Waste

Does the facility generate medical waste? ☒ YES ☐ NO

- If Yes, approximately how many kilograms of medical waste are generated annually? 35 kgs

- If yes, does the center file any reports or maintain any permits regarding storage or generation of medical waste oil with local, state, federal or other authorities?

☐ YES If yes, with whom
☒ NO

- If yes, how does the center dispose of its medical waste?
  - ☐ N/A - No medical waste on site
  - ☐ Commercial Disposal Company,
  - ☐ Through host command
  - ☒ Other Arrangement (please specify in the following section)

    Medical waste is transported to Naval Hospital Great Lakes and consolidated with their medical waste for disposal.

Polychlorinated Biphenyl's

Does the center have any transformers or 2000 + volt capacitors on site? (other than small transformers in equipment, etc.) ?

☐ YES

☒ NO

- If yes, are they owned by the? ☐ Center, ☐ Power company or other party ☐ combination of both.
    - Have center owned transformers or 2000 + volt capacitors been tested for PCB's ☐ YES ☐ NO
    - If tested, were PCB's found to be present? ☐ YES ☐ NO
    - If tested, does the center have copies of the PCB analyses?

    ☐ YES - If yes, attach copy of analysis

    ☐ NO
- If the transformers or 2000 + volt capacitors are owned by another party, has the center been furnished with any documentation showing the PCB content, if any, in the equipment? ☐ YES ☐ NO
- If yes, were PCB's found to be present? ☐ YES ☐ NO

Spill Prevention

Does the center store: (check all that apply)

☐ More than 42,000 gallons of oil underground

☐ More than 1,320 gallons of oil above ground

☐ More than 660 gallons of oil stored in a single container

☐ Hazardous Material in 55 gallon or larger containers

☒ No oil storage

Does the center have a spill response kit? ☐ YES ☒ NO

Does the center have a spill response plan? ☒ YES ☐ NO

Storage Tanks

Does the center have any, **in service**, storage tanks? ☐ YES ☒ NO

Underground storage tanks? ☐ Above ground storage tanks? ☐

If tanks are present, how many does the center have? what are their size(s)? what are their contents?

Does the center have any, **out of service**, storage tanks? ☐ YES ☒ NO

Underground storage tanks? ☐ Above ground storage tanks? ☐

If tanks are present, have they gone through a closure process with a regulatory authority? ☐ YES ☐ NO

If yes, has the center received any documentation indicating the regulatory authority requires no further action on the centers part to address the out of service tanks? ☐ YES ☐ NO

Storm Water

Where does the center discharge its storm water (i.e.; rainwater that drains via storm drains from parking lots, roofs, etc.)?

- ☒ Municipal Storm water System
- ☐ Body of water (i.e. Stream, river, retention pond)
- ☐ Drain Tile System
- ☐ Other Arrangement (please specify in the following section)

Does the center file any reports or maintain any permits regarding discharge of storm water with local, state, federal or other authorities ?

- ☐ YES - If yes, with whom?
- ☒ NO

Do vehicle wash operations drain to:

☐ Storm Drain
☐ Sanitary Sewer
☒ N/A - The center does not wash vehicles on its property

Waste Water

What type of system does the center discharge its sanitary sewage to?

☒ Municipal sanitary sewer? ☐ Septic System? ☐ Other, Please explain

Does the center generate any wastewater **OTHER** than normal gray water? (i.e.; sewage from galley, head, etc. discharges)?

☒ YES - If yes, please explain what the type and nature of the discharge is Water utilized in Damage Control Trainer to simulate flooding of ship's compartment. No external substances are mixed with water.

☐ NO

Does the center file any reports or maintain any permits regarding discharge of wastewater (i.e. Sewage) with local, state, federal or other authorities?

☐ YES - If yes, with whom
☒ NO

Pesticides

Has the center applied or hired application of any pesticides in the last calendar year?

☒ YES
☐ NO

If yes, were the pesticides applied by: ☒ Outside Contractor;
☐ Navy/Marine Corps. Personnel, or ☐ Other, Please explain
If yes, does the center have a record of the type and volume of pesticide applied?

☐ YES
☐ NO

☒ Other, Please explain Dates of treatments available through contract files maintained by Supply Department. Treatment quantities available from contractor.m

Does the center store or mix pesticides on site?

☐ YES
☒ NO

If Yes, where is the mixing done?

If a tenant, does the host handle pesticide application?

☐ YES
☒ NO
☐ Other, Please explain

ISSA (Interservice Support Agreement, or lease, or other comparable document)

If the center is a host, does the center have any environmental responsibilities defined in the ISSA (or similar document) to any tenants?

☐ YES
☒ NO
☐ N/A No tenants

If the center is a tenant, does the center have any environmental responsibilities or is it entitled to environmental services defined in the ISSA (or similar document) from the host?

☐ YES
☐ NO
☐ N/A No tenants

General

Has the center received a notice of violation or other deficiency regarding environmental matters in the last calendar year?

☐ YES - If yes, please attach a copy of the notice

This report in limited to the portion of the Adminastration building and OMS the 88th RRC leased from the Navy prior to the 88th RRC taking over ownership of the facility. This report has received a quality review on 10/03/2008

ENVIRONMENTAL SURVEY REPORT
ASBESTOS, PCB, LEAD BASED PAINT AND RADON SURVEY
88TH Regional Support Command
FOREST PARK, ILLINOIS (IL027)
ADMINISTRATION BUILDING & OMS BUILDING

PREPARED FOR:

88th Regional Support Command
506 Roeder Circle
Ft. Snelling, MN 55111

PREPARED BY:

ITI OF SOUTH FLORIDA, INC.
100 2nd Ave. South, Suite 200-S
St. Petersburg, FL 33701
727 898 0802 727 581 0764 (fax) itisf@aol.com

Adecco Technical Task Order DAY A000003029

Gil Bakshi, MA
President
15 December 2002

This Summary page is used to record all changes, discrepancies or findings identified in this report, to include QA/QC review findings, annual asbestos reports and findings, and changes. All entries will include the dated the entry was made and the name of the person making the entry.

Summary of Changes and Findings

- A report QA/QC review was conducted and the following discrepancies were noted: 1) Appendix A is missing a summary sheet and floor plans showing the location of the confirmed ACM and sample points. The report will be updated with all noted changes in the near future. (7/10/06, S. Bragg)

- This report is limited to the areas of the administration building and OMS the 88th RRC leased from the Navy when they owned the facility and does not include any other areas of the building or any other OMS. Added an updated summary page in Appendix A. (10/03/2008, S. Bragg)
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TABLE OF CONTENTS

APPENDICES

Signature of Asbestos Inspector ._____.

Angel Menendez 15 December 2002

1.0 INTRODUCTION

International Training Institute of South Florida, Inc. (ITI) has performed a site survey for the 88th Regional Support Command (RSC) property located at the Forest Park USARC, IL (IL 027). ITI's work was based on a scope of work prepared by the 88th RSC and administered under Adecco Technical Task Order DAY A000003029.

2.0 PURPOSE

This report provides information concerning the potential types, quantities, locations, and condition of asbestos containing materials, polychlorinated biphenyls (PCBs), lead based paint (LBP) and radon.

The purpose of this document is to assist the 88th RSC in complying with federal and state regulations concerning Asbestos, PCBs, LBPs and Radon. ITI's evaluation is based on a site inspection, information obtained from available documentation located at the site and the 88th RSC, and interviews with persons knowledgeable about the current and past history of the site.

3.0 Site Description

ADMINISTRATION BUILDING

This two-story building has exterior block walls, interior block walls with gypsum board and a built up roof. This building has approximately 27,239 sq. ft. in floor space.

OMS BUILDING

This one story building has exterior block walls, interior block walls and a built up roof. This building has approximately 6,141 sq. ft. in floor space.

3.1 Scope of Work

ITI has conducted one or more of the following tasks at this site: collect radon samples, conduct a lead based paint inspection, identify PCBs and asbestos inspection.

- Conduct radon testing at all identified 88th RSC sites for radon gas concentration levels and review all previous radon test results provided by the government.
- Determine levels of radon gas by installing passive detection equipment (alpha track) in specific buildings of the selected facilities.
- Utilize the laboratory that supplied the alpha track radon detectors for analysis.
- Evaluate each facility be age to determine the potential for existence of lead based paint (LBP) and review any previous LBP surveys conducted by the government

- Were the potential for LBP is determined, ITI will conduct a visual inspection of all (but not limited to) of the following surfaces; doors, door casings and frames, walls, upper and lower, windows sashes, stair stringers, tends, and handrails, ceilings, vents, structural steel, HVAC ducts and window guards at each facility. Samples of suspect surfaces will be conducted by using a portable, on-site measuring instrument that uses X-Ray Fluorescence to determine the existence of LBP.
- Include all information observed as part of the final report to include all existing LBP and it's condition, along with all sample locations (CAD drawings and/or field notes).
- Evaluate each facility by age to determine the potential for the existence of PCBs and review any previous PCB surveys conducted by the government.
- Where the potential for PCBs is determined, ITI will conduct a visual inspection of each facility to determine the existence of PCBs and identify all potential equipment. This will require ITI to randomly open one or more like types of equipment to visually confirm the existence of PCB containing material within the equipment.
- Include all information as part of the final report to include all equipment and its condition, potentially containing PCBs.
- Review all previous asbestos surveys conducted by the government.
- ITI will visually inspect each facility and visually verify all information found in pervious surveys and note any variances and/or missing data.
- ITI will identify all asbestos containing materials (ACM) and any potential asbestos containing material (PACM), estimate the amount in the entire building and determine and record the condition of the ACM and PACM in the survey. Samples will be collected on friable PACM only. PACM identified in the significantly damaged and damaged conditions will be analyzed. Friable PACM in good condition will only be analyzed with the approval for the COR or his representative. ITI will maintain and store all samples collected until sent for analysis or authorized disposal by the COR or his representative. All samples not analyzed will be disposed of in accordance with all Federal, State and Local regulations. Any friable ACM or PACM in significantly damaged or damaged condition will be brought to the attention of the COR or his representative as soon as possible.
- ITI will include all information as part of the final report to include all existing ACM, any PACM and the condition of both existing asbestos and PACM.
- Installation and retrieval of government owned alpha tract radon detectors.
- ITI must document all new data and integrate the 88th RSC information into the final report.

3.2 EXECUTIVE SUMMARY

ASBESTOS

Based on ITI's survey of the building, ITI has concluded the following materials contain asbestos:

ADMINISTRATION BUILDING

CONFIRMED ASBESTOS

- Black Floor Tile Mastic – Located Throughout
    - Good Condition, Non Friable, NF1

PRESUMED ASBESTOS

- Roofing Materials
    - Good Condition, Non Friable, NF1
- Fire Doors
    - Good Condition
- Electrical Wiring

OMS

PRESUMED ASBESTOS

- Roofing Materials
    - Good Condition, Non Friable
- Fire Doors
    - Good Condition
- Electrical Wiring

PCB'S

Based on ITI's survey of the building, ITI has concluded that the following types of transformers are located in the building:

ADMINISTRATION BUILDING

- Light Ballasts – Universal 446-LR-TC-P ("No PCB's" on label)
- Light Ballasts – Advance R-2540-1-TP ("No PCB's" on label)
- Light Ballasts – Valmont 240RS-120 P ("No PCB's" on label)
- Magnetek 446 L-SLH-TCP ("No PCB's" on label)

OMS BUILDING

- Light Ballasts – Advance RQM 2940-1-TP ("No PCB's on label)

LEAD BASED PAINTS

Based on ITI's survey for LBP, ITI has concluded that the following building products contain LBP:

ADMINISTRATION BUILDING

- Stairwell railing caps, balusters and newel posts (Black - metal)
  - Deteriorated Condition

OMS

- Door Jambs in Garage Area (Black/Red – Metal)
  - Good Condition

RADON

Based on sampling results, ITI has concluded all radon results are below 4 pCi/l for the Administration Building. Radon was not tested in the OMS Building.

4.0 PREVIOUS INSPECTIONS

Below are the records for previous inspections conducted at this site.

4.1 ASBESTOS

- NO PREVIOUS INSPECTIONS

4.2 PCB'S

- NO PREVIOUS INSPECTIONS

4.3 LEAD BASED PAINT

- NO PREVIOUS INSPECTIONS.

4.4 RADON

- NO PREVIOUS INSPECTIONS

5.0 ASBESTOS CONTAINING MATERIALS

During this survey conducted on 9 March & 24 April 2002, ITI accredited building inspector (License Number 100-9988), Mr. Angel Menendez performed a walk-through of the subject building. This was performed in order to identify and delineate locations of homogeneous materials suspected of containing asbestos. A homogeneous material is

defined as material that presents similar distinguishing features such as contents. Once homogeneous materials were identified, Mr. Martinez collected bulk samples from these materials in order to confirm the presence or absence of asbestos. Samples were collected in accordance with U.S. Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA).

BULK SAMPLES

During the Inspection, sampling locations were recorded on floor plans and are identified in Appendix A of this report.

A.E.S.L., Inc. located in Phoenix, AZ is the laboratory ITI used for analysis of bulk samples. This independent laboratory successfully participates in the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos sample analysis. The samples are analyzed using Polarized Light Microscopy (PLM) analysis methodology coupled with dispersion staining solutions to distinguish the unique optical properties of mineral forms. Employing this method of analysis allows asbestos fiber characteristics to colonize, which enables the microscopist to verify the presence or absence, quantity and type of asbestos in the samples. Any product that contains more than one percent asbestos is considered to be ACM by EPA & OSHA. ITI performed QA/QC sampling for the total collected bulk samples (minimum of 10%). PLM results will be located in Appendix A to this report.

5.1 ASSESSMENT METHODOLOGY

All Asbestos Containing Building Materials (ACBM) were classified into the following three types of suspect materials:

1. Surfacing Materials

2. Thermal System Insulation (TSI)

3. Miscellaneous Materials

ACM identified during the building survey was assessed according to the protocol described in 40 CR 763. The protocol evaluates the risk of exposure to airborne asbestos fibers by assessing the condition of each ACM and potential for that ACM to be disturbed and generate fibers. ACM was assessed according to each of the following factors:

(1) Damaged or significantly damaged thermal system insulation ACM.

(2) Damaged friable surfacing ACM.

(3) Significantly damaged friable surfacing ACM.

(4) Damaged or significantly damaged friable miscellaneous ACM.

(5) ACBM with potential for damage.

(6) ACBM with potential for significant damage.

(7) Any remaining friable ACBM or friable suspected ACBM.

ASSESSING CONDITION AND FRIABILITY

NATIONAL EMISSIONS FOR HAZARD AIR POLLUTANTS, 40 CFR Part 61, Subpart M, definitions for asbestos:

- Friable (F): ACM that can be crumbled, crushed, or reduced to powder by hand pressure.
- Nonfriable Category 1(NF1): Asbestos containing packing, gaskets, resilient floor coverings, asphalt roofing products, caulks, and mastics. These bituminous materials are assumed to remain nonfriable if demolition is performed using "normal" methods, but will become friable if severely weathered, sanded, or abraded.
- Nonfriable Category 2 (NF2): ACM excluding Category 1 nonfriable ACM, that, when dry and in its present form, cannot be crumbled, pulverized or reduced to powder by hand pressure; however, these materials may become friable during demolition activities. These products include Transite board and asbestos cement products.

The condition of ACM including severity and extent of damage is classified into one of the following categories:

- Significantly Damaged: ACM that is crumbled, blistered, gouged, marred, delaminated, or otherwise damaged either uniformly or locally over a substantial portion of its surface area.
- Damaged: ACM that is crumbled, blistered, gouged, marred, delaminated, or otherwise damaged either uniformly or locally over a small portion of its surface area.
- Good: ACM with very little or no damage.
- Potential for Disturbance: The potential for disturbance of each ACM was evaluated with respect to the types and frequency of occupancy, whether the ACM was accessible to area occupants, including vibration and air erosion.

5.2 ASBESTOS CONTAINING MATERIALS

ADMINISTRATION BUILDING

CONFIRMED ASBESTOS

- Black Floor Tile Mastic – Located Throughout
    - Good Condition, Non Friable, NF1

PRESUMED ASBESTOS

- Roofing Materials
  - Good Condition, Non Friable, NF1
- Fire Doors
  - Good Condition
- Electrical Wiring

OMS

PRESUMED ASBESTOS

- Roofing Materials
  - Good Condition, Non Friable
- Fire Doors
  - Good Condition
- Electrical Wiring

5.3 NON ASBESTOS CONTAINING MATERIAL

- Thermal System Insulation (Pipe Insulation)
  - Throughout Boiler Room, Hallway and Stairs
- 12" x 12" Green Floor Tile (Black Mastic is Positive)
- 12" x 12" Black Floor Tile (Black Mastic is Positive)
- Yellow Mastic
- 2' x 2' White and Gray Ceiling Tile
- 12" x 12" Gray Vinyl Tile
- Black Window Putty
- HVAC Mastic - Tank Insulation
- HVAC Mastic – Silver Lining
- General Exhaust – Black Insulation
- Off-White Joint Compound
- 12" x 12" White and Tan Ceiling Tile
- 12" x 12" Ceiling Tile Brown Mastic

6.0 POLYCHLORINATED BIPHENYL

PCBs are mixtures of chlorinated biphenyls that are relatively nonflammable and have useful heat exchange and dielectric properties. PCBs were used in the electric industry as dielectric fluid in capacitors and transformers until 1976, when PCBs were banned from use because of their carcinogenic properties. PCBs were also used in the formulation of lubricating oils, pesticides, adhesives, plastics, inks, paints, and sealants. ITI inventoried electrical transformers and light ballasts as part of its scope.

The primary uses of potential PCB materials are associated with transformers (i.e., pad-, pole-, or wall-mounted) or light ballast. ITI recorded available information, such as the

manufacturer, serial and model number, condition, date of manufacture, and location of potential PCB-containing equipment.

The principal requirements for PCB management are detailed in the Toxic Substances Control Act (TSCA) federal regulatory program, Title 40; Subchapter R, Part 761, Code of Federal Regulations (CFR). CFR Title 40 Part 761 establishes regulations for the use, storage, removal, disposal, and testing of PCB-containing equipment.

ITI used these management requirements regarding onsite PCB management as guidelines during the Site investigation.

6.1 PCB Inventory

ITI personnel observed the following: - Refer to drawing in Appendix B for inspection locations.

ADMINISTRATION BUILDING

- Light Ballasts – Universal 446-LR-TC-P ("No PCB's" on label)
  - Rooms 151, 153, 157, Commanders Offices, Executive Offices, CSM Office, & 227

- Light Ballasts – Advance R-2540-1-TP ("No PCB's" on label)
  - Rooms 151, 153, 152, 156, 157, 158, 164, 163, 162, 161, 159, 139 S-4, 138, 137, 136, 129, 126, Main Room / Copy Room, 239B, 220, 229, 228 & 222 (Public Affairs Office)

- Light Ballasts – Valmont 240RS-120 P ("No PCB's" on label)
  - Room 151

- Magnetek 446 L-SLH-TCP ("No PCB's" on label)
  - 2nd Floor Finance

OMS BUILDING

- Light Ballasts – Advance RQM 2940-1-TP ("No PCB's on label)
  - Fan Room
  - Office Area

7.0 LEAD BASED PAINT

During this survey, ITI inspector, Mr. Narciso Martinez performed a walk-through of the subject building on 19 & 26 April 2002 for LBP. This was performed in order to identify and delineate locations that would be sampled for lead based paint.

During the Inspection, sampling locations were recorded on working drawings and are identified in Appendix C of this report.

Samples were taken using an X-ray Fluorescence (XRF) Analyzer RMD Model LPA-1 (Serial Number 01908) manufactured by RMD, Inc. of Watertown, MA. An XRF analyzer works by exposing a paint surface to radiation emitted from a sealed source inside the instrument. The source of this radiation is cobalt-57 isotope. This radioactive material spontaneously emits energy in the form of X rays and gamma rays. When these rays are released from an XRF analyzer and hit a painted surface, the elements in the paint matrix - which can include lead – are excited and respond by emitting energy in the form of X rays characteristic of each of the elements. This response is known as Fluorescence.

In 1990 the Department of Housing and Urban Development issued the first comprehensive document addressing lead based paint in hosing. This document, Lead based paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing established criteria for conducting lead based paint inspections in public and Indian housing.

This Interim Guidelines described how to conduct a lead based paint inspection. State and Federal regulations use the XRF analyzer or laboratory analysis and specify a reading of 1.0 milligrams per square centimeter (XRF) and 0.5 percent by weight (Paint Chips) as the levels that require abatement.

See Appendix C for XRF report.

7.1 LEAD BASED PAINT

Based on ITI's survey for LBP, ITI has concluded that the following building products contain LBP:

ADMINISTRATION BUILDING

- Stairwell railing caps, balusters and newel posts (Black – Metal)
    - Deteriorated Condition

OMS BUILDING

- Door Jambs in Garage Area (Black/Red – Metal)
    - Good Condition

7.2 RESPONSIBLE AGENCIES

Various groups and governmental bodies have responsibilities for conducing, evaluating the quality of, or developing a hazard control strategy based upon lead based paint testing. These groups include, but not limited to the following:

- State, Indian tribe, and local governments;
- The US Department of Housing and Urban Development (HUD);
- The US Environmental Protection Agency (EPA);
- Housing authorities;
- Homeowners and landlords; and
- Lead based paint inspectors, risk assessors, and hazard control contractors.

8.0 RADON

Radon is formed from the radioactive decay of radium, a breakdown product of uranium found in minute quantities in most soils. Because radon is an inert gas, it does not react with soil; soil merely serves as a channel through which the gas moves. Soil composition alone is not a good indicator of potential indoor radon problems because radon levels can vary considerably, by as much as a factor of 20 to 100, in the same geographic area.

The EPA regulates the maximum allowable exposure levels for radon and recommends that action be taken to reduce the levels if radon concentrations in a structure that exceeds 4 picocuries per liter (pCi/l) in air.

The objective of the Army Radon Reduction Program (ARRP) is to identify and modify all building structures owned or leased by the Army that have indoor radon concentrations greater then 4 pCi/l. According to the ARRP, if the radon concentration is 4 pCi/l or less and the measured building is geologically and structurally representative of the installation, no further action is required. ITI has conducted radon surveys at this site on March 26, 2002, which included placement, retrieval, and analysis of alpha track canisters, which detect alpha particles emitted from radon.

Laboratory results indicate that all radon canisters contain concentrations of less than 4.0 pCi/l.

See Appendix D for Radon Results

- There were no results over 4 pCi/l for this location (Administration Building).

9.0 ACTION SUMMARY

ASBESTOS

Based on ITI's survey of the building, ITI has concluded the following material contain asbestos:

ADMINISTRATION BUILDING

CONFIRMED ASBESTOS

- Black Floor Tile Mastic – Located Throughout
    - Good Condition, Non Friable, NF1

PRESUMED ASBESTOS

- Roofing Materials
    - Good Condition, Non Friable, NF1
- Fire Doors
    - Good Condition
- Electrical Wiring

OMS

PRESUMED ASBESTOS

- Roofing Materials
    - Good Condition, Non Friable
- Fire Doors
    - Good Condition
- Electrical Wiring

Based on the findings above, ITI recommends the following:

- Observations for detected asbestos was based on visible and accessible materials; therefore, asbestos containing materials may be present in inaccessible areas such as ceiling plenums, crawl spaces, attics, etc.
- An imminent asbestos hazard was not present at the facility during the site visit.
- Develop and Implement and O & M Plan.

Based on the asbestos present in the building, ITI recommends the following:

- Develop and implement an O & M Plan for all known and suspect ACM

There are three primary objectives of the O & M program: (1) clean up existing contamination (2) minimize further fiber release by controlling access to ACM, and (3) maintain ACM until it is eventually removed. Properly prepared and implemented, this plan will document the building owner's prudence in dealing with asbestos in the building.

PCB'S

Based on ITI's survey of the building, ITI has concluded that the following types of transformers are located in the building:

ADMINISTRATION BUILDING

- Light Ballasts – Universal 446-LR-TC-P ("No PCB's" on label)
- Light Ballasts – Advance R-2540-1-TP ("No PCB's" on label)
- Light Ballasts – Valmont 240RS-120 P ("No PCB's" on label)
- Magnetek 446 L-SLH-TCP ("No PCB's" on label)

OMS BUILDING

- Light Ballasts – Advance RQM 2940-1-TP ("No PCB's on label)

Based on the findings above, ITI recommends the following:

- Observations for PCB's was based on visible and accessible materials, therefore, PCB's may be present in other ballasts not observed.
- An imminent PCB hazard was not present at the facility during the site visit.
- Any ballast not labeled "Non PCB's" must be handled according to Federal and State regulations for proper disposal.

Based on the labels found on the transformers, ITI recommends the following:

Several light ballasts do not have a label stating the absence of PCBs. Without this statement the ballast is presumed to contain PCBs and must be handled accordingly. Additional testing may be required before this ballast is disturbed or disposed. At a minimum, requirements of 40 CFR 761 must be followed should sampling be required.

LEAD BASED PAINTS

Based on ITI's survey for LBP, ITI has concluded that the following building products contain LBP:

ADMINISTRATION BUILDING

- Stairwell railing caps, balusters and newel posts (Black – Metal)
    - Deteriorated Condition

OMS BUILDING

- Door Jambs in Garage Area (Black/Red – Metal)
    - Good Condition

Based on the findings above, ITI recommends the following:

- Observations for LBP's was based on visible and accessible materials, therefore, LBP's may be present in inaccessible areas.
- An imminent LBP hazard was not present at the facility during the site visit.
- Workers need to take appropriate safe guards when working, i.e., cutting, grinding, sanding, welding, etc., on areas identified with LBP.
- Conduct a TCLP for all areas identified with LBP prior to disposal.

RADON

Based on ITI's survey, ITI has concluded all radon results are below 4 pCi/l for the Administration Building.

Based on the findings above, ITI recommends the following:

- An imminent Radon hazard was not present at the facility during the site visit.
- According to the survey data as provided in Appendix D, there were no results over 4 pCi/l for this location.

10.0 WARRANTY

The field and laboratory results reported herein (only if samples are collected and/or analyzed) are considered sufficient in detail and scope to determine the presence of accessible and/or exposed suspect asbestos, PCB's, LBPs or radon gas in the facility. ITI warrants that the findings contained herein have been prepared in general accordance with accepted professional practices at the time of its preparation as applied by similar professionals in the community. Changes in the state of the art or in applicable regulations cannot be anticipated and have not been addressed into this report.

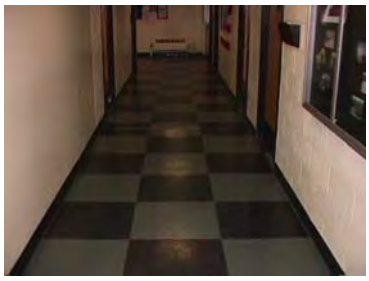
The survey and analytical methods have been used to provide the client with information regarding the presence of accessible and/or exposed suspect asbestos, lead, PCB's or radon in the facility at the time of the inspection. Test results are valid only for material tested. There is a distinct possibility that conditions may exist which could not be identified within the scope of the study or which were not apparent during the site visit. This inspection covered only suspect accessible materials with no destructive survey

techniques. The study is also limited to the information available from the client at the time it was conducted.

This report is not intended to be an asbestos, lead based paint, PCB or Radon risk assessment, management plan or project design document and should not be used for the purpose of obtaining quotes.

11.0 PHOTOS

2' x 2' Ceiling Tile (Non ACM)



12" x 12" Floor Tiles (Non ACM)
MASTIC IS POSITIVE

1' x 1' Ceiling Tiles (Non ACM)

Thermal System Insulation (Non ACM)

APPENDIX A

Illinois Facility - Asbestos Summary

FAC ID	Building	Confirmed ACM	Location	Condition
IL-021	**USARC**	Black floor tile mastic	under both green and black 12" X 12" floor tiles throughout the building	
	OMS	None observed		
FAC ID	**Building**	**Presumed ACM**	**Location**	**Condition**
IL-021	**USARC**	Roofing materials	Entire roof	Good
		Fire doors	Located throughout	Good
		Electrical coatings on wires	Located throughout	Good
	OMS	Roofing materials	Entire roof	Good
		Fire doors	Located throughout	Good
		Electrical coatings on wires	Located throughout	Good

LAB REPORTS

A. E. S. L.
Environmental
LABORATORY

1707 E. Weber Dr., Suite 6 Tempe, Arizona 85281
Phone:(480) 966-3714 Fax: (480) 394-0188
Toll Free: (877) 854-1767

BULK ASBESTOS ANALYSIS SUMMARY REPORT

CLIENT NAME: I.T.I.
514 First Avenue SW
Largo, Florida 33770

DATE OF RECEIPT: April 10, 2002
SAMPLE CONDITION: Good
DATE ANALYZED: April 10, 2002

A.E.S.L. LABORATORY #: 02-A313

PROJECT: AFRC
Forest Park IL

A.E.S.L. LAB SAMPLE ID #	CLIENT SAMPLE ID #	SAMPLE DESCRIPTION & COLOR	TEST RESULTS Pos. / Neg.	TEST RESULTS % & Type	OTHER MATERIALS
A313-1 a	AM 01 a	12 x 12 Green Vinyl Floor Tile	Negative	---------	5% Cellulose 95% Non-Fibrous
A313-1 b	AM 01 b	12 x 12 Green Vinyl Floor Tile - Yellow Mastic	Negative	---------	2% Cellulose 98% Non-Fibrous
A313-1 c	**AM 01 c**	**12 x 12 Green Vinyl Floor Tile - Black Mastic**	**Positive**	**10% Chrysotile**	**10% Cellulose 80% Non-Fibrous**
A313-2 a	AM 02 a	12 x 12 Black Vinyl Floor Tile	Negative	---------	5% Cellulose 95% Non-Fibrous
A313-2 b	AM 02 b	12 x 12 Black Vinyl Floor Tile - Yellow Mastic	Negative	---------	2% Cellulose 98% Non-Fibrous
A313-2 c	**AM 02 c**	**12 x 12 Black Vinyl Floor Tile - Black Mastic**	**Positive**	**10% Chrysotile**	**10% Cellulose 80% Non-Fibrous**
A313-3	AM 03	2 x 2 White and Gray Ceiling Tile	Negative	---------	20% Cellulose 20% Mineral Wool 60% Non-Fibrous
A313-4 a	AM 04 a	12 x 12 Gray Vinyl Floor Tile	Negative	---------	5% Cellulose 95% Non-Fibrous
A313-4 b	AM 04 b	12 x 12 Gray Vinyl Floor Tile - Black Mastic	Negative	---------	10% Cellulose 90% Non-Fibrous
A313-5	AM 05	Black Putty	Negative	---------	3% Cellulose 97% Non-Fibrous
A313-6	AM 06	Black Putty	Negative	---------	3% Cellulose 97% Non-Fibrous
A313-7 a	AM 07 a	HVAC Mastic - Tan Insulation	Negative	---------	100% Cellulose
A313-7 b	AM 07 b	HVAC Mastic - Silver Lining	Negative	---------	100% Non-Fibrous
A313-8	AM 08	General Exhaust - Black Insulation	Negative	---------	100% Non-Fibrous
A313-9 a	AM 09 a	12 x 12 Black Vinyl Floor Tile	Negative	---------	5% Cellulose 95% Non-Fibrous
A313-9 b	AM 09 b	12 x 12 Black Vinyl Floor Tile - Yellow Mastic	Negative	---------	2% Cellulose 98% Non-Fibrous
A313-9 c	AM 09 c	12 x 12 Black Vinyl Floor Tile - Black Mastic	Negative	---------	4% Cellulose 96% Non-Fibrous
A313-10 a	AM 10 a	12 x 12 Green Vinyl Floor Tile	Negative	---------	5% Cellulose 95% Non-Fibrous
A313-10 b	AM 10 b	12 x 12 Green Vinyl Floor Tile - Yellow Mastic	Negative	---------	2% Cellulose 98% Non-Fibrous
A313-10 c	**AM 10 c**	**12 x 12 Green Vinyl Floor Tile - Black Mastic**	**Positive**	**10% Chrysotile**	**10% Cellulose 80% Non-Fibrous**

A.E.S.L. LAB SAMPLE ID #	CLIENT SAMPLE ID #	SAMPLE DESCRIPTION & COLOR	TEST RESULTS Pos. / Neg.	% & Type	OTHER MATERIALS
A313-11	AM 11	2 x 2 White and Gray Ceiling Tile	Negative	---------	20% Cellulose 20% Mineral Wool 60% Non-Fibrous
A313-12	AM 12	Off-White Joint Compound	Negative	---------	3% Cellulose 97% Non-Fibrous
A313-13	AM 13	Off-White Joint Compound	Negative	---------	3% Cellulose 97% Non-Fibrous
A313-14 a	AM 14 a	12 x 12 White and Tan Ceiling Tile	Negative	---------	20% Cellulose 20% Mineral Wool 60% Non-Fibrous
A313-14 b	AM 14 b	12 x 12 Ceiling Tile - Brown Mastic	Negative	---------	2% Cellulose 98% Non-Fibrous
A313-15 a	AM 15 a	12 x 12 White and Tan Ceiling Tile	Negative	---------	20% Cellulose 20% Mineral Wool 60% Non-Fibrous
A313-15 b	AM 15 b	12 x 12 Ceiling Tile - Brown Mastic	Negative	---------	2% Cellulose 98% Non-Fibrous

Legend: NAAPCR - Not analyzed as per customer request

Comment:

Method: Polarized Light Microscopy, EPA Method 600/R-93/116

The result quantitations reported are an estimation based on the methods of visual microscopic estimation which is considered only a semi-quantitative technique. Also, this report is indicative only of the sample material A.E.S.L. Laboratory received. Results do not necessarily reflect the makeup of the entire span of the material from which the samples were derived. Sampling techniques and/or sample handling may affect the integrity of the sample/s before submission to A.E.S.L. Laboratory and hence the outcome of the laboratory results. Samples not destroyed by testing are retained a minimum of thirty days.

A.E.S.L. Laboratory, recommends re-analysis by point count or Transmission Electron Microscopy (TEM) for materials that are found to contain less than ten percent (<10%) asbestos by PLM.

This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

Analyst: R Keneson
Ronnie Keneson

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Turnaround Time: ☑ RUSH ☐ Same Day ☐ 24 Hour ☐ 48 Hour

☐ Stop @ First Positive
☐ Read All Samples

BULK ASBESTOS SAMPLE
CHAIN OF CUSTODY

A.E.S.L. LABORATORY # 02-A313

Page 1 of 1

Client Name: ITI of South Florida, Inc. Contact: Phone: (727) 586-7500 Fax: (727) 581-0764

Address: 514 First Avenue SW City: Largo State: Florida Zip: 33770

PROJECT: AFRC PROJECT ID: Forest Park IL

SAMPLES REC'D (#): DATE REC'D: CONDITION: SAMPLES ACCEPTED (Y , N): IF NO, WHY?

*** SAMPLES TO BE RETURNED TO CLIENT AFTER 30 DAYS OR DISPOSED OF BY A.E.S.L. (D R): ***
(IF NOT SPECIFIED WILL AUTOMATICALLY BE DISPOSED OF AFTER 30 DAYS)

A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description
AM01		2nd HALLWAY	VFT. GREEN 12x12
AM02		2nd HALLWAY	VFT - BLACK 12x12
AM03		2nd HALLWAY	CT - 2'x2'
AM04		2nd RM 221	VFT-GREY 12x12
AM05		2nd window	PUTTY
AM06		2nd "	PUTTY
AM07		1st HALLWAY	HVAC MASTIC
AM08		MECH ROOM	GEN EXHAUST
AM09		1st HALLWAY	VFT-BLACK 12x12
AM10		1st HALLWAY	VFT-GREEN 12x12
AM11		1st HALLWAY	CT - 2'x2'
AM12		1st FLOOR	JOINT COMPOUND
AM13		2nd FLOOR	JOINT COMPOUND
AM14		1st FLOOR	CEILING TILES 12"x12"
AM15		2nd FLOOR	" " "

A.E.S.L. Environmental Laboratory
1707 E. Weber Drive, Suite 6
Tempe, Arizona 85281

RELINQUISHED BY: Time: 1400 DATE: 9 Aug 02

RECEIVED BY: Time 0950 DATE: 4-10-02

9/4/02 Fedex 833280687060

A. E. S. L.
Environmental
LABORATORY

1707 E. Weber Dr., Suite 6 Tempe, Arizona 85281
Phone:(480) 966-3714 Fax: (480) 394-0188
Toll Free: (877) 854-1767

BULK ASBESTOS ANALYSIS SUMMARY REPORT

CLIENT NAME: I.T.I.
514 First Avenue SW
Largo, Florida 33770

DATE OF RECEIPT: April 26, 2002
SAMPLE CONDITION: Good
DATE ANALYZED: April 26, 2002

A.E.S.L. LABORATORY #: 02-A346

PROJECT: Forest Park AFRC
LL201/LL202

A.E.S.L. LAB SAMPLE ID #	CLIENT SAMPLE ID #	SAMPLE DESCRIPTION & COLOR	TEST RESULTS Pos. / Neg.	TEST RESULTS % & Type	OTHER MATERIALS
A346-1	LL201-1	TSI - Gray Insulation	Negative	---------	5% Cellulose 30% Mineral Wool 65% Non-Fibrous
A346-2	LL201-2	TSI - Gray Insulation	Negative	---------	5% Cellulose 30% Mineral Wool 65% Non-Fibrous
A346-3	LL201-3	TSI - Gray Insulation	Negative	---------	5% Cellulose 30% Mineral Wool 65% Non-Fibrous
A346-4	LL201-4	TSI - Gray Insulation	Negative	---------	5% Cellulose 30% Mineral Wool 65% Non-Fibrous

Legend: NAAPCR - Not analyzed as per customer request

Comment:

Method: Polarized Light Microscopy, EPA Method 600/R-93/116

The result quantitations reported are an estimation based on the methods of visual microscopic estimation which is considered only a semi-quantitative technique. Also, this report is indicative only of the sample material A.E.S.L. Laboratory received. Results do not necessarily reflect the makeup of the entire span of the material from which the samples were derived. Sampling techniques and/or sample handling may affect the integrity of the sample/s before submission to A.E.S.L. Laboratory and hence the outcome of the laboratory results. Samples not destroyed by testing are retained a minimum of thirty days.

A.E.S.L. Laboratory, recommends re-analysis by point count or Transmission Electron Microscopy (TEM) for materials that are found to contain less than ten percent (<10%) asbestos by PLM.

This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

Analyst: R Keneson
Ronnie Keneson

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Turnaround Time: ☑ RUSH ☐ Same Day ☐ 24 Hour ☐ 48 Hour

☐ Stop @ First Positive
☐ Read All Samples

BULK ASBESTOS SAMPLE
CHAIN OF CUSTODY

A.E.S.L. LABORATORY # : 02-A346

Page ___ of ___

Client Name: ITISF Contact: G BAKSHI Phone: 727 502 5223 Fax: 727-581 0764

Address: 514 1ST AVE SW City: LARGO State: FL Zip: 33770

PROJECT NAME: FOREST PARK AFRC PROJECT ID: LL201 / LL202

Samples Collected By: ANGEL MENENDEZ DATE SAMPLES TAKEN: 24/04/02

SAMPLES REC'D (#): _____ DATE REC'D: _____ CONDITION: _____ SAMPLES ACCEPTED (Y , N): _____ IF NO, WHY? _____

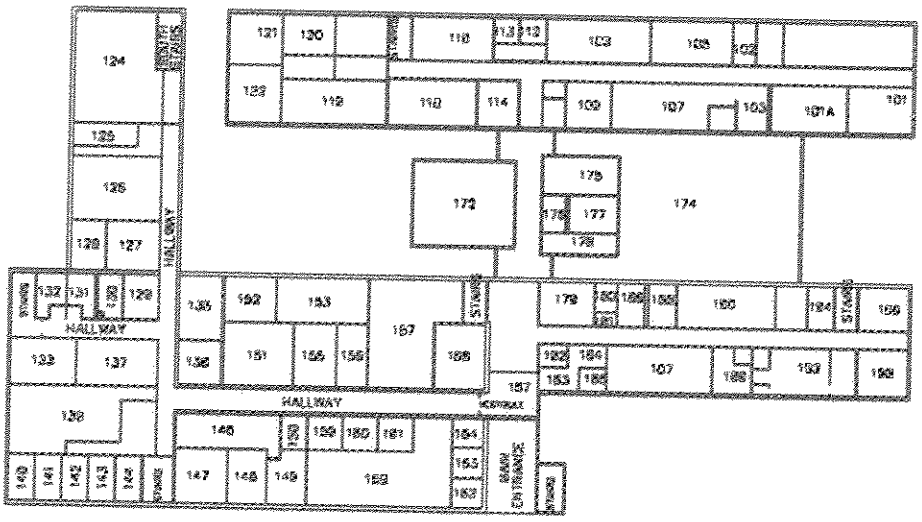
*** SAMPLES TO BE RETURNED TO CLIENT AFTER 30 DAYS OR DISPOSED OF BY A.E.S.L. (D R): _____ ***
(IF NOT SPECIFIED WILL AUTOMATICALLY BE DISPOSED OF AFTER 30 DAYS)

A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description	A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description
LL201-1		Boiler	TSI				
LL201-2		"	TSI				
LL201-3		Hallway	TSI				
LL201-4		STAIRS	TSI				

A.E.S.L. ENVIRONMENTAL LABORATORY
1707 East Weber Drive, Suite 6
TEMPE, ARIZONA 85281
PHONE (480) 966-3714 FAX (480) 394-0188

RELINQUISHED BY: _____ Time: 0600 DATE: 26/04/02

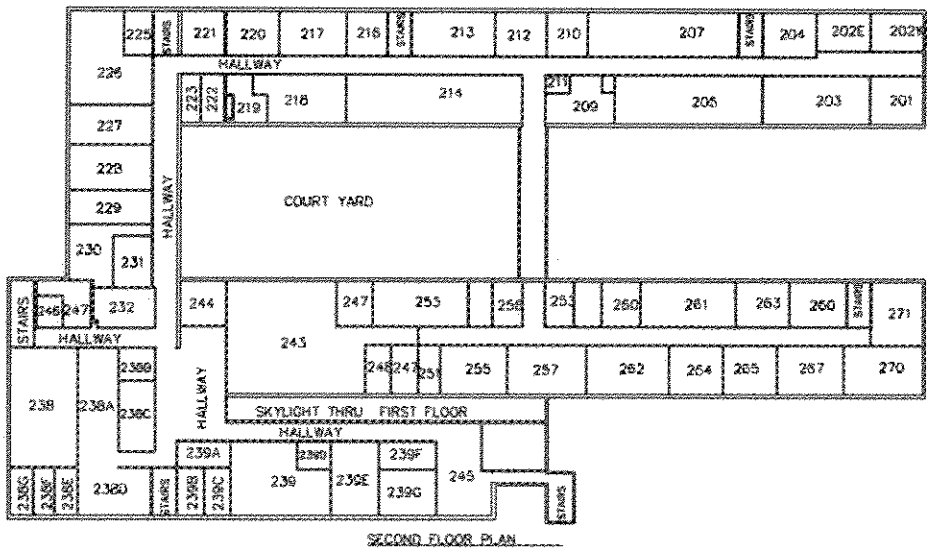
RECEIVED AT A.E.S.L. BY: _____ Time: 1000 DATE: 4/26/02



FIRST FLOOR PLAN

Block Masks is asbestos throughout

ITI of South Florida Environmental Services Drawn: M. MASAAL	Floor Plan (IL027) USAR CENTER 7492 W. ROOSEVELT ROAD FOREST PARK, IL	FIGURE 06-APR-2002



SECOND FLOOR PLAN

Black Mantic is positive throughout

ITI of South Florida Environmental Services Drawn: M. MASAAL	Floor Plan (2nd Floor) - IL 027 7402 ROOSEVELT ROAD FOREST PARK, IL	FIGURE 06-APR-2002

APPENDIX B

PCB BALLAST LOCATIONS (IL027)

ADMINISTRATION BUILDING

- Light Ballasts – Universal 446-LR-TC-P ("No PCB's" on label)
  - Rooms 151, 153, 157, Commanders Offices, Executive Offices, CSM Office, & 227

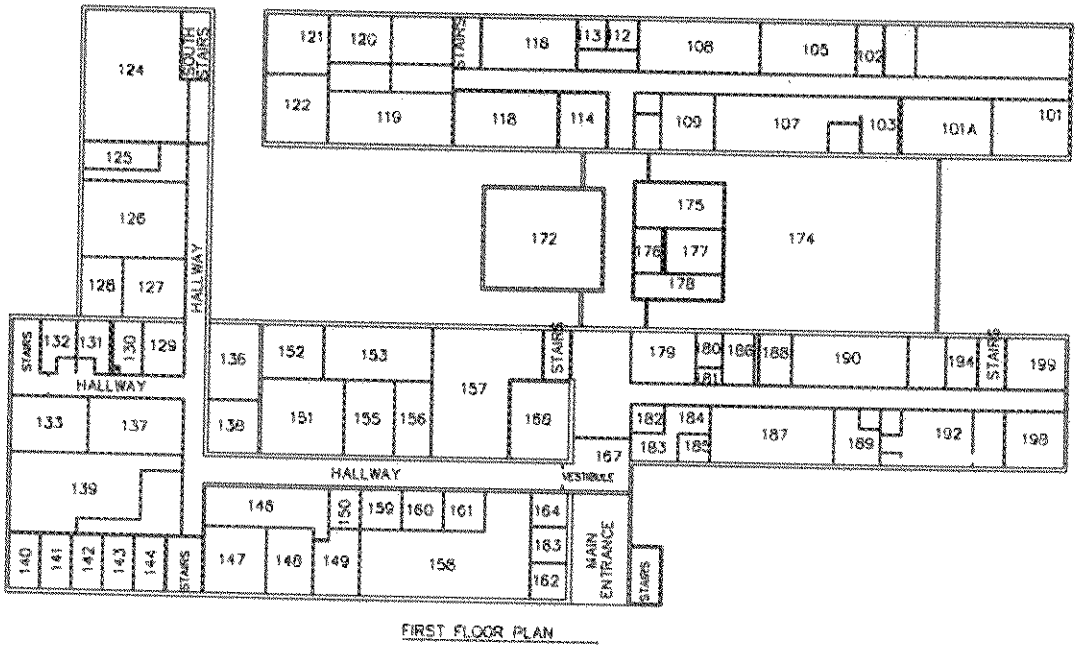
- Light Ballasts – Advance R-2540-1-TP ("No PCB's" on label)
  - Rooms 151, 153, 152, 156, 157, 158, 164, 163, 162, 161, 159, 139 S-4, 138, 137, 136, 129, 126, Main Room / Copy Room, 239B, 220, 229, 228 & 222 (Public Affairs Office)

- Light Ballasts – Valmont 240RS-120 P ("No PCB's" on label)
  - Room 151

- Magnetek 446 L-SLH-TCP ("No PCB's" on label)
  - 2nd Floor Finance

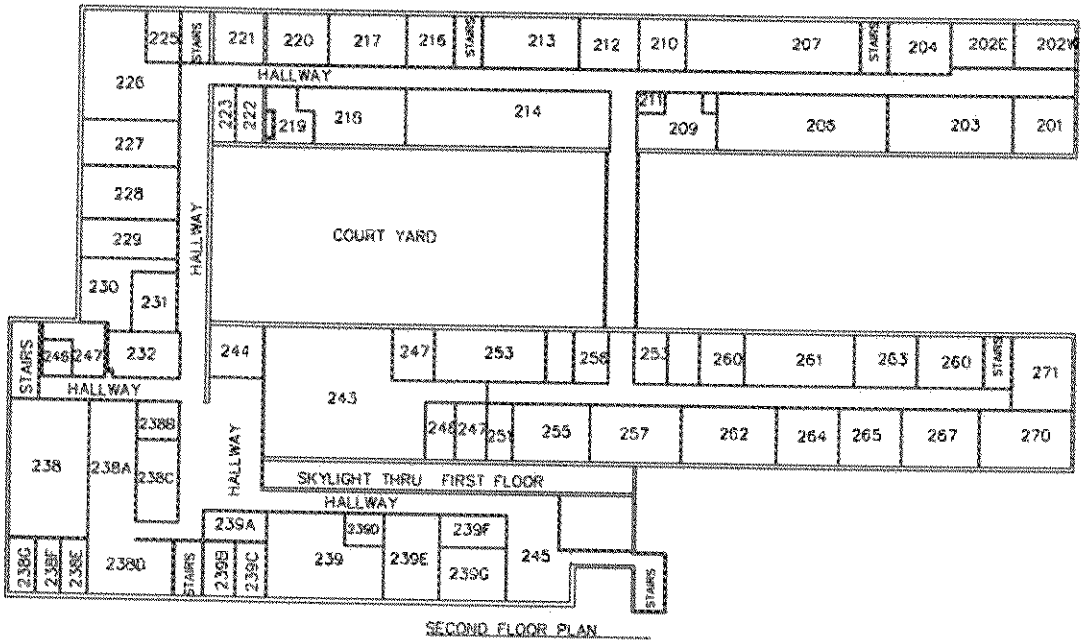
OMS BUILDING

- Light Ballasts – Advance RQM 2940-1-TP ("No PCB's on label)
  - Fan Room
  - Office Area



FIRST FLOOR PLAN

ITI of South Florida Environmental Services Drawn: M. MASAAL	Floor Plan (IL027) USAR CENTER 7402 W. ROOSEVELT ROAD FOREST PARK, IL	FIGURE 06-APR-2002



ITI of South Florida Environmental Services Drawn: M. MASAAL	Floor Plan (2nd Floor) - IL 027 7402 ROOSEVELT ROAD FOREST PARK, IL	FIGURE 06-APR-2002

APPENDIX C

USARC BLDG

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: IL 027 / 0031 Forest Park USARC

Inspection Date: 04/19/02
Report Date: 11/15/2002
Abatement Level: 1.0
Report No. S#01908 - 04/19/02 10:38
Total Readings: 460 Actionable: 6
Job Started: 04/19/02 10:38
Job Finished: 04/19/02 17:01

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
Interior Room 903 2nd Flight									
454	C	Stairs	Ctr	Newel post	I	N/A	Black	2.1	QM
450	C	Stairs	Ctr	Balusters	I	N/A	Black	4.5	QM
449	C	Stairs	Ctr	Railing cap	I	N/A	Black	5.2	QM
Interior Room 904 1st Flight									
458	C	Stairs	Ctr	Newel post	I	N/A	Black	4.9	QM
457	C	Stairs	Ctr	Balusters	I	N/A	Black	4.9	QM
456	C	Stairs	Ctr	Railing cap	I	N/A	Black	8.1	QM
---- End of Readings ----									

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: IL 027/0031 Forest Park USARC

Inspection Date: 04/19/02
Report Date: 11/15/2002
Abatement Level: 1.0
Report No. S#01908 - 04/19/02 10:38
Total Readings: 460
Job Started: 04/19/02 10:38
Job Finished: 04/19/02 17:01

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
Interior Room 125 Number Only									
032	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
033	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
034	C	Wall	L Ctr		I	N/A	N/A	0.0	QM
035	D	Wall	L Ctr		I	N/A	N/A	0.0	QM
036	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.4	QM
037	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
Interior Room 126 Number Only									
038	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
039	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
040	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
041	D	Wall	L Ctr		I	N/A	N/A	-0.3	QM
042	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
043	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
Interior Room 129 Number Only									
044	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
045	B	Wall	L Ctr		I	N/A	N/A	-0.4	QM
046	C	Wall	L Ctr		I	N/A	N/A	-0.3	QM
047	D	Wall	L Ctr		I	N/A	N/A	-0.3	QM
048	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.2	QM
049	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.3	QM
Interior Room 130 Number Only									
050	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
051	B	Wall	L Ctr		I	N/A	N/A	-0.3	QM
052	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
053	D	Wall	L Ctr		I	N/A	N/A	-0.3	QM
054	D	Door	Ctr	Rgt jamb	I	N/A	N/A	0.0	QM
055	D	Door	Ctr	U Ctr	I	N/A	N/A	0.1	QM
Interior Room 131 Number Only									
026	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
056	A	Wall	L Ctr		I	N/A	N/A	-0.4	QM
063	A	Floor			I	N/A	N/A	-0.3	QM
027	B	Wall	L Ctr		I	N/A	N/A	-0.3	QM
057	B	Wall	L Ctr		I	N/A	N/A	-0.5	QM
029	C	Wall	L Ctr		I	N/A	N/A	0.1	QM
058	C	Wall	L Ctr		I	N/A	N/A	-0.3	QM
062	C	Floor			I	N/A	N/A	-0.3	QM
031	C	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
030	C	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
028	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
059	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
060	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
061	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
Interior Room 132 Number Only									
064	A	Wall	L Ctr		I	N/A	N/A	-0.4	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR:

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
071	A	Floor			I	N/A	N/A	-0.3	QM
065	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
066	C	Wall	L Ctr		I	N/A	N/A	-0.5	QM
070	C	Floor			I	N/A	N/A	-0.3	QM
067	D	Wall	L Ctr		I	N/A	N/A	-0.6	QM
068	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
069	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
Interior Room 133 Number Only									
072	A	Wall	L Ctr		I	N/A	N/A	-0.3	QM
073	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
074	C	Wall	L Ctr		I	N/A	N/A	-0.2	QM
075	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
076	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
077	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.3	QM
Interior Room 136 Number Only									
239	A	Wall	L Ctr		I	N/A	N/A	0.2	QM
240	B	Wall	L Ctr		I	N/A	N/A	0.0	QM
241	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
242	D	Wall	L Ctr		I	N/A	N/A	0.2	QM
246	D	Window	Ctr	Sash	I	N/A	N/A	-0.1	QM
245	D	Window	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
243	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.4	QM
244	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.4	QM
Interior Room 137 Number Only									
078	A	Wall	L Ctr		I	N/A	N/A	-0.3	QM
079	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
080	C	Wall	L Ctr		I	N/A	N/A	0.0	QM
081	D	Wall	L Ctr		I	N/A	N/A	-0.2	QM
082	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
083	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
Interior Room 139 Number Only									
084	A	Wall	L Ctr		I	N/A	N/A	0.0	QM
092	A	Wall	L Ctr		I	N/A	N/A	0.0	QM
085	B	Wall	L Ctr		I	N/A	N/A	0.1	QM
093	B	Wall	L Ctr		I	N/A	N/A	0.0	QM
086	C	Wall	L Ctr		I	N/A	N/A	0.2	QM
094	C	Wall	L Ctr		I	N/A	N/A	0.3	QM
087	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
095	D	Wall	L Ctr		I	N/A	N/A	-0.2	QM
091	D	Window	Ctr	Sash	I	N/A	N/A	-0.8	QM
090	D	Window	Ctr	Lft jamb	I	N/A	N/A	-0.5	QM
088	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
096	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
089	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
097	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
Interior Room 140 Number Only									
098	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
099	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
100	C	Wall	L Ctr		I	N/A	N/A	0.1	QM
101	D	Wall	L Ctr		I	N/A	N/A	-0.3	QM
105	D	Window	Ctr	Sash	I	N/A	N/A	-0.6	QM
104	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.6	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR:

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
102	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
103	D	Door	Ctr	U Ctr	I	N/A	N/A	0.1	QM
Interior Room 141 Number Only									
106	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
107	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
108	C	Wall	L Ctr		I	N/A	N/A	-0.2	QM
109	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
113	D	Window	Ctr	Sash	I	N/A	N/A	-0.5	QM
112	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.7	QM
110	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
111	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
Interior Room 142 Number Only									
114	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
115	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
116	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
117	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
120	D	Window	Ctr	Well	I	N/A	N/A	-0.6	QM
121	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.7	QM
118	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
119	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
Interior Room 143 Number Only									
122	A	Wall	L Ctr		I	N/A	N/A	-0.4	QM
123	B	Wall	L Ctr		I	N/A	N/A	-0.4	QM
124	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
125	D	Wall	L Ctr		I	N/A	N/A	-0.3	QM
128	D	Window	Ctr	Rgt jamb	I	N/A	N/A	-0.8	QM
129	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.3	QM
126	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
127	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
Interior Room 144 Number Only									
130	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
131	B	Wall	L Ctr		I	N/A	N/A	0.0	QM
132	C	Wall	L Ctr		I	N/A	N/A	-0.2	QM
133	D	Wall	L Ctr		I	N/A	N/A	0.0	QM
137	D	Window	Ctr	Sash	I	N/A	N/A	-0.3	QM
136	D	Window	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
134	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.5	QM
135	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.5	QM
Interior Room 146 Number Only									
138	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
139	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
140	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
141	D	Wall	L Ctr		I	N/A	N/A	0.1	QM
142	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
143	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.2	QM
Interior Room 147 Number Only									
144	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
145	B	Wall	L Ctr		I	N/A	N/A	0.0	QM
146	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
147	D	Wall	L Ctr		I	N/A	N/A	0.1	QM
151	D	Window	Ctr	Sash	I	N/A	N/A	-0.5	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR:

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
150	D	Window	Ctr	Lft jamb	I	N/A	N/A	-0.5	QM
148	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
149	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
Interior Room 148 Number Only									
152	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
153	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
154	C	Wall	L Ctr		I	N/A	N/A	0.1	QM
155	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
159	D	Window	Ctr	Sash	I	N/A	N/A	-0.6	QM
158	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.6	QM
156	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
157	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
Interior Room 149 Number Only									
160	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
161	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
162	B	Wall	L Ctr		I	N/A	N/A	-0.3	QM
163	C	Wall	L Ctr		I	N/A	N/A	-0.3	QM
164	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
168	D	Window	Ctr	Well	I	N/A	N/A	-0.1	QM
167	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.1	QM
165	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.6	QM
166	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.5	QM
Interior Room 150 Number Only									
169	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
170	B	Wall	L Ctr		I	N/A	N/A	-0.3	QM
171	C	Wall	L Ctr		I	N/A	N/A	-0.3	QM
172	D	Wall	L Ctr		I	N/A	N/A	0.0	QM
173	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
174	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
Interior Room 151 Number Only									
023	A	Wall	L Ctr		I	N/A	N/A	0.1	QM
025	A	Door	Ctr	Lft jamb	I	N/A	N/A	-0.3	QM
024	A	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
022	B	Wall	L Ctr		I	N/A	N/A	0.0	QM
021	C	Wall	L Ctr		I	N/A	N/A	0.0	QM
020	D	Wall	L Ctr		I	N/A	N/A	0.1	QM
Interior Room 152 Number Only									
004	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
011	A	Window	Ctr	Sash	I	N/A	N/A	-0.7	QM
010	A	Window	Ctr	Lft jamb	I	N/A	N/A	-0.8	QM
008	A	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
009	A	Door	Ctr	U Ctr	I	N/A	N/A	-0.3	QM
005	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
006	C	Wall	L Ctr		I	N/A	N/A	0.1	QM
007	D	Wall	L Ctr		I	N/A	N/A	0.1	QM
Interior Room 153 Number Only									
012	A	Wall	L Ctr		I	N/A	N/A	0.0	QM
013	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
014	C	Wall	L Ctr		I	N/A	N/A	0.0	QM
015	D	Wall	L Ctr		I	N/A	N/A	0.0	QM
019	D	Window	Ctr	Well	I	N/A	N/A	-0.4	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR:

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
018	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.1	QM
016	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
017	D	Door	Ctr	U Ctr	I	N/A	N/A	0.1	QM
Interior Room 155 Number Only									
233	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
234	B	Wall	L Ctr		I	N/A	N/A	-0.5	QM
235	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
236	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
237	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
238	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
Interior Room 156 Number Only									
227	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
228	B	Wall	L Ctr		I	N/A	N/A	0.1	QM
229	C	Wall	L Ctr		I	N/A	N/A	0.1	QM
230	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
231	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
232	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
Interior Room 157 Number Only									
219	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
220	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
221	C	Wall	L Ctr		I	N/A	N/A	0.2	QM
222	D	Wall	L Ctr		I	N/A	N/A	0.2	QM
226	D	Window	Ctr	Sash	I	N/A	N/A	-0.3	QM
225	D	Window	Ctr	Lft casing	I	N/A	N/A	0.0	QM
223	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.6	QM
224	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.5	QM
Interior Room 158 Number Only									
175	A	Wall	L Ctr		I	N/A	N/A	0.1	QM
176	B	Wall	L Ctr		I	N/A	N/A	0.1	QM
177	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
178	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
182	D	Window	Ctr	Sash	I	N/A	N/A	-0.7	QM
181	D	Window	Ctr	Lft jamb	I	N/A	N/A	-0.5	QM
179	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.1	QM
180	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
Interior Room 159 Number Only									
183	A	Wall	L Ctr		I	N/A	N/A	0.0	QM
184	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
185	C	Wall	L Ctr		I	N/A	N/A	0.1	QM
186	D	Wall	L Ctr		I	N/A	N/A	0.1	QM
187	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
188	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
Interior Room 160 Number Only									
189	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
190	B	Wall	L Ctr		I	N/A	N/A	0.1	QM
191	C	Wall	L Ctr		I	N/A	N/A	-0.3	QM
192	D	Wall	L Ctr		I	N/A	N/A	-0.2	QM
193	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
194	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.2	QM
Interior Room 161 Number Only									

DETAILED REPORT OF LEAD PAINT INSPECTION FOR:

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
195	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
196	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
197	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
198	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
199	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
200	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
Interior Room 162 Number Only									
201	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
202	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
203	C	Wall	L Ctr		I	N/A	N/A	0.0	QM
204	D	Wall	L Ctr		I	N/A	N/A	0.1	QM
206	D	Window	Ctr	Well	I	N/A	N/A	-0.3	QM
205	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.5	QM
207	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
208	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
Interior Room 163 Number Only									
209	C	Wall	L Ctr		I	N/A	N/A	0.0	QM
210	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
211	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
212	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.3	QM
Interior Room 164 Number Only									
213	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
214	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
215	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
216	D	Wall	L Ctr		I	N/A	N/A	0.0	QM
217	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
218	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
Interior Room 217 Number Only									
395	A	Wall	L Ctr		I	N/A	N/A	0.1	QM
396	B	Wall	L Ctr		I	N/A	N/A	0.0	QM
397	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
398	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
402	D	Window	Ctr	Sash	I	N/A	N/A	-0.1	QM
401	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.1	QM
399	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
400	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.2	QM
Interior Room 221 Number Only									
411	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
412	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
413	C	Wall	L Ctr		I	N/A	N/A	-0.2	QM
414	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
418	D	Window	Ctr	Sash	I	N/A	N/A	0.0	QM
417	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.2	QM
415	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
416	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
Interior Room 222 Number Only									
419	A	Wall	L Ctr		I	N/A	N/A	-0.3	QM
420	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
421	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
422	D	Wall	L Ctr		I	N/A	N/A	-0.2	QM
426	D	Window	Ctr	Sash	I	N/A	N/A	-0.6	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR:

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
425	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.7	QM
423	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
424	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.2	QM
Interior Room 226 Number Only									
379	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
387	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
380	B	Wall	L Ctr		I	N/A	N/A	0.0	QM
388	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
381	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
389	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
382	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
390	D	Wall	L Ctr		I	N/A	N/A	0.0	QM
394	D	Window	Ctr	Sash	I	N/A	N/A	-0.1	QM
386	D	Window	Ctr	Well	I	N/A	N/A	-0.1	QM
385	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.5	QM
393	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.1	QM
383	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
391	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.3	QM
384	D	Door	Ctr	U Ctr	I	N/A	N/A	0.1	QM
392	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.4	QM
Interior Room 227 Number Only									
371	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
372	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
373	C	Wall	L Ctr		I	N/A	N/A	0.0	QM
374	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
378	D	Window	Ctr	Well	I	N/A	N/A	-0.1	QM
377	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.1	QM
375	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.4	QM
376	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.5	QM
Interior Room 228 Number Only									
363	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
364	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
365	C	Wall	L Ctr		I	N/A	N/A	0.0	QM
366	D	Wall	L Ctr		I	N/A	N/A	-0.2	QM
370	D	Window	Ctr	Sash	I	N/A	N/A	0.0	QM
369	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.4	QM
367	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.5	QM
368	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.2	QM
Interior Room 230 Number Only									
341	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
342	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
343	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
344	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
346	D	Window	Ctr	Sash	I	N/A	N/A	-0.3	QM
345	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.4	QM
347	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
348	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
Interior Room 231 Number Only									
335	A	Wall	L Ctr		I	N/A	N/A	0.0	QM
336	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
337	C	Wall	L Ctr		I	N/A	N/A	0.0	QM
338	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR:

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
339	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
340	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.3	QM
Interior Room 232 Number Only									
349	A	Wall	L Ctr		I	N/A	N/A	-0.4	QM
355	A	Wall	L Ctr		I	N/A	N/A	0.0	QM
350	B	Wall	L Ctr		I	N/A	N/A	0.0	QM
356	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
351	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
357	C	Wall	L Ctr		I	N/A	N/A	0.0	QM
352	D	Wall	L Ctr		I	N/A	N/A	-0.2	QM
358	D	Wall	L Ctr		I	N/A	N/A	0.0	QM
360	D	Window	Ctr	Sash	I	N/A	N/A	-0.8	QM
359	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.5	QM
353	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.1	QM
361	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.4	QM
354	D	Door	Ctr	U Ctr	I	N/A	N/A	0.1	QM
362	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
Interior Room 234 Number Only									
433	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
437	A	Floor			I	N/A	N/A	-0.2	QM
434	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
435	C	Wall	L Ctr		I	N/A	N/A	-0.3	QM
438	C	Floor			I	N/A	N/A	-0.1	QM
439	C	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
440	C	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
436	D	Wall	L Ctr		I	N/A	N/A	-0.5	QM
Interior Room 235 Number Only									
441	A	Wall	L Ctr		I	N/A	N/A	-0.5	QM
445	A	Floor			I	N/A	N/A	-0.7	QM
442	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
444	C	Wall	L Ctr		I	N/A	N/A	-0.3	QM
446	C	Floor			I	N/A	N/A	-0.5	QM
447	C	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
448	C	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
443	D	Wall	L Ctr		I	N/A	N/A	-0.2	QM
Interior Room 238 Number Only									
253	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
272	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
281	A	Wall	L Ctr		I	N/A	N/A	0.0	QM
286	A	Wall	L Ctr		I	N/A	N/A	0.1	QM
291	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
254	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
293	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
294	B	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
295	B	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
255	C	Wall	L Ctr		I	N/A	N/A	-0.3	QM
261	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
278	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
282	C	Wall	L Ctr		I	N/A	N/A	-0.2	QM
288	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
292	C	Wall	L Ctr		I	N/A	N/A	0.0	QM
279	C	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
289	C	Door	Ctr	Lft jamb	I	N/A	N/A	-0.3	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR:

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
280	C	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
290	C	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
256	D	Wall	L Ctr		I	N/A	N/A	0.1	QM
262	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
267	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
273	D	Wall	L Ctr		I	N/A	N/A	0.3	QM
283	D	Wall	L Ctr		I	N/A	N/A	0.0	QM
287	D	Wall	L Ctr		I	N/A	N/A	0.0	QM
260	D	Window	Ctr	Sash	I	N/A	N/A	-0.2	QM
266	D	Window	Ctr	Sash	I	N/A	N/A	-0.3	QM
269	D	Window	Ctr	Well	I	N/A	N/A	-0.3	QM
275	D	Window	Ctr	Well	I	N/A	N/A	-0.5	QM
285	D	Window	Ctr	Well	I	N/A	N/A	0.0	QM
265	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.2	QM
268	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.6	QM
274	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.9	QM
284	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.1	QM
259	D	Window	Ctr	Lft jamb	I	N/A	N/A	-0.3	QM
257	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
263	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
270	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.3	QM
276	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.4	QM
258	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
264	D	Door	Ctr	U Ctr	I	N/A	N/A	0.1	QM
271	D	Door	Ctr	U Ctr	I	N/A	N/A	0.2	QM
277	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
Interior Room 239 Number Only									
296	A	Wall	L Ctr		I	N/A	N/A	0.0	QM
306	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
321	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
297	B	Wall	L Ctr		I	N/A	N/A	-0.3	QM
307	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
322	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
311	B	Window	Ctr	Sash	I	N/A	N/A	-0.3	QM
310	B	Window	Ctr	Lft casing	I	N/A	N/A	-0.1	QM
309	B	Door	Ctr	Lft jamb	I	N/A	N/A	-0.5	QM
308	B	Door	Ctr	U Ctr	I	N/A	N/A	-0.3	QM
298	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
305	C	Wall	L Ctr		I	N/A	N/A	-0.3	QM
323	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
299	D	Wall	L Ctr		I	N/A	N/A	-0.2	QM
304	D	Wall	L Ctr		I	N/A	N/A	-0.3	QM
324	D	Wall	L Ctr		I	N/A	N/A	-0.3	QM
301	D	Window	Ctr	Sash	I	N/A	N/A	0.0	QM
300	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.1	QM
302	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
325	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
303	D	Door	Ctr	U Ctr	I	N/A	N/A	0.1	QM
326	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.3	QM
Interior Room 244 Number Only									
327	A	Wall	L Ctr		I	N/A	N/A	0.0	QM
328	B	Wall	L Ctr		I	N/A	N/A	0.0	QM
329	C	Wall	L Ctr		I	N/A	N/A	-0.3	QM
330	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
334	D	Window	Ctr	Well	I	N/A	N/A	-0.1	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR:

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
333	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.3	QM
331	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
332	D	Door	Ctr	U Ctr	I	N/A	N/A	0.0	QM
Interior Room 245 Number Only									
312	A	Wall	L Ctr		I	N/A	N/A	0.0	QM
313	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
314	C	Wall	L Ctr		I	N/A	N/A	0.1	QM
315	D	Wall	L Ctr		I	N/A	N/A	0.0	QM
319	D	Window	Ctr	Sash	I	N/A	N/A	-0.1	QM
320	D	Window	Ctr	Sash	I	N/A	N/A	-0.1	QM
318	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.8	QM
316	D	Door	Ctr	Lft jamb	I	N/A	N/A	0.0	QM
317	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.5	QM
Interior Room 418 Number Only									
403	A	Wall	L Ctr		I	N/A	N/A	0.0	QM
404	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
405	C	Wall	L Ctr		I	N/A	N/A	-0.6	QM
406	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
410	D	Window	Ctr	Sash	I	N/A	N/A	-0.2	QM
409	D	Window	Ctr	Lft casing	I	N/A	N/A	-0.2	QM
407	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.6	QM
408	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.6	QM
Interior Room 901 Number Only									
247	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
248	B	Wall	L Ctr		I	N/A	N/A	0.0	QM
249	C	Wall	L Ctr		I	N/A	N/A	0.1	QM
250	D	Wall	L Ctr		I	N/A	N/A	-0.3	QM
251	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.4	QM
252	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.7	QM
Interior Room 902 Hallway									
427	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
428	B	Wall	L Ctr		I	N/A	N/A	-0.3	QM
429	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
430	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
431	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.2	QM
432	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
Interior Room 903 2nd Flight									
453	C	Stairs	Ctr	Wall	I	N/A	Black	0.0	QM
451	C	Stairs	Ctr	Risers	I	N/A	Black	-0.1	QM
454	C	Stairs	Ctr	Newel post	I	N/A	Black	2.1	QM
452	C	Stairs	Ctr	Stringer	I	N/A	Black	-0.1	QM
450	C	Stairs	Ctr	Balusters	I	N/A	Black	4.5	QM
449	C	Stairs	Ctr	Railing cap	I	N/A	Black	5.2	QM
Interior Room 904 1st Flight									
455	C	Stairs	Ctr	Wall	I	N/A	Black	-0.1	QM
459	C	Stairs	Ctr	Risers	I	N/A	Black	-0.1	QM
458	C	Stairs	Ctr	Newel post	I	N/A	Black	4.9	QM
460	C	Stairs	Ctr	Stringer	I	N/A	Black	-0.2	QM
457	C	Stairs	Ctr	Balusters	I	N/A	Black	4.9	QM
456	C	Stairs	Ctr	Railing cap	I	N/A	Black	8.1	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR:

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm^2)	Mode
Calibration Readings									
001								0.9	Std
002								0.9	Std
003								0.8	Std
---- End of Readings ----									

OMS BLDG

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: IL 027 - 002; Forest Park, IL

Inspection Date:	04/26/02	Forest Park OMS
Report Date:	5/19/2003	
Abatement Level:	1.0	
Report No.	S#01908 - 04/26/02 16:10	
Total Readings:	46 Actionable: 2	
Job Started:	04/26/02 16:10	
Job Finished:	04/26/02 16:47	

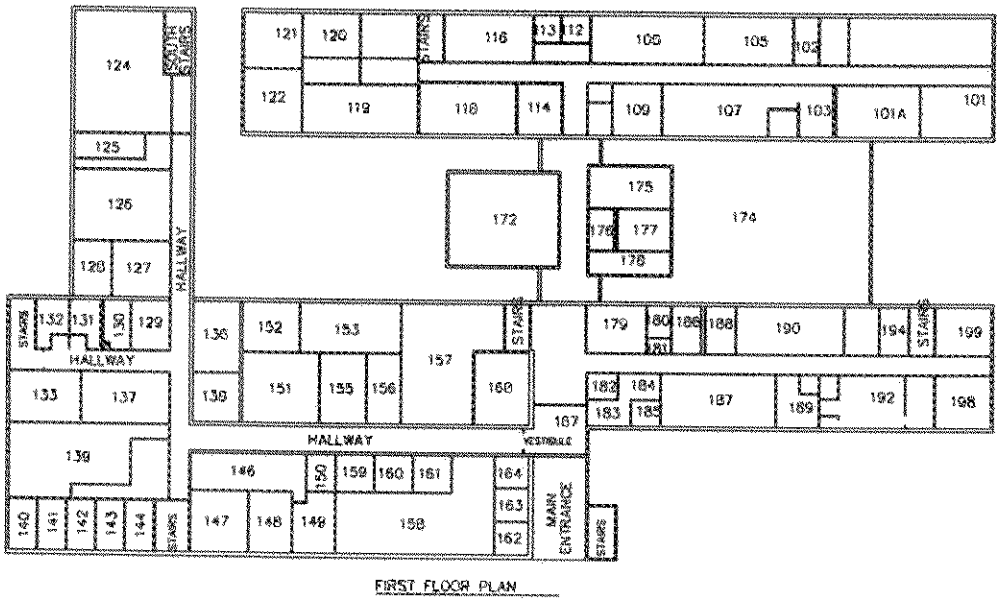
Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
Exterior Room 002 Garage									
044	A	Door	Ctr	Lft jamb	I	Metal	Black	4.4	QM
045	B	Door	Ctr	Lft jamb	I	Metal	Black	4.5	QM
Calibration Readings									

---- End of Readings ----

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: IL 027 - 002; Forest Park, IL

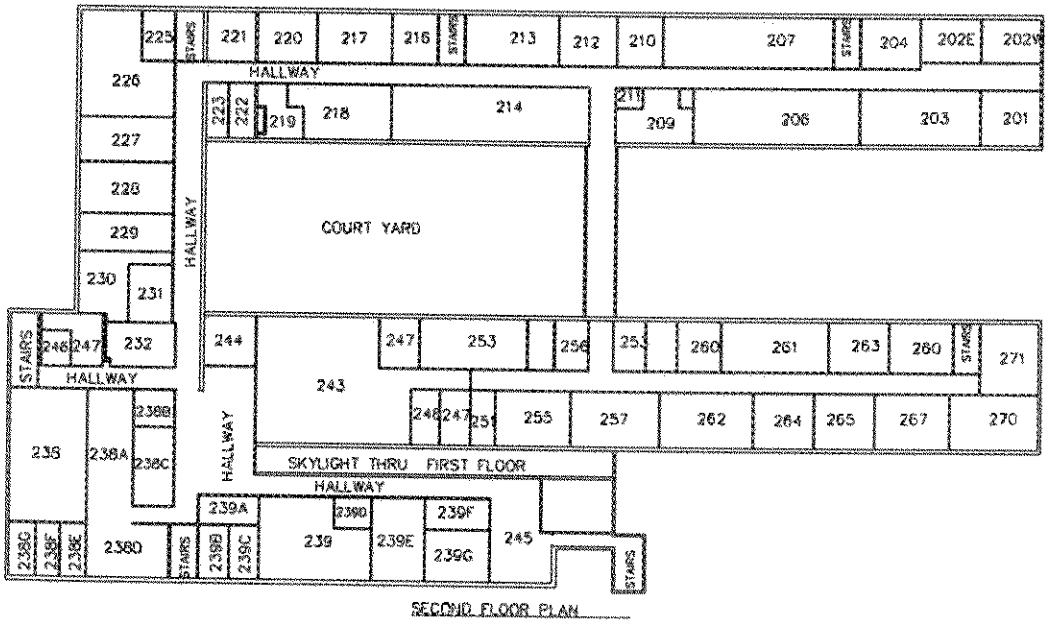
Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
036	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
037	C	Wall	L Ctr		I	N/A	N/A	-0.4	QM
038	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
039	D	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
040	D	Door	Ctr	U Ctr	I	N/A	N/A	-0.4	QM
Calibration Readings									
001								1.3	Std
002								0.8	Std
003								1.2	Std
004								1.3	Std

---- End of Readings ----



FIRST FLOOR PLAN

ITI of South Florida Environmental Services Drawn: M. MASAAL	Floor Plan (IL027) USAR CENTER 7402 W. ROOSEVELT ROAD FOREST PARK, IL	FIGURE 06-APR-2002



ITI of South Florida **Environmental Services** **Drawn: M. MASAAL**	Floor Plan (2nd Floor) - IL 027 7402 ROOSEVELT ROAD FOREST PARK, IL	**FIGURE** **06-APR-2002**

APPENDIX D

AccuStar Radon Labs (REM)
3334 Commercial Avenue
Northbrook, IL 60062 USA
(847) 205-0110

Environmental Resource Association
Gil Bakshi
514 1st Ave. SW
Largo, FL 33770

Report Date Oct 28, 2002

Monitor	pCi/l	Installed	Removed	Days Used	pCi/l-days	Tracks	Sq. mm Counted	Notes
983889	**1.1**	3-26-02	9-24-02	182	195	177	43	Forest Park AFRC - Office #153 west wall
983891	**1.1**	3-26-02	9-24-02	182	194	192	43	Office #152 north wall
983893	**1.4**	3-26-02	9-24-02	182	250	240	43	Office #160 west wall

4 detectors missing

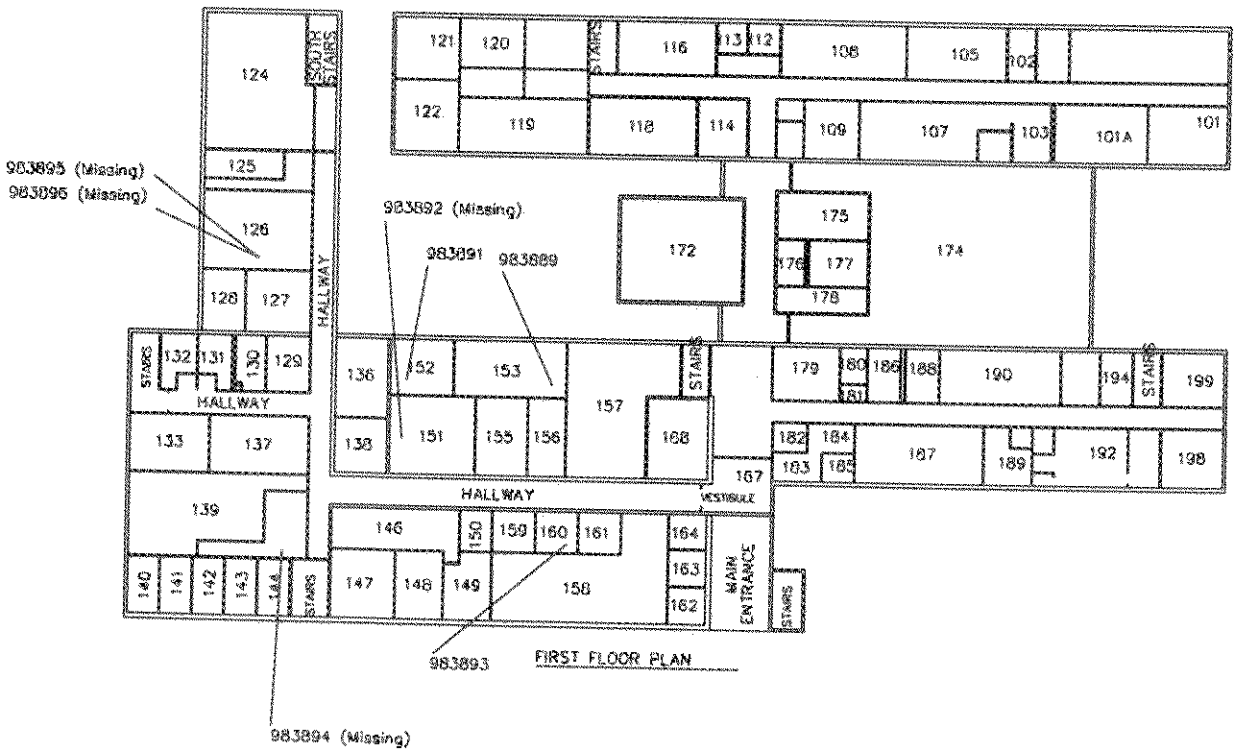
The uncertainty (standard deviation) of an alpha track radon measurement is ±15%.

KEM Alpha Track Radon Field Data Sheet

gram IL027 Report Address Forest Park AFRC 7402 Roosevelt Rd Forest Park, IL 60130-2587 Recorded by [redacted] Page 1

Detector # (mail bar code label)	Date Installed	Date Removed	Comments & Location (building, floor, room, etc.)
983889	03/26/02	09/24/02	West wall Office 153 ≅ 5'3" high
983891		09/24/02	North wall office 152 ≅ 5'2" high
983892		MIA	Office 151 East wall ≅ 5'3" high
983893		09/24/02	Office 160 west wall ≅ 5'2" high
983894		MIA	5d in front of ofc. 144 N. wall ≅ 5'3" high
983895		MIA	Do/M ofc 126 north wall ≅ 5'5" high
983896	03/26/02	MIA	Do/M ofc 126 North wall ≅ 5'5" high

Rev 10/97



ITI of South Florida Environmental Services Drawn: M. MASAAL	Floor Plan (IL027) USAR CENTER 7402 W. ROOSEVELT ROAD FOREST PARK, IL	FIGURE 06-APR-2002

APPENDIX E

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

A.E.S.L. ENVIRONMENTAL LABORATORY

TEMPE, AZ

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

March 31, 2002
Effective through

David F. Alderman
For the National Institute of Standards and Technology

NVLAP Lab Code: 200303-0

NVLAP-01C (11-95)

APPENDIX F

State of Illinois

A 129496

Department of Public Health

LICENSE, PERMIT, CERTIFICATION, REGISTRATION

The person, firm or corporation whose name appears on this certificate has complied with the provisions of the Illinois Statutes and/or rules and regulations and is hereby authorized to engage in the activity as indicated below

JOHN R. LUMPKIN, M.D.
DIRECTOR

Issued under the authority of
The State of Illinois
Department of Public Health

EXPIRATION DATE	CATEGORY	I.D. NUMBER
05/15/2003	5319	100-9988

ANGEL MENENDEZ

INSPECTOR

BUSINESS ADDRESS
ASBESTOS PROFESSIONAL LICENSE
ALTERING THIS CERTIFICATE MAY RESULT IN LEGAL ACTION
ANGEL MENENDEZ
56 AUBURN AVE
FORTSON GA 31808

THIS LICENSE IS NOT VALID IF YOUR IDPH COURSE CERTIFICATE IS NOT CURRENT

Printed by Authority of the State of Illinois ● 2/91 ●

← **DISPLAY THIS PART IN A CONSPICUOUS PLACE**

REMOVE THIS CARD TO CARRY AS AN IDENTIFICATION

↓

03/19/02
ANGEL MENENDEZ
56 AUBURN AVE
FORTSON GA 31808

STATE OF ILLINOIS

DEPARTMENT OF NUCLEAR SAFETY

1035 OUTER PARK DRIVE • SPRINGFIELD, ILLINOIS 62704
217-785-9900 • 217-782-6133 (TDD)

George H. Ryan
Governor

Thomas W. Ortciger
Director

October 23, 2002

Jessica Compton, Office Manager
International Training Institute of S. Florida, Inc.
100 2nd Avenue South
St. Petersburg, FL 33701

Dear Ms. Compton:

Please accept this letter as documentation of our conversation this morning. As we discussed, due to the use locations (federal facilities) of your company's lead paint analyzer use, no reciprocity agreements are necessary with this Department. We do, however, appreciate your prior notices of work in Illinois, and encourage you to continue to do so. Prior notification of your work here will help us to better facilitate any questions received from the general public, or allow for more immediate assistance in the event of an accident.

We appreciate your cooperation with this Department. Should you have any questions, please don't hesitate to contact me at (217) 785-9932.

Sincerely,

Thomas J. Seif, Head
Inspection and Enforcement
Division of Radioactive Materials

STATE OF ILLINOIS

DEPARTMENT OF NUCLEAR SAFETY

1035 OUTER PARK DRIVE • SPRINGFIELD, ILLINOIS 62704
217-785-9900 • 217-782-6133 (TDD)

George H. Ryan
Governor

Thomas W. Ortciger
Director

July 25, 2002

Mr. Timothy J. DeLathouwer
HBIS Engineering
535 S. Washington Street
Naperville, IL 60540

Dear Mr. DeLathouwer,

Enclosed is Illinois Radon Measurement Professional License Number RNI2002211.

Please review the enclosed document carefully and be sure that you understand all conditions. You must conduct your program involving radon measurements in accordance with the conditions of your Illinois license, statements and representations made in your license application, and Illinois regulations.

You must request and obtain an appropriate amendment if you plan to make any changes in your measurement program. All amendment requests should contain the appropriate documentation.

You will be periodically inspected by this agency. Failure to conduct your program in accordance with IDNS regulations, license conditions and representations in your license application will result in enforcement action.

Thank you for your cooperation in this matter. When corresponding with this office, please refer to your Illinois Radon Measurement Professional License Number and ensure you retain a copy of all items. If you have any questions or require clarification of any of the above information, please contact Patrick Daniels at (217) 782-1325.

Cordially,

Marjorie Wallé
Manager, Radon Program

cc: license file

APPENDIX G

FIELD NOTES

USARC BLDG

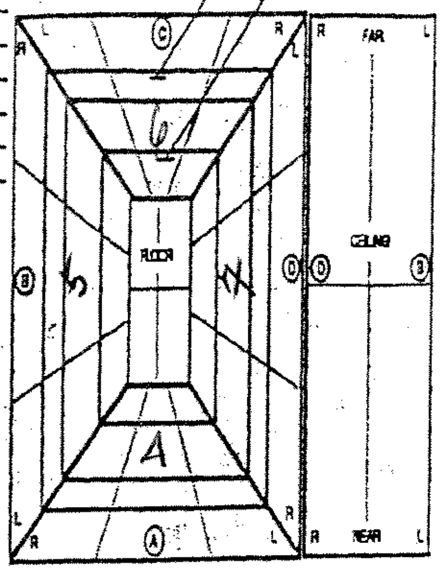
FOREST PARK USARC IL-027
File No: 04191038

ADDRESS 152
Office

JOB #
CAL CHK

UNIT # _____
ROOM # _____

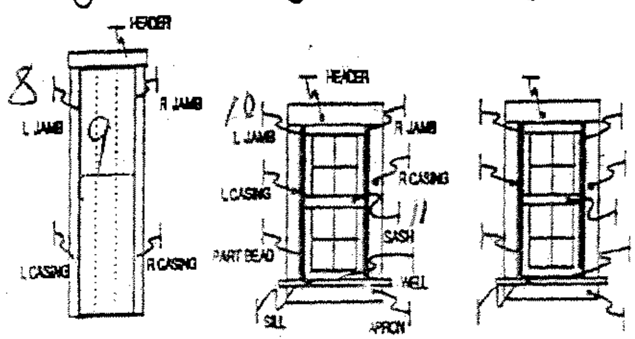
READINGS ON UNSOUND PAINT ARE CIRCLED



WALL (A) (B) (C) (D) — LEFT ( ) RIGHT ( ) CENTER ( )

WALL (A) (B) (C) (D) — LEFT ( ) RIGHT ( ) CENTER ( )

WALL (A) (B) (C) (D) — LEFT ( ) RIGHT ( ) CENTER ( )



COMMENTS: All walls are of Sheet Rock tan finished substrate. A/B wall is of poured concrete. concrete blocks Tan finished substrate. The door is of a She-A-Lac finished wooden substrate.

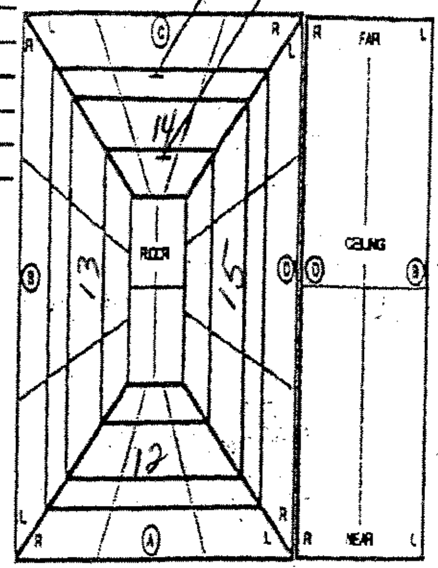
Sample# 1, 2, & 3 are Calibration Samples.
The doors jamb is of Black finished metal substrate.
The Window component is of Brown finished metal substrate.

ADDRESS 153
Office

JOB #
CAL CHK

UNIT # _____
ROOM # _____

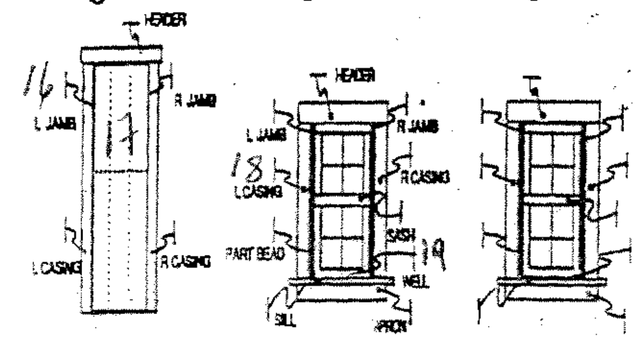
READINGS ON UNSOUND PAINT ARE CIRCLED



WALL (A) (B) (C) (D) — LEFT ( ) RIGHT ( ) CENTER ( )

WALL (A) (B) (C) (D) — LEFT ( ) RIGHT ( ) CENTER ( )

WALL (A) (B) (C) (D) — LEFT ( ) RIGHT ( ) CENTER ( )



COMMENTS: All walls are of tan finished Sheet Rock, except wall B which is of concrete blocks tan finished. The door is of a She-A-Lac wooden substrate. The door jamb is of Black finished metal substrate and the window components is of Brown finished metal substrate.

ADDRESS 151

S-2/3

JOB #

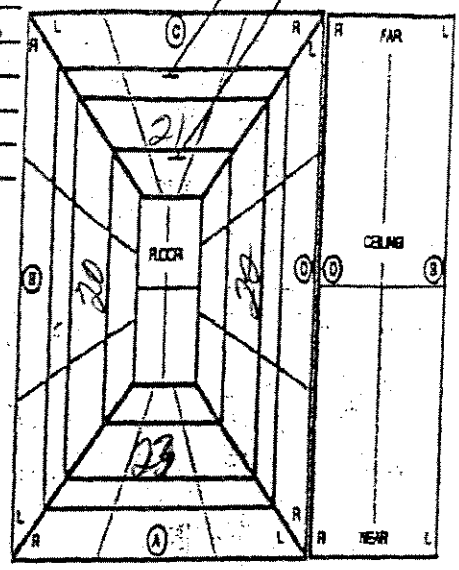
CAL CHK

UNIT #

ROOM #

CHAIR RAIL

BASEBOARD



READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

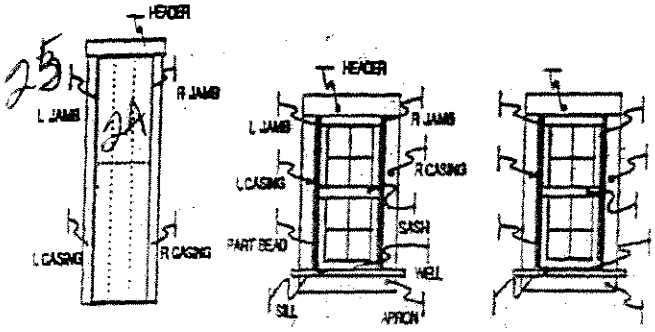
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: THE partition walls is of Tan finished sheet rock and all outer walls and structure walls are of Tan finished concrete Blocks & concrete columns. THE door is of wooden She-A-LAC finished substrate. THE door frame is of Black finished metal substrate.

ADDRESS 131

S-1

JOB #

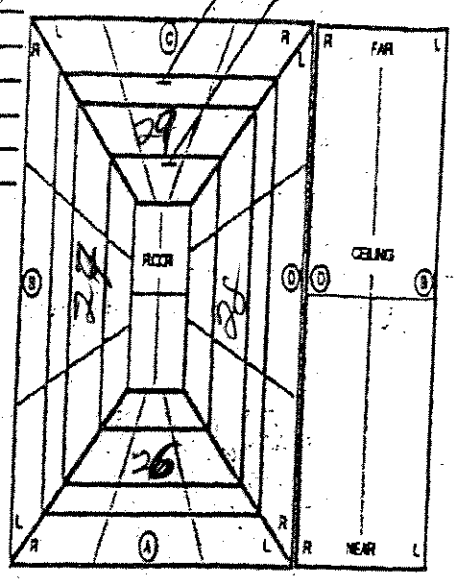
CAL CHK

UNIT #

ROOM #

CHAIR RAIL

BASEBOARD



READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

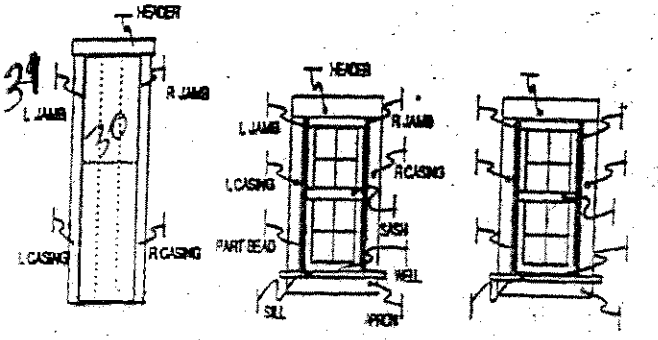
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: THE partitions walls is of tan finished sheet rock, all outer walls and structural columns are of concrete Blocks and poured concrete columns. THE door, is a She-A-LAC finished wooden substrate, and the doors jamb is of Black finished metal substrate. wall C is of Tan finished Blocks

ADDRESS 125 MAIN COURT

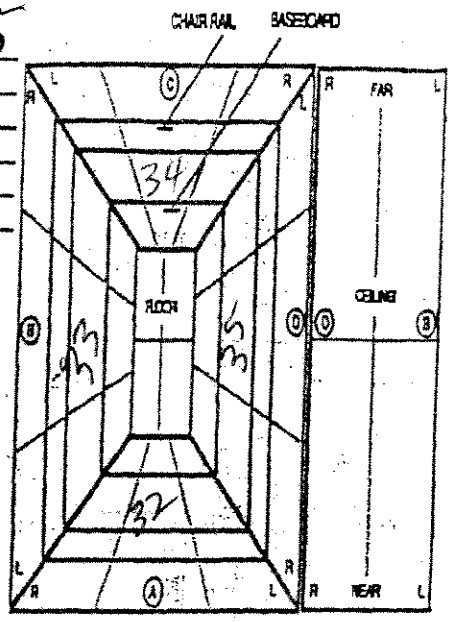
JOB #

CAL CHK

UNIT #

ROOM #

READINGS ON UNSOUND PAINT ARE CIRCLED

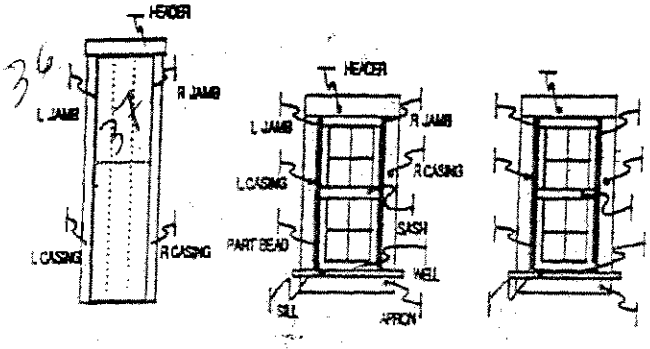


WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The partition walls is of Ten finished sheet rock and all outer walls and structural walls are of Ten finished concrete Blocks & concrete columns. The door is of wooden She-A-Lac finished substrate. The door frame is of Black finish metal substrate.

ADDRESS 126 DOTAN

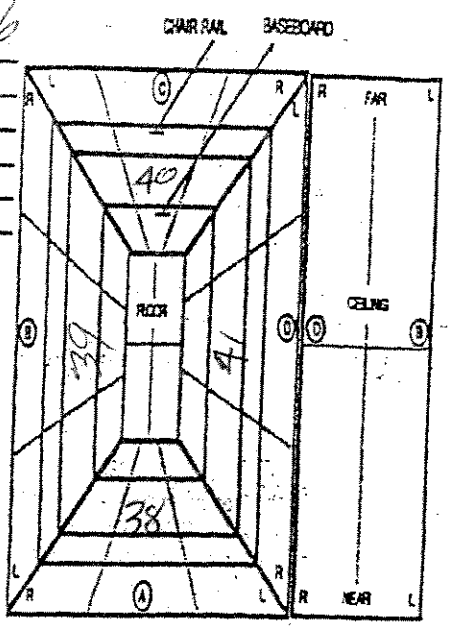
JOB #

CAL CHK

UNIT #

ROOM #

READINGS ON UNSOUND PAINT ARE CIRCLED

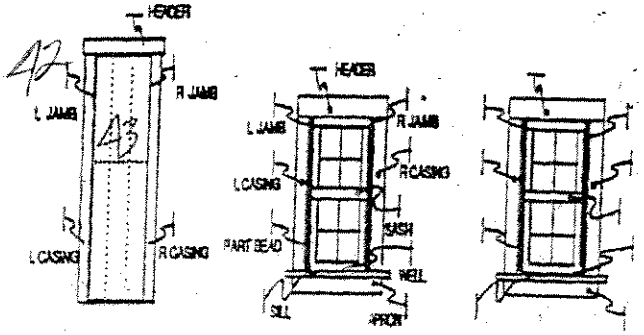


WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The partitions walls is of ten finished sheet rock. All outer walls and structural walls are of concrete Blocks and poured concrete columns. The door is a She-A-Lac finished wooden substrate, and the Doors jamb is of Black finished metal substrate.

ADDRESS 129

Storage

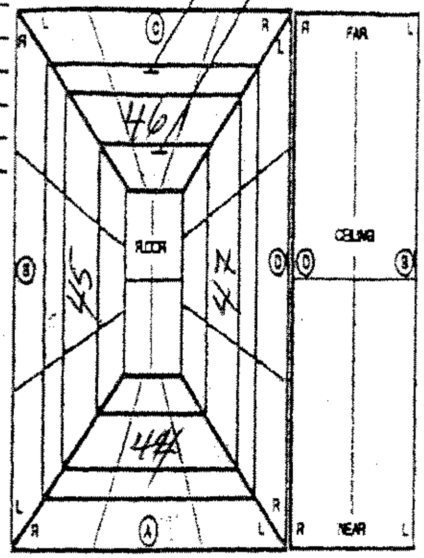
JOB #

CAL CHK

UNIT #_____

ROOM #_____

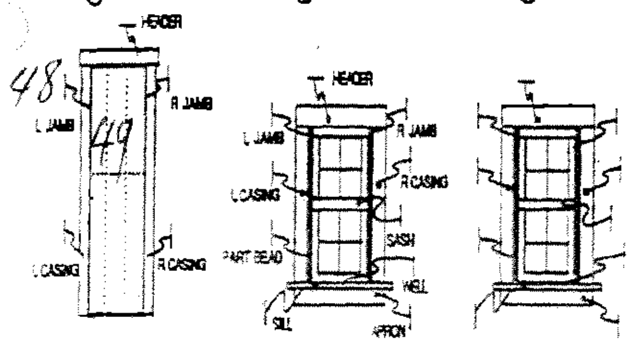
READINGS ON UNSOUND PAINT ARE CIRCLED



WALL (A) (B) (C) (D) LEFT ○ RIGHT ○ CENTER ○

WALL (A) (B) (C) (D) LEFT ○ RIGHT ○ CENTER ○

WALL (A) (B) (C) (D) LEFT ○ RIGHT ○ CENTER ○



COMMENTS: All walls are of four finished concrete blocks. The door is of a slue-a-cal wooden substrate and the door frame is of black finished metal substrate

ADDRESS 130

Storage

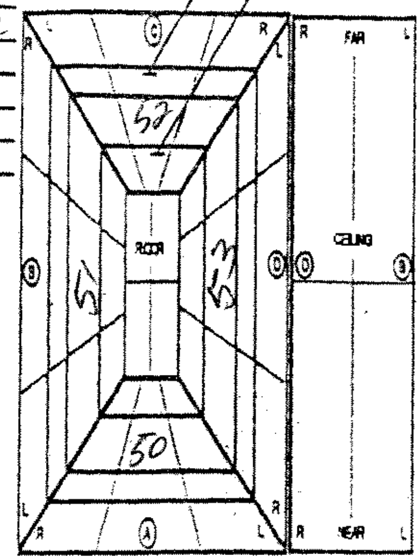
JOB #

CAL CHK

UNIT #_____

ROOM #_____

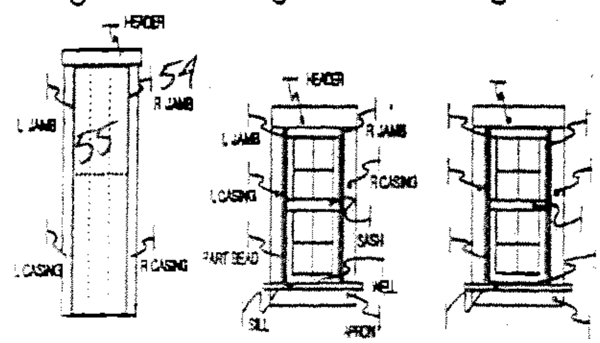
READINGS ON UNSOUND PAINT ARE CIRCLED



WALL (A) (B) (C) (D) LEFT ○ RIGHT ○ CENTER ○

WALL (A) (B) (C) (D) LEFT ○ RIGHT ○ CENTER ○

WALL (A) (B) (C) (D) LEFT ○ RIGHT ○ CENTER ○



COMMENTS: All walls are of tan finished concrete blocks. The door is of a slue-a-cal wooden substrate. The door frame is of black finished metal substrate

ADDRESS 131 Mule Barns

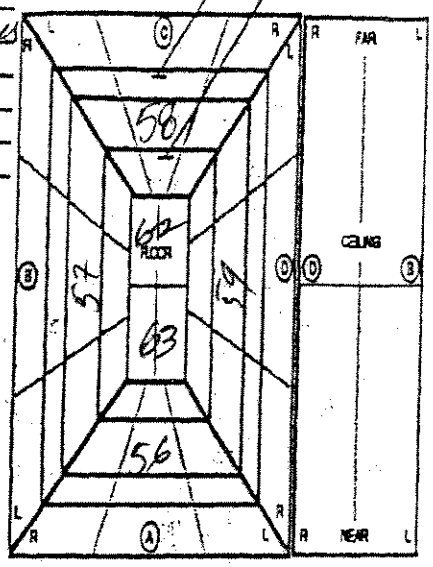
JOB #

CAL CHK

UNIT #

ROOM #

CHAIR RAIL BASEBOARD



READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

JER

WALL A B C D

LEFT

RIGHT

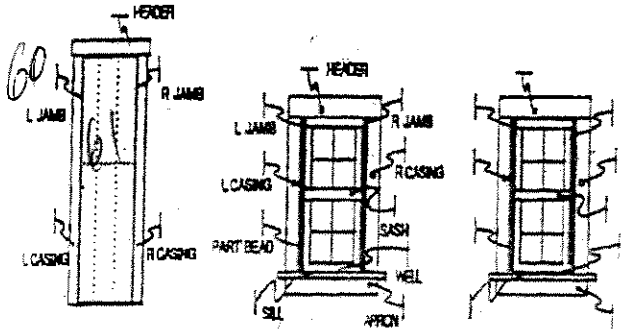
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: 1/2 of walls is a green ceramic tile and 1/2 is a Tan Sheet Rock substrate & the floor is a Black & green laminated ceramic tile. The door is a She-A-Lac wooden substrate and the door jamb is a Black painted metal substrate.

ADDRESS 132 Temples Tavern

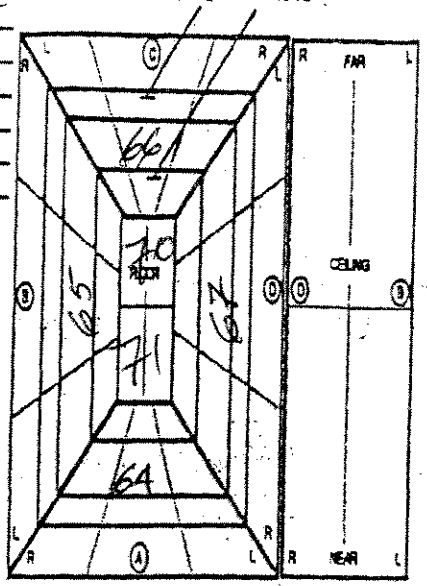
JOB #

CAL CHK

UNIT #

ROOM #

CHAIR RAIL BASEBOARD



READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

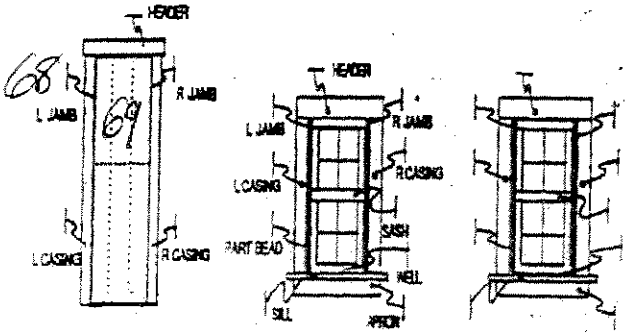
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: 1/2 of the walls is a tan ceramic tile and 1/2 is a tan sheet rock substrate. The floor is a red & tan terrazzo tile laminated. The door is a She-A-Lac wooden substrate and the door jamb is a black metal substrate.

ADDRESS 133

Lunchroom

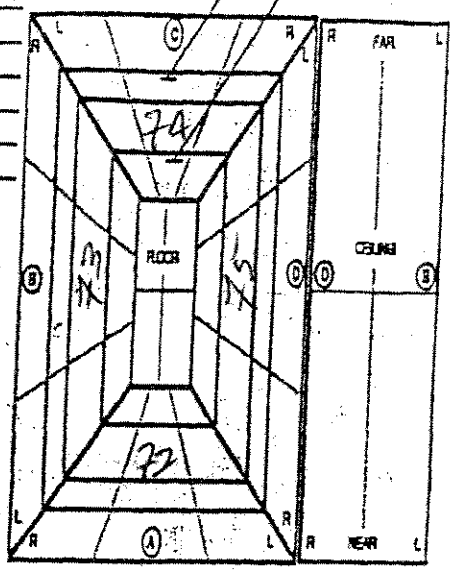
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL (A) (B) (C) (D)

LEFT ○

RIGHT ○

JER ○

WALL (A) (B) (C) (D)

LEFT ○

RIGHT ○

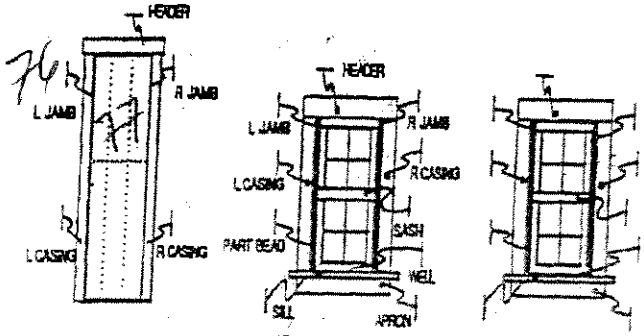
CENTER ○

WALL (A) (B) (C) (D)

LEFT ○

RIGHT ○

CENTER ○



COMMENTS: The partition walls is of Tan finished sheet rock and all outer walls and structures walls are of Tan finished concrete Blocks & concrete columns. The door is of wooden She-A-Lac finished substrate. The door frame is of Black finished metal substrate. wall (A) is of walls paper Brown

ADDRESS 137

DOL

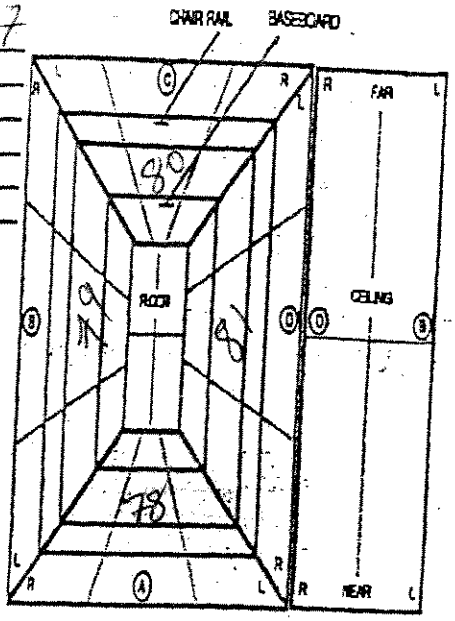
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL (A) (B) (C) (D)

LEFT ○

RIGHT ○

CENTER ○

WALL (A) (B) (C) (D)

LEFT ○

RIGHT ○

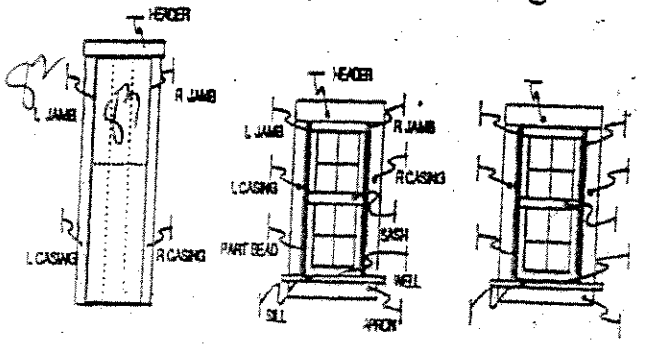
CENTER ○

WALL (A) (B) (C) (D)

LEFT ○

RIGHT ○

CENTER ○



COMMENTS: THE partitions walls is of tan finished sheet rock. all outer walls and structural walls are of concrete Blocks and poured concrete columns. THE door is a She-A-Lac finished wooden substrate, and the doors jamb is of Black finished metal substrate. wall A is ~~wall~~ of green finished sheet rock.

ADDRESS 139

DOC

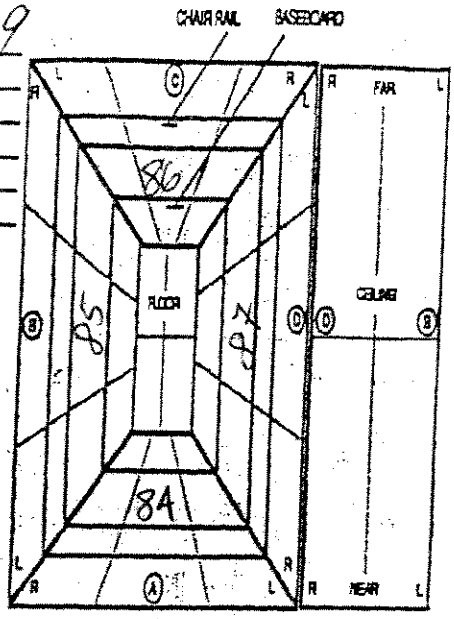
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL (A) (B) (C) (D)

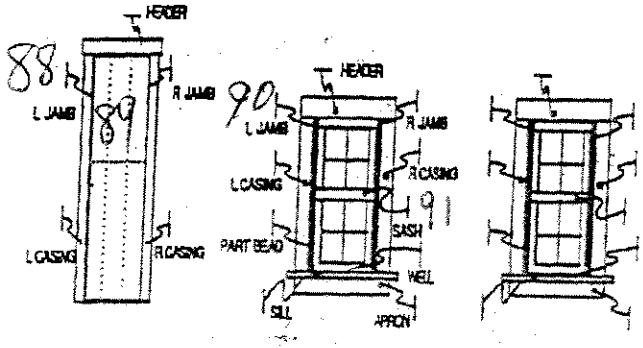
LEFT ○
RIGHT ○
CENTER ○

WALL (A) (B) (C) (D)

LEFT ○
RIGHT ○
CENTER ○

WALL (A) (B) (C) (D)

LEFT ○
RIGHT ○
CENTER ○



COMMENTS: THE partition walls is of Tan finished sheet rock and all outer walls and structural walls are of Tan finished concrete blocks & concrete columns. THE door is of wooden she-a-lac finished substrate. THE door frame is of Black finished metal substrate. THE window frame & components is of Beaun metal substrate

ADDRESS 139

S-4

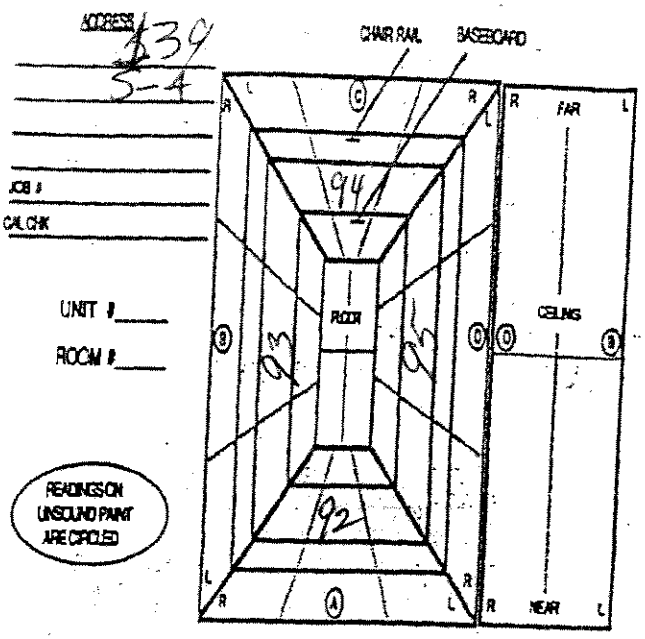
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL (A) (B) (C) (D)

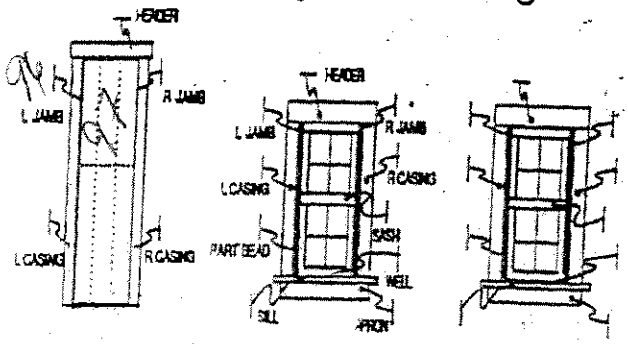
LEFT ○
RIGHT ○
CENTER ○

WALL (A) (B) (C) (D)

LEFT ○
RIGHT ○
CENTER ○

WALL (A) (B) (C) (D)

LEFT ○
RIGHT ○
CENTER ○



COMMENTS: THE partitions walls is of tan finished sheet rock, all outer walls and structural walls are of concrete blocks and poured concrete columns. THE door is a She-A-Lac finished wooden substrate, and the Doors jamb is of Black finished Metal substrate. Wall (C) is of RED glue on walls paper. Walls A & B are painted GYPS. Sample was taken from THE Bases.

ADDRESS 140 Apple

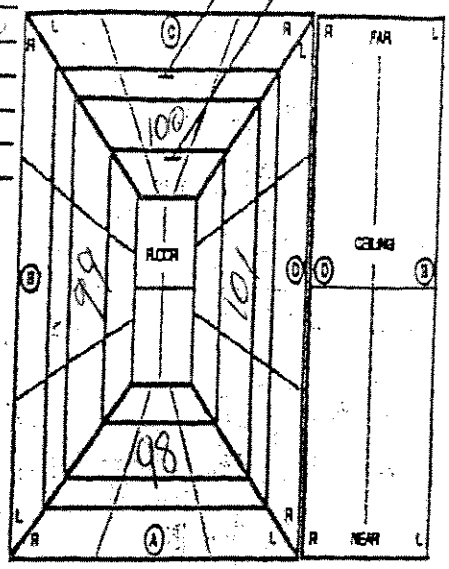
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

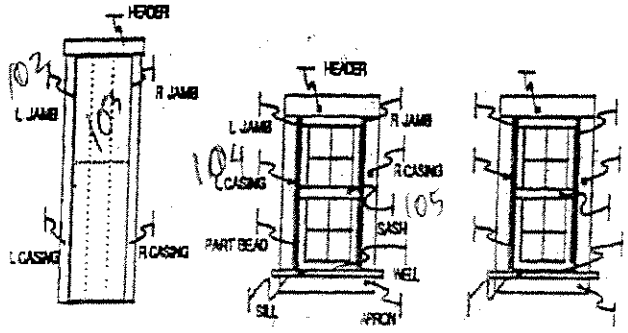
LEFT ○
RIGHT ○
JER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○



COMMENTS: The partition walls is of Tan finished sheet rock and all outer walls and structural walls are of Tan finished concrete blocks & concrete columns. The door is of wooden She-A-Lac finished substrate. The door frame is of Black finished metal substrate. The Windows components is of BROWN finished Metal substrate.

ADDRESS 141 property Book Sealer

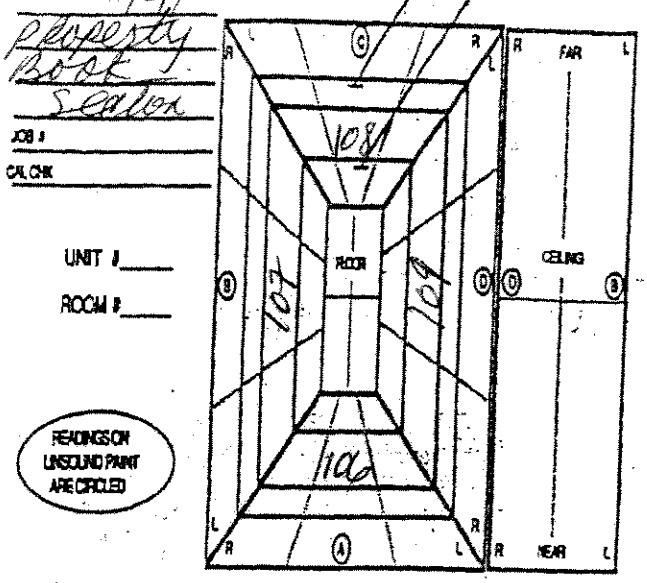
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

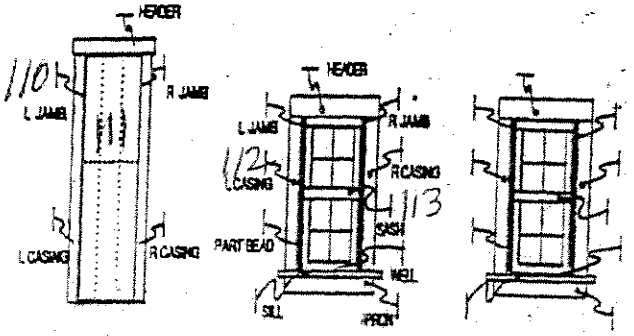
LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○



COMMENTS: The partitions walls is of tan finished sheet rock. All outer walls and structural wall spare of concrete blocks and poured concrete columns. The door is a She-A-Lac finished wooden substrate, and the Doors jamb is of Black finished Metal substrate. The Windows components is of Brown finished metal substrate

ADDRESS 142 Apre

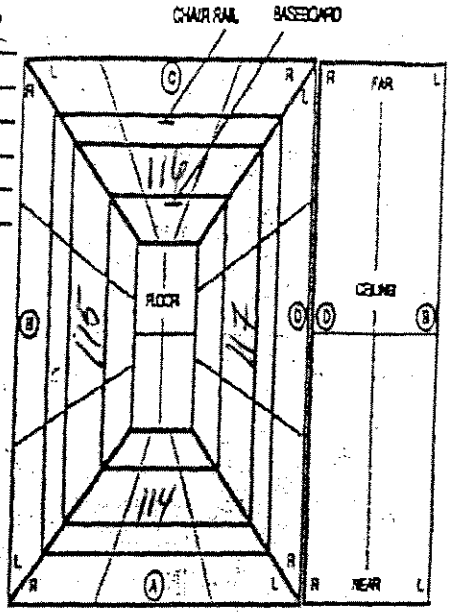
JOB #

CAL CHK

UNIT #____

ROOM #____

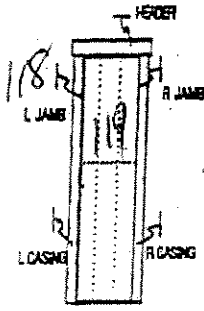
READINGS ON UNSOUND PAINT ARE CIRCLED

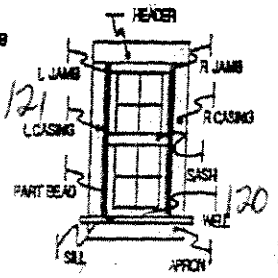


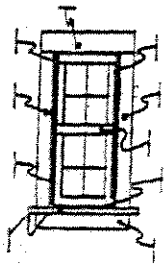
WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				







COMMENTS: The partition walls is of Ten Finished sheet rock and all outer walls and structures walls are of Ten Finished concrete Blocks & concrete columns. The door is of wooden she-a-lac finished substrate. The door frame is of Black finish metal substrate. The windows components is of Brown finished Metal Substrate

ADDRESS 143 Apre

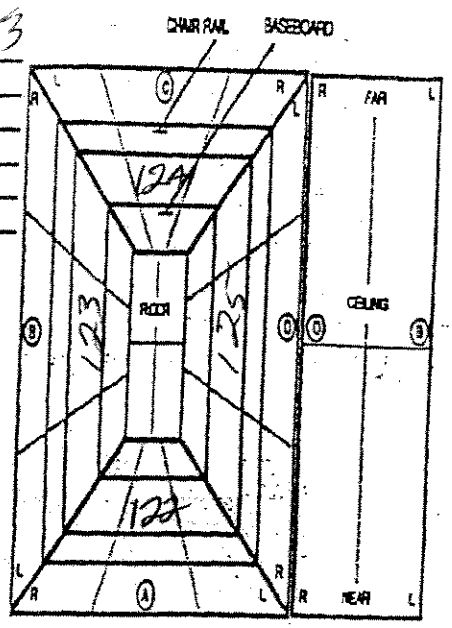
JOB #

CAL CHK

UNIT #____

ROOM #____

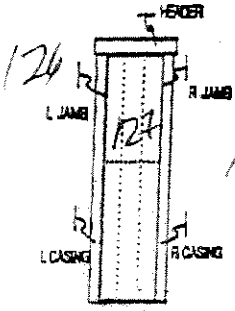
READINGS ON UNSOUND PAINT ARE CIRCLED

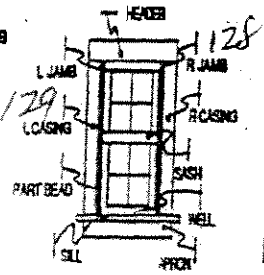


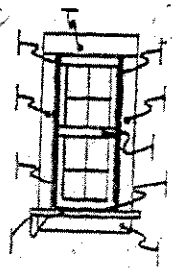
WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				







COMMENTS: THE partitions walls is of Finished sheet rock, all outer walls and structural walls are of concrete Blocks and some of concrete columns. THE door is of she-a-lac finish of wooden substrate, and the Doors jamb is of Black finish Metal substrate. THE windows components is of Brown finish Metal substrate

ADDRESS 144

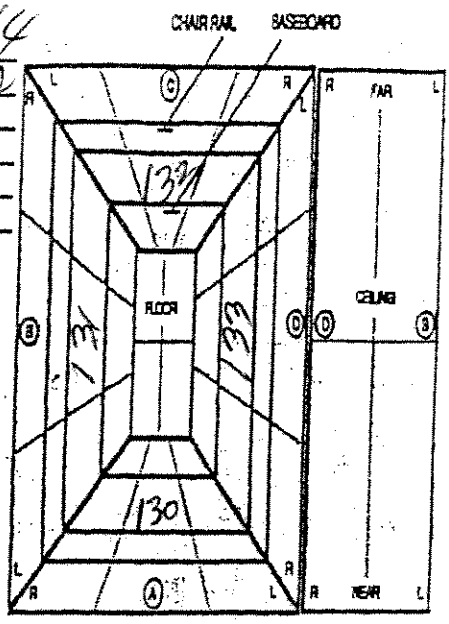
Computer Room

JOB #

CAL CHK

UNIT #____

ROOM #____

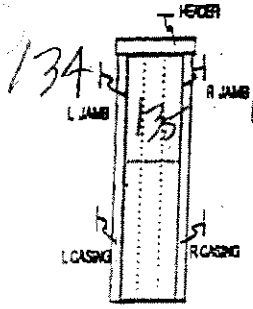


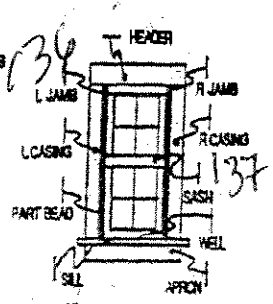
READINGS ON UNSOUND PAINT ARE CIRCLED

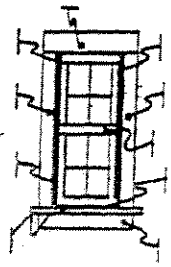
WALL	A	B	C	D
LEFT	○	○	○	○
RIGHT	○	○	○	○
JER	○			

WALL	A	B	C	D
LEFT	○	○	○	○
RIGHT	○	○	○	○
CENTER	○	○	○	○

WALL	A	B	C	D
LEFT	○	○	○	○
RIGHT	○	○	○	○
CENTER	○	○	○	○







COMMENTS: The partition walls is of Tan finished sheet rock and all outer wall and structural walls are of Tan finished concrete Blocks & concrete columns. The door is of wooden She-A-Lac finished substrate. The door frame is of Black finish metal substrate. The windows components is a Brown finished metal substrate

ADDRESS 146

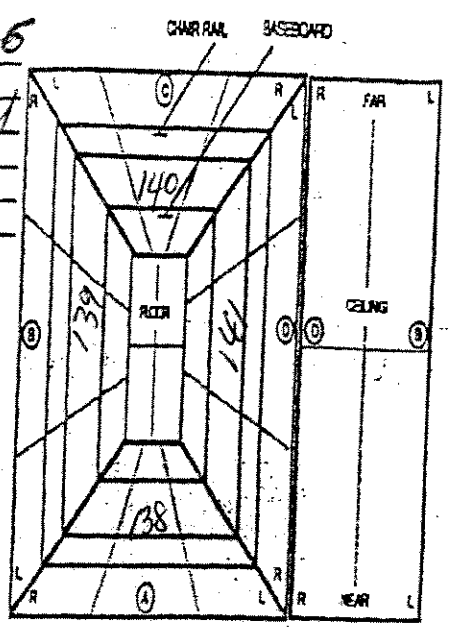
Front Conference

JOB #

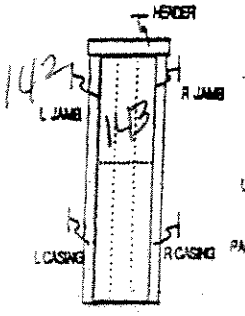
CAL CHK

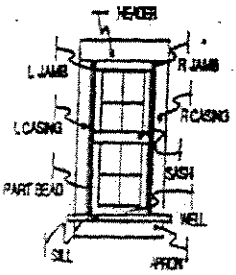
UNIT #____

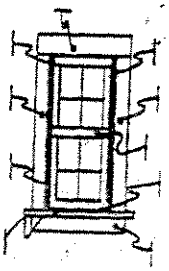
ROOM #____



READINGS ON UNSOUND PAINT ARE CIRCLED







COMMENTS: THE partitions walls is of tan finished sheetrock, all outer walls and structural walls are of concrete blocks and poured concrete columns. THE door is a She-A-Lac finish of wooden substrate, and the doors jamb is of Black finish metal substrate. THE wall A is painted pink.

ADDRESS 147

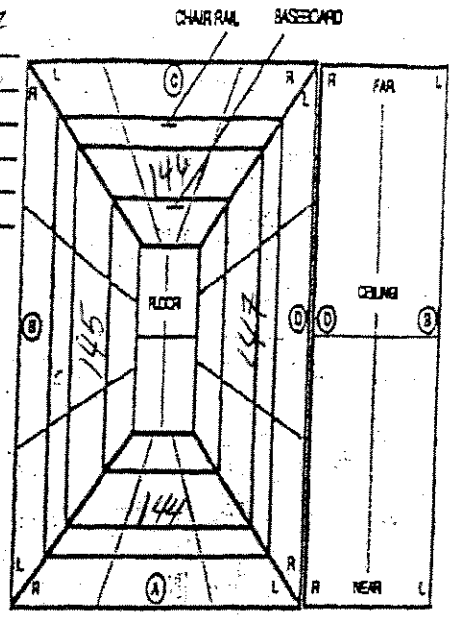
Co. Office

JOB #

CAL CHK

UNIT #____

ROOM #____



READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

JER

WALL A B C D

LEFT

RIGHT

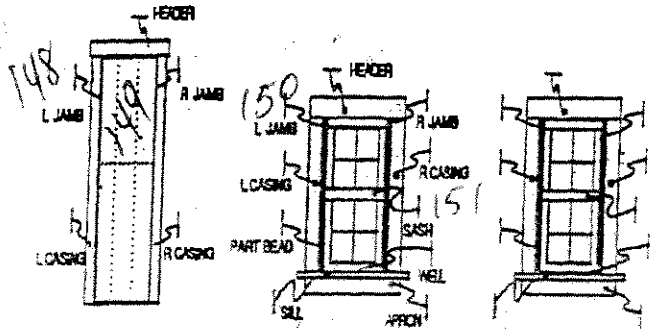
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The partitions walls is of Tan finished sheet rock and all outer walls and structures walls are of Tan finished concrete Blocks & concrete columns. The door is of wooden she-a-lac finished substrate. The door frame is of Black finished metal substrate. ~~The windows components is of~~ The windows components is of BRAWN finished metal substrate

ADDRESS 148

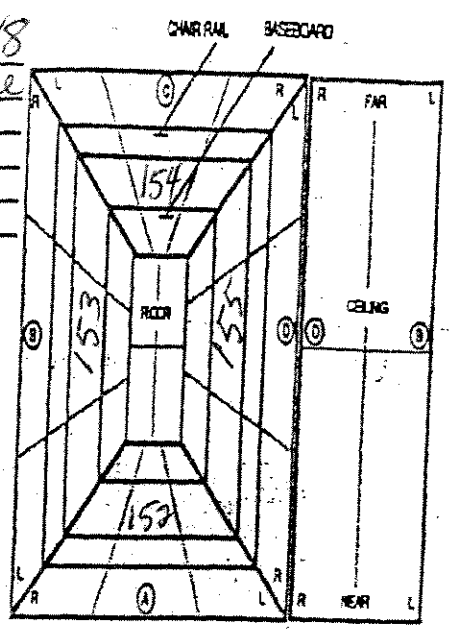
Co Office

JOB #

CAL CHK

UNIT #____

ROOM #____



READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

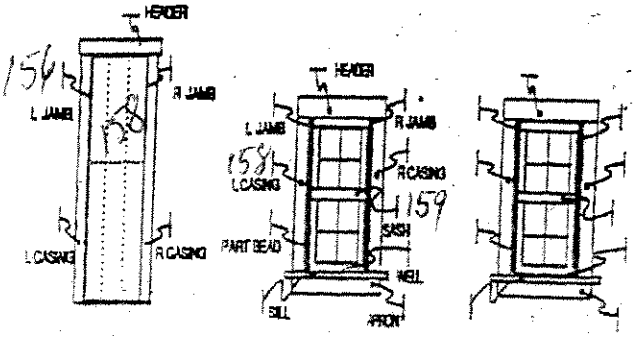
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The partitions walls is of tan finished sheet rock, all outer walls and structural wall are of concrete Blocks and poured concrete columns. The door is of She-A-Lac finished wooden substrate, and the doors jambs is of Black finished metal substrate. The windows components is of BROWN finished metal substrate.

ADDRESS 149

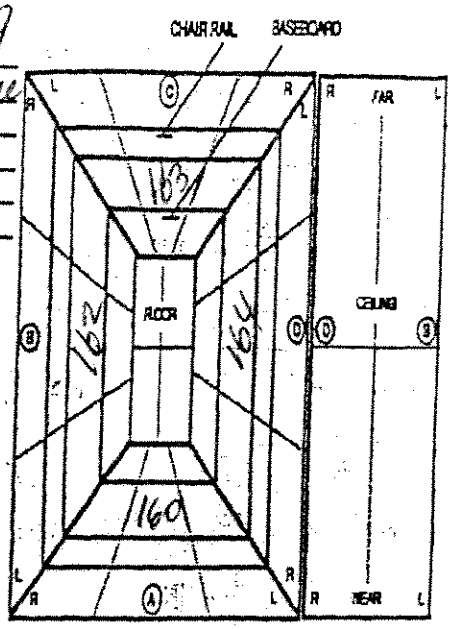
CSM office

JOB #

CAL CHK

UNIT #

ROOM #



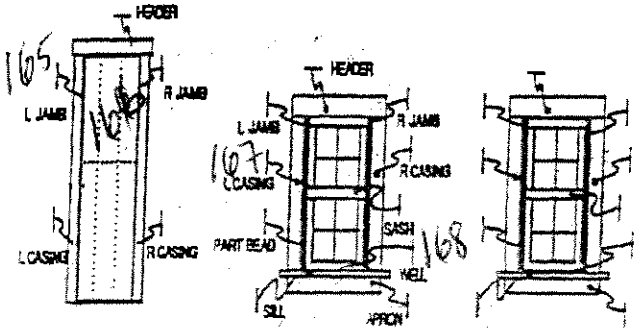
READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The partitions walls is of Tan Finished sheet rock and all outer walls and structure walls are of Tan Finished concrete Blocks & concrete columns. The door is of wooden she-a-lac finished substrate. The door frame is of Black finished metal substrate. The windows components is of Brown finished metal substrate.

ADDRESS 150

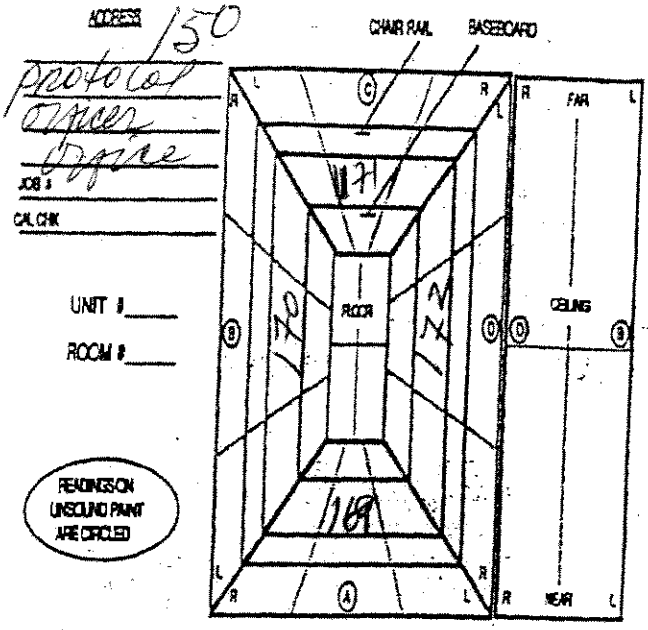
Protocol office Space

JOB #

CAL CHK

UNIT #

ROOM #



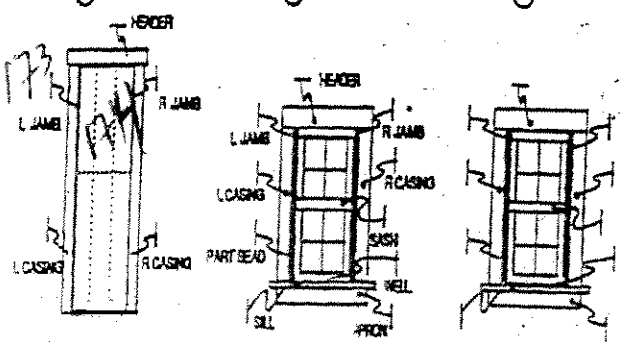
READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The partitions walls is of tan finished sheet rock, all outer walls and structural wall are of concrete blocks and poured concrete columns. The door is of she-a-lac finished wooden substrate, and the doors jambs is of Black finished metal substrate.

ADDRESS 158

HHC

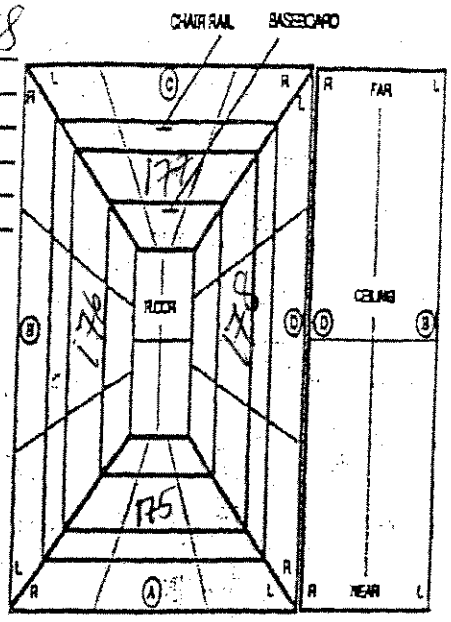
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT ○

RIGHT ○

JER ○

WALL A B C D

LEFT ○

RIGHT ○

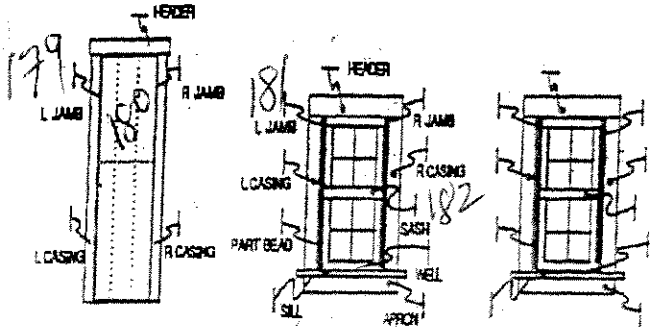
CENTER ○

WALL A B C D

LEFT ○

RIGHT ○

CENTER ○



COMMENTS: The partition walls is of Tan finished sheet rock and all outer walls and structural walls are of Tan finished concrete blocks & concrete columns. The door is of Wooden She-A-Lac finished substrate. The door frame is of Black finished metal substrate. The windows components is of Brown finished metal substrate.

ADDRESS 159

Office

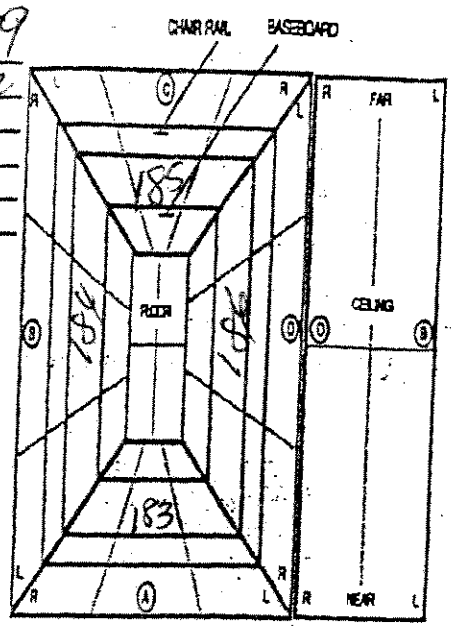
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT ○

RIGHT ○

CENTER ○

WALL A B C D

LEFT ○

RIGHT ○

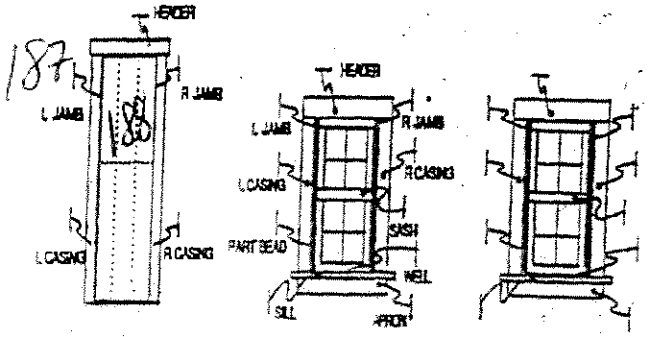
CENTER ○

WALL A B C D

LEFT ○

RIGHT ○

CENTER ○



COMMENTS: The partitions walls is of tan finished sheet rock, all outer walls and structural walls are of concrete blocks and poured concrete columns. The door is of She-A-Lac finished of wooden substrate, and the doors jambs is of Black finished metal substrate.

ADDRESS 160

Office

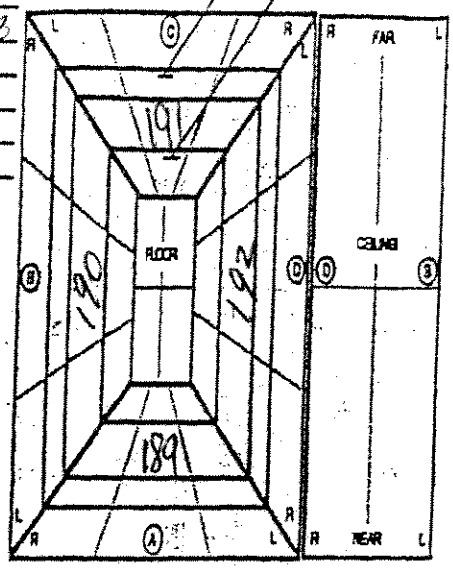
JOB #

CAL CHK

UNIT #____

ROOM #____

CHAIR RAIL BASEBOARD



READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

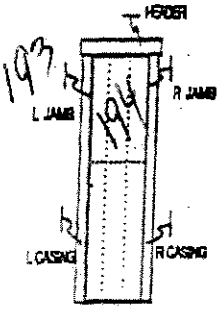
LEFT ○
RIGHT ○
CENTER ○

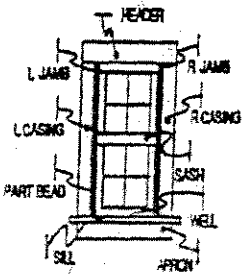
WALL A B C D

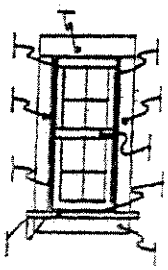
LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○







COMMENTS: The partition walls is of Tan finished sheet rock and all outer walls and structure walls are of Tan finished concrete Blocks & concrete columns. The door is of wooden she-a-lac finished substrate. The door frame is of Black finished metal substrate.

ADDRESS 161

Office

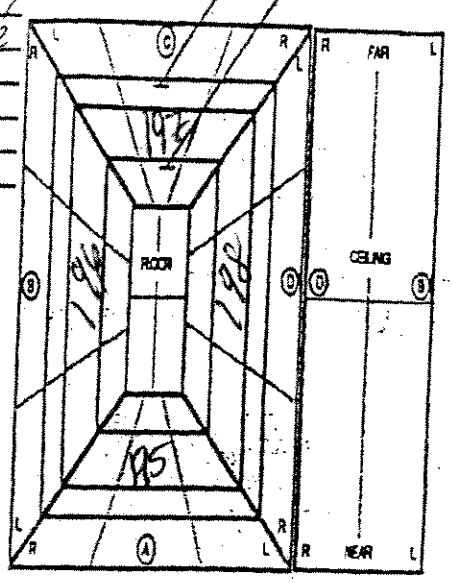
JOB #

CAL CHK

UNIT #____

ROOM #____

CHAIR RAIL BASEBOARD



READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

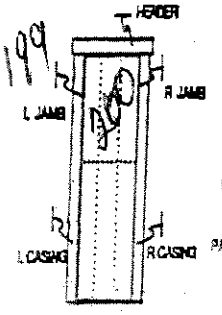
LEFT ○
RIGHT ○
CENTER ○

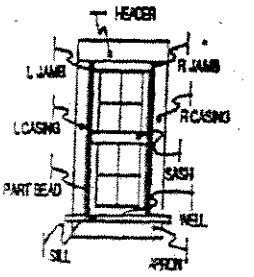
WALL A B C D

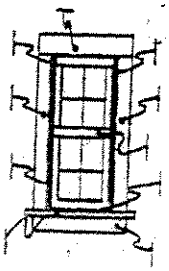
LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○







COMMENTS: The partitions walls is of tan finished sheet rock, all outer walls and structural walls are of concrete Blocks and poured concrete columns. The door is a She-A-Lac finished of wooden substrate, and the doors jambs is of Black finished Metal substrate.

ADDRESS 162 Co Rd

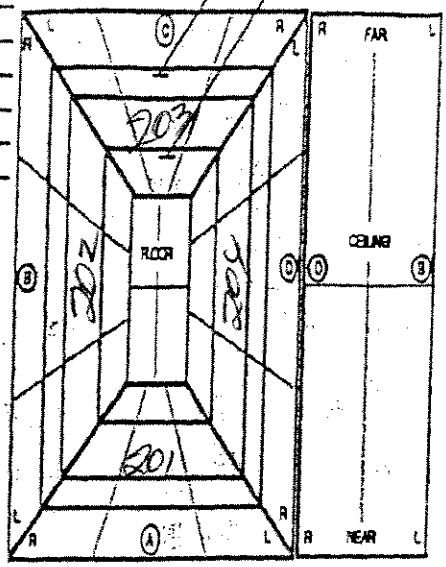
JOB #

CAL CHK

UNIT #

ROOM #

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

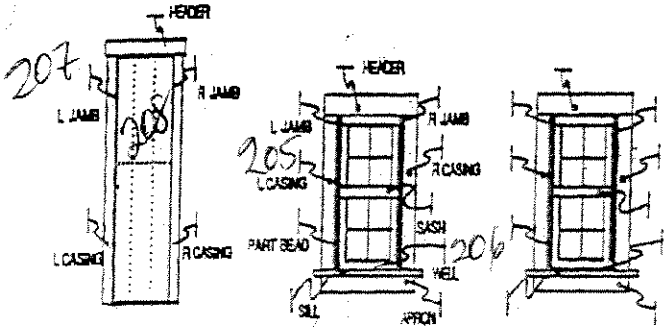
LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○



COMMENTS: THE partition walls is of Tan finished sheet rock and all outer walls and structural walls are of Tan finished concrete Blocks & poured concrete columns. THE door is of Wooden She-A-Lac finished substrate. THE door frame is of Black finished metal substrate. Windows Components is of Brown Metal substrate

ADDRESS 163 1st Street

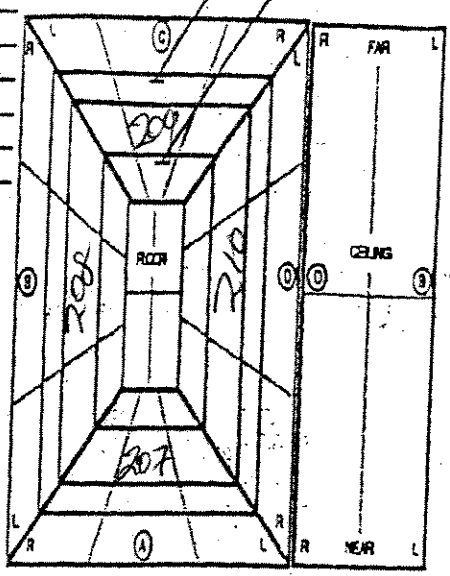
JOB #

CAL CHK

UNIT #

ROOM #

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

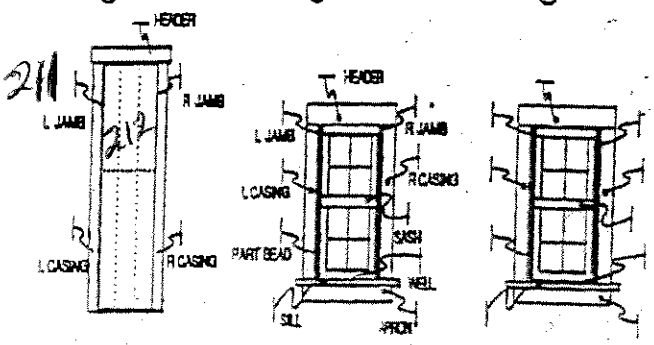
LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○



COMMENTS: THE partitions walls is of Tan finished sheet rock, all outer walls and structural walls are of concrete Blocks and poured concrete columns. THE door is a She-A-Lac finished Wooden substrate, and the Doors jambs is of Black finished Metal substrate.

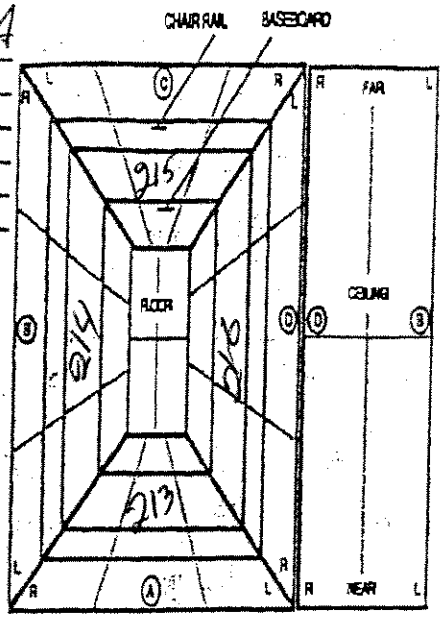
ADDRESS 164 Office

JOB #

CAL CHK

UNIT #____

ROOM #____



READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

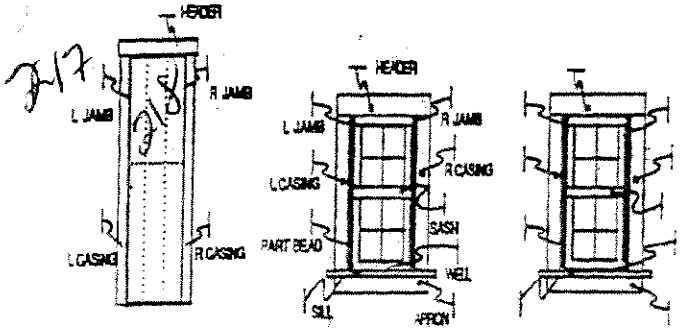
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The partitions walls is of Tan finished sheet rock and all outer walls and structural walls are of Tan finished concrete blocks & concrete columns. The door is of wooden she-a-lac finished substrate. The door frame is of Black finished metal substrate.

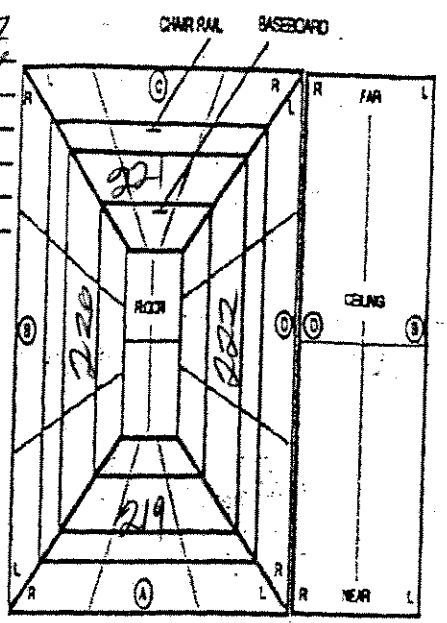
ADDRESS 157 Personal Pantry

JOB #

CAL CHK

UNIT #____

ROOM #____



READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

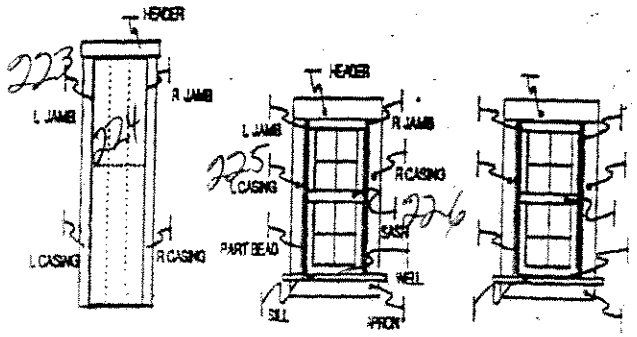
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The partitions walls is of tan finished sheet rock. all outer cinder walls and structural walls are of concrete blocks and poured concrete columns. The door is a she-a-lac finished wooden substrate, and the doors jamb is of Black finished metal substrate. The windows components is of Brown metal substrate.

ADDRESS 156

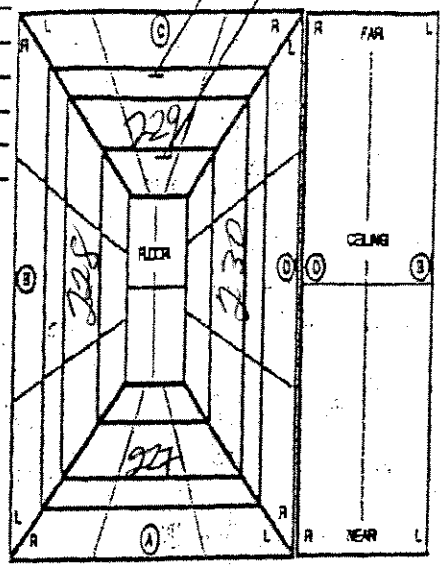
JOB #

CAL CHK

UNIT #

ROOM #

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT

RIGHT

JER

WALL A B C D

LEFT

RIGHT

CENTER

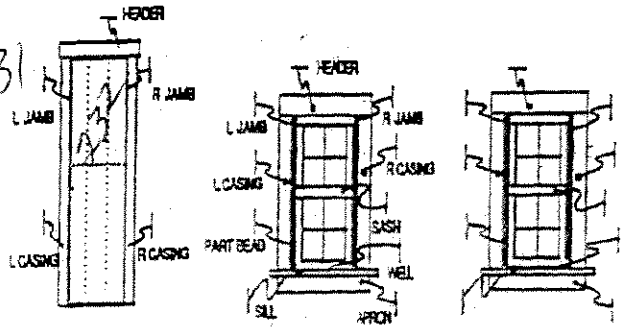
WALL A B C D

LEFT

RIGHT

CENTER

231



COMMENTS: The Partition walls are of Tan finished sheet ROCK SUBSTRATE All outer walls and STRUCTURAL WALLS ARE OF Concrete Blocks, Concrete Column or concrete Blocks BRICK LAYERED. The door IS OF She-A-Lac finished Wooden Substrate. The doors jambs IS OF Black Finished Metal Substrate.

ADDRESS 155

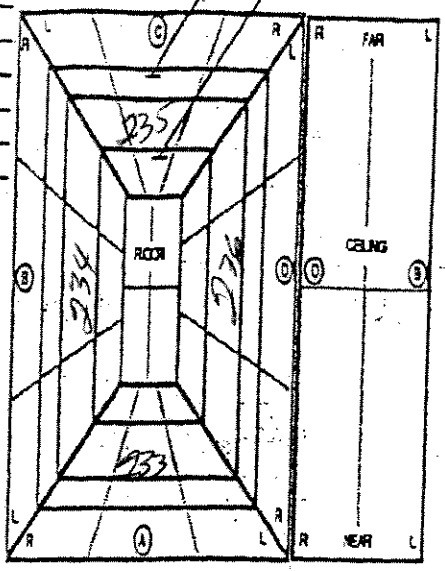
JOB #

CAL CHK

UNIT #

ROOM #

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

CENTER

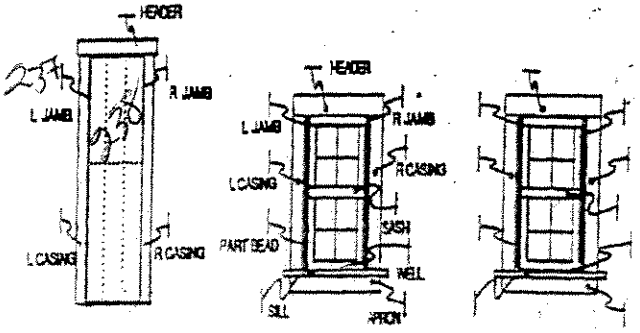
WALL A B C D

LEFT

RIGHT

CENTER

237



COMMENTS: The Partition Walls are of Tan finished Sheet Rock. All outer walls are of Concrete Blocks, Concrete Columns or Concrete Blocks, Brick Layered. The door IS OF She-A-Lac Wooden Substrate. The doors Jambs IS OF Black finished metal Substrate.

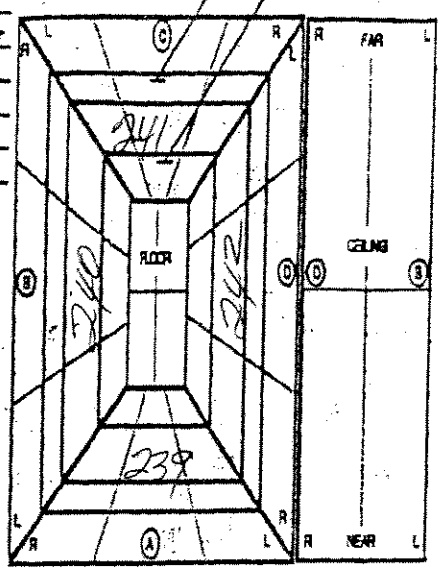
ADDRESS 136 Corydon

JOB #

CAL CHK

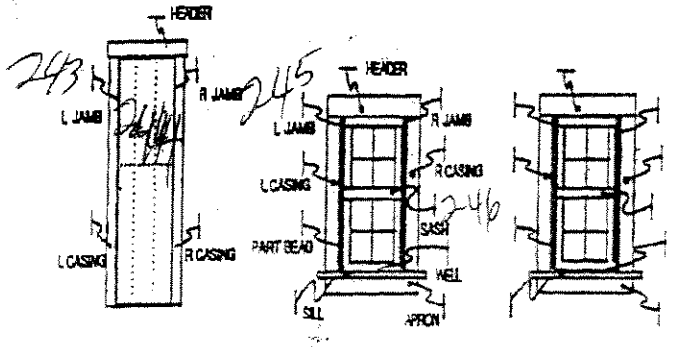
UNIT #

ROOM #



READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D	WALL A B C D	WALL A B C D
LEFT	LEFT	LEFT
RIGHT	RIGHT	RIGHT
JER	CENTER	CENTER



COMMENTS: All wall area is Sho-A-Lac Wooden Panels. The Windows Components is of Dark Brown Metal substrate. The door is of Sho-A-Lac Wooden substrate. The doors jambs is of Black Metal substrate

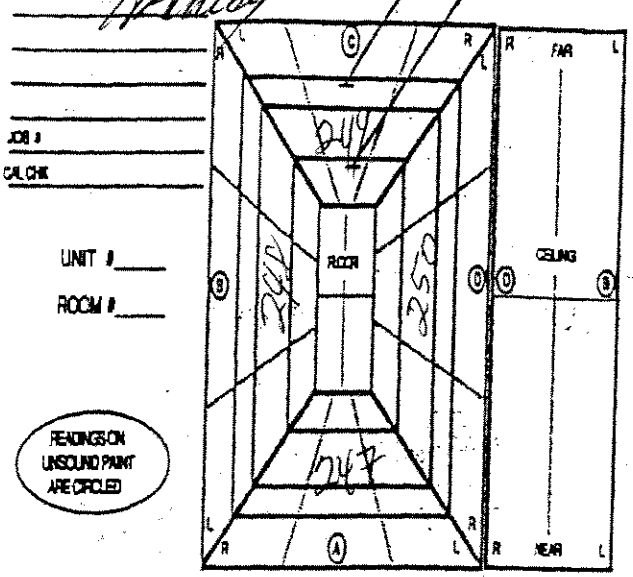
ADDRESS 136 Corydon

JOB #

CAL CHK

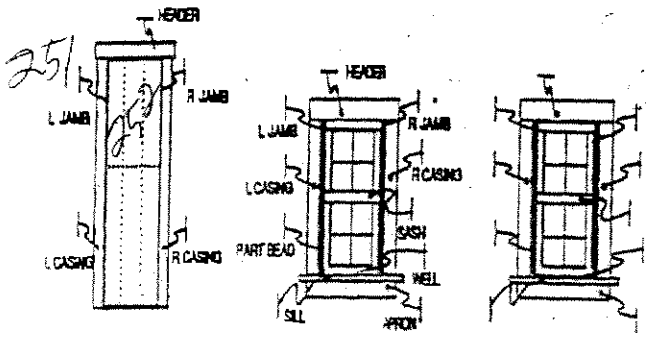
UNIT #

ROOM #



READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D	WALL A B C D	WALL A B C D
LEFT	LEFT	LEFT
RIGHT	RIGHT	RIGHT
CENTER	CENTER	CENTER



COMMENTS: Wall are either Plastered Boards, Glass Blocks, Windows and Brick covered over Concrete Blocks. All Grill doors are of Black Painted Glass and of Black Metal substrate. The door jambs is of Black metal substrate

ADDRESS 238D

JOB #

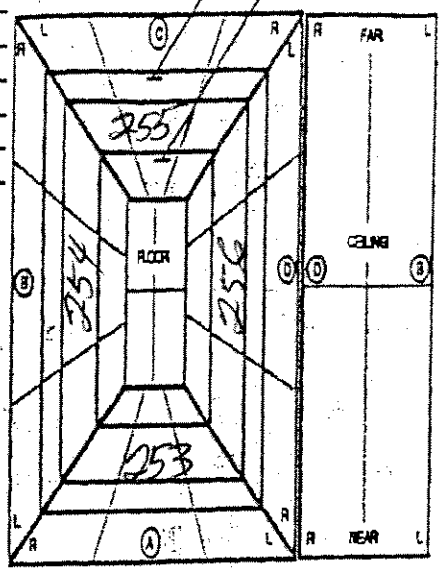
CAL CHK

UNIT #

ROOM #

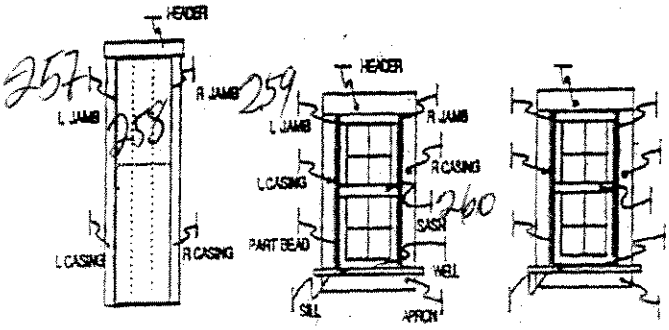
CHAIR RAIL

BASEBOARD



READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D	WALL A B C D	WALL A B C D
LEFT	LEFT	LEFT
RIGHT	RIGHT	RIGHT
JER	CENTER	CENTER



COMMENTS: The partition walls are of Tan finished sheet rock substrate. All outer walls and structural walls are of concrete blocks, concrete columns or concrete blocks. Brick covered. The door is of She-A-Lac finished wooden substrate. The doors jambs is of Black Finished Metal substrate. The windows comparing is of Brown metal substrate

ADDRESS 238E

JOB #

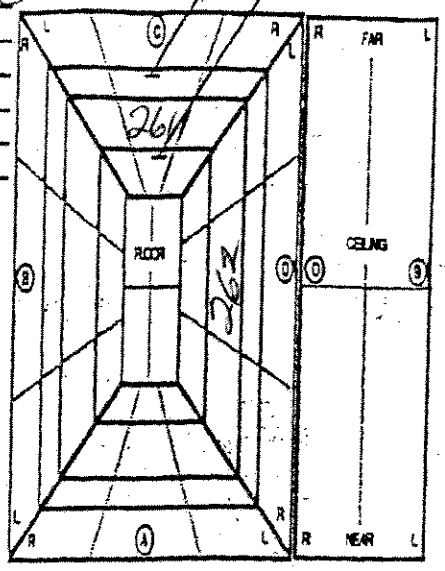
CAL CHK

UNIT #

ROOM #

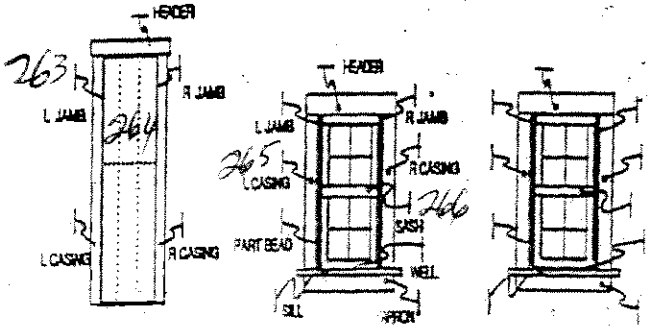
CHAIR RAIL

BASEBOARD



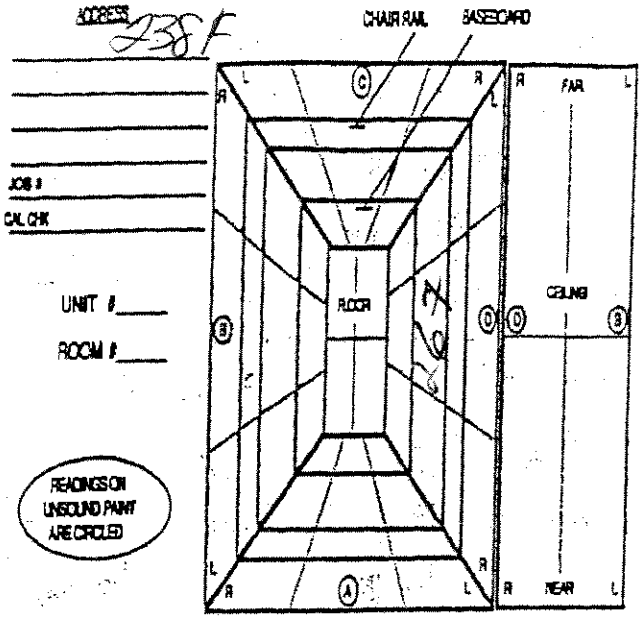
READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D	WALL A B C D	WALL A B C D
LEFT	LEFT	LEFT
RIGHT	RIGHT	RIGHT
CENTER	CENTER	CENTER



COMMENTS: The Partition Walls are of Tan finished Sheet rock. All outer walls are of Concrete Blocks, Concrete Columns or Concrete Blocks. Brick Covered. The door is of She-A-Lac Wooden Substrate. The doors Jambs is of Black Finished metal substrate. Wall A is of Precast Framed clothes walls. Wall B is of framed Glass. The windows is of Brown metal substrate.

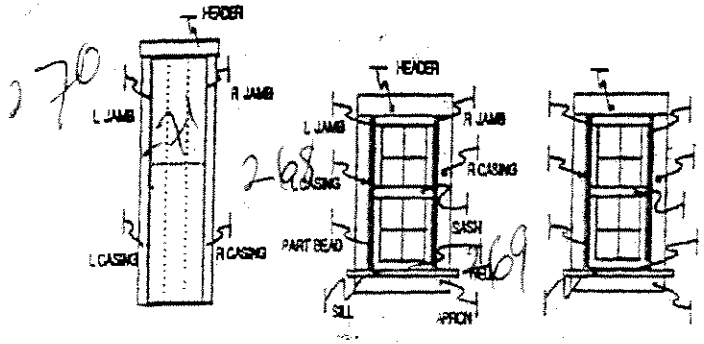
ADDRESS 238 F



WALL A B C D
LEFT
RIGHT
JER

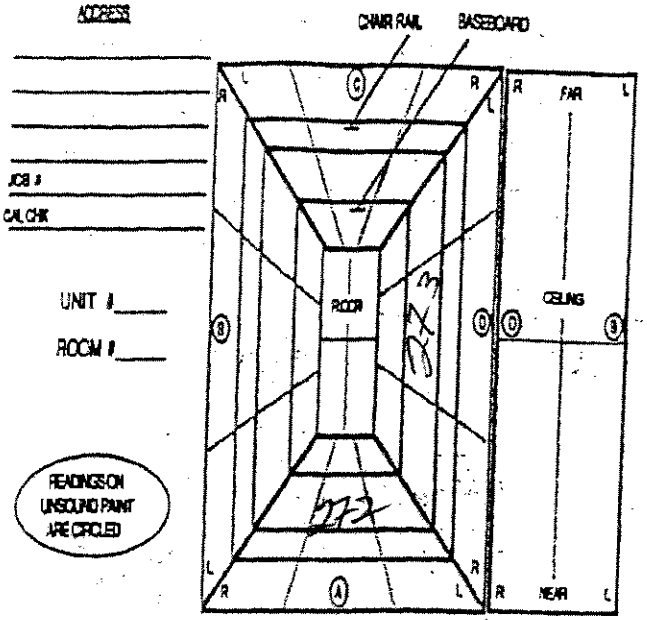
WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER



COMMENTS: The partition walls are of Tan finished sheet ROCK substrate All outer walls and structural walls are of concrete Blocks, concrete Column or concrete blocks Brick Layered. The door is of She-A-Lac finished Wooden substrate. The doors jambs is of Black finished Metal substrate. walls C and A are of Pre cast framed cloth wall. wall B is Black framed glass wall. and the Window components is of Framed Brown metal substrate

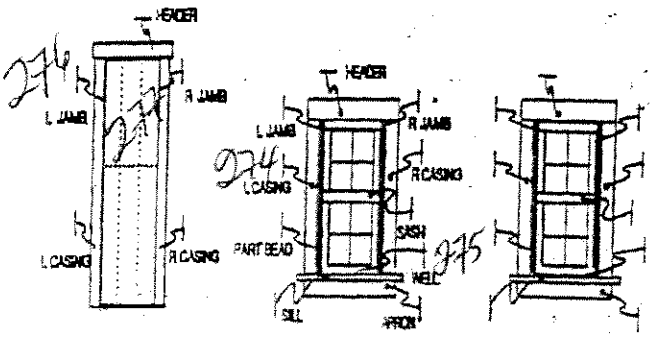
ADDRESS



WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER



COMMENTS: The Partition Walls are of Tan finished Sheet Rock. All outer walls are of Concrete Blocks, concrete Columns or concrete Blocks Brick Layered. The door is of She-A-Lac Wooden substrate. The doors Jambs is of Black finished metal substrate. wall B is of Black Framed Glass. wall C is of Pre-cost Framed Cloth walls the windows components is of Framed Brown metal substrate

ADDRESS 238A

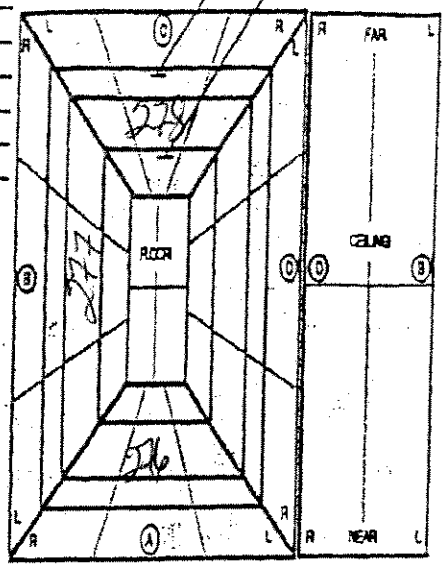
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

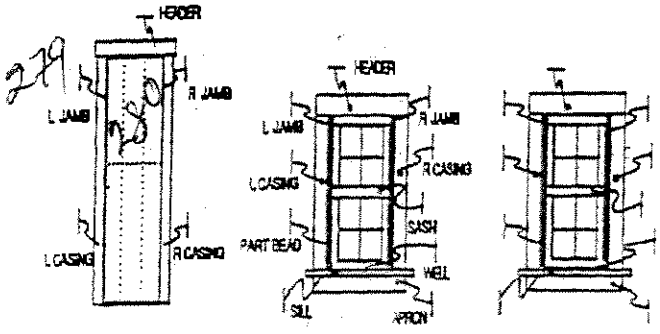
LEFT ○
RIGHT ○
JER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○



COMMENTS: The partition walls are of Tan finished sheet ROCK SUBSTRATE All outer walls and STRUCTURAL walls are of concrete Blocks, concrete column or concrete Blocks BRICK LAYERED. The door is of She-A-Lac finished Wooden Substrate. the doors jambs is of Black Finished Metal Substrate.

ADDRESS 238D

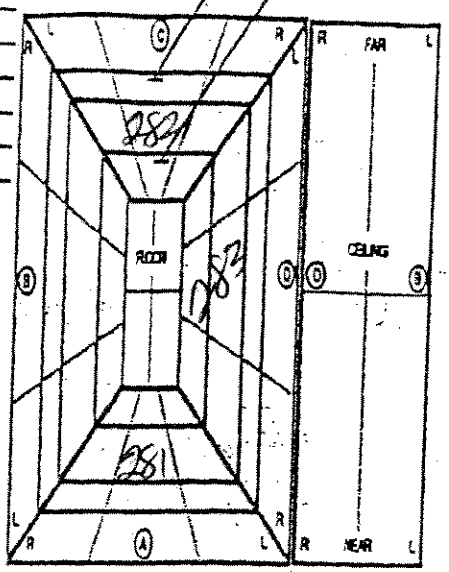
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

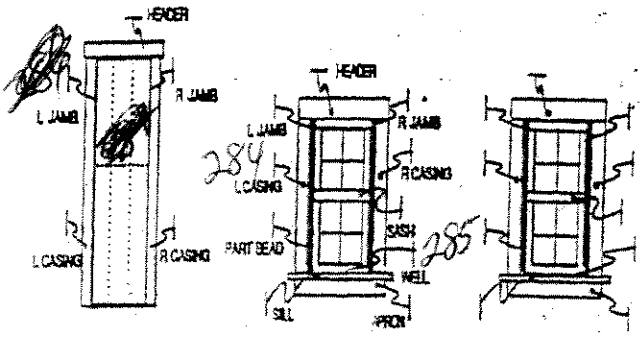
LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○



COMMENTS: The Partition Walls are of TAN finished Sheet Rock. All outer walls are of Concrete Blocks, concrete Columns or concrete Blocks, Brick Layered. ~~The door is of She-A-Lac finished Wooden Substrate. the doors jambs is of Black Finished Metal Substrate~~ THE Windows component is of Brown metal substrate

ADDRESS 2383

Office

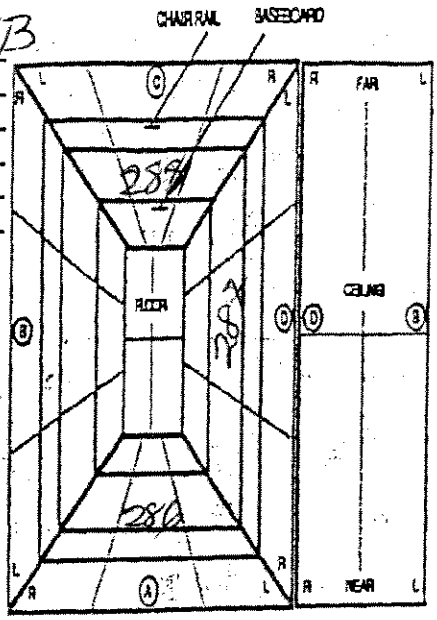
JOB #

CAL CHK

UNIT #

ROOM #

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT

RIGHT

JER

WALL A B C D

LEFT

RIGHT

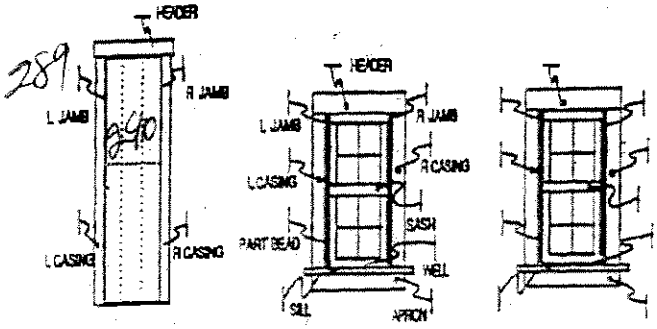
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The Partition Walls are of Tan Finished sheet ROCK SUBSTEATE All outer Walls and STRUCTURAL Walls ARE OF Concrete Blocks, Concrete Columns or Concrete Blocks BRICK Layered. The door is of She-A-Lac Finished Wooden Substeate. The doors jambs is of Black Finishe Metal Substeate.

ADDRESS 238C

Office

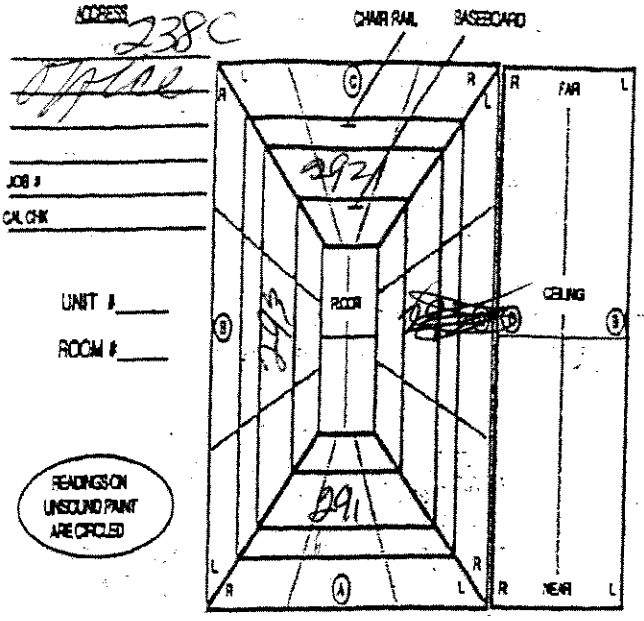
JOB #

CAL CHK

UNIT #

ROOM #

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

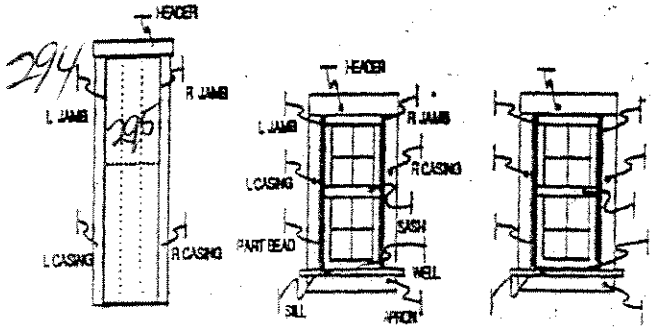
CENTER

WALL A B C D

LEFT

RIGHT

CENTER

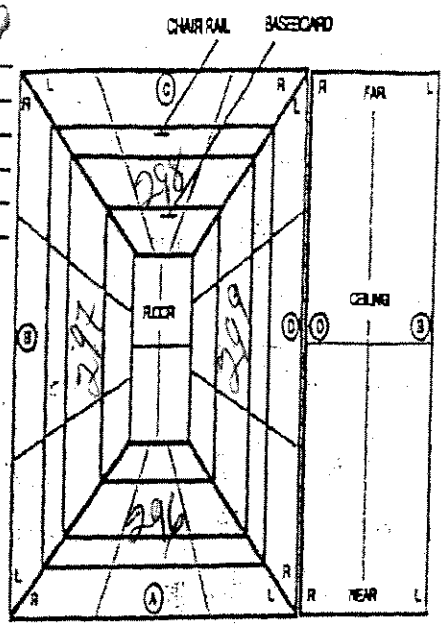


COMMENTS: The Partition Walls are of Tan finished Sheet Rock. All outer Walls are of Concrete Blocks, concrete Columns or concrete Blocks, Brick Layered. The door is of She-A-Lac Wooden Substeate. The doors Jambs is of Black finished metal Substeate.

ADDRESS 239
Atlee
OPTM
JOB #
CAL CHK

UNIT #____
ROOM #____

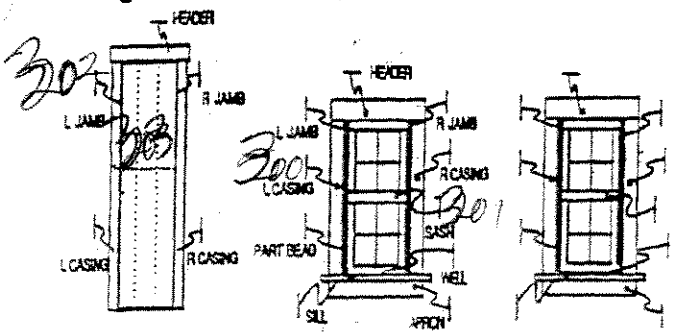
READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER

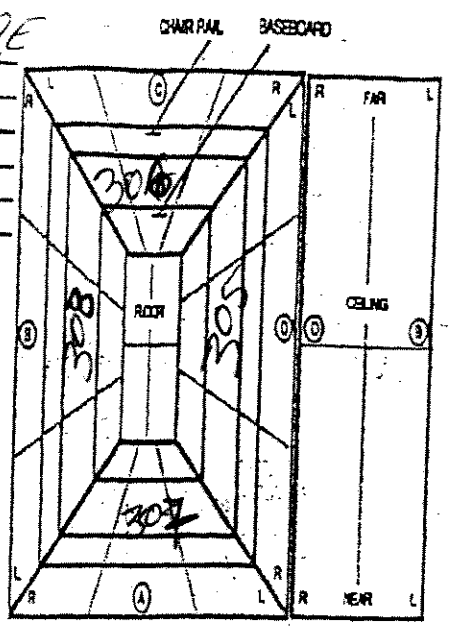


COMMENTS: The partition walls are of Furnished sheet ROCK Substrate. All outer walls and STRUCTURAL walls are of concrete Blocks, concrete column or concrete Blocks behind covered. The door is of She-A-Lac finished Wooden Substrate. The doors jambs is of Black finished Metal Substrate.

ADDRESS 239E
Personnel
Atlee
JOB #
CAL CHK

UNIT #____
ROOM #____

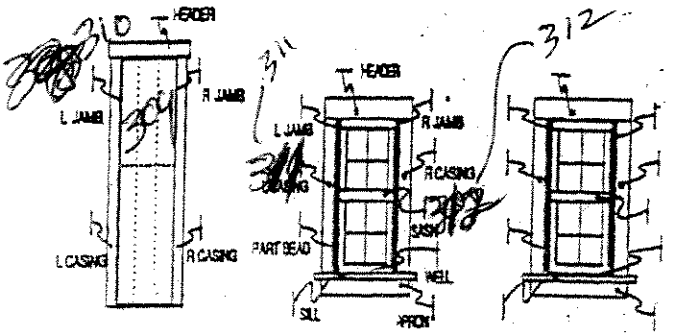
READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER



COMMENTS: The ~~Partition Walls are of Furnished~~ ~~Sheet Rock Substrate All outer walls~~ ~~are of Concrete Blocks, concrete~~ ~~Columns or concrete Blocks behind~~ ~~covered~~. The door is of She-A-Lac Wooden Substrate. The doors Jambs is of Black finished metal Substrate.

The partition walls are of Wooden Panels. The Windows are of Board finished metal

ADDRESS 345

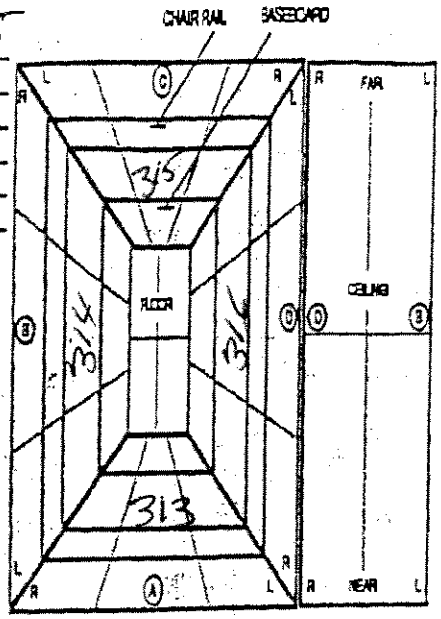
JOB #

CAL CHK

UNIT #____

ROOM #____

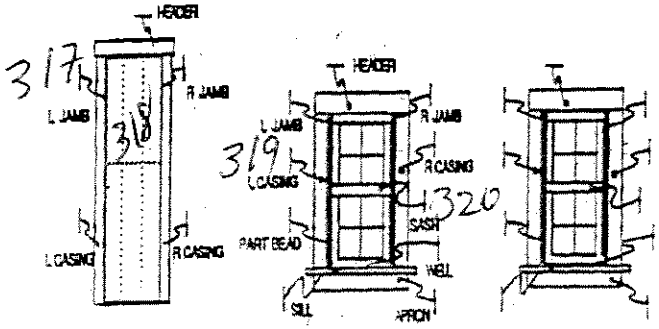
READINGS ON UNSOUND PAINT ARE CIRCLED



WALL	A	B	C	D
LEFT				
RIGHT				
JER				

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				



COMMENTS: The partition walls are of Tan finished sheet ROCK substrate. All outer walls and STRUCTURAL walls are of concrete Blocks, concrete columns or concrete Blocks Brick Layered. The door is of She-B-Lac finished ~~door~~ metal substrate. The doors jambs is of Black Finished Metal substrate.

ADDRESS 334

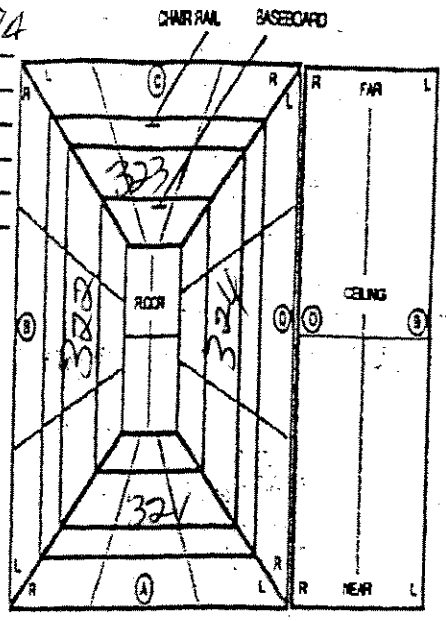
JOB #

CAL CHK

UNIT #____

ROOM #____

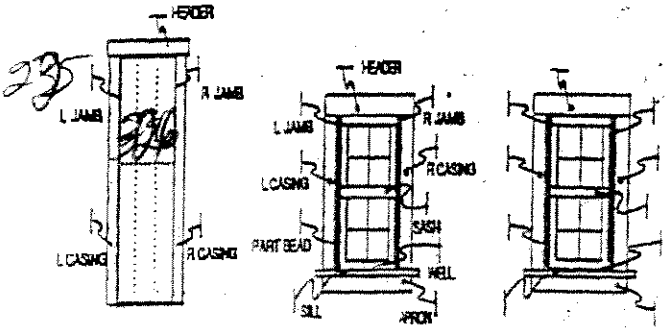
READINGS ON UNSOUND PAINT ARE CIRCLED



WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				



COMMENTS: The Partition Walls are of Tan finished Sheet Rock. All outer walls are of Concrete Blocks, Concrete Columns or Concrete Blocks, Brick Layered. The door is of She-A-Lac Wooden Substrate. The doors Jambs is of Black Finished metal Substrate.

ADDRESS 244

PUB

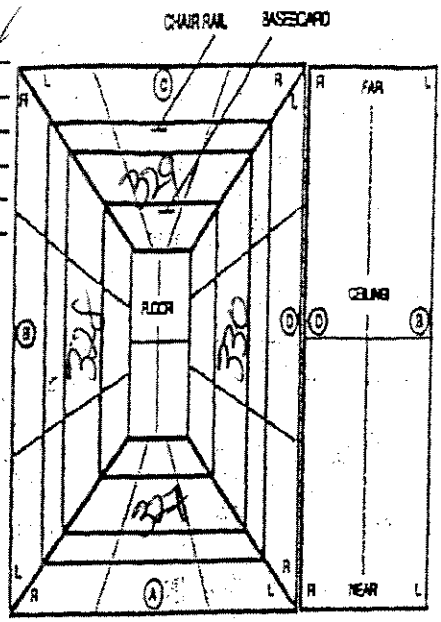
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

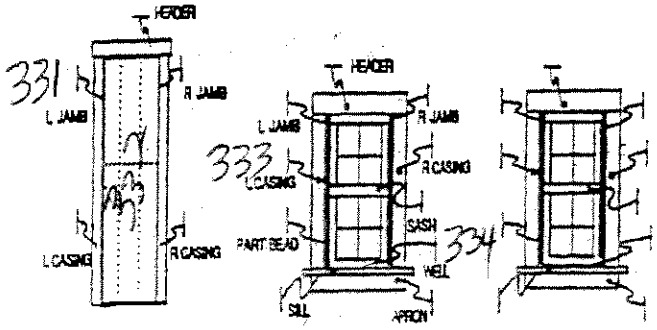
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The partition walls are of Tan finished sheet rock substrate. All outer walls and structural walls are of concrete blocks, concrete column or concrete blocks brick layered. The door is of She-A-Lac finished wooden substrate. The doors jambs is of Black finished metal substrate. The windows components is of Brown metal substrate.

ADDRESS 231

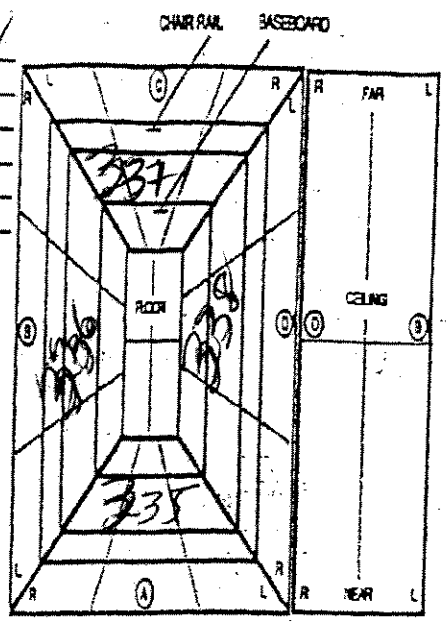
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

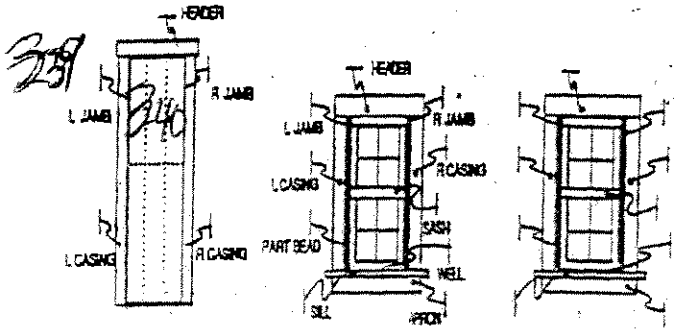
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The Partition Walls are of Tan finished Sheet Rock. All outer walls are of Concrete Blocks, concrete Columns or Concrete Blocks, Brick Layered. The door is of She-A-Lac Wooden Substrate. The doors Jambs is of Black finished metal substrate.

ADDRESS 230

Office

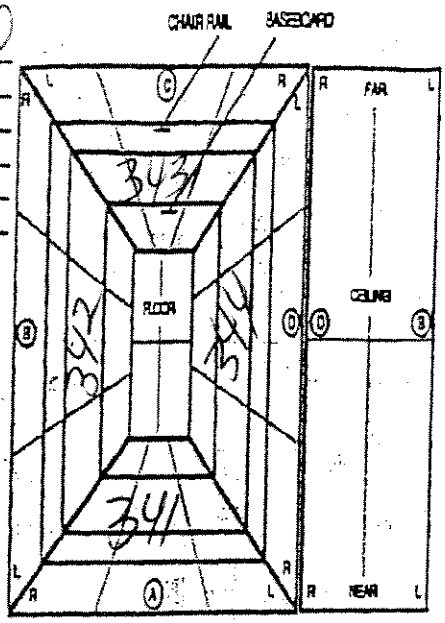
JOB #

CAL CHK

UNIT #

ROOM #

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

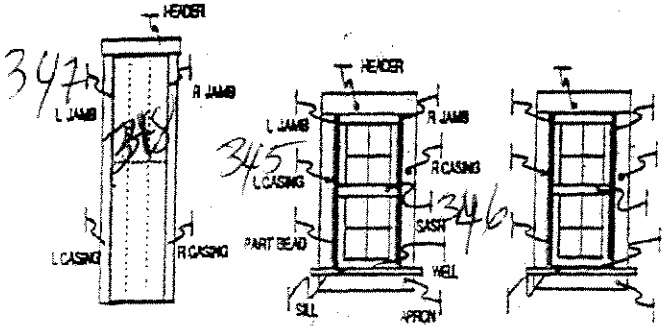
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The Partition walls are of Tan finished sheet rock substrate All outer walls and structural walls are of concrete Blocks, concrete column or concrete Blocks Brick Layered. The door is of She-A-Lac finished Wooden Substrate. The doors jambs is of Black Finishe Metal substrate. The window is of Brown metal substrate

ADDRESS 232

Office

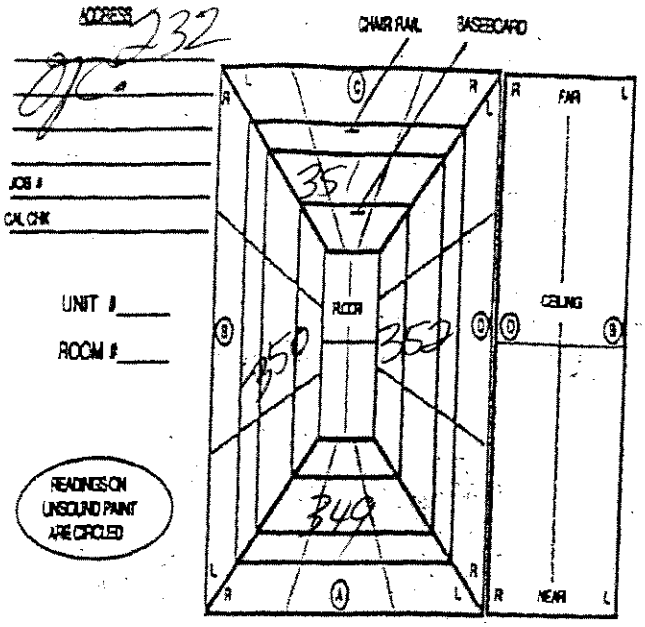
JOB #

CAL CHK

UNIT #

ROOM #

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

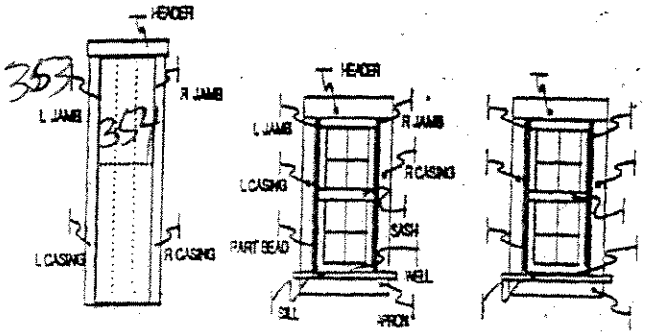
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The Partition Walls are of Tan finished Sheet rock. All outer walls are of Concrete Blocks, concrete Columns or concrete Blocks. Brick Layered. The door is of She-A-Lac Wooden Substrate. The doors Jambs is of Black finished metal Substrate.

ADDRESS 229

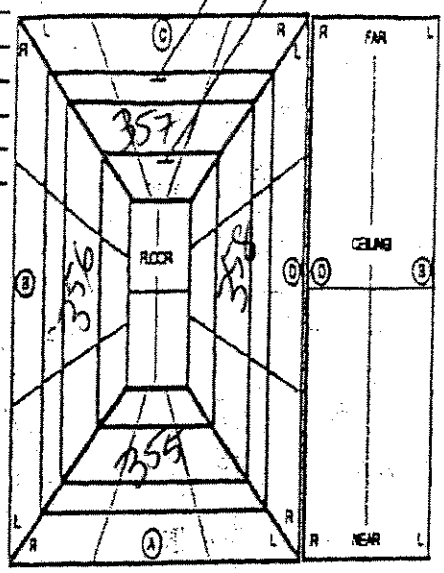
JOB #

CAL CHK

UNIT #

ROOM #

CHAIR RAIL BASEBOARD



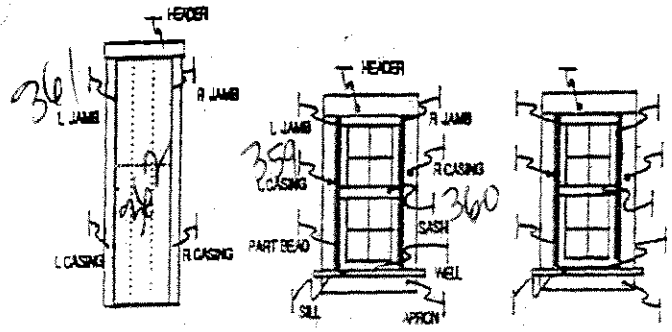
READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The partition walls are of Tan finished sheet rock substrate. All outer walls and structural walls are of concrete blocks, concrete column or concrete blocks brick layered. The door is of she-A-Lac finished wooden substrate. The doors jambs is of Black finished metal substrate. The window components is of Black metal substrate.

ADDRESS 228

JOB #

CAL CHK

UNIT #

ROOM #

CHAIR RAIL BASEBOARD

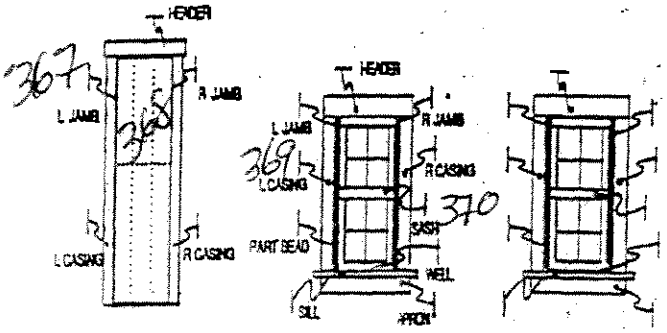
READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The Partition Walls are of Tan finished Sheet Rock. All outer walls are of Concrete Blocks, concrete Columns or Concrete Blocks, Brick Layered. The door is of She-A-Lac Wooden Substrate. The doors Jambs is of Black finished metal substrate. The windows components is of Brown metal substrate.

ADDRESS 327

DE #

Commercial

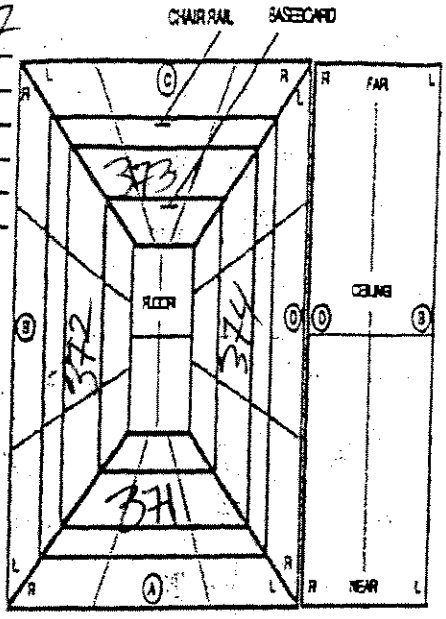
JOB # Section

CAL CHK

UNIT #_____

ROOM #_____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

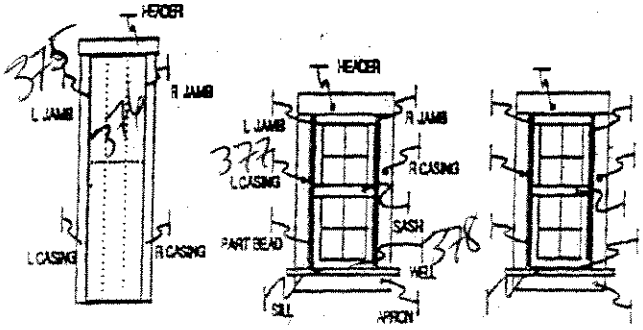
LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○



COMMENTS: The partition walls are of Tan finished sheet rock substrate All outer walls and structural walls are of concrete blocks, concrete column or concrete blocks brick layered. The door is of She-A-Lac finished wooden substrate. The doors jambs is of Black finished metal substrate. The windows components is of Brown metal substrate

ADDRESS 326

DE #

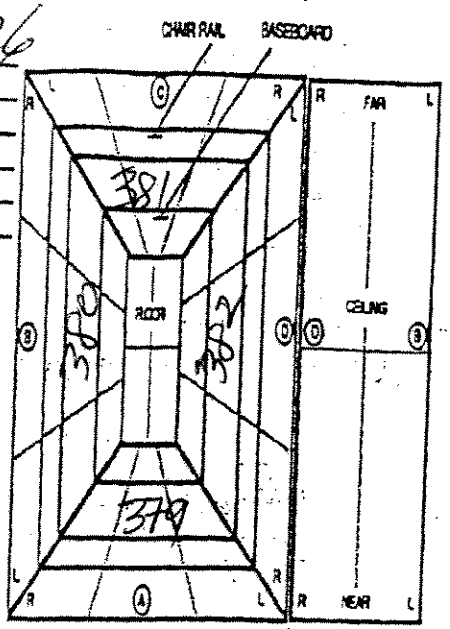
JOB #

CAL CHK

UNIT #_____

ROOM #_____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

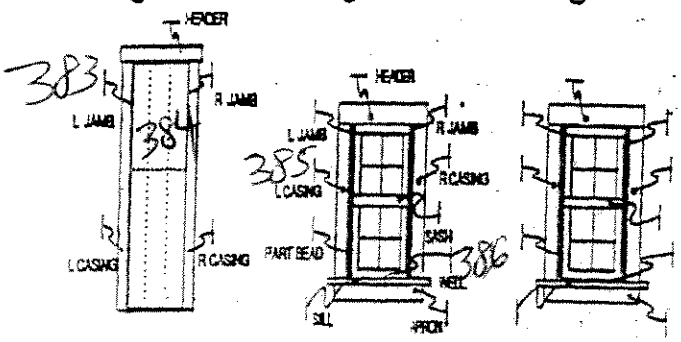
LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○



COMMENTS: The Partition Walls are of Tan finished Sheet Rock. All outer walls are of Concrete Blocks, Concrete Columns or Concrete Blocks, Brick Layered. The door is of She-A-Lac Wooden Substrate. The doors Jambs is of Black finished metal substrate. The windows components is of Brown Metal substrate

ADDRESS 226A

PUBLIC AFFAIRS

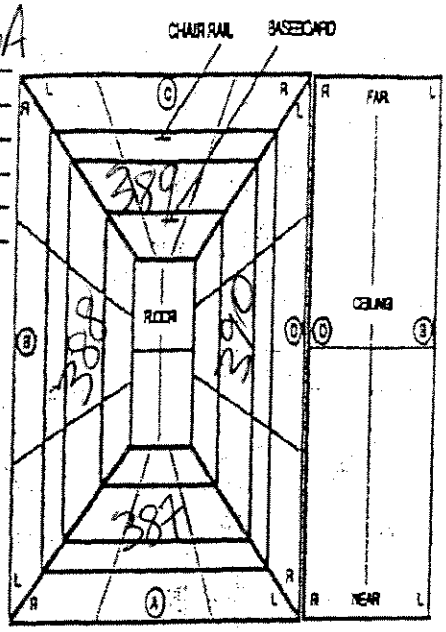
JOB #

CAL CHK

UNIT #

ROOM #

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

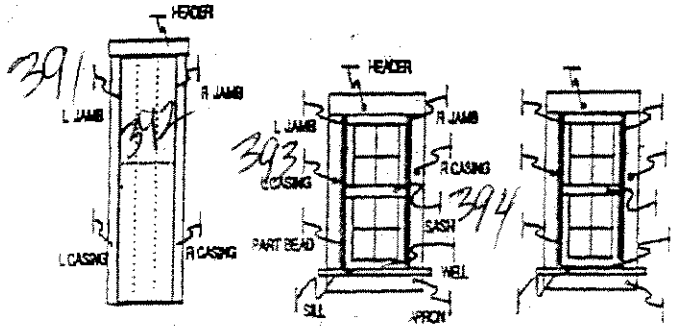
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The partition walls are of tan finished sheet rock substrate. All outer walls and structural walls are of concrete blocks, concrete column or concrete blocks brick layered. The door is of She-A-Lac finished wooden substrate. The doors jambs is of Black Finished Metal substrate. The windows components is of Brown metal substrate.

ADDRESS 217

Classroom

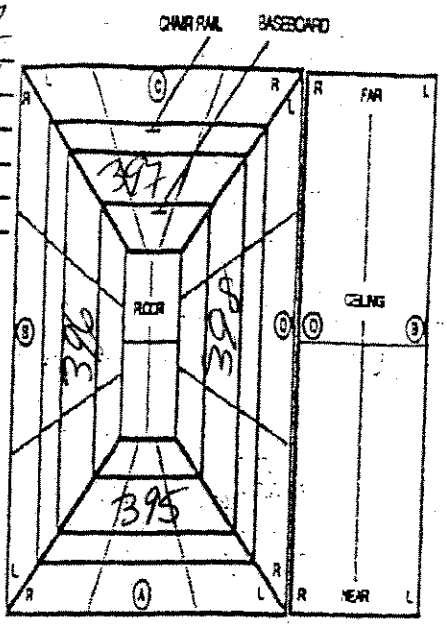
JOB #

CAL CHK

UNIT #

ROOM #

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

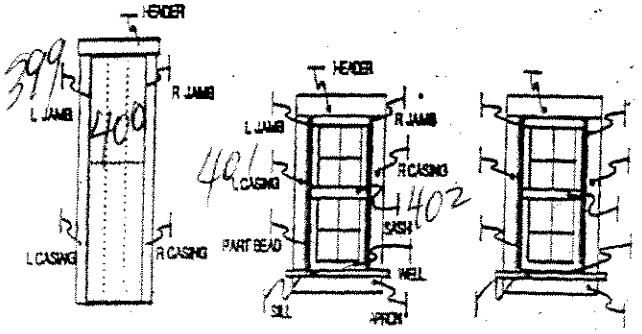
CENTER

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: The Partition Walls are of tan finished Sheet Rock. All outer walls are of Concrete Blocks, Concrete Columns or Concrete Blocks, Brick Layered. The door is of She-A-Lac Wooden Substrate. The doors Jambs is of Black finished metal substrate. The Windows components is of Brown metal

ADDRESS 418 E
Office

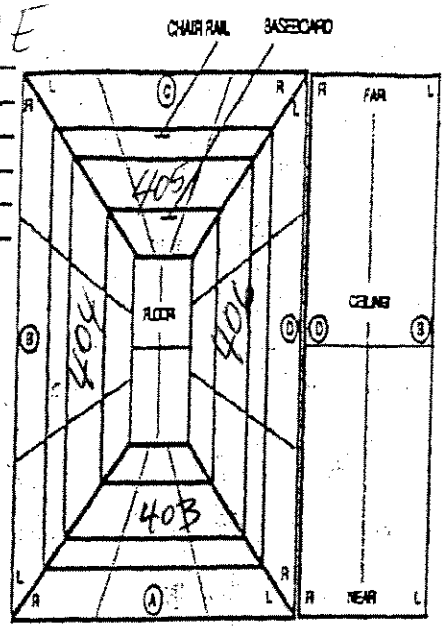
JOB #

CAL CHK

UNIT #____

ROOM #____

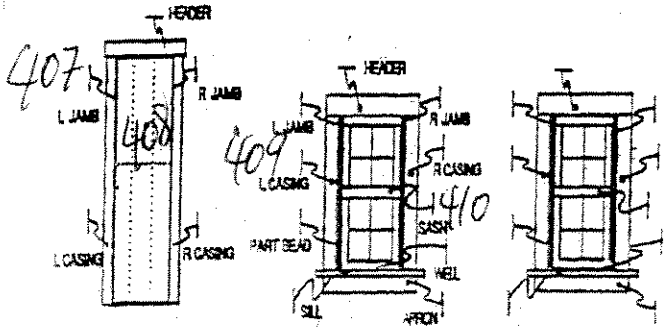
READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER



COMMENTS: The partition walls are of Tan finished sheet ROCK substrate All outer walls and STRUCTURAL walls are of concrete Blocks, concrete Column or concrete Blocks Brick Layered. The door is of She-A-Lac finished Wooden Substrate. the doors jambs is of Black finished Metal substrate. The windows components is of Brown metal substrate

ADDRESS 421
Office

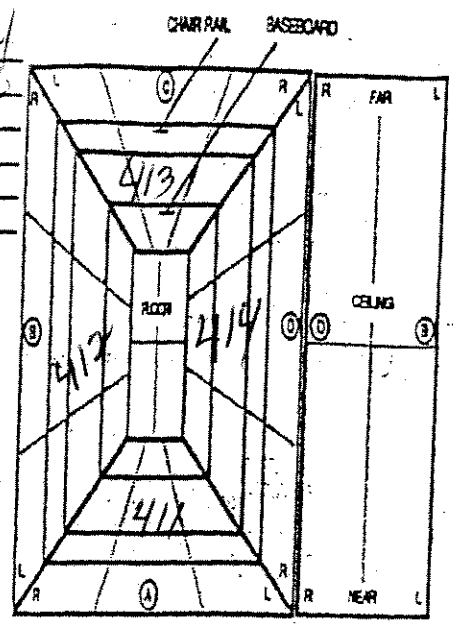
JOB #

CAL CHK

UNIT #____

ROOM #____

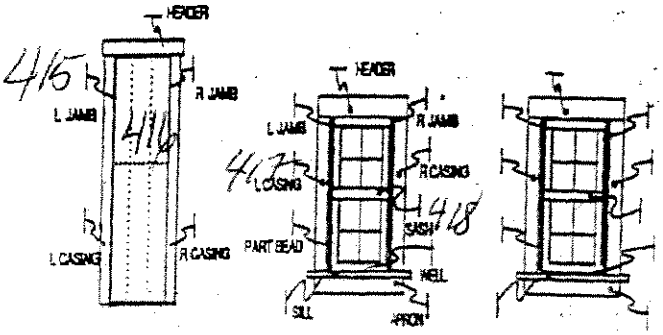
READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER



COMMENTS: The Partition Walls are of Tan finished Sheet Rock. All outer walls are of Concrete Blocks, concrete Columns or Concrete Blocks, Brick Layered. The door is of She-A-Lac Wooden Substrate. The doors Jambs is of Black finished metal substrate. The Window components is of Brown metal substrate.

ADDRESS 227

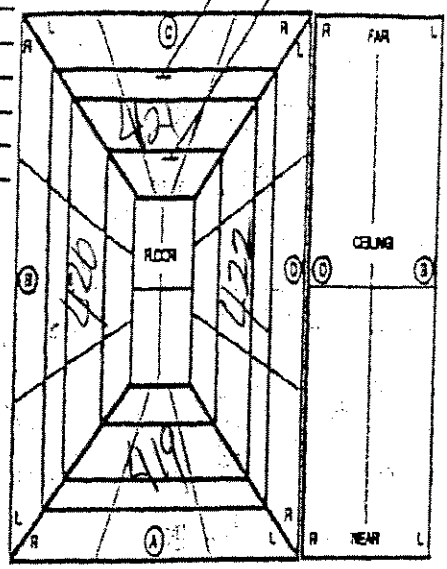
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

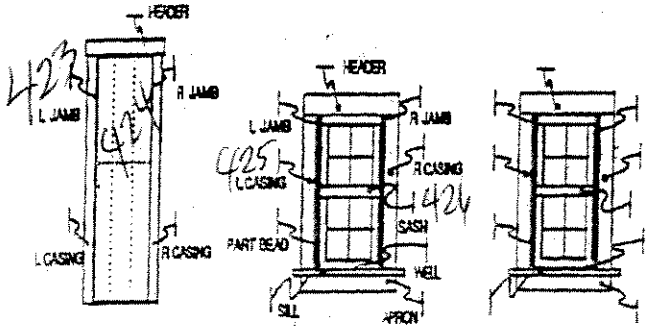
LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○



COMMENTS: The partition walls are of Tan finished sheet ROCK substrate All outer walls and STRUCTURAL walls are of concrete Blocks, concrete column or concrete Blocks Brick Layered. The door is of She-A-Lac finished Wooden Substrate. the doors jambs is of Black Finishe Metal Substrate. The windows components is of metal substrate

ADDRESS Hallway

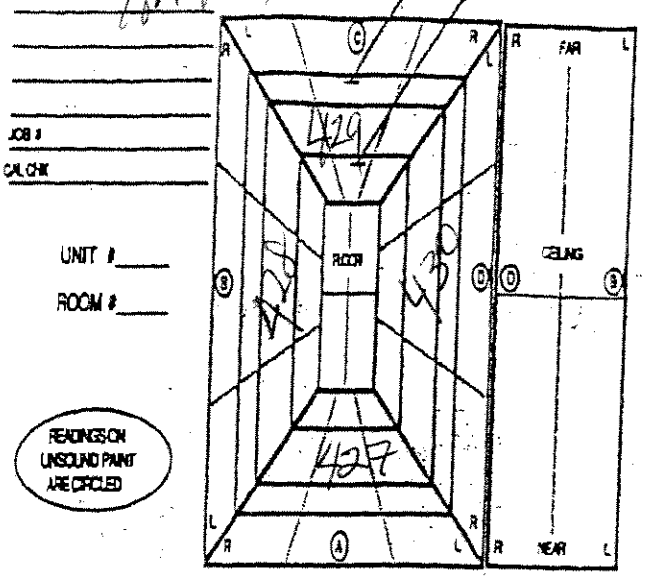
JOB #

CAL CHK

UNIT #____

ROOM #____

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

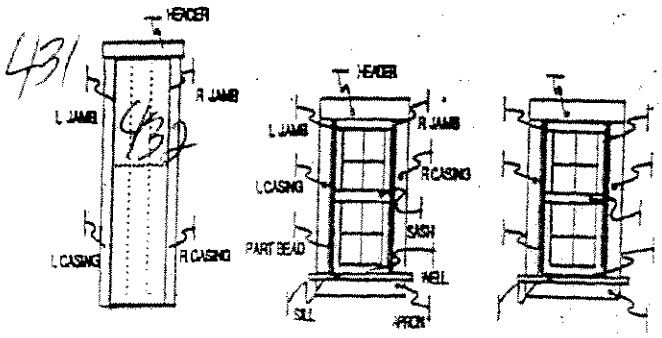
LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○

WALL A B C D

LEFT ○
RIGHT ○
CENTER ○



COMMENTS: The Partition Walls are of Tan finished Sheet Rock. All outer walls are of Concrete Blocks, concrete Columns or Concrete Blocks, Brick Layered. The door is of She-A-Lac Wooden Substrate. The doors Jambs is of Black finished metal Substrate.

ADDRESS: Wales 234 CHAIR RAIL BASEBOARD

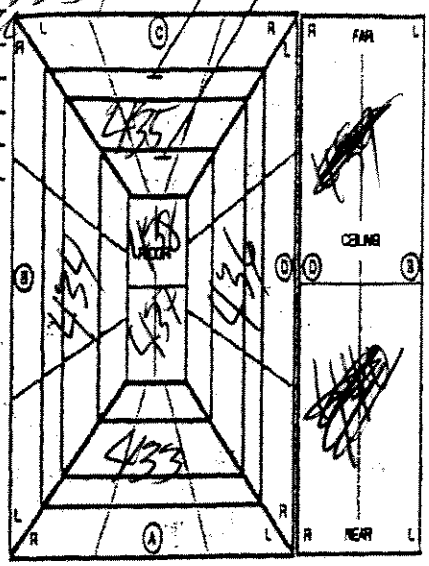
Bathroom

JOB #

CAL CHK

UNIT #

ROOM #



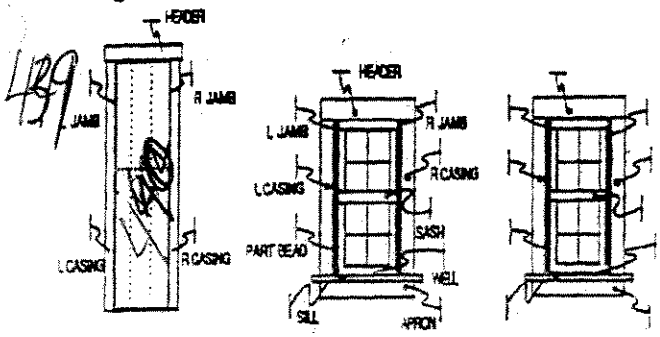
READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

CENTER



COMMENTS: 1/2 of the wall is of green ceramic tile 1/2 is white painted sheet rock. The door is of sheet a/c wooden surround to a duo The door frame is black on metal substrate. The floor is of green & black ceramic tiles confined

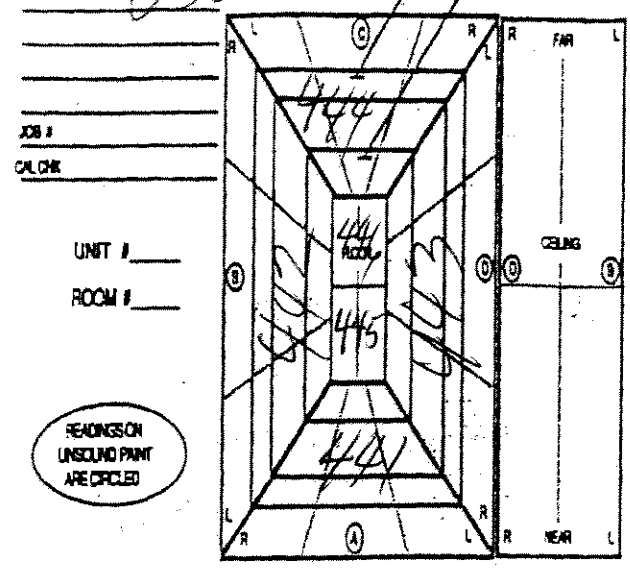
ADDRESS: 235 CHAIR RAIL BASEBOARD

JOB #

CAL CHK

UNIT #

ROOM #



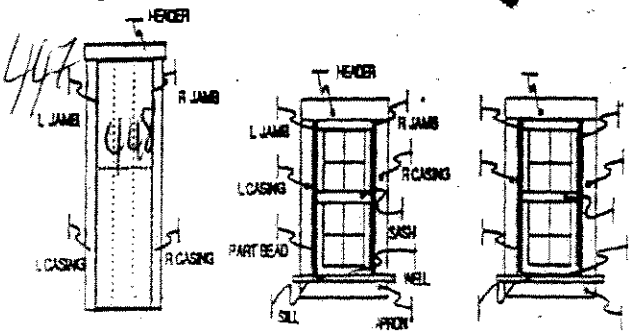
READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT

RIGHT

CENTER

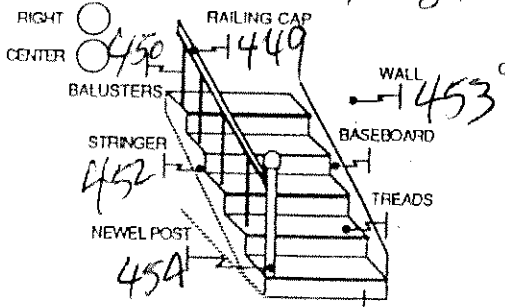


COMMENTS: 1/2 of the walls is of BEIGE ceramic tiles and 1/2 white over sheet rock. The floor is of BROWN BEIGE ceramic tiles confined The door is of the A/C wooden substrate and the door jamb is of Black metal substrate

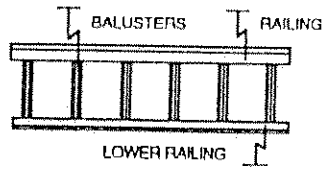
JOB # Foretmark II - 027

EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ○
RIGHT ○
CENTER ○

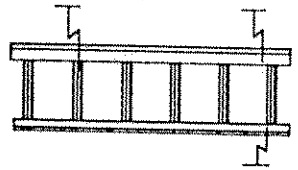
2nd Right



EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ○
RIGHT ○
CENTER ○

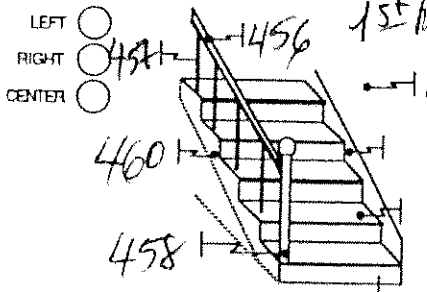


EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ○
RIGHT ○
CENTER ○

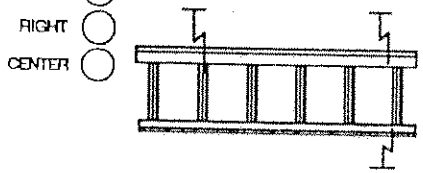


EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ○
RIGHT ○
CENTER ○

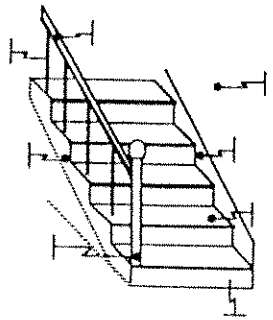
1st Right



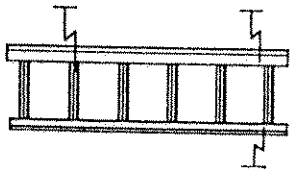
EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ○
RIGHT ○
CENTER ○



EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ○
RIGHT ○
CENTER ○



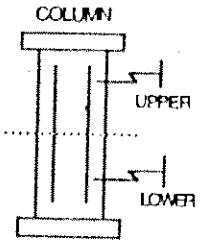
EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ○
RIGHT ○
CENTER ○



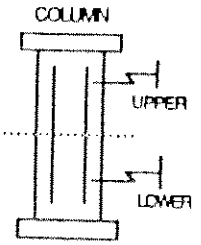
Interior ONLY

JOB # .....

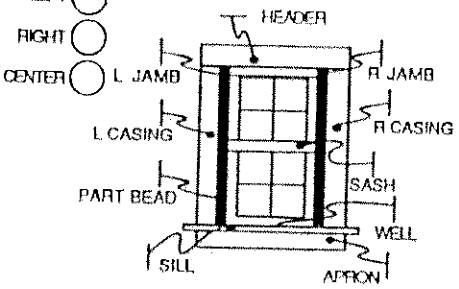
EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ○
RIGHT ○
CENTER ○



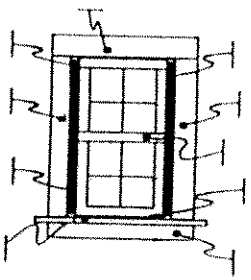
EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ○
RIGHT ○
CENTER ○



EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ○
RIGHT ○
CENTER ○



EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ○
RIGHT ○
CENTER ○



EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
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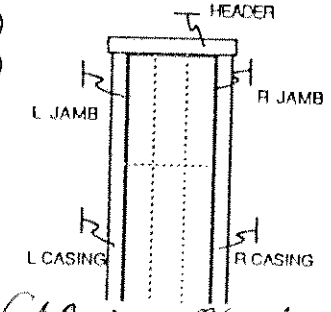
RIGHT ○
CENTER ○



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ROOM # .....
WALL (A) (B) (C) (D)
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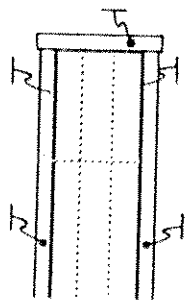
RIGHT ○
CENTER ○



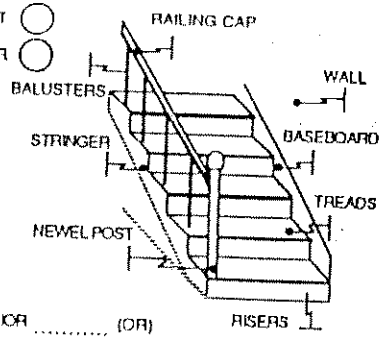
Interior ONLY

COMMENTS: The paint on the Railing Cap is Black Dust in Interior area Installation assumed as the Paint on the Risers Balusters and Newell Pole

OMS BLDG

JOB # .....

EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ◯
RIGHT ◯
CENTER ◯



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ROOM # .....
WALL (A) (B) (C) (D)
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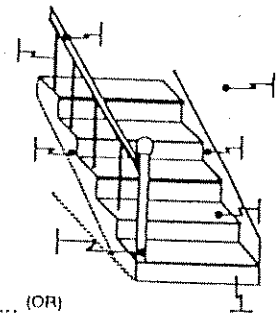
RIGHT ◯
CENTER ◯



EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
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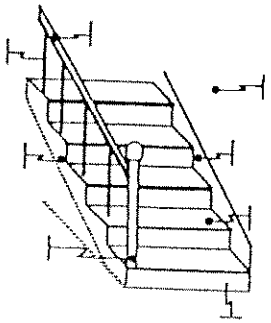
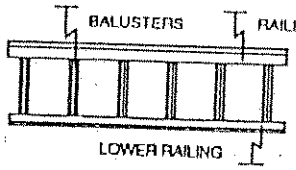
RIGHT ◯
CENTER ◯



EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ◯
RIGHT ◯
CENTER ◯



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ROOM # .....
WALL (A) (B) (C) (D)
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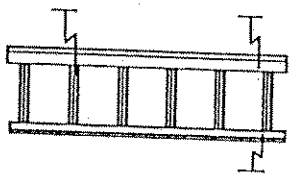
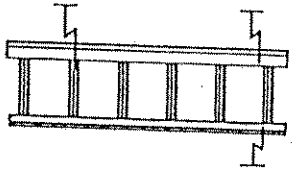
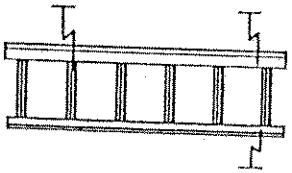
RIGHT ◯
CENTER ◯



EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ◯
RIGHT ◯
CENTER ◯

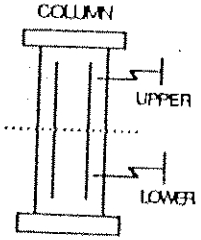


EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ◯
RIGHT ◯
CENTER ◯

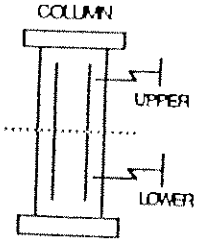


JOB # .....

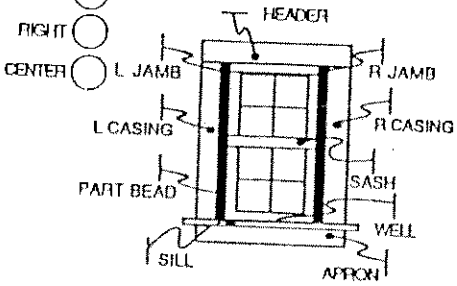
EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ◯
RIGHT ◯
CENTER ◯



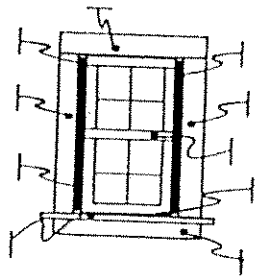
EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ◯
RIGHT ◯
CENTER ◯



EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ◯
RIGHT ◯
CENTER ◯

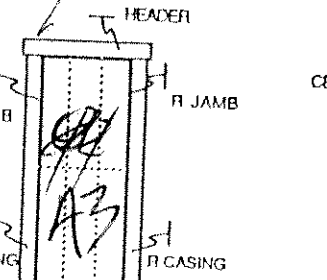


EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ◯
RIGHT ◯
CENTER ◯

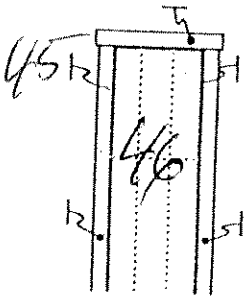


EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ◯
RIGHT ◯
CENTER ◯

garage door



EXTERIOR ..... (OR)
ROOM # .....
WALL (A) (B) (C) (D)
LEFT ◯
RIGHT ◯
CENTER ◯



COMMENTS: The doors found on the garage door is a black ACB underneath on metal substrate. This material is in good condition there is approximately 200 square feet of surface 44 45.

ADDRESS BAthroom

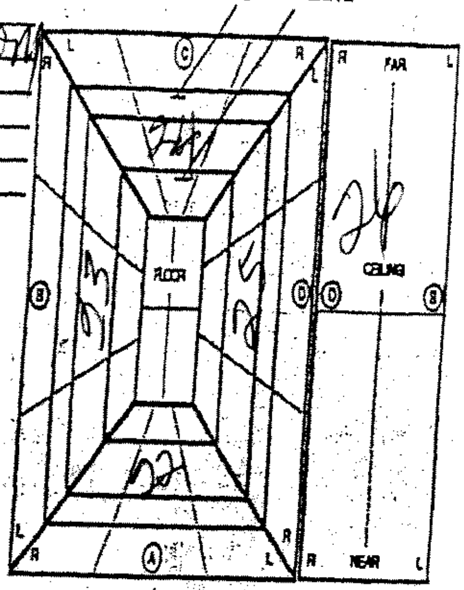
JOB #

CAL CHK

UNIT #_____

ROOM #_____

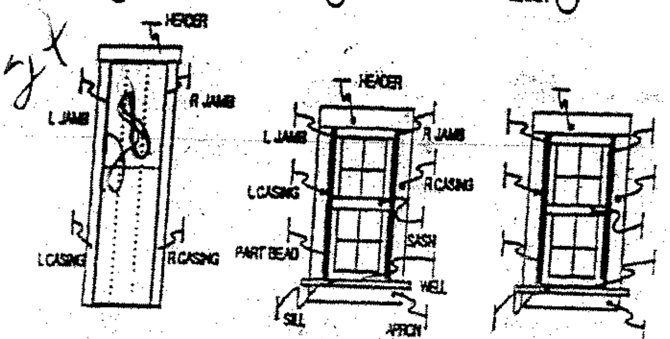
READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER



COMMENTS: The walls are of white brush concrete block. The ceiling is precast concrete beams. The door & door jambs is of black finish over metal substrate

ADDRESS FAN RM

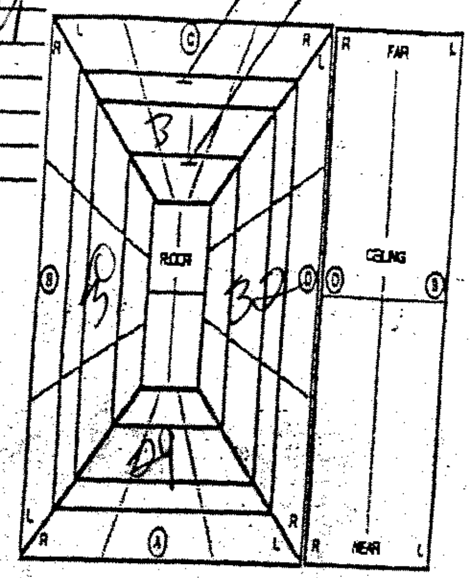
JOB #

CAL CHK

UNIT #_____

ROOM #_____

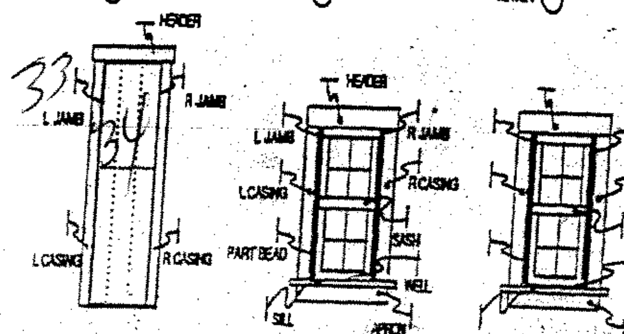
READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER



COMMENTS: The walls are of white brushed concrete block. The ceiling is of pre-cast concrete beams. The door & the door jambs is of black finished on metal substrate

ADDRESS

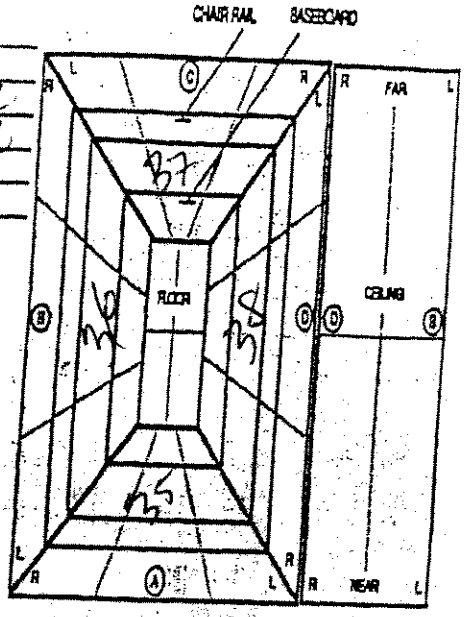
Marion Ohse

JOB #

CAL CHK

UNIT #____

ROOM #____

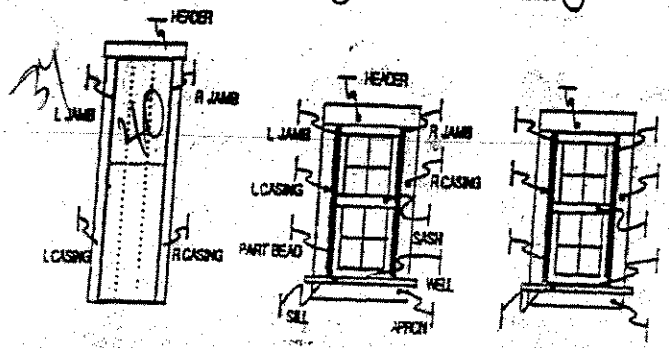


READINGS ON UNSOUND PAINT ARE CIRCLED

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				



COMMENTS: All wall on Tan Painted Concrete Block. The ceiling is a Pre-Cast Concrete Beam w/ the floor as well as the floor system is of Black Iron over metal substrate.

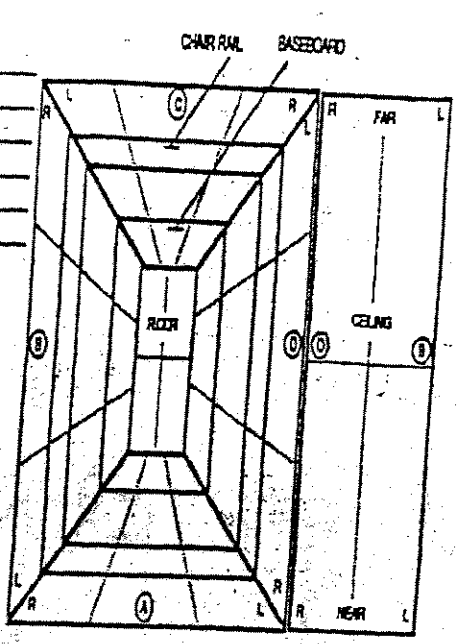
ADDRESS

JOB #

CAL CHK

UNIT #____

ROOM #____

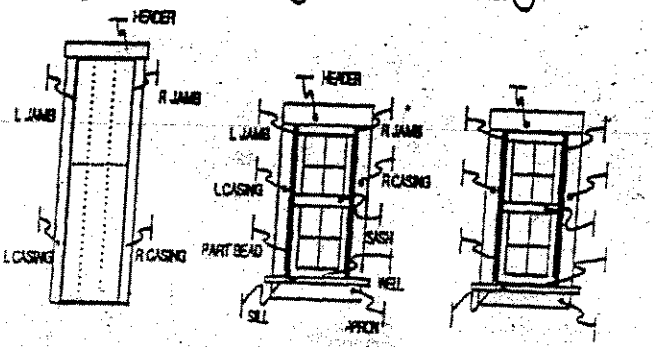


READINGS ON UNSOUND PAINT ARE CIRCLED

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				

WALL	A	B	C	D
LEFT				
RIGHT				
CENTER				



COMMENTS:

Forrest Park auto for pool, IL-
LBP File #: 04261610

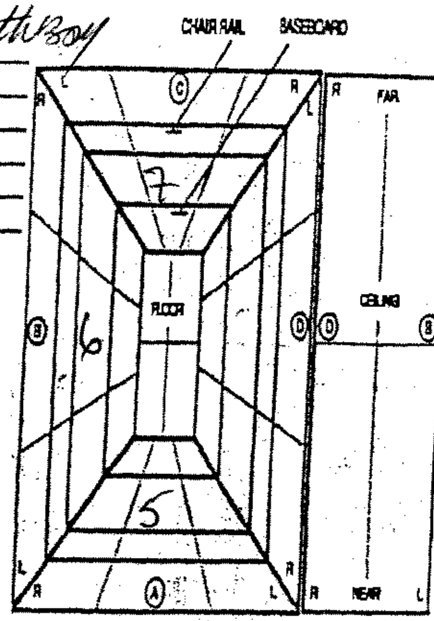
ADDRESS North Bay

JOB #

CAL CHK

UNIT #

ROOM #

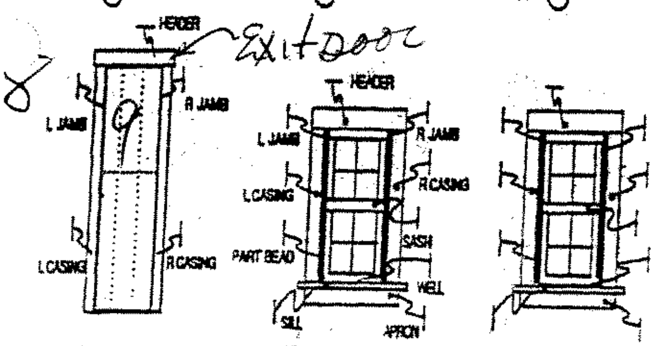


READINGS ON UNSOUND PAINT ARE CIRCLED

WALL (A) (B) (C) (D)
LEFT ( )
RIGHT ( )
CENTER ( )

WALL (A) (B) (C) (D)
LEFT ( )
RIGHT ( )
CENTER ( )

WALL (A) (B) (C) (D)
LEFT ( )
RIGHT ( )
CENTER ( )



COMMENTS: All walls are of off white finished, concrete blocks substrate. The door is of a Drk green finish over metal substrate. The door jamb is of Drk green finish over metal substrate. The Exit Door is of Black finish over metal substrate as well as the doors jamb. Sample 1, 2, 3, and 4 are Calibration Samples. See other side for the garage door.

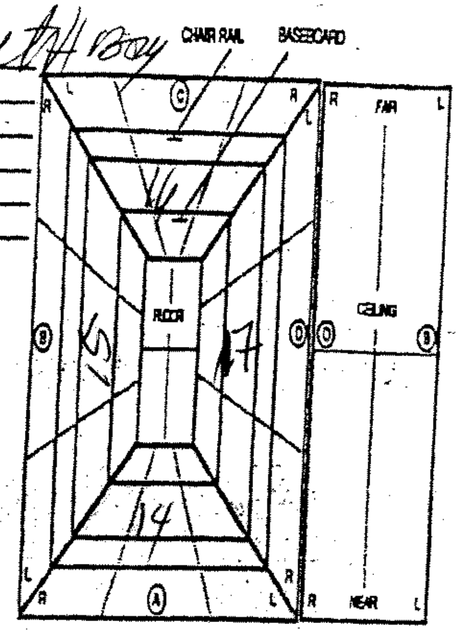
ADDRESS South Bay

JOB #

CAL CHK

UNIT #

ROOM #

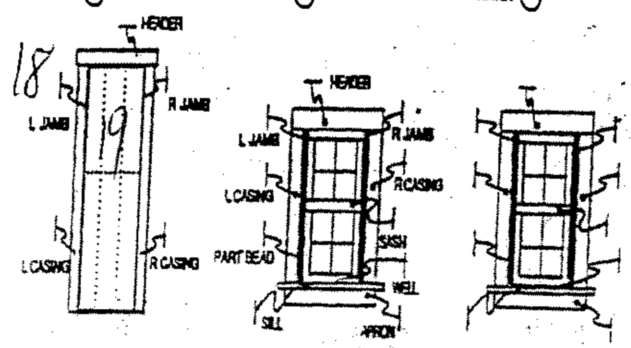


READINGS ON UNSOUND PAINT ARE CIRCLED

WALL (A) (B) (C) (D)
LEFT ( )
RIGHT ( )
CENTER ( )

WALL (A) (B) (C) (D)
LEFT ( )
RIGHT ( )
CENTER ( )

WALL (A) (B) (C) (D)
LEFT ( )
RIGHT ( )
CENTER ( )



COMMENTS: All walls are of white finish over concrete blocks. The door and door jamb (Exit Doors) is of Black finish over metal substrate. The garage Door is of Drk green finish over metal substrate. See other side for garage Door Sample # 20 & 21

ENVIRONMENTAL JOB ORDER CONTRACT
NO. N68950-00-D-0200
DELIVERY ORDER NO. 0066

FINAL DELIVERY ORDER CLOSURE REPORT
BUILDING 101 DEMOLITION
FOREST PARK NAVAL RESERVE CENTER
FOREST PARK, ILLINOIS

PREPARED FOR

DEPARTMENT OF THE NAVY
NAVAL TRAINING CENTER
ENVIRONMENTAL DEPARTMENT
BUILDING 1-A, 201 DECATUR AVENUE
GREAT LAKES, ILLINOIS 60088-5600

SUBMITTED
JULY 2003

BY

TOLTEST INC.
1000 S. NORTHPOINT BOULEVARD
WAUKEGAN, ILLINOIS 60085
(847) 689-0697
FAX (847) 689-0698

TOLTEST PROJECT NO. 73712.01

FINAL DELIVERY ORDER CLOSURE REPORT
BUILDING 101 DEMOLITION
FOREST PARK NAVAL RESERVE CENTER
FOREST PARK, ILLINOIS

EJOC NO. N68950-00-D-0200
DELIVERY ORDER NO. 0066

Submitted by:

TolTest, Inc.
1000 S. Northpoint Boulevard
Waukegan, Illinois 60085

TolTest, Inc. hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under this contract is complete, accurate, and complies with all requirements of the contract.

Prepared By: _____ Date: 7/10/03
Jeff Tinney, Project Manager

Reviewed By: _____ Date: 7/10/03
Mike Graf, Quality Control

Approved By: _____ Date: 7/10/03
Khushwant Mander, Senior EJOC Project Manager

TOLTEST INC.

TABLE OF CONTENTS

LIST OF ACRONYMS

ACM	Asbestos-Containing Material
CFR	Code of Federal Regulations
DO	Delivery Order
DOT	Department of Transportation
FPNRC	Forest Park Naval Reserve Center
IEPA	Illinois Environmental Protection Agency
KNIGHT	Knight Architects, Engineers, Planners, Inc.
LF	Lineal Feet
Navy	Department of the Navy
NIOSH	National Institute for Occupational Safety and Health
NESHAP	National Emission Standards for Hazardous Air Pollutants
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenols
PEL	Permissible Exposure Limit
RFP	Request for Proposal
SF	Square Feet
TolTest	TolTest, Inc.
TWA	Time Weighted Average

EXECUTIVE SUMMARY

TolTest, Inc. (TolTest) was retained by the Department of the Navy (Navy), Naval Facilities Engineering Command under Contract No. N68950-00-D-0200, Delivery Order (DO) No. 0066 to demolish Building 101 located at the Forest Park Naval Reserve Center (FPNRC), Forest Park, Illinois. The building was demolished in accordance with the Navy's "Green Demolition" measures to promote recycling efforts. TolTest submitted a Demolition and Health and Safety Plan for the demolition of Building 101 to the Navy in March 2003.

TolTest performed an asbestos survey of Building 101 to confirm the locations and quantities of asbestos identified in the Knight Architects, Engineers, Planners, Inc. (Knight) Asbestos Survey performed at Building 101 in 1997. The results of TolTest's asbestos survey confirmed that there was asbestos-containing tar that sealed a roof penetration for the heater flue on the roof of Building 101.

On April 21, 2003, TolTest removed and disposed of approximately 5 square feet (SF) of asbestos containing tar from the roof of Building 101. The asbestos-containing material (ACM) was transported to the American Waste Processing disposal facility in Maywood, Illinois for disposal.

An interior demolition was performed to remove mercury-containing light bulbs and polychlorinated biphenol (PCB) ballasts. The mercury-containing light bulbs were provided to Mr. Terry Ryan, FPNRC Facilities Manager, for reuse. The PCB ballasts were removed from the light fixtures and placed in one 55-gallon Department of Transportation (DOT) approved steel drum. The PCB ballasts were transported to American Waste Processing, Maywood facility for recycling.

TolTest confirmed that no utilities were in the immediate demolition area by contacting NiCor Gas and the Forest Park City Water Department and arranging a site visit. NiCor Gas and the Village of Forest Park Water Department representatives arrived on site on April 21, 2003 and confirmed that no gas or water lines were in the immediate demolition area. One electric line was identified by the FPNRC electrical contractor and was isolated prior to TolTest arriving on site.

Building 101, including the concrete floor slab and foundations, was demolished between April 21, 2003 and April 24, 2003. A total of 4.30 tons of steel, 136.86 tons of concrete, and 99.19 tons of brick were recycled. Scrap metal that was segregated from the building debris was recycled at ACME Steel. The concrete was recycled at Vulcan Materials and the brick was recycled at the Country Side RDF. The Navy's August 20, 2002 Request for Proposal required TolTest to recycle or reuse at least 755 of the building debris. TolTest recycled nearly 100% of the building debris.

TolTest imported 66.52 tons of gravel to the site to backfill the building's footprint. The gravel was placed in one six-inch lift and compacted utilizing a vibratory roller.

1.0 INTRODUCTION

Building 101 was constructed in 1977 and was approximately 1,920 square feet (SF). The building was utilized as a small arms firing range. There were two doorway entrances to the building located on the north and west sides of the building. The north and south facades had openings with metal louvered vents, most likely for a ventilation system. The interior of the building contained several wooden doors and a roll of chain link fence.

A Demolition and Health and Safety Plan for Building 101 was submitted to the Navy by TolTest in March 2003. TolTest provided all labor, equipment, and materials to demolish Building 101 in accordance with the applicable federal, state, and local laws as well as Navy regulations, guidance, and policies. Under the Navy's "Green Demolition" measures, TolTest was required to reuse or recycle 75% by weight of all solid wastes generated from the building demolition.

TolTest completed the tasks associated with DO No. 0066 in accordance with specifications included in the August 20, 2002 Request For Proposal (RFP) and the applicable regulations found in 29, 40, and 49 Code of Federal Regulations (CFR). The demolition activities for Building 101 included, but were not limited to, the following tasks:

- Performed an asbestos survey for Building 101.
- Removed ACMs from Building 101 consisting of five SF of asbestos roofing material.
- Transported and disposed of the ACMs at the American Waste Processing facility located in Maywood, Illinois.
- Removed mercury-containing light bulbs and PCB ballasts from Building 101.
- Stored, transported, and recycled the ballast from Building 101 in accordance with 40 and 49 CFR.
- Demolished Building 101, including the concrete slab floor and foundation, recycling 136.86 tons of concrete, 19.19 tons of brick, and 4.30 tons of steel.
- Imported 66.56 tons of gravel; backfilled and compacted the footprint for the demolished Building 101.

2.0 DEMOLITION ACTIVITIES

Demolition activities completed by TolTest included the following:

- Asbestos Survey
- Asbestos Abatement
- Environmental Air Sampling
- Transportation and Disposal of ACM
- Transportation and disposal of PCB ballast
- Building Demolition
- Site Restoration
- Recycling and Disposal

2.1 Permitting and Notification

TolTest submitted an Asbestos and Demolition Notification to the Illinois Environmental Protection Agency (IEPA) 10 days prior to performing the asbestos abatement. TolTest also received an abatement and demolition permit from the Cook County Department of Environment. A copy of the IEPA 10-Day Notification and Cook County Permit are provided in **Appendix A**.

2.2 Asbestos Survey

The NTC Great Lakes Environmental Department provided TolTest with a building inspection assessment performed in 1997 by Knight that included an asbestos survey of Building 101. TolTest performed a limited asbestos survey of Building 101 to confirm the quantity and location of ACM identified in the Knight building assessment. TolTest's qualified asbestos inspector performed the asbestos survey on March 14, 2003.

The results of TolTest's survey revealed that approximately five SF of asbestos-containing roofing material was located around a ceiling penetration for a heater flue. A copy of the Asbestos Analytical Report is provided in **Appendix B**.

2.3 Asbestos Abatement

The updated survey of Building 101 performed by TolTest identified five SF of roofing material to be an ACM.

In accordance with the National Emission Standards for Hazardous Air Pollutants (NESHAP), the roof was a Category I non-friable material. Therefore, this material did not need to be removed prior to demolition if the demolition process would not render it friable. However, TolTest removed the ACM from the roof of Building 101 because TolTest could not be guaranteed that the demolition activities would not render this ACM friable.

While performing the asbestos abatement activities for Building 101, TolTest adhered to the NTC Great Lake's environmental protection policies and all applicable federal, state, and local regulations.

2.3.1 Abatement Activities

TolTest provided experienced State of Illinois licensed asbestos abatement professionals to perform the asbestos abatement activities on April 21, 2003.

TolTest established a regulated area by placing asbestos barrier tape around the perimeter of the building. The work area was posted and demarcated per Occupational Safety and Health Administration (OSHA) regulations. All persons entering the regulated area were required to wear proper personal protective equipment including protective clothing and respiratory protection equipped with High-Efficiency Particulate Air filters.

Built-Up Roof

The built-up roof of Building 101 contained a Category I non-friable ACM. As previously stated, 40 CFR Part 61 does not regulate the roofing material or state that the material should be managed as ACM; however, the material did contain asbestos and could not be recycled. Therefore, TolTest removed the roofing material in accordance with standard abatement procedures utilized for the abatement of roofing material containing asbestos. The roofing material was sprayed with amended water to minimize the release of asbestos fibers into the atmosphere. After the amended water was applied to the ACM, TolTest utilized scrappers to remove the tar from the roof. The ACM was placed in asbestos waste bags and staged in a 55-gallon DOT-approved drum for disposal.

2.3.2 Transportation and ACM Disposal Services

ACM waste was placed in a properly labeled, enclosed, 55-gallon DOT-approved drum. ACM waste was manifested for disposal to the American Waste Processing facility in Maywood, Illinois. A disposal receipt from the American Waste Processing facility is provided in **Appendix C**.

2.4 Interior Demolition

The Navy's August 20, 2002 RFP required TolTest to assume the ballasts found in the light fixtures contained PCBs. TolTest removed the ballasts from the light fixtures and placed them in 55-gallon DOT-approved drums. The drums were labeled as hazardous waste containing PCBs and transported to American Waste Processing in Maywood, Illinois for recycling. A copy of the shipping documentation for the PCB ballast is provided in **Appendix C**.

The FPNRC Facilities Manager, Mr. Terry Ryan, accepted the mercury-containing light bulbs for reuse at the facility.

2.5 Exposure Assessment for Dust and Lead

During the building demolition activities, on April 21, 2003 through April 24, 2003, TolTest performed an exposure assessment in accordance with 29 CFR 1926.62 to evaluate for the presence of lead dust in the air. TolTest also performed an exposure assessment for respirable dust in the air. Environmental air samples were collected and submitted to Suburban Laboratories in Hillsdale, Illinois for analysis by the National Institute for Occupational Safety and Health (NIOSH) Method 7082 for lead in air and the NIOSH Method 0500 for dust in air. Test results are provided in **Appendix D**.

Environmental air sampling was conducted with low-volume-flow sample pumps attached to a cellulose membrane filter air-sampling cassette. Lead samples were collected on a 0.8-micron pored size mixed cellulose ester filter. Dust samples were collected on pre-weighted mixed cellulose ester filter cassettes.

Environmental samples were collected inside and outside the demolition area utilizing a volumetric flow rate of approximately 4.0 liters per minute.

TolTest identified two different tasks that would require an exposure assessment to be performed in accordance with the above-referenced methodology: Building Demolition and Building Debris Load Out.

Because a 10-hour workday was established for this project, the Permissible Exposure Limit (PEL) and Action Levels were adjusted accordingly. OSHA exposure limits were as follows:

1. The OSHA PEL for worker exposure to lead in air for this project was 42 micrograms per cubic centimeter averaged over a 10-hour Time Weighted Average (TWA).
2. The OSHA PEL for worker exposure to dust in air for this project was 4.0 micrograms per cubic centimeter averaged over a 10-hour TWA.

2.6 Building Demolition

Lake County Grading began demolition of the building structure on April 21, 2003 by removing the metal flashing on the roof of the building and removing the debris from the interior of the building. The demolition activities continued by utilizing an excavator to push over the north brick wall. As a small section of the wall was demolished, Lake County Grading utilized the excavator to demolish a small section of the lightweight concrete roof. The demolition for the remainder of the building was performed in the same sequence. The demolition of Building 101 was completed in accordance with 29 CFR 1926.850.

TolTest recycled the material generated from the demolition of the brick walls and concrete floor and footings. This material was transported to a recycling facility and documented with weight tickets.

Once the building was demolished and debris was removed from the site, Lake County Grading began to demolish the concrete floor slab and footings. An excavator was utilized to break the

concrete floor slab and stage the concrete debris for off-site recycling. Once the concrete floor slab had been demolished and the footings were exposed, Lake County Grading utilized the excavator to remove the footings. The excavator removed soil from the corner of the footing and began to break sections of the footings. As the concrete footings were removed from the ground, Lake County Grading placed the concrete debris in a staging area. During the demolition of the concrete floor, a second excavator was utilized to load concrete debris into dump trucks for transportation to the concrete recycling facility.

Scrap metal found in the demolition debris was segregated and transported to the ACME Scrap Iron facility for recycling. A copy of the weight ticket for the recycled steel (4.30 tons) is provided in **Appendix E**.

Lake County grading transported the concrete debris to Vulcan Materials and the brick debris to Country Side RDF for recycling in 20-cubic yard dump trucks. Lake County Grading loaded the trucks utilizing the loader until the stockpiled concrete and brick were completely removed from the site. The respective recycling facilities issued weight tickets to TolTest documenting the weight of the concrete and brick debris transported for recycling. TolTest submitted the weight tickets to the NTR at the end of each day that the concrete and brick debris was transported from the site to their respective recycling facilities. Approximately 136.86 tons of concrete and 99.19 tons of brick were recycled. Copies of the weight tickets for the concrete and brick are provided in **Appendix F**.

2.7 Site Restoration

After the concrete floor and foundations were removed, TolTest backfilled the building footprint. Crushed gravel ("CA-6") was placed into the areas requiring backfill in one six-inch lift and compacted with a 20-ton compactor.

After the gravel had been compacted, TolTest installed approximately 60 linear feet (LF) of chain link fence to provide site security. The new eight-foot high chain link fence was installed from an existing section of fence that was located on the north side of the former Building 101 to a chain link fence that was located on the south side of the former Building 101.

TolTest utilized an auger to install six fence post holes to a depth of two-feet below ground surface. Once the holes were dug, TolTest set the poles in the holes and poured field mixed concrete in the holes. Once the concrete cured, TolTest installed the chain link fence, bottom rails, top rails, and three strands of barbed wire to match the existing fence. TolTest has included photographs of the completed site work in **Appendix G**.

2.8 Recycling

The Navy's August 20, 2002 RFP for this DO required TolTest to recycle at least 75% of all debris generated during the demolition of Building 101 and TolTest recycled nearly 100% of the building debris. Each load of recyclable materials or waste was weighed at the respective facility prior to the materials being either recycled or disposed. As previously noted, weight tickets for

each load from the respective recycling and/or disposal facilities are included as Appendices to this Delivery Order Closure Report.

3.0 SUMMARY

Building 101 was successfully demolished without a single safety or health incident. The Navy's August 20, 2002 RFP for this DO required TolTest to recycle at least 75% of all debris generated during the demolition of Building 101. The building was demolished in accordance with the Navy's "Green Demolition" measures to promote recycling efforts and nearly 100% of the building debris was recycled.

TolTest recycled nearly 100% of the demolition debris. The disposal cost to demolish Building 101 utilizing traditional disposal methods would be approximately $7,691, compared to only $5,875 for the "Green Demolition."

Typically, the cost to demolish a building similar in construction to Building 101 is $18.00 per square foot. The cost for the "Green Demolition" of Building 101 was approximately $20.00 per square foot. The difference between general debris disposal and the "Green Demolition" is due to the extra labor hours required to segregate the demolition debris into recyclable stockpiles and/or roll-off boxes, and for extra equipment and time to double-handle the demolition materials.

Although the cost of performing a "Green Demolition" is more than that of a traditional demolition, the environmental impacts are considerably less. Materials that could be recycled were transported to a recycling facility where the materials were reprocessed for use. In the case of the concrete and brick, they were crushed and processed to create backfill material that is typically used in construction projects. The metal was bailed and transported to steel mills where it was processed for reuse.

If the traditional demolition approach were implemented, the materials that could have been recycled would have instead been transported to a local landfill. Disposing of recyclable materials at a landfill decreases the landfill's capacity to manage municipal and commercial wastes, thereby increasing the disposal costs for the local communities and industries that utilize the landfill.

Table 1 presents the cost comparison between traditional demolition and "Green Demolition."

TABLES

Traditional Demolition Costs Compared to "Green Demolition" Costs
Building 101 – Forest Park Naval Reserve Center, Forest Park, Illinois

Demolition Type	Demolition Labor	Backfill Labor	Interior Demolition Labor	Professional Labor	Heavy Equipment Costs	Construction Debris Disposal	Metal Recycling Fee	Concrete Recycling Fee	Construction Debris Recycling	Backfill Material Costs	Price /SF	Total Cost
Traditional Demolition	$9,961	$1,904	N/A	$4,258	$9,867	$7,691	N/A	N/A	N/A	$885	$18.00	$34,566
Green Demolition	$11,793	$1,904	N/A	$5,538	$12,409	N/A	$50	$3800	$2025	$885	$20.00	$38,404

Material	Weight in Tons
Construction Debris	0.00
Steel	4.30
Concrete Brick	236.05

Material	Unit Rate/CY
Backfill Material	$22.11
Construction Debris Disposal	$32.00

NOTES:

1. The above costs are for building demolition only and do not include asbestos abatement costs.
2. 40 cubic yards (CY) road base gravel was used to restore the building footprint.
3. Demolition labor costs include one site superintendent, one laborer, and two equipment operators.
4. Heavy equipment costs include two excavators, one loader, one compactor, one bobcat, and one water truck.
5. Labor costs based on Davis Bacon prevailing wage rates for Cook County, Illinois.
6. Construction debris disposal is based on landfill disposal of debris. Traditional demolition approach assumes zero percent recycling.
7. Professional labor costs include the following:
   - Project Management
   - Quality Control Oversight
   - Report Preparation
8. N/A – Not Applicable
9. Price per square foot (Price/SF) was calculated using a 1,920 SF area for Building 101.

APPENDIX A

ASBESTOS ABATEMENT AND DEMOLITION NOTIFICATIONS

BUREAU OF ADMINISTRATION
DEPARTMENT OF ENVIRONMENTAL CONTROL
LOUIS DEROSE
DIRECTOR

69 West Washington • Suite 1900
Chicago, Illinois 60602-3004
TEL (312) 603-8200
FAX (312) 603-9828

April 7, 2003

Toltest, Inc.
1915 N. 12th Street
Toledo, OH. 43624

ACM PERMIT NUMBER: **A03360**

The Department hereby grants an asbestos removal permit for the following structure(s) located at:

Commercial-Bldg. 101
Forest Park Naval Reserve Center
Forest Park, IL.

Date to Begin:04-17-03 **Date to End:04-17-03**
Filing Fees:$100.00 **Inspection Fees:*** ** **Check Number:5217**

This permit will be subject to the following **conditions:**
(1) If the structure is located in an *incorporated* village or town, all local requirements/permits applicable to renovation of structure must be satisfied.
(2) Sections of the Cook County Environmental Control Ordinance-Articles VI, VIII, IX, and X must be satisfied.
(3) This permit must be posted at the job site during the actual project.
(4) The "Notification of Demolition and Renovation" application (mailed or hand carried) must be received in this Department (10) working days prior to the start of the asbestos removal activity.
(5) The Special Conditions for Demolition-Dismantlement-Alterations-Razing that are listed on the reverse side of the permit must be followed.

If any of the above conditions are not followed, this Asbestos permit will be VOIDED and enforcement measures may be initiated.

Thank you for your cooperation. If there are any changes in the asbestos schedule, please contact Rudolph Trejo at (312) 603-8200.

Very truly yours,

Louis DeRose, Director
Department of Environmental Control

BUREAU OF ADMINISTRATION
DEPARTMENT OF ENVIRONMENTAL CONTROL
LOUIS DEROSE
DIRECTOR

69 West Washington • Suite 1900
Chicago, Illinois 60602-3004
TEL (312) 603-8200
FAX (312) 603-9828

April 7, 2003

Lake County Grading
Routes 120 & 21
Libertyville, IL. 60048

PERMIT NUMBER: D03527

The Department hereby grants a demolition permit for the following structure(s) located at:
Commercial-Bldg. 101
Forest Park Naval Reserve Ctr.
Forest Park, IL.
Date to Begin: 04-21-03 Date to End: 05-08-03

This permit will be subject to the following **conditions:**
(1) If the structure is located in an incorporated village, town or city in Cook County, all local requirements/permits applicable to demolition or renovation of structure must be satisfied.
(2) If the structure is located in unincorporated Cook County, a permit from the Cook County Department of Building and Zoning (Room 2830, 69 West Washington Street, Chicago, IL. 60602, (312) 603-0500) must be obtained.
(3) The Provisions of The Cook County Environmental Control Ordinance apply.
(4) The Special Conditions for Demolition-Dismantlement-Alterations-Razing that are listed on the reverse side of the permit must be followed.
(5) No facsimiles of the original application will be accepted and all applications must be mailed or hand carried to this Department. The Demolition Application (mailed or hand carried) must be received in this Department ten (10) working days prior to the demolition. Any changes in the starting and/or completion dates of the demolition removal schedule, must be submitted to the Department 48 hours prior to the actual demolition.
(6) If the demolition completion date expires without notification to the Department and the actual work has not been completed, a new permit must be obtained.
(7) In emergency situations, this Department must be notified immediately of the circumstances and a follow up letter sent explaining the details.
(8) This permit must be posted at the job site during the actual project.

If any of the above conditions are not followed, the Demolition Permit will be VOIDED and enforcement measures initiated.

Thank you for your cooperation. If you have any questions concerning any of the above provisions, please contact Rudolph Trejo (312) 603-8200.

Very truly yours,

Louis DeRose, Director
Department of Environmental Control

REC. NO. _____

NOTIFICATION OF DEMOLITION AND RENOVATION

IL 532 1296
APC 430 Rev.03/00

Illinois Environmental Protection Agency — P.O. Box 19276, Springfield, IL 62794-9276

THIS INFORMATION IS REQUIRED: NESHAP-40CFR-SUBPART M-61.145, Rev. Nov. 20, 1990

ALL SECTIONS MUST BE COMPLETED TO AVOID NOTICE VIOLATION

1. TYPE OF NOTIFICATION (O-Original/R-Revised/C-Canceled): Original

2. TYPE OF OPERATION (R-Renovation/D-Demo/A-Annual/O-Ordered Demo/E-Emergency Renovation): Demolition

3. FACILITY DESCRIPTION (Building Name): Building 101, Naval Reserve Center

Address: 7410 W. Roosevelt Road

City: Forest Park | County: Cook | State: IL | ZIP: 60141

Location of Asbestos Containing Material (ACM) in structure:

Bldg. Size: 1750 SF | # of Flrs. 1 | Age: unknown | Present Use: vacant

Prior Use: Small Arms Range | Future Use (Demo): NA

4. IS ASBESTOS PRESENT? Y (N) | 5. WORK HOURS:* 0700 a.m. 1530 p.m.

6. SCHEDULED DATE DEMOLITION: Start: 4-21-03 Complete: 5-8-03

7. SCHEDULED DATE ASBESTOS REMOVAL: Start: 4-17-03 Complete: 4-17-03

8. REGULATED ASBESTOS CONTAINING MATERIAL TO BE REMOVED (RACM):		NONFRIABLE ASBESTOS NOT TO BE REMOVED (Demolition):		NONFRIABLE ASBESTOS TO BE REMOVED:	
		CATEGORY I	CATEGORY II	CATEGORY I	CATEGORY II
Pipes (Ln. Ft.)	0	0	0	0	0
Surface Area (Sq. Ft.)	0	0	0	0	5
Volume (Cu. Ft.)	0	0	0	0	0

9. ASBESTOS REMOVAL CONTRACTOR: ToiTest, Inc.

Address: 1915 N 12th Street | City: Toledo

State, Zip: Ohio, 43624 | Contact: Jeff Tinney | Phone: 847-689-0697

10. DEMOLITION CONTRACTOR: Lake County Grading

Address: Routes 120 + 21 | City: Libertyville

State, Zip: IL, 60048 | Contact: Mike Wolff | Phone: 847-362-2590

11. OWNER NAME: Department of the Navy

Address: 201 Decatur Ave, Bldg 1A | City: Great Lakes

State, Zip: IL, 60088 | Contact: Dan Fleming | Phone: 847-688-5999 x161

12. WASTE TRANSPORTER: American Waste Processing

Address: PO Box 306 | City: Maywood

State, Zip: IL, 60153 | Contact: Joe Strosniak | Phone: (847) 708-681-3999

13. WASTE DISPOSAL SITE: Countryside RDF

Address: 31725 North Route 83 | City: Grayslake

State, Zip: IL, 60030 | Landfill Permit #: 0970250003 | Phone: 847-223-2722

-AGENCY USE ONLY-

Date Received: | Input to ACTS: | To Region 1 2 3

Post Mark Date: | To Cook/City: | Champaign: | LaSalle:

Springfield: | Rockford: | Moline: | Marion:

14. PROCEDURE, INCLUDING ANALYTICAL METHOD, USED TO DETECT THE PRESENCE OF ASBESTOS.
Bulk sampling and analysis by ~~phase~~ polarized light microscopy.

ILLINOIS LICENSE NUMBER OF INSPECTOR: 100-08054

NAME OF ANALYTICAL TESTING LABORATORY: TriTest, Inc.

15. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK:
utilize heavy equipment to demolish building while wetting debris. Removal of concrete floor and footers as well. Recycle building materials.

METHODS TO BE EMPLOYED INCLUDING DEMOLITION OR RENOVATION TECHNIQUES.
utilize heavy equipment to demolish building, concrete and footers. Separate building materials for recycling. Wet materials to minimize visual emissions.

16. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS AT THE DEMOLITION OR RENOVATION SITE:
Constantly wet materials. collection of air samples for lead + dust.

17. IS DEMOLITION ORDERED BY A GOVERNMENTAL AGENCY? Y (N) (If Yes, a signed copy of Order must be attached.)

Governmental representative ordering the activity:

Title: Date of Order: Ordered Demolition Date:

18. FOR EMERGENCY RENOVATIONS:

Date and Hour of Emergency:

Description of the Sudden, Unexpected Event (e.g. structure in danger of eminent collapse):

19. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER.
Stop work, evaluate methods, implement new or additional engineering controls. notify all pertinent parties.

20. I CERTIFY THAT AT LEAST ONE REPRESENTATIVE, TRAINED IN THE PROVISIONS OF 40 CFR PART 61, SUBPART M, SHALL BE ON-SITE DURING DEMOLITION OR RENOVATION, HAVING IN HIS OR HER POSSESSION, FOR INSPECTION, EVIDENCE THAT THE REQUISITE TRAINING HAS BEEN ACCOMPLISHED.

I CERTIFY THE ABOVE INFORMATION IS CORRECT.

[signature] 3/31/03

Signature of ~~Owner~~/Operator Date
(Original Signature Only, Photocopy Not Valid)

*Not required under NESHAPS.

Mail this form to: IL Environmental Protection Agency, Attn: Asbestos Unit, P.O. Box 19276, Springfield, IL 62794-9276

APPENDIX B

ASBESTOS SURVEY ANALYTICAL REPORT

TOLTEST, INC.

Solutions for Your Site Development, Construction, and Environmental Projects

March 20, 2003

Project No. 73712.01

Mr. Daniel Fleming
Great Lakes Naval Training Center
Environmental Department
201 Decatur Avenue
Great Lakes, Illinois 60088

Asbestos Building Inspection
DO 66 Building Demolition, Forest Park Naval and Marine Corps Reserve Center
N68950-00-D-0200 Environmental Job Order Contract, Various Midwest States
Great Lakes, Illinois

Dear Mr. Fleming:

This letter is to inform you of the results for the pre-demolition asbestos building inspection. On March 14, 2003, TolTest performed an asbestos inspection of the Firing Range located at the Forest Park Naval Reserve Center (NRC), Forest Park, Illinois.

During this survey, TolTest's State of Illinois Licensed Building Inspector inspected the interior and exterior of the building and determined that three materials were suspect to be asbestos-containing materials (ACMs). The three suspect ACMs were categorized into separate homogeneous sampling areas (HSA) and one functional area since all three suspect ACM's were located on the buildings roof. The three HSAs that were sampled are as follows:

1. Roof Flashing around the perimeter of roof
2. Roofing Material
3. Roof Tar around southwest vent pipe

Of the three materials that were sampled, only the roof tar analyzed positive for asbestos content. The roof tar contains 8% chrysotile asbestos. The roof tar surrounding the vent pipe is approximately 5 square feet.

Roofing material is considered a Category I Non-friable material and as long as it is not rendered friable during demolition activities, is not required to be removed from the building prior to demolition. However, TolTest will remove this material with State of Illinois licensed asbestos workers and supervisors in accordance with applicable regulations.

TolTest appreciates the opportunity to provide our testing and environmental consulting services to the Department of the Navy. Should you require any additional information regarding the Building 101 inspection, please contact us at (847) 689-0697.

Respectfully Submitted,

TolTest, Inc.

Michael P. Graf
Environmental Scientist
IDPH # 100-08054

Jeffrey M. Tinney
Project Manager

TOLTEST, INC.

To be the preferred and trusted partner of our clients and associates . . . **PERIOD!**

TEST REPORT

CLIENT: TolTest, Inc.
P.O. Box 886960
Great Lakes, Illinois 60088

DATE: March 18, 2003

ATTN: Mr. Jeff Tinney

Project No.: 73712.01

Lab Receiving No.: 9912003230

Date Received: March 17, 2003

Date Sampled: March 14, 2003

Project Location: Forest Park
Gun Range
Forest Park, Illinois

Sample Point(s): see analytical results

Analysis Performed: Asbestos Analysis by PLM

Reviewed by: Myron V. Gasiorowski Date: 3/18/2003
Myron V. Gasiorowski, Lab Supervisor

Approved by: Timothy P. Weltin Date: 3/18/2003
Timothy P. Weltin, Quality Assurance Officer

ANALYTICAL NARRATIVE

The note(s) below pertain to the sample(s) and analytical data reported herein:

Quantitative results are listed as approximate % asbestos. Results are based on calibrated visual estimation of materials. All results <1% asbestos (Trace) have been confirmed by the analysis of a duplicate slide. As per the method, all "negative" or BDL samples have been confirmed by triplicate analyses. Due to the nature of the samples the following measurements of uncertainty may apply:

% Asbestos	Uncertainty
1%	± 2%
5%	± 4%
10%	± 5%
>20%	± 10%

Due to the complexity of analyzing floor tile by PLM, the client may want to consider having "negative" floor tiles analyzed further by an alternative method such as TEM.

Samples are archived by TolTest for a period of thirty days. Samples may be retained for a longer period of time or returned to the client upon written request.

Laboratory Accreditation:

U.S. Department of Commerce, National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (NVLAP), Lab #101594-0

This report may not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the items tested, and may not be reproduced, except in full, without the written approval of the laboratory.

Report Key:

BDL = Below Detection Level
n/a = not applicable
HSA = Homogeneous Sampling Area

Detection Level: 1% asbestos fibers greater than one micrometer in length.

POLARIZED LIGHT MICROSCOPY
ANALYTICAL RESULTS

METHOD NUMBER:	EPA/600/R-93/116, July, 1993; 40 CFR, Ch. 1 (7-1-93 ed.), Part 763, Subpart F, Appendix A, pages 293-299
BATCH NUMBER:	2PLM009103
DATE ANALYZED:	March 18, 2003
ANALYST:	Myron Gasiorowski

LAB No.	SAMPLE ID	HSA No.	SAMPLE LOCATION	LAYER DESCRIPTION	NON-ASBESTOS COMPONENTS	APPROXIMATE % ASBESTOS
138860	1-1 Layer A	1	Roof, northwest corner	Black Tar	100% Binder	Asbestos fibers BDL
138860	1-1 Layer B	1	same	Black Tar Paper	65% Binder, 35% Cellulose	Asbestos fibers BDL
138860	1-1 Layer C	1	same	Tan Felt Paper	100% Cellulose	Asbestos fibers BDL
138861	1-2 Layer A	1	Roof, northeast corner	Black Tar	100% Binder	Asbestos fibers BDL
138861	1-2 Layer B	1	same	Black Tar Paper	65% Binder, 35% Cellulose	Asbestos fibers BDL
138862	1-3	1	Roof, southeast corner	Black Tar	100% Binder, <1% Cellulose	Asbestos fibers BDL
138863	2-1 Layer A	2	Roof, northwest corner	Black Tar	100% Binder	Asbestos fibers BDL
138863	2-1 Layer B	2	same	Black Tar	85% Binder, 15% Cellulose	Asbestos fibers BDL
138864	2-2	2	Roof, northeast corner	Black Tar	100% Binder	Asbestos fibers BDL
138865	2-3	2	Roof, southeast corner	Black Tar	100% Binder	Asbestos fibers BDL
138866	3-1 Layer A	3	Roof, southwest corner	Black Tar	92% Binder	8% Chrysotile
138866	3-1 Layer B	3	same	Black Tar	100% Binder	Asbestos fibers BDL
138867	3-2 Layer A	3	Roof, southwest corner	Black Tar	92% Binder	8% Chrysotile

POLARIZED LIGHT MICROSCOPY
ANALYTICAL RESULTS

METHOD NUMBER:	EPA/600/R-93/116, July, 1993; 40 CFR, Ch. 1 (7-1-93 ed.), Part 763, Subpart F, Appendix A, pages 293-299
BATCH NUMBER:	2PLM009103
DATE ANALYZED:	March 18, 2003
ANALYST:	Myron Gasiorowski

LAB No.	SAMPLE ID	HSA No.	SAMPLE LOCATION	LAYER DESCRIPTION	NON-ASBESTOS COMPONENTS	APPROXIMATE % ASBESTOS
138867	3-2 Layer B	3	same	Black Tar	100% Binder	Asbestos fibers BDL
138868	3-3 Layer A	3	Roof, southwest corner	Black Tar	92% Binder	8% Chrysotile
138868	3-3 Layer B	3	same	Black Tar	100% Binder	Asbestos fibers BDL

TOLTEST, INC.
1915 N. 12th St., P.O. Box 2186, Toledo, OH 43603-2186; Voice (419) 241-7175, Fax (419) 321-6259
Ship To Address: ATTN: RECEIVING LAB, 1810 N. 12th St., Toledo, OH 43624-1304; Voice (419) 241-7175, Fax (419) 241-1808
Sent From: ☐ Corporate ☐ Plymouth ☐ Pittsburgh ☒ Other GLNTC

Chain of Custody Record

38503 Page 1 of 1

Project No.: 73712.01	Client: US Navy
P.O. No.:	Project/Location: forest Park Gun Range
Project Mgr.: Jeff Tinney	Sampler's Name: Mike Graf
Phone No.: 847-689-0697	Sampler's Signature:

Parameters: 3230

Item No.	Sample I.D.	Date Sampled	Time Sampled	Type	Matrix	Sample Location	Total No. of Containers	PLM	Preserved Yes/No	LAB USE ONLY Lab #
1	1-1	3/14/03			ACM	See Bulk Sample Log	1	✓	X	138860
2	1-2	↓			↓	↓	1	✓	X	138861
3	1-3						1	✓	X	138862
4	2-1						1	✓	X	138863
5	2-2						1	✓	X	138864
6	2-3						1	✓	X	138865
7	3-1						1	✓	X	138866
8	3-2						1	✓	X	138867
9	3-3	↓			↓	↓	1	✓	X	138868
10										

Item No.	Relinquished By:	Date / Time	Received By:	Date / Time
1-9		3/14/03 1400	M. Jasionowski	3/17/03 1050
	Relinquished By:	Date / Time	Received By:	Date / Time
	Relinquished By:	Date / Time	Received By:	Date / Time
	Relinquished By:	Date / Time	Received By:	Date / Time

LAB USE ONLY

Were samples delivered ☐ in person ☒ by courier
Were samples preserved ☐ in field ☐ in lab ☒ N/A
Temp of samples NA °C
Did samples arrive intact and sealed? ☒ yes ☐ no ☐ N/A
Were proper containers used? ☒ yes ☐ no
Was container labeled properly for contents? ☒ yes ☐ no
Were samples packaged properly for type of material? ☒ yes ☐ no
Was shipping label completed properly per regulations? (49 CFR 170, etc.) ☐ yes ☐ no

Comments: TAT 24hr

Distribution: Original plus one accompanies shipment (white and yellow); copy to coordinator field files (pink)

Rev. 4/99

TolTest Inc.

Bulk Sample Log

Inspector: M. Graf

Project No: 73712.01

No. of Samples: 9

Date: 3-14-03

Facility: Forest Park

Building: Gun Range

HSA	Sample No.	FA	Sample Location	Results
1	1	Roof	northwest corner	
1	2	"	northeast corner	
1	3	"	southeast corner	
2	1	"	northwest corner	
2	2	"	northeast corner	
2	3	"	southeast corner	
3	1	"	southwest corner	
3	2	"	"	
3	3	"	"	

TOLTEST, INC.

APPENDIX C

ASBESTOS WASTE AND PCB BALLAST SHIPPING DOCUMENTATION

Original - Not Negotiable

Straight Bill of Lading - Short Form

AMERICAN WASTE HAULERS, INC. (Name of Carrier)

Shipper's No. _____

Carrier's No. _____

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of the Bill of Lading

at FOREST PARK, IL 5/15/2003 From NAVAL STATION (TOLTEST JEFF TINNEY

The property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classification in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Consigned to AMERICAN WASTE PROCESSORS, LTD

Destination MAYWOOD State IL Zip 60153 (Street or mail address of consignee—For purposes of notification only.) County _____

Delivery Address* 2010 W. MADISON ST.

Route _____ *To be filled in only when shipper desires and governing tariffs provide for delivery thereof.

Delivering Carrier AWH Car or Vehicle Initials _____ No. _____

NO. PACKAGES	HAZARDOUS MATERIALS	DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS	WEIGHT SUBJECT TO CORR.	CLASS OR RATE	✓
		UNIVERSAL WASTE			
1	NO	DRUM PCB BALLASTS	76 Lbs		
		CONSTNUCTION DEBRIS			
1	NO	DRUM ASBESTOS TAR PAPER	37Lbs		

Subject to Section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Per _____ (Signature of Consignor)

If charges are to be prepaid, write or stamp here, "To be Prepaid."

Received $ _____ to apply in prepayment of the charges on the property described hereon.

Agent or Cashier

Per _____ (The signature here acknowledges only the amounts prepaid.)

Charges advanced: $ _____

SHIPPERS CERTIFICATION: This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

SIGNATURE DC'Tynn for TITLE Facility Mgr

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight."

**Shipper's imprints in lieu of stamp; not a part of Bill of Lading approved by the Interstate Commerce Commission.

Note-Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____

THIS SHIPMENT IS CORRECTLY DESCRIBED.

CORRECT WEIGHT IS _____ LBS

** The fibre boxes used for this shipment conform to the specifications set forth in the box makers certificate thereon, and all other requirements of the Consolidated Freight Classification.

Shipper

Per _____

C.O.D. SHIPMENT

C.O.D. Amt. _____

Collection Fee _____

Total Charges _____

Shipper, Per _____ Agent, Per _____

7410 W Roosevelt Rd

Permanent post office address of shipper

Forest Park IL

1

APPENDIX D

EXPOSURE ASSESSMENT ANALYTICAL REPORTS

SUBURBAN LABORATORIES, Inc.

4140 Litt Drive · Hillside, Illinois 60162-1183
Tel. (708) 544-3260 · Toll Free (800) 783-LABS · Fax (708) 544-8587
www.SuburbanLabs.com

ACCREDITED IN ACCORDANCE WITH nelac

May 02, 2003

Jeff Tinney
Toltest Inc.
1000 S. Northpoint Blvd.
Waukegan, IL 600858213
Tel: (847) 689-0697
Fax: (847) 689-0698

Project Name: Forest Park,IL NMCRC 73712.01 Workorder #: ***03040913***

Dear Jeff Tinney,

Suburban Laboratories, Inc. received 3 samples on 4/25/2003 9:45:00 AM for the analyses presented in the following report.

There were no problems with the analyses and all the data for the associated QC met EPA, or laboratory specifications except where noted in the case narrative.

This final report of laboratory analysis consists of this cover letter, case narrative, analytical report, dates report, and any accompanying documentation including, but not limited to, chain of custody records, raw data, and letters of explanation or reliance. This report may not be reproduced, except in full, without the prior written approval of Suburban Laboratories, Inc.

If you have any questions regarding these test results, please call your customer service representative at (708) 544-3260.

Sincerely,

Mike Chung
Data Review Manager

CC:

SUBURBAN LABORATORIES, Inc.

4140 Litt Drive · Hillside, Illinois 60162-1183
Tel. (708) 544-3260 · Toll Free (800) 783-LABS · Fax (708) 544-8587
www.SuburbanLabs.com

ACCREDITED IN ACCORDANCE WITH nela

Client ID: Toltest Inc.
Workorder Name: Forest Park,IL NMCRC 73712.01
Workorder #: *03040913*
COC #: 38540
Temp Upon Receipt: 17.5 °C

CASE NARRATIVE

Date: *Friday, May 02, 2003*
PO #:
QC Level: LEVEL I

General Comments:
- All results reported in wet weight unless otherwise indicated. (dry = Dry Weight)
- Sample results relate only to the analytes of interest tested and to sample as received by the laboratory.
- Environmental compliance sample results meet the requirements of Part 186 unless otherwise indicated.
- Accreditation by the State of Illinois is not an endorsement or a guarantee of the validity of data generated. For more information about the laboratories' scope of accreditation, please contact Suburban or the Agency.
- MDL: Method Detection Limit. The minimum concentration of an analyte that can be measured and reported with a 99% confidence that analyte is greater than zero.
- PQL: Practical Quantitation Limit. The lowest concentration that can be reliably achieved within specified requirements of precision and accuracy during routine laboratory operating conditions. The PQL is generally 3 times the MDL.
- DF: Dilution Factor

Data Qualifiers:
J: The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ: The analyte was not detected above the reported detection limit. However, the reported limits approximate and may or may not represent the actual limits of detection and quantitation necessary to accurately and precisely measure the analyte in the sample.
I: Result is Invalid; CS: Compound Screened; TNTC: Too Numerous to Count

Method References:
E: USEPA Methods for the Determination of Inorganic Substances in Environmental Samples; Methods for Chemical Analysis of Water and Wastes; Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, 40CFR136 App A; Methods for the Determination of Metals in Environmental Samples; Methods for the Determination of Organic Compounds in Drinking Water
SW: USEPA, Test Methods for Evaluating Solid Waste, SW-846, 3rd Ed, includes Updates I-III
M: APHA, Standard Methods for the Examination of Water and Wastewater, 18th & 19th Ed.
D: ASTM, Annual Book of Standards F: NAS, Food Chemicals Codex (FCC), 4th Edition
B: US FDA Bacteriological Analytical Manual (BAM) 8th Edition, 1995
USP: US Pharmacopoeia, 24th Revision, 2000

Project Specific Comments:

Suburban Laboratories, Inc.
4140 Litt Drive Hillside, IL 60162 (708) 544-3260

Laboratory Results

Client ID: Toltest Inc.
Workorder Name: Forest Park,IL NMCRC 73712.01

Workorder #: *03040913*
Date: *Friday, May 02, 2003*

Lab Sample #: 03040913-01A
Client Sample ID: Pb-P-1
Matrix: AIR

Collection Date: 4/22/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
LEAD IN AIR SAMPLE		Method:	SW6010B				Analyst: RA
Lead	ND		0.00100	0.00300	mg/m³	1	5/1/2003 4:29 pm

Lab Sample #: 03040913-02A
Client Sample ID: Pb-Fb-2
Matrix: AIR

Collection Date: 4/22/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
LEAD IN AIR SAMPLE		Method:	SW6010B				Analyst: RA
Lead	ND		1.00	3.00	ug/filter	1	5/1/2003 4:31 pm

Lab Sample #: 03040913-03A
Client Sample ID: Pb-Fb-3
Matrix: AIR

Collection Date: 4/22/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
LEAD IN AIR SAMPLE		Method:	SW6010B				Analyst: RA
Lead	ND		1.00	3.00	ug/filter	1	5/1/2003 4:34 pm

Qualifiers:

MDL-Continous Fraction2003

- ND - Not Detected at the Method Detection Limit
- J - Estimated or analyte detected below quantitation limit
- B - Analyte detected in the associated Method Blank
- * - Value exceeds Maximum Contaminant Level
- c - Analyte not included in our scope of accreditation
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- H - Analysis run past method holding time
- DF - Dilution Factor

SUBURBAN LABORATORIES, Inc.
4140 Litt Drive Hillside, Illinois 60162 (708) 544-3260

PREP DATES REPORT

Client ID: Toltest Inc.
Project Name: Forest Park,IL NMCRC 73712.01

Workorder #: *03040913*
Date: *Friday, May 02, 2003*

Lab Sample ID	Collection Date	Batch #	Prep Method	Prep Name	Prep Date
03040913-01A	4/22/2003 12:00 am	8750	SW3050A	SOLID PREP TOTAL METALS: ICP	4/29/2003 8:00 am
03040913-02A	4/22/2003 12:00 am	8750	SW3050A	SOLID PREP TOTAL METALS: ICP	4/29/2003 8:00 am
03040913-03A	4/22/2003 12:00 am	8750	SW3050A	SOLID PREP TOTAL METALS: ICP	4/29/2003 8:00 am

TOLTEST, INC.

1915 N. 12th St., P.O. Box 2186, Toledo, OH 43603-2186; Voice (419) 241-7175, Fax (419) 321-6259
Ship To Address: ATTN: RECEIVING LAB, 1810 N. 12th St., Toledo, OH 43624-1304; Voice (419) 241-7175, Fax (419) 241-1808
Sent From: ☐ Corporate ☐ Plymouth ☐ Pittsburgh ☒ Other GLNTC

Chain of Custody Record

38540 Page 1 of 1

Project No.: 73712.01	Client: US Navy
P.O. No.:	Project/Location: Forest Park, IL, NMCRC
Project Mgr.: Jeff Tinney	Sampler's Name Floyd Cushing
Phone No. 847-689-0697	Sampler's Signature Floyd Cushing

Item No.	Sample I.D.	Date Sampled	Time Sampled	Type	Matrix	Sample Location	Total No. of Containers	NIOSH 7082	Preserved Yes/(No)	LAB USE ONLY Lab #
1	Pb-P-1	4/22/03			Pb	See Summary Sheet	1	✓	X	03040913 1A
2	Pb-FB-2	↓			↓	↓	1	✓	X	03040913 2A
3	Pb-FB-3						1	✓	X	03040913 3A
4										
5										
6										
7										
8										
9										
10										

Item No.	Relinquished By:	Date / Time	Received By:	Date / Time
	Floyd Cushing	4/24/04 2:20		4/22/03
	Relinquished By:	Date / Time	Received By:	Date / Time
	Fedex			4/25 9:45A
	Relinquished By:	Date / Time	Received By:	Date / Time
	Relinquished By:	Date / Time	Received By:	Date / Time

LAB USE ONLY

Were samples delivered ☐ in person ☐ by courier
Were samples preserved ☐ in field ☐ in lab ☐ N/A
Temp of samples 17.5 °C
Did samples arrive intact and sealed? ☐ yes ☐ no ☐ N/A
Were proper containers used? ☐ yes ☐ no
Was container labeled properly for contents? ☐ yes ☐ no
Were samples packaged properly for type of material? ☐ yes ☐ no
Was shipping label completed properly per regulations? (49 CFR 170, etc.) ☐ yes ☐ no

Comments: _____

TAT STD

Distribution: Original plus one accompanies shipment (white and yellow); copy to coordinator field files (pink)

Rev. 4/99

SUBURBAN LABORATORIES, Inc.

4140 Litt Drive · Hillside, Illinois 60162-1183
Tel. (708) 544-3260 · Toll Free (800) 783-LABS · Fax (708) 544-8587
www.SuburbanLabs.com

ACCREDITED IN ACCORDANCE WITH nelac

May 02, 2003

Jeff Tinney
Toltest Inc.
1000 S. Northpoint Blvd.
Waukegan, IL 600858213
Tel: (847) 689-0697
Fax: (847) 689-0698

Project Name: Forest Park,IL,NMCRC 73712.01 Workorder #: ***03040918***

Dear Jeff Tinney,

Suburban Laboratories, Inc. received 5 samples on 4/25/2003 9:45:00 AM for the analyses presented in the following report.

There were no problems with the analyses and all the data for the associated QC met EPA, or laboratory specifications except where noted in the case narrative.

This final report of laboratory analysis consists of this cover letter, case narrative, analytical report, dates report, and any accompanying documentation including, but not limited to, chain of custody records, raw data, and letters of explanation or reliance. This report may not be reproduced, except in full, without the prior written approval of Suburban Laboratories, Inc.

If you have any questions regarding these test results, please call your customer service representative at (708) 544-3260.

Sincerely,

Mike Chung
Data Review Manager

CC:

SUBURBAN LABORATORIES, Inc.

4140 Litt Drive · Hillside, Illinois 60162-1183
Tel. (708) 544-3260 · Toll Free (800) 783-LABS · Fax (708) 544-8587
www.SuburbanLabs.com

ACCREDITED IN ACCORDANCE WITH nelac

May 02, 2003

Jeff Tinney
Toltest Inc.
1000 S. Northpoint Blvd.
Waukegan, IL 600858213
Tel: (847) 689-0697
Fax: (847) 689-0698

Project Name: Forest Park,IL,NMCRC 73712.01 Workorder #: ***03040918***

Dear Jeff Tinney,

Suburban Laboratories, Inc. received 5 samples on 4/25/2003 9:45:00 AM for the analyses presented in the following report.

There were no problems with the analyses and all the data for the associated QC met EPA, or laboratory specifications except where noted in the case narrative.

This final report of laboratory analysis consists of this cover letter, case narrative, analytical report, dates report, and any accompanying documentation including, but not limited to, chain of custody records, raw data, and letters of explanation or reliance. This report may not be reproduced, except in full, without the prior written approval of Suburban Laboratories, Inc.

If you have any questions regarding these test results, please call your customer service representative at (708) 544-3260.

Sincerely,

Mike Chung
Data Review Manager

CC:

SUBURBAN LABORATORIES, Inc.

4140 Litt Drive · Hillside, Illinois 60162-1183
Tel. (708) 544-3260 · Toll Free (800) 783-LABS · Fax (708) 544-8587
www.SuburbanLabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Client ID: Toltest Inc.
Workorder Name: Forest Park,IL,NMCRC 73712.01
Workorder #: ***03040918***
COC #: 38541
Temp Upon Receipt: 17.5 °C

CASE NARRATIVE

Date: *Friday, May 02, 2003*
PO #:
QC Level: LEVEL I

General Comments:
- All results reported in wet weight unless otherwise indicated. (dry = Dry Weight)
- Sample results relate only to the analytes of interest tested and to sample as received by the laboratory.
- Environmental compliance sample results meet the requirements of Part 186 unless otherwise indicated.
- Accreditation by the State of Illinois is not an endorsement or a guarantee of the validity of data generated. For more information about the laboratories' scope of accreditation, please contact Suburban or the Agency.
- MDL: Method Detection Limit. The minimum concentration of an analyte that can be measured and reported with a 99% confidence that analyte is greater than zero.
- PQL: Practical Quantitation Limit. The lowest concentration that can be reliably achieved within specified requirements of precision and accuracy during routine laboratory operating conditions. The PQL is generally 3 times the MDL.
- DF: Dilution Factor

Data Qualifiers:
J: The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ: The analyte was not detected above the reported detection limit. However, the reported limits approximate and may or may not represent the actual limits of detection and quantitation necessary to accurately and precisely measure the analyte in the sample.
I: Result is Invalid; CS: Compound Screened; TNTC: Too Numerous to Count

Method References:
E: USEPA Methods for the Determination of Inorganic Substances in Environmental Samples; Methods for Chemical Analysis of Water and Wastes; Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, 40CFR136 App A; Methods for the Determination of Metals in Environmental Samples; Methods for the Determination of Organic Compounds in Drinking Water
SW: USEPA, Test Methods for Evaluating Solid Waste, SW-846, 3rd Ed, includes Updates I-III
M: APHA, Standard Methods for the Examination of Water and Wastewater, 18th & 19th Ed.
D: ASTM, Annual Book of Standards F: NAS, Food Chemicals Codex (FCC), 4th Edition
B: US FDA Bacteriological Analytical Manual (BAM) 8th Edition, 1995
USP: US Pharmacopoeia, 24th Revision, 2000

Project Specific Comments:

Suburban Laboratories, Inc.
4140 Litt Drive Hillside, IL 60162 (708) 544-3260

Laboratory Results

Client ID: Toltest Inc.
Workorder Name: Forest Park,IL,NMCRC 73712.01

Workorder #: *03040918*
Date: *Friday, May 02, 2003*

Lab Sample #: 03040918-01A
Client Sample ID: D-P-1
Matrix: AIR

Collection Date: 4/22/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
NUISANCE DUST IN AIR SAMPLE		Method:	NIOSH 0500				Analyst: AB
Nuisance Dust	0.500		0.010	0.010	mg/m³	1	5/1/2003 12:10 pm

Lab Sample #: 03040918-02A
Client Sample ID: D-P-2
Matrix: AIR

Collection Date: 4/22/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
NUISANCE DUST IN AIR SAMPLE		Method:	NIOSH 0500				Analyst: AB
Nuisance Dust	0.200		0.010	0.010	mg/m³	1	5/1/2003 12:10 pm

Lab Sample #: 03040918-03A
Client Sample ID: D-P-3
Matrix: AIR

Collection Date: 4/22/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
NUISANCE DUST IN AIR SAMPLE		Method:	NIOSH 0500				Analyst: AB
Nuisance Dust	ND		0.010	0.010	mg/m³	1	5/1/2003 12:10 pm

Lab Sample #: 03040918-04A
Client Sample ID: D-FB-4
Matrix: AIR

Collection Date: 4/22/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
NUISANCE DUST IN AIR SAMPLE		Method:	NIOSH 0500				Analyst: AB
Nuisance Dust	ND		0.010	0.010	mg/filter	1	5/1/2003 12:10 pm

Qualifiers:
MDL-Continous Fraction2003

ND - Not Detected at the Method Detection Limit
J - Estimated or analyte detected below quantitation limit
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
c - Analyte not included in our scope of accreditation
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Analysis run past method holding time
DF - Dilution Factor

Suburban Laboratories, Inc.
4140 Litt Drive Hillside, IL 60162 (708) 544-3260

Laboratory Results

Client ID: Toltest Inc.
Workorder Name: Forest Park,IL,NMCRC 73712.01

Workorder #: *03040918*
Date: *Friday, May 02, 2003*

Lab Sample #: 03040918-05A
Client Sample ID: D-FB-5
Matrix: AIR

Collection Date: 4/22/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
NUISANCE DUST IN AIR SAMPLE		Method:	NIOSH 0500				Analyst: AB
Nuisance Dust	0.100		0.010	0.010	mg/filter	1	5/1/2003 12:10 pm

Qualifiers:

MDL-Continuous Fraction2003

- ND - Not Detected at the Method Detection Limit
- J - Estimated or analyte detected below quantitation limit
- B - Analyte detected in the associated Method Blank
- * - Value exceeds Maximum Contaminant Level
- c - Analyte not included in our scope of accreditation
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- H - Analysis run past method holding time
- DF - Dilution Factor

SUBURBAN LABORATORIES, Inc.
4140 Litt Drive Hillside, Illinois 60162 (708) 544-3260

PREP DATES REPORT

Client ID: **Workorder #:**

Project Name: **Date:** *Friday, May 02, 2003*

Lab Sample ID	Collection Date	Batch #	Prep Method	Prep Name	Prep Date

TOLTEST, INC.
1915 N. 12th St., P.O. Box 2186, Toledo, OH 43603-2186; Voice (419) 241-7175, Fax (419) 321-6259
Ship To Address: ATTN: RECEIVING LAB, 1810 N. 12th St., Toledo, OH 43624-1304; Voice (419) 241-7175, Fax (419) 241-1808
Sent From: ☐ Corporate ☐ Plymouth ☐ Pittsburgh ☒ Other GENTC

Chain of Custody Record

38541 Page 1 of 1

Project No.: 73712.01 | Client: US Navy
P.O. No.: | Project/Location: Forest Park, IL, NMCRC
Project Mgr.: Jeff Tinney | Sampler's Name Floyd Cushing
Phone No. 847-689-0697 | Sampler's Signature Floyd Cushing

Item No.	Sample I.D.	Date Sampled	Time Sampled	Type	Matrix	Sample Location	Total No. of Containers	2105H 0600	Parameters	Preserved Yes (No)	LAB USE ONLY Lab #
1	D-P-1	4/22/03			Dust	See Sample Summary Sheet	1	✓		X	0310918 1A
2	D-P-2	↓			↓	↓	1	✓		X	2A
3	D-P-3						1	✓		X	3A
4	D-FB-4						1	✓		X	4A
5	D-FB-5	↓			↓		1	✓		X	5A
6											
7											
8											
9											
10											

Item No.	Relinquished By:	Date / Time	Received By:	Date / Time
	Floyd Cushing	4/22/03 2130		4/22/03
	Relinquished By:	Date / Time	Received By:	Date / Time
			Amanda Clark	4/25/03 9:45
	Relinquished By:	Date / Time	Received By:	Date / Time
	Relinquished By:	Date / Time	Received By:	Date / Time

LAB USE ONLY

Were samples delivered ☐ in person ☐ by courier
Were samples preserved ☐ in field ☐ in lab ☐ N/A
Temp of samples 17.5 °C
Did samples arrive intact and sealed? ☐ yes ☐ no ☐ N/A
Were proper containers used? ☐ yes ☐ no
Was container labeled properly for contents? ☐ yes ☐ no
Were samples packaged properly for type of material? ☐ yes ☐ no
Was shipping label completed properly per regulations? (49 CFR 170, etc.) ☐ yes ☐ no

Comments:

TAT STD

Distribution: Original plus one accompanies shipment (white and yellow); copy to coordinator field files (pink)

Rev. 4/99

SUBURBAN LABORATORIES, Inc.

4140 Litt Drive · Hillside, Illinois 60162-1183
Tel. (708) 544-3260 · Toll Free (800) 783-LABS · Fax (708) 544-8587
www.SuburbanLabs.com

ACCREDITED IN ACCORDANCE WITH nelac

May 02, 2003

Jeff Tinney
Toltest Inc.
1000 S. Northpoint Blvd.
Waukegan, IL 600858213
Tel: (847) 689-0697
Fax: (847) 689-0698

Project Name: Forest Park,IL,NMCRC 73712.01 Workorder #: ***03040919***

Dear Jeff Tinney,

Suburban Laboratories, Inc. received 3 samples on 4/25/2003 9:45:00 AM for the analyses presented in the following report.

There were no problems with the analyses and all the data for the associated QC met EPA, or laboratory specifications except where noted in the case narrative.

This final report of laboratory analysis consists of this cover letter, case narrative, analytical report, dates report, and any accompanying documentation including, but not limited to, chain of custody records, raw data, and letters of explanation or reliance. This report may not be reproduced, except in full, without the prior written approval of Suburban Laboratories, Inc.

If you have any questions regarding these test results, please call your customer service representative at (708) 544-3260.

Sincerely,

Mike Chung
Data Review Manager

CC:

SUBURBAN LABORATORIES, Inc.

4140 Litt Drive · Hillside, Illinois 60162-1183
Tel. (708) 544-3260 · Toll Free (800) 783-LABS · Fax (708) 544-8587
www.SuburbanLabs.com

ACCREDITED IN ACCORDANCE WITH nelac

May 02, 2003

Jeff Tinney
Toltest Inc.
1000 S. Northpoint Blvd.
Waukegan, IL 600858213
Tel: (847) 689-0697
Fax: (847) 689-0698

Project Name: Forest Park,IL,NMCRC 73712.01 Workorder #: ***03040919***

Dear Jeff Tinney,

Suburban Laboratories, Inc. received 3 samples on 4/25/2003 9:45:00 AM for the analyses presented in the following report.

There were no problems with the analyses and all the data for the associated QC met EPA, or laboratory specifications except where noted in the case narrative.

This final report of laboratory analysis consists of this cover letter, case narrative, analytical report, dates report, and any accompanying documentation including, but not limited to, chain of custody records, raw data, and letters of explanation or reliance. This report may not be reproduced, except in full, without the prior written approval of Suburban Laboratories, Inc.

If you have any questions regarding these test results, please call your customer service representative at (708) 544-3260.

Sincerely,

Mike Chung
Data Review Manager

CC:

SUBURBAN LABORATORIES, Inc.

4140 Litt Drive · Hillside, Illinois 60162-1183
Tel. (708) 544-3260 · Toll Free (800) 783-LABS · Fax (708) 544-8587
www.SuburbanLabs.com

ACCREDITED IN ACCORDANCE WITH nela

Client ID:	Toltest Inc.
Workorder Name:	Forest Park,IL,NMCRC 73712.01
Workorder #:	***03040919***
COC #:	38542
Temp Upon Receipt:	17.5 °C

CASE NARRATIVE

Date: *Friday, May 02, 2003*
PO #:
QC Level: LEVEL I

General Comments:
- All results reported in wet weight unless otherwise indicated. (dry = Dry Weight)
- Sample results relate only to the analytes of interest tested and to sample as received by the laboratory.
- Environmental compliance sample results meet the requirements of Part 186 unless otherwise indicated.
- Accreditation by the State of Illinois is not an endorsement or a guarantee of the validity of data generated. For more information about the laboratories' scope of accreditation, please contact Suburban or the Agency.
- MDL: Method Detection Limit. The minimum concentration of an analyte that can be measured and reported with a 99% confidence that analyte is greater than zero.
- PQL: Practical Quantitation Limit. The lowest concentration that can be reliably achieved within specified requirements of precision and accuracy during routine laboratory operating conditions. The PQL is generally 3 times the MDL.
- DF: Dilution Factor

Data Qualifiers:
J: The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ: The analyte was not detected above the reported detection limit. However, the reported limits approximate and may or may not represent the actual limits of detection and quantitation necessary to accurately and precisely measure the analyte in the sample.
I: Result is Invalid; CS: Compound Screened; TNTC: Too Numerous to Count

Method References:
E: USEPA Methods for the Determination of Inorganic Substances in Environmental Samples; Methods for Chemical Analysis of Water and Wastes; Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, 40CFR136 App A; Methods for the Determination of Metals in Environmental Samples; Methods for the Determination of Organic Compounds in Drinking Water
SW: USEPA, Test Methods for Evaluating Solid Waste, SW-846, 3rd Ed, includes Updates I-III
M: APHA, Standard Methods for the Examination of Water and Wastewater, 18th & 19th Ed.
D: ASTM, Annual Book of Standards F: NAS, Food Chemicals Codex (FCC), 4th Edition
B: US FDA Bacteriological Analytical Manual (BAM) 8th Edition, 1995
USP: US Pharmacopoeia, 24th Revision, 2000

Project Specific Comments:

Client ID: Toltest Inc.
Workorder Name: Forest Park,IL,NMCRC 73712.01

Workorder #: *03040919*
Date: *Friday, May 02, 2003*

Lab Sample #: 03040919-01A
Client Sample ID: Pb-4
Matrix: AIR

Collection Date: 4/23/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
LEAD IN AIR SAMPLE		Method:	SW6010B				Analyst: RA
Lead	0.0011	J	0.00100	0.00300	mg/m³	1	5/1/2003 4:37 pm

Lab Sample #: 03040919-02A
Client Sample ID: Pb-5
Matrix: AIR

Collection Date: 4/23/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
LEAD IN AIR SAMPLE		Method:	SW6010B				Analyst: RA
Lead	ND		1.00	3.00	ug/filter	1	5/1/2003 4:40 pm

Lab Sample #: 03040919-03A
Client Sample ID: Pb-6
Matrix: AIR

Collection Date: 4/23/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
LEAD IN AIR SAMPLE		Method:	SW6010B				Analyst: RA
Lead	ND		1.00	3.00	ug/filter	1	5/1/2003 4:43 pm

Qualifiers:

MDL-Continous Fraction2003

- ND - Not Detected at the Method Detection Limit
- J - Estimated or analyte detected below quantitation limit
- B - Analyte detected in the associated Method Blank
- * - Value exceeds Maximum Contaminant Level
- c - Analyte not included in our scope of accreditation
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- H - Analysis run past method holding time
- DF - Dilution Factor

SUBURBAN LABORATORIES, Inc.
4140 Litt Drive Hillside, Illinois 60162 (708) 544-3260

PREP DATES REPORT

Client ID: Toltest Inc.
Project Name: Forest Park,IL,NMCRC 73712.01

Workorder #: *03040919*
Date: *Friday, May 02, 2003*

Lab Sample ID	Collection Date	Batch #	Prep Method	Prep Name	Prep Date
03040919-01A	4/23/2003 12:00 am	8750	SW3050A	SOLID PREP TOTAL METALS: ICP	4/29/2003 8:00 am
03040919-02A	4/23/2003 12:00 am	8750	SW3050A	SOLID PREP TOTAL METALS: ICP	4/29/2003 8:00 am
03040919-03A	4/23/2003 12:00 am	8750	SW3050A	SOLID PREP TOTAL METALS: ICP	4/29/2003 8:00 am

TOLTEST, INC.
1915 N. 12th St., P.O. Box 2186, Toledo, OH 43603-2186; Voice (419) 241-7175, Fax (419) 321-6259
Ship To Address: ATTN: RECEIVING LAB, 1810 N. 12th St., Toledo, OH 43624-1304; Voice (419) 241-7175, Fax (419) 241-1808
Sent From: ☐ Corporate ☐ Plymouth ☐ Pittsburgh ☒ Other Great Lakes

Chain of Custody Record

38542 Page 1 of

Project No.: 73712.01	Client: U.S. Navy
P.O. No.:	Project/Location: Forest Park, IL. NMCRC
Project Mgr.: Jeff Tinney	Sampler's Name Michael Hebert
Phone No. 847-697-0647	Sampler's Signature Michael Hebert

Item No.	Sample I.D.	Date Sampled	Time Sampled	Type	Matrix	Sample Location	Total No. of Containers	7052	Parameters										Preserved Yes/No	LAB USE ONLY Lab #
1	Pb-4	4/23/03		P	Pb	See Sample Summary Sheet	1	✓											x	03040919 1A
2	Pb-5	4/23/03		FB			1	✓											x	03040919 2A
3	Pb-6	4/23/03		FB			1	✓											x	03040919 3A
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Item No.	Relinquished By:	Date / Time	Received By:	Date / Time
	Michael Hebert	4/23/03 5:00PM	Amardellard	4/25/03 9:45
	Relinquished By:	Date / Time	Received By:	Date / Time
	Relinquished By:	Date / Time	Received By:	Date / Time
	Relinquished By:	Date / Time	Received By:	Date / Time

LAB USE ONLY

Were samples delivered ☐ in person ☐ by courier
Were samples preserved ☐ in field ☐ in lab ☐ N/A
Temp of samples 17.5 °C
Did samples arrive intact and sealed? ☐ yes ☐ no ☐ N/A
Were proper containers used? ☐ yes ☐ no
Was container labeled properly for contents? ☐ yes ☐ no
Were samples packaged properly for type of material? ☐ yes ☐ no
Was shipping label completed properly per regulations? (49 CFR 170, etc.) ☐ yes ☐ no

Comments:

TAT STD

Distribution: Original plus one accompanies shipment (white and yellow); copy to coordinator field file (pink)

Rev. 4/99

SUBURBAN LABORATORIES, Inc.

4140 Litt Drive · Hillside, Illinois 60162-1183
Tel. (708) 544-3260 · Toll Free (800) 783-LABS · Fax (708) 544-8587
www.SuburbanLabs.com

ACCREDITED IN ACCORDANCE WITH nelac

May 02, 2003

Jeff Tinney
Toltest Inc.
1000 S. Northpoint Blvd.
Waukegan, IL 600858213
Tel: (847) 689-0697
Fax: (847) 689-0698

Project Name: Forest Park,IL,NMCRC 73712.01 Workorder #: ***03040920***

Dear Jeff Tinney,

Suburban Laboratories, Inc. received 5 samples on 4/25/2003 9:45:00 AM for the analyses presented in the following report.

There were no problems with the analyses and all the data for the associated QC met EPA, or laboratory specifications except where noted in the case narrative.

This final report of laboratory analysis consists of this cover letter, case narrative, analytical report, dates report, and any accompanying documentation including, but not limited to, chain of custody records, raw data, and letters of explanation or reliance. This report may not be reproduced, except in full, without the prior written approval of Suburban Laboratories, Inc.

If you have any questions regarding these test results, please call your customer service representative at (708) 544-3260.

Sincerely,

Mike Chung
Data Review Manager

CC:

SUBURBAN LABORATORIES, Inc.

4140 Litt Drive · Hillside, Illinois 60162-1183
Tel. (708) 544-3260 · Toll Free (800) 783-LABS · Fax (708) 544-8587
www.SuburbanLabs.com

ACCREDITED IN ACCORDANCE WITH nelac

May 02, 2003

Jeff Tinney
Toltest Inc.
1000 S. Northpoint Blvd.
Waukegan, IL 600858213
Tel: (847) 689-0697
Fax: (847) 689-0698

Project Name: Forest Park,IL,NMCRC 73712.01 Workorder #: ***03040920***

Dear Jeff Tinney,

Suburban Laboratories, Inc. received 5 samples on 4/25/2003 9:45:00 AM for the analyses presented in the following report.

There were no problems with the analyses and all the data for the associated QC met EPA, or laboratory specifications except where noted in the case narrative.

This final report of laboratory analysis consists of this cover letter, case narrative, analytical report, dates report, and any accompanying documentation including, but not limited to, chain of custody records, raw data, and letters of explanation or reliance. This report may not be reproduced, except in full, without the prior written approval of Suburban Laboratories, Inc.

If you have any questions regarding these test results, please call your customer service representative at (708) 544-3260.

Sincerely,

Mike Chung
Data Review Manager

CC:

SUBURBAN LABORATORIES, Inc.

4140 Litt Drive · Hillside, Illinois 60162-1183
Tel. (708) 544-3260 · Toll Free (800) 783-LABS · Fax (708) 544-8587
www.SuburbanLabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Client ID: Toltest Inc.
Workorder Name: Forest Park,IL,NMCRC 73712.01
Workorder #: ***03040920***
COC #: 42323
Temp Upon Receipt: 17.5 °C

CASE NARRATIVE

Date: *Friday, May 02, 2003*
PO #:
QC Level: LEVEL I

General Comments:
- All results reported in wet weight unless otherwise indicated. (dry = Dry Weight)
- Sample results relate only to the analytes of interest tested and to sample as received by the laboratory.
- Environmental compliance sample results meet the requirements of Part 186 unless otherwise indicated.
- Accreditation by the State of Illinois is not an endorsement or a guarantee of the validity of data generated. For more information about the laboratories' scope of accreditation, please contact Suburban or the Agency.
- MDL: Method Detection Limit. The minimum concentration of an analyte that can be measured and reported with a 99% confidence that analyte is greater than zero.
- PQL: Practical Quantitation Limit. The lowest concentration that can be reliably achieved within specified requirements of precision and accuracy during routine laboratory operating conditions. The PQL is generally 3 times the MDL.
- DF: Dilution Factor

Data Qualifiers:
J: The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ: The analyte was not detected above the reported detection limit. However, the reported limits approximate and may or may not represent the actual limits of detection and quantitation necessary to accurately and precisely measure the analyte in the sample.
I: Result is Invalid; CS: Compound Screened; TNTC: Too Numerous to Count

Method References:
E: USEPA Methods for the Determination of Inorganic Substances in Environmental Samples; Methods for Chemical Analysis of Water and Wastes; Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, 40CFR136 App A; Methods for the Determination of Metals in Environmental Samples; Methods for the Determination of Organic Compounds in Drinking Water
SW: USEPA, Test Methods for Evaluating Solid Waste, SW-846, 3rd Ed, includes Updates I-III
M: APHA, Standard Methods for the Examination of Water and Wastewater, 18th & 19th Ed.
D: ASTM, Annual Book of Standards F: NAS, Food Chemicals Codex (FCC), 4th Edition
B: US FDA Bacteriological Analytical Manual (BAM) 8th Edition, 1995
USP: US Pharmacopoeia, 24th Revision, 2000

Project Specific Comments:

Client ID: Toltest Inc.
Workorder Name: Forest Park,IL,NMCRC 73712.01

Workorder #: *03040920*
Date: *Friday, May 02, 2003*

Lab Sample #: 03040920-01A
Client Sample ID: D-6
Matrix: AIR

Collection Date: 4/23/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
NUISANCE DUST IN AIR SAMPLE		Method:	NIOSH 0500				Analyst: AB
Nuisance Dust	0.800		0.010	0.010	mg/m³	1	5/1/2003 12:10 pm

Lab Sample #: 03040920-02A
Client Sample ID: D-7
Matrix: AIR

Collection Date: 4/23/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
NUISANCE DUST IN AIR SAMPLE		Method:	NIOSH 0500				Analyst: AB
Nuisance Dust	ND		0.010	0.010	mg/m³	1	5/1/2003 12:10 pm

Lab Sample #: 03040920-03A
Client Sample ID: D-8
Matrix: AIR

Collection Date: 4/23/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
NUISANCE DUST IN AIR SAMPLE		Method:	NIOSH 0500				Analyst: AB
Nuisance Dust	ND		0.010	0.010	mg/m³	1	5/1/2003 12:10 pm

Lab Sample #: 03040920-04A
Client Sample ID: D-9
Matrix: AIR

Collection Date: 4/23/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
NUISANCE DUST IN AIR SAMPLE		Method:	NIOSH 0500				Analyst: AB
Nuisance Dust	0.300		0.010	0.010	mg/filter	1	5/1/2003 12:10 pm

Qualifiers:

MDL-Continous Fraction2003

- ND - Not Detected at the Method Detection Limit
- J - Estimated or analyte detected below quantitation limit
- B - Analyte detected in the associated Method Blank
- * - Value exceeds Maximum Contaminant Level
- c - Analyte not included in our scope of accreditation
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- H - Analysis run past method holding time
- DF - Dilution Factor

Suburban Laboratories, Inc.
4140 Litt Drive Hillside, IL 60162 (708) 544-3260

Laboratory Results

Client ID: Toltest Inc.
Workorder Name: Forest Park,IL,NMCRC 73712.01

Workorder #: *03040920*
Date: *Friday, May 02, 2003*

Lab Sample #: 03040920-05A
Client Sample ID: D-10
Matrix: AIR

Collection Date: 4/23/2003
Received Date: 4/25/2003 9:45:00 AM

Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
NUISANCE DUST IN AIR SAMPLE		Method:	NIOSH 0500				Analyst: AB
Nuisance Dust	ND		0.010	0.010	mg/filter	1	5/1/2003 12:10 pm

Qualifiers:

MDL-Continous Fraction2003

- ND - Not Detected at the Method Detection Limit
- J - Estimated or analyte detected below quantitation limit
- B - Analyte detected in the associated Method Blank
- * - Value exceeds Maximum Contaminant Level
- c - Analyte not included in our scope of accreditation
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- H - Analysis run past method holding time
- DF - Dilution Factor

SUBURBAN LABORATORIES, Inc.
4140 Litt Drive Hillside, Illinois 60162 (708) 544-3260

PREP DATES REPORT

Client ID: **Workorder #:**

Project Name: **Date:** *Friday, May 02, 2003*

Lab Sample ID	Collection Date	Batch #	Prep Method	Prep Name	Prep Date

TOLTEST, INC.

1915 N. 12th St., P.O. Box 2186, Toledo, OH 43603-2186; Voice (419) 241-7175, Fax (419) 321-6259
Ship To Address: ATTN: RECEIVING LAB, 1810 N. 12th St., Toledo, OH 43624-1304; Voice (419) 241-7175, Fax (419) 241-1808
Sent From: ☐ Corporate ☐ Plymouth ☐ Pittsburgh ☒ Other Great Lakes

Chain of Custody Record

42323 Page 1 of 1

Project No.: 73712.01 | Client: U.S. Navy
P.O. No.: | Project/Location: Forest Park, IL., NMCRC
Project Mgr.: Jeff Tinney | Sampler's Name Michael Hubbard
Phone No. 417-684-0047 | Sampler's Signature Michael Hubbard

Item No.	Sample I.D.	Date Sampled	Time Sampled	Type	Matrix	Sample Location	Total No. of Containers	Parameters: N Lead Only	Preserved Yes/No	LAB USE ONLY Lab #
1	D-6	4/23/03		A	Dust	See Sample Summary Sheet	1	1	X	03040920 1A
2	D-7	4/23/03		A	↓	↓	1	1	X	03040920 2A
3	D-8	4/23/03		A			1	1	X	03040920 3A
4	D-9	4/23/03		FB			1	1	X	03040920 4A
5	D-10	4/23/03		FB	↓	↓	1	1	X	03040920 5A
6										
7										
8										
9										
10										

Item No.	Relinquished By:	Date / Time	Received By:	Date / Time
	Michael Hubbard	4/23/03 5:00PM	[signature]	4/25 9:45A
	Relinquished By:	Date / Time	Received By:	Date / Time
				FB
	Relinquished By:	Date / Time	Received By:	Date / Time
	Relinquished By:	Date / Time	Received By:	Date / Time

LAB USE ONLY

Were samples delivered ☐ in person ☐ by courier
Were samples preserved ☐ in field ☐ in lab ☐ N/A
Temp of samples 17.5 °C
Did samples arrive intact and sealed? ☐ yes ☐ no ☐ N/A
Were proper containers used? ☐ yes ☐ no
Was container labeled properly for contents? ☐ yes ☐ no
Were samples packaged properly for type of material? ☐ yes ☐ no
Was shipping label completed properly per regulations? (49 CFR 170, etc.) ☐ yes ☐ no

Comments:

TAT: STD

Distribution: Original plus one accompanies shipment (white and yellow); copy to coordinator field files (pink)

Rev. 4/99

APPENDIX E

STEEL RECYCLING WEIGHT TICKET

ACME REFINING
SCRAP IRON & METAL COMPANY

1409 ROCKLAND ROAD • LAKE BLUFF, ILLINOIS 60044
847-[illegible]-0639

Job # 0021

Not Responsible For Vehicles Damaged

CUSTOMER'S ORDER NO. | PHONE | DATE 4-24

NAME LCG

ADDRESS

CITY | STATE

SOLD BY	CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D	PAID OUT	

QTY.	DESCRIPTION	PRICE	AMOUNT
	48090		
	34480		
	2500		
	1500 UNPEELED		
	7110		
	1500 UNPEELED PLATE		
	5610		
	Stainless 4x		
		TAX	
RECEIVED BY		TOTAL	

CLAIMS AND RETURNED GOODS MUST BE ACCOMPANIED BY THIS BILL

Thank You

APPENDIX F

CONCRETE AND BRICK RECYCLING WEIGHT TICKETS

C3

COUNTRYSIDE LANDFILL

A WASTE MANAGEMENT COMPANY

31725 N. Rt. 83. Grayslake, Illinois 60030
(847) 223-2722 • FAX (847) 223-3188

B10648
04/22/2003

Loc ID	County	ST Pct
LK	LAKE	IL 100%

	Oper	Time	Date
In:	KAT	10:28 AM	04/22/2003
Out:	KAT	10:28 AM	04/22/2003

PLEASE SIGN BELOW:

Job 121 Forest Park Armed Forces Center

Truck #366 Dale FAX:

0000652 LC0366 RBM

ROAD BASE MATERIAL
31725 N. RT 83

GRAYSLAKE IL 60030

RDB ROAD BASE MATERIAL - 15.00

Gross 64,900
EW 31,200
Net 33,700

WM 403-0006

C3

COUNTRYSIDE LANDFILL

A WASTE MANAGEMENT COMPANY

31725 N. Rt. 83. Grayslake, Illinois 60030
(847) 223-2722 • FAX (847) 223-3188

810837
04/22/2003

Loc ID	County	ST Pct
LK	LAKE	IL 100%

	Oper	Time	Date
In:	KAT	03:13 PM	04/22/2003
Out:	KAT	03:13 PM	04/22/2003

PLEASE SIGN BELOW:

Job #121 Forest Park Armed Forces
Truck #366 FAX: Center
LK

0000452 LCG366 RBM

ROAD BASE MATERIAL
31725 N. RT 83

GRAYSLAKE IL 60030

RDB ROAD BASE MATERIAL - 15.00

Gross 76,300
EW 31,200
net 45,100

WM 403-0006

C3

COUNTRYSIDE LANDFILL

A WASTE MANAGEMENT COMPANY
31725 N. Rt. 83. Grayslake, Illinois 60030
(847) 223-2722 • FAX (847) 223-3188

810791
04/22/2003

Loc ID	County	ST Pct
LK	LAKE	IL 100%

GROSS: 23.480
TARE: 19.770

NET: 3.710
7420

	Oper	Time	Date
In:	KAT	01:33 PM	04/22/2003
Out:	KAT	01:50 PM	04/22/2003

PLEASE SIGN BELOW:

Jerry #21

FAX:

NAVY BASE 121

0000021 LCG211 MSW

LAKE COUNTY GRADING COMP
P.O. BOX L. RT. 120 &21

LIBERTYVILLE IL 60048

FSL	Fuel Surcharge landf	15.00
TAX	TAXES - 4 TON MIN	15.00
MI4	4 TON MINIMUM CHARGE	15.00

WM 403-0006

COUNTRYSIDE LANDFILL

A WASTE MANAGEMENT COMPANY

31725 N. Rt. 83. Grayslake, Illinois 60030
(847) 223-2722 • FAX (847) 223-3188

810913
04/23/2003

Loc ID	County	ST Pct
LK	LAKE	IL 100%

	Oper	Time	Date
In:	KAT	08:07 AM	04/23/2003
Out:	KAT	08:07 AM	04/23/2003

PLEASE SIGN BELOW:

FAX:

G. 72.860
T. 34.000
N. 38-860

0000652 LOG177 PBM

ROAD BASE MATERIAL
31725 N. RT 83

GRAYSLAKE IL 60030

ADB ROAD BASE MATERIAL

WM 403-0006

COUNTRYSIDE LANDFILL

A WASTE MANAGEMENT COMPANY

31725 N. Rt. 83. Grayslake, Illinois 60030
(847) 223-2722 • FAX (847) 223-3188

810913
04/28/2003

Loc ID	County	ST Pct
LK	LAKE	IL 100%

	Oper	Time	Date
In	KAT	08:08 AM	04/28/2003
Out	KAT	08:08 AM	04/28/2003

PLEASE SIGN BELOW:

NAVY BASE DEMO #121

FAX: GW. 71.900
EW. 32.500

0000652 LD521 RBM

ROAD BASE MATERIAL
31725 N. RT 83

GRAYSLAKE

PES . ROAD BASE MATERIAL

WM 403-0006

CE

COUNTRYSIDE LANDFILL

A WASTE MANAGEMENT COMPANY

31725 N. Rt. 83. Grayslake, Illinois 60030
(847) 223-2722 • FAX (847) 223-3188

B10745
04/22/2003

Loc ID	County	ST Pct
LK	LAKE	IL 100%

	Oper	Time	Date
In:	KAT	12:49 PM	04/22/2003
Out:	KAT	12:49 PM	04/22/2003

PLEASE SIGN BELOW:

Job # 121 Forest Park Armed Forces Center

Truck #366 CE

FAX:

0000652 LCG366 RBM

ROAD BASE MATERIAL
31725 N. RT 83

GRAYSLAKE IL 60030

Gross 72,000
EW 31,200
Net 40,800

RDB ROAD BASE MATERIAL — 15.00

WM 403-0006

THE NATION'S LEADING PRODUCER OF CONSTRUCTION AGGREGATES

993660

Vulcan Materials Company

Midwest Division, Vulcan Construction Materials, LP
747 East 22nd Street • Lombard, IL 60148

SHIPPING LOCATION:

BY SIGNING BELOW, TRANSPORTERS OF MATERIAL INTO VULCAN PROPERTY AGREE TO THE CONDITIONS ON THE REVERSE SIDE.

CARRIER	RECEIVED BY

DATE	TIME	PLANT	
		ELK GROVE DUM	993660

CUSTOMER NO.

SALES ORDER NO.

G 73.100
T 34.000
N 39.100

SHIP TO

HAULER	TRUCK NO.	DELIVERY TYPE

PRODUCT	CUSTOMER P.O. NO.

GROSS	TARE	NET	NET TONS	WEIGHER

COMMENTS:

CASH SALE ONLY

	PROD	HAUL	TAX	TOTAL
PER TON				
AMOUNT				

See Product Warning on Reverse Side

CUSTOMER COPY 2

THE NATION'S LEADING PRODUCER OF CONSTRUCTION AGGREGATES

093093

Vulcan Materials Company

Midwest Division, Vulcan Construction Materials, LP
747 East 22nd Street • Lombard, IL 60148

SHIPPING LOCATION:

BY SIGNING BELOW, TRANSPORTERS OF MATERIAL INTO VULCAN PROPERTY AGREE TO THE CONDITIONS ON THE REVERSE SIDE.

CARRIER	RECEIVED BY

DATE	TIME	PLANT	

CUSTOMER NO.

SALES ORDER NO.

LOADS TODAY

SHIP TO

HAULER	TRUCK NO.	DELIVERY TYPE

PRODUCT	CUSTOMER P.O. NO.

GROSS	TARE	NET	NET TONS	WEIGHER

COMMENTS:

CASH SALE ONLY

	PROD	HAUL	TAX	TOTAL
PER TON				
AMOUNT				

See Product Warning on Reverse Side

CUSTOMER COPY 2

THE NATION'S LEADING PRODUCER OF CONSTRUCTION AGGREGATES

033098

Vulcan Materials Company

Midwest Division, Vulcan Construction Materials, LP
747 East 22nd Street • Lombard, IL 60148

SHIPPING LOCATION:

BY SIGNING BELOW, TRANSPORTERS OF MATERIAL INTO VULCAN PROPERTY AGREE TO THE CONDITIONS ON THE REVERSE SIDE.

CARRIER	RECEIVED BY

DATE	TIME	PLANT	
04/23/13	11:53	ELK GROVE DUM	930/50

CUSTOMER NO. 0050705 LCG SALES ORDER NO. 575601

LAKE COUNTY GRADING C

GENERAL PICK UP #121

LOADS TODAY

SHIP TO

NAVY BASE DEMO

GW. 73.300

EW. 32.500 39800

HAULER	TRUCK NO.	DELIVERY TYPE

PRODUCT	CUSTOMER P.O. NO.

GROSS	TARE	NET	NET TONS	WEIGHER
				LC

COMMENTS:

CASH SALE ONLY

	PROD	HAUL	TAX	TOTAL
PER TON				
AMOUNT				

See Product Warning on Reverse Side

CUSTOMER COPY 2

THE NATION'S LEADING PRODUCER OF CONSTRUCTION AGGREGATES

938661

Vulcan Materials Company

Midwest Division, Vulcan Construction Materials, LP
747 East 22nd Street • Lombard, IL 60148

SHIPPING LOCATION:

BY SIGNING BELOW, TRANSPORTERS OF MATERIAL INTO VULCAN PROPERTY AGREE TO THE CONDITIONS ON THE REVERSE SIDE.

CARRIER	RECEIVED BY

DATE	TIME	PLANT	

CUSTOMER NO.

SALES ORDER NO.

SHIP TO #121
NAVY BASE PENC
GW. 72.2cc
EW. 32 Soc 39700

HAULER	TRUCK NO.	DELIVERY TYPE

PRODUCT	CUSTOMER P.O. NO.

GROSS	TARE	NET	NET TONS	WEIGHER

COMMENTS:

CASH SALE ONLY

	PROD	HAUL	TAX	TOTAL
PER TON				
AMOUNT				

See Product Warning on Reverse Side

CUSTOMER COPY 2

THE NATION'S LEADING PRODUCER OF CONSTRUCTION AGGREGATES 093120

Vulcan Materials Company

Midwest Division, Vulcan Construction Materials, LP
747 East 22nd Street • Lombard, IL 60148

SHIPPING LOCATION: VULCAN MATERIALS - DUBOIS
1520 LAND MEMORY COURT
ELK GROVE VILLAGE, IL

BY SIGNING BELOW, TRANSPORTERS OF MATERIAL INTO VULCAN PROPERTY AGREE TO THE CONDITIONS ON THE REVERSE SIDE.

CARRIER	RECEIVED BY

DATE	TIME	PLANT	
01/23/03	13:09	ELK GROVE DUB	93120

CUSTOMER NO.	SALES ORDER NO.	
3074785 LLC	5756681	3

LYLE COUNTY GRADING C
GENERAL PICK UP

LOADS TODAY

6. 72.620
+ 34.000
41. 38.620

SHIP TO VARIOUS 5

ELK GROVE

121

HAULER	TRUCK NO.	DELIVERY TYPE
999 CUSTOMER PICK	177	PICKED UP

PRODUCT	CUSTOMER P.O. NO.
53B LIME DUMP DIME	

GROSS	TARE	NET	NET TONS	WEIGHER
				LC

COMMENTS: 1,067 LOADS PER UNIT
= 96 TONS

CASH SALE ONLY

	PROD	HAUL	TAX	TOTAL
PER TON				
AMOUNT				

See Product Warning on Reverse Side

CUSTOMER COPY 2

PHONE 362-2590
Area Code (847)

No. 94263

LAKE COUNTY GRADING CO.

P.O. BOX L

LIBERTYVILLE, ILL., 60048 4-23-2003

M NAVY CASE DEMO 121
FOREST PARK

		CRUSH GRAVEL				
		BANK RUN				
		FILL DIRT				
		BLACK DIRT				
		SAND				
		STONE				
		TORPEDO SAND				
		TRUCK-TIME ~~II~~ 211				
		RUBBISH				
	1	LOAD CON-CRETE				
		GW 71.600				
		EW 32.500				
		Net 39	100			

* In any action to collect payment hereunder, Lake County Grading Company of Libertyville, Inc. shall be entitled to recover attorneys' fees and court costs.

PHONE 362-2590
Area Code (847)

No. 92436

LAKE COUNTY GRADING CO.

P.O. BOX L

LIBERTYVILLE, ILL., 60048 4-23-03

M NAVY Reserve Building
~~121~~ Truck 177

		CRUSH GRAVEL				
		BANK RUN				
		FILL DIRT				
		BLACK DIRT				
		SAND				
		STONE				
		TORPEDO SAND				
		TRUCK-TIME				
		RUBBISH				
		1 load concrete				
		+ YARD				
		G. 72.160				
		T. 34.000				
		N. 38.160				

* In any action to collect payment hereunder, Lake County Grading Company of Libertyville, Inc. shall be entitled to recover attorneys' fees and court costs.

APPENDIX G

PHOTOGRAPHS

Project No.
73712.01

Contract No.
N68950-96-D-0200

Location
Contractor/Photographer
Indoor Gun Range
Forest Park NRC
Forest Park, Illinois
TolTest/Jeffrey M Tinney

Photograph No.
1

Description
View of Building 101 prior to demolition activities.

Project No.
73712.01

Contract No.
N68950-96-D-0200

Location
Contractor/Photographer
Indoor Gun Range
Forest Park NRC
Forest Park, Illinois
TolTest/Jeffrey M. Tinney

Photograph No.
2

Description
View of demolition activities.

Project No.
73712.01

Contract No.
N68950-96-D-0200

Location
Contractor/Photographer
Indoor Gun Range
Forest Park NRC
Forest Park, Illinois
TolTest/Jeffrey M. Tinney

Photograph No.
3

Description
Demolition activities continued.

Project No.
73712.01

Contract No.
N68950-96-D-0200

Location
Contractor/Photographer
Indoor Gun Range
Forest Park NRC
Forest Park, Illinois
TolTest/Jeffrey M. Tinney

Photograph No.
4

Description
View of concrete slab exposed.

Project No.
73712.01

Contract No.
N68950-96-D-0200

Location
Contractor/Photographer
Indoor Gun Range
Forest Park NRC
Forest Park, Illinois
TolTest/Jeffrey. M. Tinney

Photograph No.
5

Description
View of concrete slab and foundations exposed.

Project No.
73712.01

Contract No.
N68950-96-D-0200

Location
Contractor/Photographer
Indoor Gun Range
Forest Park NRC
Forest Park, Illinois
TolTest/Jeffrey M. Tinney

Photograph No.
6

Description
View of abandoned utility being removed.

Project No.
73712.01

Contract No.
N68950-96-D-0200

Location
Contractor/Photographer
Indoor Gun Range
Forest Park NRC
Forest Park, Illinois
TolTest/Jeffrey M. Tinney

Photograph No.
7

Description
View of debris load out.

Project No.
73712.01

Contract No.
N68950-96-D-0200

Location
Contractor/Photographer
Indoor Gun Range
Forest Park NRC
Forest Park, Illinois
TolTest/Jeffrey M. Tinney

Photograph No.
8

Description
View of stone being placed.

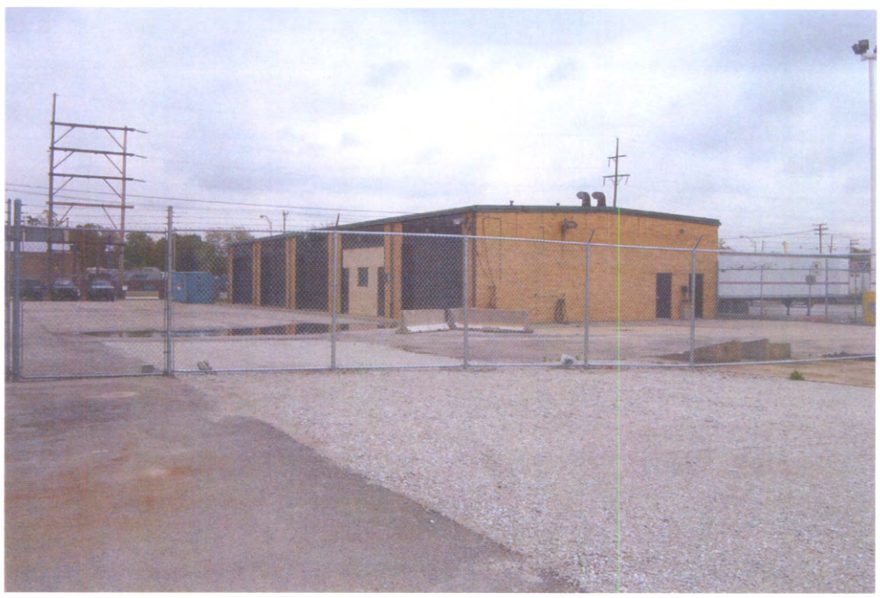
Project No.
73712.01

Contract No.
N68950-96-D-0200

Location
Contractor/Photographer
Indoor Gun Range
Forest Park NRC
Forest Park, Illinois
TolTest/Jeffrey M. Tinney

Photograph No.
9

Description
View of stone being machine compacted.



Project No.
73712.01

Contract No.
N68950-96-D-0200

Location
Contractor/Photographer
Indoor Gun Range
Forest Park NRC
Forest Park, Illinois
TolTest/Jeffrey M. Tinney

Photograph No.
10

Description
View of the new fence that was installed for site security.

THE LEAD INSPECTORS, INC.

7056 Lavergne Avenue
Skokie, Illinois 60077
North Suburban (847)982-9900 Chicago (312)726-7708
Fax (847)674-5335
www.theleadinspectors.com

Report Date: August 14, 2003

Attention: DC1 Ryan

Identifying Information: On August 14, 2003, The Lead Inspectors, Inc. responded to a request for a limited XRF Lead-Based Paint Inspection at 7410 Roosevelt Road, Forest Park, Illinois. Upon arrival, Illinois Department of Health-licensed Inspector/Risk Assessor #1050, Edward Topp, met with DC1 Ryan, who arranged building access.

Testing Methods: Painted surfaces were tested with the Sci Tec MAP unit #403 for lead content according to manufacturer's instructions through certified training, and according to the regulations of the Illinois Department of Nuclear Safety, which licenses operators of portable X-ray equipment. The survey was performed according to HUD protocols listed in the Guidelines for the Evaluation and Control of Lead-based Paint Hazards in Housing, published June 1995, Chapter 7 revised 1997. For painted surfaces, field results (XRF) at or above 1.0 mg/cm2 are reported as positive.

Instrument Calibration:

Edax Map 4, serial#41403

Calibration Readings	8/14/03	7:00 am	K Shell	Measurement Time
1. Test Block	Average	1.05	0.97	19 seconds
2. Test Block	Average	1.05	1.12	19 seconds
3. Test Block	Average	1.05	1.03	19 seconds
4. Test Block	Average	1.05	1.02	19 seconds
5. Test Block	Average	1.05	1.00	19 seconds
	Average	1.03	Acceptable Calibration	

Calibration Reading	8/14/03	9:00 am	K Shell	Measurement Time
1. Test Block	Average	1.05	1.01	19 seconds
				Acceptable Calibration

Calibration Reading	8/14/03	9:30 am	K Shell	Measurement Time
1. Test Block	Average	1.05	1.09	19 seconds
				Acceptable Calibration

Calibration Checks: Measurements are in micrograms per square centimeter.

Readings are to monitor system performance. All measurements are taken in identical conditions. The position of the Test Block with respect to the face of the Map 4 must be consistent. Test Block has been provided by the instrument manufacturer, average reading at 1.05 mg/cm^2. The average of calibration checks made during field use should be within .2 mg/cm^2 of the average.

The above results indicate the performance of this system was satisfactory during the above testing period.

Summary of findings and recommendations: Please refer to the XRF report for specific results of individual components tested. K-Shell readings represent the lead concentrations throughout all the layers of the paint. The L-Shell readings represent the top two to three layers of paint. Wall 1 refers to the wall facing north, wall 2 east, wall 3 south and wall 4 west.

A visual inspection was made of, Rooms 187,192, 214, 213, 216, 217, 271 and 270. All painted surfaces were found to be intact. Lead in paint testing was done on Rooms 187 and 192. Lead was found to be present in Room 192 on the masonry window molding, the south block wall and the plaster ceiling above the drop in ceiling. These components are intact.
As long as the surfaces in the rooms to be painted are in good condition and surface preparation does not breach the top layer of paint there is no hazard posed in the painting of these rooms.

Lead paint that is intact and is not on a mouthable or friction/impact surface is not considered a hazard at this time. Please note that these conditions may change, therefore refer to the XRF report and monitor the locations that are not being addressed at this time.

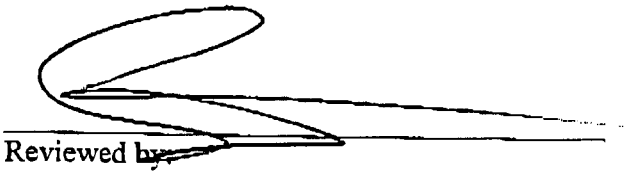
All lead remediation should be performed in accordance with the Environmental Protection Agency's standards (EPA) by Illinois Department of Public Health licensed lead abatement workers.

Following the conclusion of work on any lead-bearing surfaces, lead dust level clearance samples should be taken by a licensed lead inspector to ensure that post-abatement cleanup was properly performed.

All permanent or interim controls of lead hazards, except routine cleaning, as well as planning a specific written design and contract specification, which this report falls short of providing, should be overseen or undertaken by certified professional personnel. This report is meant only for the person(s) it is addressed to and may not be relied on for any other purpose by any other agent or legal entity.

A copy of this summary must be provided to new lessees (tenants) and purchasers of this property under Federal law (24 CFR part 35 and 40 CFR part 745) before they become obligated under a lease or sales contract. The complete report must also be provided to new purchasers and it must be made available to new tenants. Landlords (lessors) and sellers are also required to distribute an educational pamphlet approved by the U.S. Environmental Protection Agency and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from lead-based paint hazards.

Please call me if you have any questions or require further information.



Reviewed by:
Edward Topp
The Lead Inspectors, Inc.

Enclosures

The Lead Inspectors, Inc.
(847)982-9900 N. Suburban
(312)726-7708 Chicago
(847)674-5335 Fax

Confirmed Positives

Customer:

Project Name: 2502 Naval Reserve
Tested 08/14/03

Site Name: 7410 Roosevelt Road
Forest Park, Illinois

Action Level 1.000 mg /cm2 Lab 1.000 mg /cm2

Total Assays Reported 4

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
76990	0001	Room 192	1	1	Window	Masonry	Satisfactory	5.217 K	1.908 L	403		Pos
76997	0001	Room 192	1	3	Closet Wall	Masonry	Satisfactory	3.230 K	1.010 L	403		Pos
76998	0001	Room 192	1	3	Wall	Masonry	Satisfactory	3.911 K	0.356 L	403		Pos
77003	0001	Room 192	1	*	Ceiling	Plaster	Satisfactory	3.249 K	3.774 L	403		Pos

The Lead Inspectors, Inc.
(847)982-9900 N. Suburban
(312)726-7708 Chicago
(847)674-5335 Fax

Customer:

Preliminary XRF

Project Name: 2502 Naval Reserve
Tested 08/14/03

Site Name: 7410 Roosevelt Road
Forest Park, Illinois

Action Level 1.000 mg /cm2 Lab 1.000 mg /cm2

Total Assays Reported 33

#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Type	Result
76970	0001	Calibration	*	*	*	*	*	0.000 X	0.000 X	0	ID	
76971	0001	Calibration	*	*	*	*	*	1.008 K	1.073 L	403	TEST	Incl
76972	0001	Room 187	1	1	Wall	Sheetrk	Satisfactory	-0.317 K	0.334 L	403	UNLM	Neg
76973	0001	Room 187	1	1	Window Sill	Metal	Satisfactory	0.159 K	0.323 L	403	UNLM	Neg
76974	0001	Room 187	1	1	IntWindowSash	Metal	Satisfactory	-0.567 K	0.322 L	403	UNLM	Neg
76975	0001	Room 187	1	1	Window	Masonry	Satisfactory	0.267 K	0.011 L	403	UNLM	Neg
76976	0001	Room 187	1	1	Radiator	Metal	Satisfactory	0.225 K	0.225 L	403	UNLM	Neg
76977	0001	Room 187	1	2	Wall	Sheetrk	Satisfactory	-0.093 K	0.137 L	403	UNLM	Neg
76979	0001	Room 187	1	3	Wall	Masonry	Satisfactory	0.241 K	0.247 L	403	UNLM	Neg
76980	0001	Room 187	1	3	Closet Shelf	Wood	Satisfactory	-0.054 K	0.224 L	403	UNLM	Neg
76981	0001	Room 187	1	3	New	Wood	Satisfactory	0.164 K	-0.038 L	403	UNLM	Neg
76982	0001	Room 187	1	3	Door	Wood	Stain Varnish	-0.116 K	-0.319 L	403	UNLM	Neg
76983	0001	Room 187	1	3	Door Molding	Metal	Satisfactory	0.467 K	0.903 L	403	UNLM	Neg
76984	0001	Room 187	1	4	Wall	Masonry	Satisfactory	0.304 K	-0.176 L	403	UNLM	Neg
76985	0001	Room 187	1	*	Ceiling	Plaster	Satisfactory	-0.658 K	1.277 L	403	UNLM	Neg
76987	0001	Room 192	1	1	Wall	Sheetrk	Satisfactory	-0.034 K	0.289 L	403	UNLM	Neg
76988	0001	Room 192	1	1	Radiator	Metal	Satisfactory	0.095 K	0.184 L	403	UNLM	Neg
76989	0001	Room 192	1	1	Window Sill	Metal	Satisfactory	0.448 K	0.250 L	403	UNLM	Neg
76990	0001	Room 192	1	1	Window	Masonry	Satisfactory	5.217 K	1.908 L	403	UNLM	Pos
76991	0001	Room 192	1	1	IntWindowSash	Metal	Satisfactory	0.128 K	0.137 L	403	UNLM	Neg

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Action Level 1.000 mg /cm2 Lab 1.000 mg /cm2

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76992	0001	Room 192	1	2	Wall	Masonry	Satisfactory	-0.456 K	0.286 L	403	UNLM	Neg
76993	0001	Room 192	1	2	Door	Wood	Stain Varnish	-0.458 K	-0.062 L	403	UNLM	Neg
76994	0001	Room 192	1	2	Door Molding	Metal	Satisfactory	1.320 K	0.792 L	403	UNLM	Incl
76995	0001	Room 192	1	2	Door Molding	Metal	Satisfactory	-0.095 S	0.000 X	403	UNLM	Neg
76996	0001	Room 192	1	3	New	Wood	Stain Varnish	0.350 K	-0.038 L	403	UNLM	Neg
76997	0001	Room 192	1	3	Closet Wall	Masonry	Satisfactory	3.230 K	1.010 L	403	UNLM	Pos
76998	0001	Room 192	1	3	Wall	Masonry	Satisfactory	3.911 K	0.356 L	403	UNLM	Pos
76999	0001	Room 192	1	3	Door	Wood	Stain Varnish	-0.031 K	-0.169 L	403	UNLM	Neg
77001	0001	Room 192	1	4	Wall	Masonry	Satisfactory	0.256 K	0.455 L	403	UNLM	Neg
77003	0001	Room 192	1	*	Ceiling	Plaster	Satisfactory	3.249 K	3.774 L	403	UNLM	Pos
77004	0001	Room 192	1	4	Closet Wall	Plaster	Satisfactory	0.098 K	0.282 L	403	UNLM	Neg
77005	0001	Room 192	1	4	Closet Wall	Masonry	Satisfactory	-0.401 K	0.294 L	403	UNLM	Neg
77006	0001	Calibration	*	*	*	*	*	1.086 K	1.085 L	403	UNLM	Incl

Navy	Agency	Phone	E-mail
Stephanie Zamorski	Navy BRAC PMO NE Realty Specialist	215 897-4905 610 595 0772	Stephanie.Zamorski @ Navy.mil
ELAINE PRESTON	NAVY BRAC PMO NE REALTY SPEC	215-897-4906 610-595-0473	ELAINE.PRESTON @ NAVY.MIL
Dawn Kincaid	NAVY BRAC PMO NE BRAC Environmental Coordinator (BEC)	(215) 897-4915 cell (610) 496-8844	dawn.kincaid@navy.m
Bruce Mack	NRMW	(847) 688-3767 x142	Bruce.G.Mack@Navy.MIL
Celeste Hunt	Amec Project Manager	(978) 692-9090 x315	celeste.hunt@amec.com
John Rice	AMEC	978/692-9090	john.rice@amec.co
ARTURO MARIN	NAVY	708/697-6812	arturo.marin@navy.mil

1/18/05

Forest Park, IL

1941 Ammo torp

Manufactured torpedoes up until 1970s (where adjacent strip mall is located)

Reserve center since 1950s

Bureau of Ordnance

tenants: 318 Public Affairs office

Army (65th, 6015, GSU, plus 3 more) 414th Military History

2nd of 3rd 329

garage → all storage (Army)

range → demolished

no USTs identified from past (none now)

town storage bunker in parking lot.

① Wash rack removed ~ 3 years ago; out of service before then; no assessment w/ NWRD for wash rack.

② no stormwater permit; also w/ NWRD

③ No hazmat → small quantities of cleaning supplies

Cleaning supplies → in locker outside from maintenance; disposed of used supplies

④ No known CERCLA sites, no FUDS sites, no state sites

⑤ no EDS

⑥ Lead paint survey → not of entire facility; just spot surveys

⑦ Radon survey → done but <4. B. Mack 1980s (don't have survey). not a year long survey.

⑧ Conditionally exempt small quantity → check RCRA database

7410 = official address

(9) No UST / AST (currently)

(10) No UXO / MEC

(11) no Wetlands

(12) Outside contractor ↓ for Permit mgt. PLAN

(13) no radiological mtrl.

(14) Drinking Water ↓ from City

(15) no air permit

small quantities paint in storage area. gas cylinders (propane, oxygen, propane) cutting torch

"Cleaning Gear Locker" → Hole in floor

"Boiler Room" ↓

2 drums of SS-cut "corrosive liquid"

Debris → outside fence maintenance below

Second Deck

"Fan Room" → PPE stored

asbestos ~~tiles~~

"First Deck Fan Room" →

oily/ waste can holds rags

Contactor removed

E7 Godiva

Acm/ "Supply Cage" → dry storage

no POL

↳ connected to Arethusa bilges which stores

Generators more dry storage

w/ direct tank inside (minor spot oil transmission fluid)

no transformers on property

1/18/05

Forest Park

(Beuard) Plansion

- Anetorp Manufacture Torpedoes either adj to the site or at the site
- Tenents
  ~~Police~~ School Busses are stored in Lot
  Army 88th
  ~~651st~~ 6015 Cosc
  318 ~~PAO~~ 49th Military History
- UST's None - unknown if any have been ~~R~~removed in the Past

2-329 Trainy Div

Gorcester

Archeological - (Brad) Negative

Asbestos - Hans rep

Air Perm - under 1M BTU

Clean Wate - Metro NO Perm
Brad

Wash Rack Removed 3 years
out of serv 2 year beh

don't think there was any cement

Same for Storm water

Haz Mater - Small Quants of Cleaning supplies
Paint etc. Subcontractor
Janitorial serv

CEKCLA - None Known

CEKFA - None

Endanger Species - None

Flood - No Known

Lead Paint - No Lead serv/ - spot servy done
likely Representative

NHPA - None known

Nat Amer Grave No Known

Radon – screens in 80 Some done None above 4 pC/L
Report not Found

RCRA CESQG no Number Known

UST/AST None

UXO/MEC – Possibility of Torpedo manfacture

Pest/PCB – contractor Applied

Radiation – NONE

Drinking water – City

Dontee - HVAC Contractor

2-55-gallon DM Corrosive liquid

Fistdeck Fan Room

~~Sgt~~ Gosha
E7

Supply cage

Minor oil
Generator w/ small Diesel tank

Navy	Agency	Phone	E-mail
Stephanie Zamorski	Navy BRAC PMO NE Realty Specialist	215 897-4905 610 595 0772	Stephanie.Zamorski @ Navy.mil
ELAINE PRESTON	NAVY BRAC PMO NE REALTY SPEC	215-897-4906 610-595-0473	ELAINE.PRESTON @ NAVY.MIL
Dawn Kincaid	NAVY BRAC PMO NE BRAC Environmental Coordinator (BEC)	(215) 897-4915 cell (610) 496-8844	dawn.kincaid@navy.m
Bruce Mack	NRMW	(847) 688-3767 x142	Bruce.G.Mack@Navy.MIL
Celeste Hunt	Amec Project Manager	(978) 692-9090 x315	celeste.hunt@amec.com
John Rice	AMEC	978/692-9090	john.rice@amec.co
ARTURO MARIN	NAVY	708/697-6812	arturo.marin@navy.mil

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asbestos ~~tiles~~

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Lead Paint - No Lead serv/ - spot servy done
likely Representative

NHPA - None known

Nat Amer Grave No Known

Radon – screens in 80 Some done None above 4 pC/L
Report not Found

RCRA CESQG no Number Known

UST/AST None

UXO/MEC – Possibility of Torpedo manfacture

Pest/PCB – contractor Applied

Radiation – NONE

Drinking water – City

Dontee - HVAC Contractor

2-55-gallon DM Corrosive liquid

Fistdeck Fan Room

~~Sgt~~ Gosha
E7

Supply cage

Minor oil
Generator w/ small Diesel tank

Old torpedo factory hit by military site closings

By **Aamer Madhani, Tribune staff reporter**
CHICAGO TRIBUNE

SEPTEMBER 5, 2005

When Cmdr. Barbara Franklin arrived in Forest Park last year to take charge of the U.S. Naval Reserve Center, she found few signs of the Navy's storied history at the sterile-looking military installation now marked for closing.

In the midst of World War II, it was the site of a torpedo factory that helped arm Navy submarines, destroyers and planes. As many as 6,500 workers churned out hundreds of torpedoes per month, a long-forgotten but crucial part of the war effort.

Little of the original installation on Roosevelt Road remains. Built on ground that was once a nine-hole golf course, the torpedo factory building was converted into a shopping center years ago, and a Wal-Mart now sits where there was once Navy housing.

"There isn't much left around that represents the Navy's past in Forest Park," Franklin said. "A lot of my sailors didn't even know what the Navy did here during World War II until I told them."

The last vestige of the Navy in the western suburb could soon be gone as well.

Late last month, the reserve center was among dozens of military installations throughout the country that the Base Realignment and Closure Commission recommended for closing.

Congress and President Bush still have to give their consent. But so far, the pending demise of the Forest Park installation has generated little complaint from Illinois politicians consumed by the potential loss of thousands of jobs at the Downstate Rock Island Arsenal and Great Lakes Naval Training Center in North Chicago.

If the closing is approved, about 20 sailors at Forest Park would be reassigned to other bases, and about 500 reservists who use the reserve center would have to drill elsewhere.

"It's a pretty sad thing," said Rich Vitton, the village's resident historian. "We tried to explain the base's historical importance to the [commission], but it's not something they're too interested in. At least it's something that Forest Park contributed an important part in the war effort. Those torpedoes probably saved lives. Well, at least American lives."

More than 19,000 torpedoes were built at the factory, and the factory workers--who came mostly from Forest Park, the West Side of Chicago and other nearby suburbs--were credited by Navy commanders for crafting precision weapons considered essential in defeating the Japanese in the Pacific.

Torpedoes "made by the men and women of [Navy Ordnance Plant] Forest Park took heavy toll o[n] the enemy when they were dropped by U.S. Navy airmen in a strike on Manila Bay," Rear Admiral G.F. Hussey Jr. wrote in one telegram to the factory in November 1944. "Pilots were enthusiastic in their praise of the performance of Forest Park torpedoes."

By the end of the war, however, production slowed drastically, and the plant was used primarily as a research and testing facility. In 1971 the plant was shut and the main factory building converted into a 360,000-square-foot mall.

Still, through the years, the Navy kept a presence in Forest Park with the reserve center. The only remaining military structure left on the once expansive installation, the center is a fairly generic office building on a 6.6-acre lot.

g center, a corner of a room on the ground floor of the building built to
r pumped into the steel walls of the faux hull, reservists learn how to
e simulator closed next month, Franklin said.

The U.S. Army, which moved into the space in 1964, will continue to operate a reserve center there.

For years, the mall kept a mural commemorating the factory and a displayed a torpedo made in the Navy ordnance plant. Those and many other mementos were lost or given to military museums over the years, according to Navy and village officials.

"For a lot of the younger generation in the village, there isn't much to remind us of the military history in Forest Park," said Mayor Anthony Calderone.

In the past, Navy reservists dedicated a weekend per month to drilling, plus one, two-week block.

Under restructuring, Franklin said the Navy hopes to encourage many of its reserve units to fill their commitments over less frequent but longer blocks of time, a shift she said is more attractive to students and professionals in the reserve corps. With the shift in drilling schedules, Franklin said the Navy believes it can make do with fewer facilities.

Some, however, have criticized the strategy, because they believe it will discourage reservists from sticking with the Navy because they would have to drive farther to get to their drill sites.

"Everybody I've spoken to is against it," said retired Chief Petty Officer Conrad Forks, who was a recruiter for the Navy at the center for 11 years. "When they close these centers down, they are just making it tougher for the reservists."

Franklin, who came to Forest Park last year after being stationed in New Orleans, said she is disappointed that she soon might have to leave the installation.

When she arrived in Forest Park last summer, Franklin knew the installation's history and was struck by how little of the Navy's past was reflected in the halls of the reserve center.

She began looking for World War II memorabilia and gathering photographs of the torpedo plant from the Navy installation with the hopes of commissioning a mural. Franklin said she contacted a local cement factory owner who she heard had the shell of an old torpedo that was built at the plant with the hopes of getting him to donate it for a memorial.

But with the closing of the pipeline, Franklin said she has given up on the idea.

"Once the talk started that we were going to be on the [closure] list, the motivation was lost," she said.

---

amadhani@tribune.com

This article is related to: Forest Park

Rice, John F (Westford)

From: Marin, Arturo NRC FOREST PARK [arturo.marin@navy.mil]
Sent: Tuesday, February 28, 2006 4:12 PM
To: Rice, John F (Westford)
Subject: RE: Environmental Condition of Property Report

Admin- provides administrative support to all reserve personnel. (page 2 updates, I.D. cards, DEERS)
Medical- provides physicals, blood work, and immunizations
Training- training, administration and mobilization of navy personnel
Supply- provides uniforms, lodging, and other multiple services to reserve personnel

-----Original Message-----
From: Rice, John F (Westford) [mailto:john.rice@amec.com]
Sent: Monday, February 27, 2006 16:03
To: Marin, Arturo NRC FOREST PARK
Subject: RE: Environmental Condition of Property Report

Arturo - don't forget me. I have to get the report completed on Tuesday.

Sorry to be a pain

Thanks

John

From: Marin, Arturo NRC FOREST PARK [mailto:arturo.marin@navy.mil]
Sent: Monday, February 27, 2006 9:51 AM
To: Rice, John F (Westford)
Subject: RE: Environmental Condition of Property Report

I'll have it to you in a couple minutes

-----Original Message-----
From: Rice, John F (Westford) [mailto:john.rice@amec.com]
Sent: Monday, February 27, 2006 8:50
To: Marin, Arturo NRC FOREST PARK
Subject: RE: Environmental Condition of Property Report

Arturo,

Details on the Navy units and what they do would by helpful.

Thanks

John

From: Marin, Arturo NRC FOREST PARK [mailto:arturo.marin@navy.mil]
Sent: Monday, February 27, 2006 9:44 AM
To: Rice, John F (Westford)
Subject: FW: Environmental Condition of Property Report

-----Original Message-----
From: Marin, Arturo NRC FOREST PARK
Sent: Monday, February 27, 2006 8:43
To: 'Hunt, Celeste M'

Subject: RE: Environmental Condition of Property Report

To John Rice:
I noticed on the original email - Navy - 2-329 Training Division - the 2-329 is a army division. Is that the information you needed or do you need the details of what the navy does here?

-----Original Message-----
From: Hunt, Celeste M [mailto:celeste.hunt@amec.com]
Sent: Friday, February 24, 2006 14:37
To: Marin, Arturo NRC FOREST PARK
Cc: Rice, John F (Westford)
Subject: FW: Environmental Condition of Property Report

Hi - John Rice/AMEC asked me to check on the status of this missing information. Thanks - Celeste

Celeste M. Hunt, PE
AMEC Earth & Environmental
239 Littleton Road, Suite 1B
Westford, MA 01886
Tel: 978-692-9090, ext. 315
Fax: 978-692-6633
Mobile: 978-697-8308
E-Mail: celeste.hunt@amec.com

From: Marin, Arturo NRC FOREST PARK [mailto:arturo.marin@navy.mil]
Sent: Thursday, February 23, 2006 3:56 PM
To: Rice, John F (Westford)
Subject: RE: Environmental Condition of Property Report

I could have it for you by morning

-----Original Message-----
From: Rice, John F (Westford) [mailto:john.rice@amec.com]
Sent: Thursday, February 23, 2006 14:52
To: Marin, Arturo NRC FOREST PARK
Subject: RE: Environmental Condition of Property Report

Great! Do you have the same information for the Navy at Forest Park?

From: Marin, Arturo NRC FOREST PARK [mailto:arturo.marin@navy.mil]
Sent: Thursday, February 23, 2006 3:42 PM
To: Rice, John F (Westford)
Subject: RE: Environmental Condition of Property Report

No I will underline all the seperate Units.

2/329th 9th Bde, 100 Div(IT):

IDT (Battle Assemblies)-Train for Mobilization Mission-(BCT) cycle

MOB- Deploy to a Conus Installation to conduct BCT/Mission (initial enlisted entry training at Active Duty Installations), support GWOT and National Guard units.

6015th Garrison Support Unit:

IDT (Train for mobilization mission. Mob-Deploy to a conus installation and conduct installation missions to process Overseas Movement.

318th Public Affair Organization:

IDT (Trains for Mobilization Missions. Mob-Deploy to area of Operations and conduct Public Affairs Missions.

49TH Military History Detachment:

IDT (Train for mobilization Missions. Deploy to area of Operations and record actions conducted in theater for Historical Rcd's

88TH Regional Readiness Command, Army Reserve Installation Management, Field Support Team #2.

TDA Organization(1 DAC, and 2 contractors) performs facility management operations to all USAR Center In Illinois.

88TH RTO

(3) Man Team-Provides Retention Operations in Illinois.

-----Original Message-----
From: Rice, John F (Westford) [mailto:john.rice@amec.com]
Sent: Thursday, February 23, 2006 14:36
To: Marin, Arturo NRC FOREST PARK
Subject: RE: Environmental Condition of Property Report

Thank You

If I am reading this correctly all of the units you listed fall under the 2/329th 9th Bde, 100 Div (IT)?

Do you have the same information for the Navy units at Forest Park?

From: Marin, Arturo NRC FOREST PARK [mailto:arturo.marin@navy.mil]
Sent: Thursday, February 23, 2006 3:24 PM
To: Rice, John F (Westford)
Subject: RE: Environmental Condition of Property Report

To John Rice:
Here is the information I gather from the Army Units in the building. Hope its what you needed.

Per your request: Army CMD

2/329th 9th Bde, 100 Div(IT):

IDT (Battle Assemblies)-Train for Mobilization Mission-(BCT) cycle

MOB- Deploy to a Conus Installation to conduct BCT/Mission (initial enlisted entry training at Active Duty Installations), support GWOT and National Guard units.

6015th Garrison Support Unit:

IDT (Train for mobilization mission. Mob-Deploy to a conus installation and conduct installation missions to process Overseas Movement.

318th Public Affair Organization:

IDT (Trains for Mobilization Missions. Mob-Deploy to area of Operations and conduct Public

Affairs Missions.

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88TH Regional Readiness Command, Army Reserve Installation Management, Field Support Team #2.

TDA Organization(1 DAC, and 2 contractors) performs facility management operations to all USAR Center In Illinois.

88TH RTO

(3) Man Team-Provides Retention Operations in Illinois.

Respectfully,
IC2 (sw) Marin
NRC Forest Park

-----Original Message-----
From: Rice, John F (Westford) [mailto:john.rice@amec.com]
Sent: Wednesday, February 15, 2006 15:08
To: Marin, Arturo NRC FOREST PARK
Subject: Environmental Condition of Property Report

IC2 Marin,

Back in January we visited NRC Forest Park and you provided us information for the Environmental Condition of Property Report. I am currently working on the report and don't have any information for the background section.

Please verify that I have the correct units for the NRC Forest Park. If you know that each unit does, please add that information.

Navy - 2-329 Training Division

Army - 88th unit
6015 GSU
49th Military History
318 Public Affairs Office

Thanks for your help

John

Rice, John F (Westford)

From: Marin, Arturo NRC FOREST PARK [arturo.marin@navy.mil]
Sent: Thursday, February 23, 2006 3:39 PM
To: Rice, John F (Westford)
Subject: RE: EPC Forest Park

To John Rice:
We still have a Medical and dental departments although dental is not manned full time. Medical waste is disposed of thru a local company. I am still seaching for the company information if you need it. We also use local companies to dispose of any effluent that is used here. The boilers are located in room 172

-----Original Message-----
From: Rice, John F (Westford) [mailto:john.rice@amec.com]
Sent: Wednesday, February 22, 2006 12:04
To: Marin, Arturo NRC FOREST PARK
Cc: Kincaid, Dawn C CIV BRAC PMO NORTHEAST
Subject: EPC Forest Park

Arturo,

Could you please help me with the following questions:

- Does NRC Forest Park still have medical or dental facility?
- If so, how is the medical waste disposed of?
- The 1997 Environmental Compliance Evaluation indicated that X-Ray developer effluent was discharged to the sanitary sewer and developer rollers are being washed in the sink. Are these still ongoing processes and if so, how is the effluent being disposed of?
- Is the boiler located in room 172?

Thanks for you help

John

Rice, John F (Westford)

From: Mack, Bruce G CIV CNI [Bruce.G.Mack@navy.mil]
Sent: Wednesday, March 15, 2006 5:33 PM
To: Rice, John F (Westford)
Subject: RE: NRC Forest Park ECP Comments

John/Arturo:

The center is on City water, and the municipality performs the tests. Since the occupancy of the center is not sufficient to constitute a regulated water supply in and of itself, the providers tests can be, and are, used. In addition the backflow preventor are tested annually. We funded testing in FY05, although I don't have a copy of the results, our database shows that it was funded and the contractor was paid.

Thanks

Bruce

> -----Original Message-----
> **From:** Rice, John F (Westford) [mailto:john.rice@amec.com]
> **Sent:** Wednesday, March 15, 2006 14:07
> **To:** Mack, Bruce G CIV CNI
> **Subject:** FW: NRC Forest Park ECP Comments
>
> Bruce,
>
> I sent these question to Arturo Marin and he requested I forward you a copy.
>
> Thanks
>
> John

> **From:** Marin, Arturo NRC FOREST PARK [mailto:arturo.marin@navy.mil]
> **Sent:** Wednesday, March 15, 2006 3:01 PM
> **To:** Rice, John F (Westford)
> **Subject:** RE: NRC Forest Park ECP Comments
>
> I will find out about the paint A.S.A.P. Could you also forward a copy of this email to Bruce Mack
>
> > -----Original Message-----
> > **From:** Rice, John F (Westford) [mailto:john.rice@amec.com]
> > **Sent:** Wednesday, March 15, 2006 13:53
> > **To:** Marin, Arturo NRC FOREST PARK
> > **Cc:** Kincaid, Dawn C CIV BRAC PMO NORTHEAST; Stone, James T LCDR OASN (I&E) BRAC PMO West; Hunt, Celeste M
> > **Subject:** NRC Forest Park ECP Comments
> >
> > Arturo - I am preparing responses to Navy comments to the Draft NRC Forest Park ECP report and have a few questions for you.
>
> - During our visit in January, we noted that there were cans of paint stored in the Navy Storage Garage.

A question was asked if it was oil or latex? and if it was new or old (as in 1978 or older).

- The 1997 Environmental Compliance Evaluation indicated that facility personnel could not find the lead test results on the drinking water sources. In addition, they were unable to locate the backflow preventers on the water system. Can you confirm that lead test were done on the drinking water sources and that the facility water system has the appropriate backflow preventers?

Thank You

John

Rice, John F (Westford)

From: Mack, Bruce G CIV CNI [Bruce.G.Mack@navy.mil]
Sent: Wednesday, March 15, 2006 5:27 PM
To: Rice, John F (Westford); Marin, Arturo NRC FOREST PARK
Cc: Kincaid, Dawn C CIV BRAC PMO NORTHEAST; Stone, James T LCDR OASN (I&E) BRAC PMO West
Subject: RE: NRC Forest Park ECP Comments

John:

Dental waste is only hazardous (at least with our fixer and developer) when those two products are mixed, separated each is non hazardous and can be washed down the drain. In this case we did not mix them. As I understand it, fixer and developer become unusable at different points in time and were never mixed into one solution, thus no discharge of material which would otherwise be hazardous occurred. That said, we asked the center to stop discharging for fear that they would have a spill where the two non hazardous materials would mix.

Pistol range. Again, bad info. The "dirt" was a sand trap to catch bullets. The standard manner of construction was such that a trough was constructed of concrete and filled with sand and fired bullets were deflected downward into the sand. Periodically the sand was removed and disposed. The trough was removed along with the rest of the building foundation. No soil was, or should have been, removed.

Wash Rack. The was rack was removed at the same time as the pistol range by the same contractor. It had not been used for a number of years. That area has been industrialized for a number of years and had combined sewer, thus it should have discharged to the sanitary.

Call if questions

Bruce

-----Original Message-----
From: Rice, John F (Westford) [mailto:john.rice@amec.com]
Sent: Wednesday, March 15, 2006 13:48
To: Mack, Bruce G CIV CNI
Cc: Kincaid, Dawn C CIV BRAC PMO NORTHEAST; Stone, James T LCDR OASN (I&E) BRAC PMO West; Hunt, Celeste M
Subject: NRC Forest Park ECP Comments

Bruce,

I am preparing responses to the Navy's comments to the Draft NRC Forest Park ECP report. Dawn Kincaid/BRAC PMO NE suggested that I contact you to see if you had any information on, or could direct us to someone who could provide the information on, the following topics:

- Former Pistol Range - A 1997 report indicated that Cape Environmental Management was contracted to address the lead dust issue in the pistol range prior to renovations. Cape Environmental noted that as-builts of the pistol range indicated that the flooring between the firing line and target wall was dirt. However, they discovered during the dust removal that the floor was concrete. The report cautioned that if the range was used prior to the installation of the concrete floor, there could potentially be lead dust in the soil under the building. The 2003 TolTest report on the demolition of the pistol range did not provide any information on testing or removal of the soil from under the building after it was demolished. Can you provide any additional information?
- Wash Rack - Is there any information on the former wash rack in regards to its age and construction? Did it discharge to the stormwater system, sewer system, or both? How was it demolished?
- Dental Clinic Discharge - According to the 1997 ECE report, at the time of the evaluation the dental clinic was

discharging x-ray developer effluent to the sanitary sewer. The discharge would have required the NRC to notify the EPA, State, and POTW per 40CFR 403.12(p). Arturo Marin indicated that currently the x-ray developer effluent is contained and disposed of by a contractor. Did EPA, State, and POTW provide approval of the discharge to the sewer system? Did the process switch to disposal by contractor because the EPA, State and POTW were unaware of the discharge?

I will call you to follow up with these questions because we have a tight schedule for providing the response to comments and the final document.

Thanks

John

- Final -

ENVIRONMENTAL CONDITION OF PROPERTY REPORT

for the

NAVAL RESERVE CENTER
FOREST PARK, ILLINOIS

Department of the Navy
Base Realignment and Closure
Program Management Office
1455 Frazee Road, Suite 900
San Diego, California 92108-4310

02 May 2006

- Final -

ENVIRONMENTAL CONDITION OF PROPERTY REPORT

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02 May 2006

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ABBREVIATIONS, ACRONYMS, AND SYMBOLS

%g	percent acceleration due to gravity
ACM	Asbestos Containing Material
AHERA	Asbestos Hazard Emergency Response Act
AST	Aboveground Storage Tank
BRAC	Base Realignment and Closure
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERFA	Community Environmental Response Facilitation Act
CESQG	Conditionally Exempt Small Quantity Generator
CFR	Code of Federal Regulations
CWA	Clean Water Act
DoD	Department of Defense
DOT	Department of Transportation
ECE	Environmental Compliance Evaluation
ECP	Environmental Condition of Property
FFDCA	Federal Food, Drum, and Cosmetic Act
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
ft.	feet/foot
IRP	Installation Restoration Program
ISGS	Illinois State Geological Survey
LBP	Lead-Based Paint
mBtu/hr	million British thermal units per hour
MEC	Munitions and Explosives of Concern
NPDES	National Pollutant Discharge Elimination System
NRC	Naval Reserve Center
PACM	Presumed Asbestos Containing Material
PCB	polychlorinated biphenyl
pCi/L	picoCuries per Liter
PMO	Program Management Office
Pub. L.	Public Law
SDWA	Safe Drinking Water Act
sq. ft.	square feet/foot
TolTest	TolTest, Inc. (of Toledo, OH)
TSCA	Toxic Substances Control Act
U.S.	United States
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
XRF	X-ray Fluorescence Spectroscopy

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EXECUTIVE SUMMARY

This Environmental Condition of Property (ECP) report for Naval Reserve Center (NRC), Forest Park, Illinois summarizes the historical, cultural, and environmental conditions of the property as part of Base Realignment and Closure (BRAC) documentation associated with the closure of NRC Forest Park. Information was reviewed with installation points of contact to ensure all data are current and accurate. Where information was not available, the sources contacted and reference materials sought were documented.

A brief summary of ECP findings is provided below by subject area.

- **Classifications of Environmental Conditions**. This ECP Report is not intended to identify uncontaminated property in compliance with the Community Environmental Response Facilitation Act (CERFA) and Department of Defense (DoD) policy. The Navy will comply with its statutory requirement to identify uncontaminated property through additional evaluations and documentation.
- **Installation Restoration Program Sites.** The Navy has not identified any Installation Restoration Programs (IRP) sites on NRC Forest Park (Marin 2006b).
- **Storage Tanks.** There are no existing storage tanks nor any documentation of former storage tanks on NRC Forest Park (Marin 2006b).
- **Munitions and Explosives of Concern.** NRC Forest Park has no known areas containing munitions and explosives of concern (MEC) (Marin 2006b).
- **Hazardous Waste.** The NRC Forest Park is a Conditionally Exempt Small Quantity Generator of hazardous waste. Wastes generated at the facility include used paint, cleaners, and lubricants. All hazardous waste is transported and disposed of off-site by a licensed contractor (Marin 2006b).
- **Polychlorinated Biphenyls.** There are no transformers located on the NRC Forest Park. During the 2003 demolition of the Pistol Range, light ballasts that contained polychlorinated biphenyls (PCBs) were transported off-site by licensed contractors (TolTest 2003).
- **Radiological Materials.** There are no known radiological materials used or stored at NRC Forest Park (Marin 2006b).
- **Pesticides.** According to the 1997 Navy Environmental Compliance Evaluation (ECE) (Navy 1997), pesticides were applied by a licensed contractor to the areas of NRC Forest Park occupied by the Navy. The Army occupied areas had pesticides applied by Army personnel. Currently pesticides are applied to all areas of NRC Forest Park by a licensed contractor (Marin 2006b) and there is no on-site storage, mixing, or disposal of pesticides.
- **Asbestos.** The asbestos surveys (Cape 1997a, Cape 1997b) indicated the presence of asbestos containing material (ACM) in both the administration building and the former pistol range building. Asbestos abatements were conducted in 2000 and 2001. The abatements removed 1,550 square feet of asbestos-containing floor tile and mastic. Approximately 53,300 square feet of presumed asbestos containing floor tiles and mastic remain in place. The 2000 abatement also removed or repaired some of

the pipe insulation and roof drains in the facility but did not abate all the material identified in the 1997 asbestos survey. ACM still remains on the heating system pipe insulation in the boiler room and in Room 109; domestic water pipe and fitting insulation in Room 109; mastic on sink of Room 109; and on the heating system pipe fitting insulation located throughout the first floor of the Army side of the building.

- **Lead-Based Paint.** In August 2003, a limited lead paint survey was conducted within selected administration building rooms scheduled for repainting (Rooms 187, 192, 214, 213, 216, 217, 271, and 270). Visual inspection of each room and analysis of paint chip samples from Rooms 187 and 192 indicated the presence of elevated lead concentrations in Room 192, but good paint condition overall in all rooms and no hazards associated with re-painting in any of the surveyed locations.

  Lead-containing dusts detected within the Pistol Range (Building 101) (Knight 1997) were identified as requiring remediation prior to building renovations (Cape 1997a). The Pistol Range building was demolished in 2003. According to Navy personnel (Mack 2006b), the lead dust was removed as part of the Navy's contract for the demolition contract of the building.

- **Radon.** A radon screening conducted during the 1980s did not identify any radon gas concentrations in NRC Forest Park buildings above the screening criterion of 4 picoCuries per Liter (pCi/L) (Mack 2006a).

- **Air Quality.** NRC Forest Park has two natural gas boilers with an output capacity of 4.8 million British thermal units per hour (mBtu/hr), which is below the State of Illinois' 10 mBtu/hr permit requirement. NRC Forest Park does not have any other regulated air-emissions generating equipment.

- **Drinking Water.** Drinking water is supplied by the City of Forest Park. According to the 2000 ECE, facility personnel could not identify if the water system had the appropriate backflow prevention devices.

- **Groundwater.** Groundwater occurs at a depth of approximately 15 to 20 feet (ft.) below the ground surface in the vicinity of NRC Forest Park (USGS 2006). There are no known groundwater production or monitoring wells located within the boundaries of the NRC Forest Park property.

- **Stormwater.** According to facility personnel (Marin 2006b), the NRC Forest Park stormwater system is connected to the City of Forest Park's stormwater system.

- **Surface Water.** There are no surface water features within or adjacent to the NRC Forest Park.

- **Wastewater.** According to facility personnel (Marin 2006b), the facility wastewater system is connected to the City of Forest Park municipal sewer system. Navy records indicate that a vehicle wash rack, which was connected to the municipal sewer system, was operated at NRC Forest Park (Navy 1994, Mack 2006b). The wash rack was taken out of service in approximately 2001 and removed in 2003 (Mack 2006a) by the same contract that demolished the Pistol Range.

- **Floodplains.** NRC Forest Park is not located within a mapped 100-year flood boundary (ISWS 2006)

- **Wetlands and Aquatic Habitats (Special Aquatic Sites).** There are no known wetlands on or adjacent to the NRC Forest Park (NWI 2006).
- **Coastal Zone Areas.** Coastal zone management is not applicable to NRC Forest Park.
- **Coral Reefs.** Coral reef protection requirements are not applicable to NRC Forest Park.
- **Fisheries.** Fisheries are not applicable to NRC Forest Park.
- **Marine Mammals.** Marine mammals is not applicable to NRC Forest Park.
- **Threatened, Endangered, and Other Sensitive Species.** There are no known threatened, endangered, or other sensitive species identified on NRC Forest Park (Marin 2006b).
- **Geological Hazards.** There is minimal risk for an earthquake event that would cause damage to structures in the Forest Park area (USGS 2002). NRC Forest Park is not located in one of the mapped karst areas of Illinois; therefore, there is little risk at NRC Forest Park of sinkholes from collapse of underground caverns (ILDNR 2006).
- **Historic Resources.** The buildings at NRC Forest Park are not listed in the National Register of Historic Places. Due to the age of the administration building (approximately 51 years), a cultural resource survey needs to be completed to confirm its historic status.
- **Archaeological Resources.** There are no known archaeological resources at NRC Forest Park (Marin 2006b)
- **Native American Graves.** There are no known Native American graves at NRC Forest Park (Marin 2006b).
- **Solid Waste.** Solid waste generated at NRC Forest Park is collected and disposed of off-site by a licensed contractor (Marin 2006b).
- **Universal Waste.** All universal waste is removed from the facility and disposed of off-site by a licensed contractor (Marin 2006b).
- **Medical Waste.** The NRC Forest Park has both medical and dental facilities that produce medical waste. All medical waste is transported and disposed of off-site by a licensed contractor (Marin 2006c).
- **Hazardous Materials.** Hazardous materials at NRC Forest Park include caustic liquid used by the maintenance contractor to clean the boilers; minor amounts of motor oil, transmission fluid, antifreeze, and two small generators with diesel tanks in the Army Storage Building; and latex paint in the Navy Storage building.

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1.0 Purpose

The Navy Base Realignment and Closure (BRAC) Program Management Office (PMO) prepared this Environmental Condition of Property (ECP) report for Naval Reserve Center (NRC), Forest Park, Illinois.

This report used existing information to summarize the historical, cultural, and environmental conditions of NRC Forest Park property. Information was reviewed with installation personnel to ensure all data are current and accurate. Where information was not available, the sources contacted and reference materials sought were documented.

The purposes of the ECP report are to:

- Provide the BRAC PMO with the information it may use to make disposal decisions regarding the property;
- Provide the public with information relative to the environmental condition of the property;
- Assist local government in planning land reuse activities;
- Assist federal agencies during the federal property screening process;
- Assist new owners in meeting their environmental obligations under the United States (U.S.) Environmental Protection Agency's (USEPA's) "All Appropriate Inquiry" regulations, at such time as they become final; and
- Assist in determining appropriate responsibilities, assets valuation, liabilities, and liabilities with other parties to a transaction.

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2.0 Background

The NRC Forest Park facility has been a Reserve Center since its initial construction in 1955. The current operations at NRC Forest Park are conducted by four units: (1) an Administration Unit that provides administrative support to all reserve personnel; (2) a Medical Unit that provides physicals, blood work, and immunizations; (3) a Training Unit that trains, provides administrative support, and mobilizes Navy Reserve personnel; and (4) a Supply Unit that provides uniforms, lodging, and other services to Reserve personnel (Marin 2006a).

Since November 1985, the U.S. Army has been a tenant at NRC Forest Park, and occupies 27,762 square feet (sq. ft.) in the reserve center building, along with use of a garage (Kincaid 2006). Army units located at the NRC Forest Park site include the 2/239th 9th Brigade, 100 Division; 6015th Garrison Support Unit; 318th Public Affairs Organization; 49th Military History Detachment; 88th Regional Readiness Command-Army Reserve Installation Management-Field Support; and the 88th Retention Operations (Marin 2006a).

NRC Forest Park was renamed in March 2006 to Navy Operational Support Center, Forest Park (Kincaid 2006).

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3.0 Property Description

NRC Forest Park is located at 7410 Roosevelt Road, in Cook County, Forest Park, Illinois (Navy 1997) in a business-zoned area. The 6.5-acre facility was first constructed in 1955, and is currently improved with a reserve training center building consisting of approximately 76,201 square feet of space, two support buildings, along with an asphalt-paved parking area (see **Figure 3-1**). At one time, NRC Forest Park also included a building which housed a Pistol Range in the southern portion of the site. The Pistol Range building (101) was demolished in 2003. In addition, the NRC Forest Park also had a wash rack that was demolished in 2003.

The U.S. Army is currently a tenant at the facility and operates a reserve center. The U.S. Army has occupied approximately 27,762 sq. ft. of the reserve center building along with use of a garage since Novemeber 1985 (Kincaid 2006).

Property adjacent to NRC Forest Park to the north, east, west, and south is all mixed residential and commercial property intersected by Hannah Avenue to the east, Roosevelt Road to the north, the Mall to the east, and U.S. Postal Warehouse to the south.

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4.0 Environmental Condition Overview – Existing Environmental Information

As part of ECP report activities, extensive record reviews were conducted, a meeting at the Naval Station Great Lakes with the Reserve Environmental Support Program Manager and BRAC PMO personnel was held, a visit with the BRAC PMO personnel was conducted, and personnel interviews were held to document current and historic conditions at NRC Forest Park. The meeting at Naval Station Great Lakes was conducted on January 17, 2006. A visit at NRC Forest Park was made on January 18, 2006.

The Naval Station Great Lakes office as well as site personnel located at NRC Forest Park provided relevant information for this ECP report. Additionally, available reports of previous environmental investigations at NRC Forest Park were obtained and reviewed. **Appendix A** presents a list of the documents that were reviewed as part of this effort. The information presented in this report was reviewed with installation personnel to ensure all data are current and accurate. Where information was not available, the sources contacted and reference materials sought were documented.

Interviews were conducted with NRC Forest Park personnel during a site visit and in subsequent telephone conversations and e-mail communications. **Appendix B** presents a list of the people contacted during preparation of the ECP report.

4.1 Classification of Environmental Conditions

The Community Environmental Response Facilitation Act (CERFA) of 1992 (amending the Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA] to add Section 120(h)(4) of CERCLA, 42 United States Code (U.S.C.) Section 9620(h)(4)) requires the identification and documentation of uncontaminated real property controlled by the Department of Defense (DoD). Components where DoD plans to make excess property available for reuse pursuant to a base closure law. Uncontaminated property is defined as any "real property on which no hazardous substances and no petroleum products or their derivatives were known to have been released, or disposed of." This includes aviation fuel and motor oil. This ECP Report is not intended to identify uncontaminated property in compliance with CERFA and DoD policy. The Navy will comply with its statutory requirement to identify uncontaminated property through additional evaluations and documentation.

4.2 Installation Restoration Program Sites

The Navy has not identified any sites under the Installation Restoration Programs (IRP) on the NRC Forest Park property (Marin 2006b).

4.3 Storage Tanks

4.3.1 Underground Storage Tanks

There are no known former or existing underground storage tanks (USTs) at NRC Forest Park (Marin 2006b, Navy 1997).

4.3.2 Aboveground Storage Tanks

There are no known former or existing aboveground storage tanks (ASTs) at NRC Forest Park (Marin 2006b).

4.4 Munitions and Explosives of Concern

There are no known areas containing munitions and explosives of concern (MEC) at NRC Forest Park (Marin 2006b). The structure, Building 101, formerly operated as a Pistol Range was demolished in 2003.

4.5 Hazardous Waste

In accordance with CERCLA 120(h)(1), Title 40 Code of Federal Regulation (CFR) part 373 and the DoD policy of June 17, 1994, notice is required when (1) a hazardous substance has been stored for one year or more in quantities greater than 1,000 kilograms or the substance's CERCLA reportable quantity (whichever is greater); or (2) when a hazardous substance is identified in 40 CFR 261.30 as acutely hazardous, and is stored for one year or more, at quantities greater than or equal to the substance's reportable quantity. Current hazardous substance storage activities at NRC Forest Park do not meet these conditions. In addition, documents reviewed indicated that the facility did not meet these conditions in the past.

NRC Forest Park is classified as a Conditionally Exempt Small Quantity Generator (CESQG) per 40 CFR 261.5, based on its monthly hazardous waste generation rate of less than 100 kilograms (220 pounds) and total accumulation/storage of less than 1,000 kilograms (2,200 pounds) of hazardous waste at any one time (Navy 2000, Marin 2006b, Mack 2006a). This generator status exempts the facility from substantial regulator requirements and liabilities. The NRC Forest Park's Federal Facility ID Number is IL6170023828 (Kincaid 2006).

Typical hazardous waste generated at NRC Forest Park includes household paint, cleaners, lubricants and antifreeze. All hazardous waste is transported and disposed of off-site by a licensed contractor (Marin 2006b).

4.6 Polychlorinated Biphenyls

Congress enacted the Toxic Substances Control Act (TSCA) in 1976 (Public Law [Pub. L.] 94-469, effective as of January 1, 1977). The act authorizes the USEPA to secure information on all new and existing chemical substances and to control any of these substances that could cause an unreasonable risk to public health or the environment. Under earlier laws, the USEPA had authority to control toxic substances only after damage had occurred. The earlier laws did not require the screening of toxic substances before they entered the marketplace. TSCA

closed the gap in the earlier laws by requiring that the health and environmental effects of all new chemicals be reviewed before they are manufactured for commercial purposes. Polychlorinated biphenyls (PCBs) are regulated under TSCA Title I (Control of Toxic Substances), which includes provisions for testing chemical substances and mixtures, manufacturing and processing notices, regulating hazardous chemicals substances and mixtures, managing imminent hazards, and reporting and retaining information.

There are no transformers located on the NRC Forest Park property and no other known potentially PCB-containing electrical equipment.

During the 2003 demolition of the Building 101 Pistol Range, PCB-containing light ballasts were removed, placed in one 55-gallon Department of Transportation (DOT) steel drum (TolTest 2003), and transported to American Waste Processing in Maywood, Illinois for recycling.

4.7 Radiological Materials

No known radiological materials are stored or used at NRC Forest Park (Marin 2006b).

4.8 Pesticides

The USEPA regulates the use of pesticides under the authority of two federal statutes: the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food, Drug, and Cosmetic Act (FFDCA). The FIFRA provides the basis for regulation, sale, distribution and use of pesticides in the U.S., whereas the FFDCA authorizes the USEPA to set maximum residue levels, or tolerances, for pesticides used in or on foods or animal feed.

Facility documentation indicates that past and present pesticide applications at the Navy operated portion of NRC Forest Park were/are performed by a licensed contractor (Navy 1997, Orkin 2004). No pesticide formulations are stored, mixed, or disposed of on-site.

Facility documentation indicates that in the past Army personnel applied pesticides within their portion of the NRC Forest Park facility (Navy 1997). All pesticides applications within Army-leased facilities at NRC Forest Park are currently performed by a licensed contractor (Marin 2006b).

4.9 Asbestos

Asbestos abatement is regulated under TSCA Title II, Asbestos Hazard Emergency Response, which was added by the Asbestos Hazard Emergency Response Act (AHERA, Pub. L. 99-519), enacted by Congress on October 22, 1986. It authorizes the USEPA to amend its TSCA regulations to impose more requirements on asbestos abatement in schools. AHERA provides for the promulgation of federal regulations requiring inspection for asbestos and appropriate response actions in schools and mandates periodic re-inspection. In addition, it requires the USEPA Administrator to determine "the extent of the danger to human health posed by asbestos in public and commercial buildings and the means to respond to any such danger."

During the renovation of the Building 101 Pistol Range, asbestos-containing material (ACM) was identified (Knight 1997) in roof flashing and mastic/tar around the roofing vent (Cape

1997a). Cape Environmental, Inc. removed the suspect ACM from the Building 101 roofing, and conducted an asbestos survey of the administration building, Pistol Range, and the two storage buildings at NRC Forest Park (Cape 1997b). The survey results identified the presence of ACM throughout the facility in the floor tile mastic, pipe insulation, heating system insulation, and roof drains. The survey report recommended initiation of an operation and maintenance program for most ACM, and implementation of repair/replacement for other ACM. A summary of the findings and recommendations of the asbestos survey is presented in **Table 4-1** and the locations of ACM are shown in **Figure 4-1** and **Figure 4-2**.

In 2000 and 2001, TolTest, Inc. (TolTest) of Toledo, Ohio performed asbestos-abatement measures in the administration building at NRC Forest Park including:

- Removal of approximately 500 sq. ft. of asbestos-containing floor tiles and mastic from the first and second stairwell landings. Quikrete Acrylic Concrete Cure & Seal was applied to the concrete after abatement activities. As per the Forest Park NRC's request, the concrete floors were not retiled after ACM removal (TolTest 2000).
- Removal of approximately 3 linear feet of thermal system insulation from two roof drains on the second deck and replacement of the insulation with fiberglass insulation (TolTest 2000).
- Abatement of two damaged pipe runs located in the stairwell of the first deck and replacement the insulation with fiberglass insulation (TolTest 2000).
- Repair of 15 linear feet of damaged thermal system insulation of the roof drain located in the drill deck (TolTest 2000).
- Repair of damaged ACM fittings on the fiberglass pipe runs in Room 179 (TolTest 2000).
- Repair of one square foot of damaged insulation on the boiler jacket in the boiler room (TolTest 2000).
- Removal of approximately 870 sq. ft. of asbestos-containing floor tile and mastic from Rooms 189 and 192 (TolTest 2001).
- Removal of approximately 180 sq. ft. of asbestos-containing floor tile and mastic from Room 251 (TolTest 2001).

In preparation for the 2003 demolition of the Building 101 Pistol Range, an asbestos re-survey was performed to confirm the locations and quantities of previously identified ACM (TolTest 2003). The results confirmed that asbestos-containing tar was used as a seal around a heater flue on the roof of Building 101. In April 2003, TolTest removed and disposed of approximately 5 sq. ft. of asbestos-containing tar during the demolition of Building 101 (TolTest 2003).

The majority of the ACM and presumed asbestos containing material (PACM) identified in these surveys remain in place. The asbestos abatement activities were limited in scope. The 2001 abatement removed 1,050 square feet of asbestos-containing floor tile and mastic and the 2000 abatement removed 500 square feet of asbestos containing floor tile and mastic; therefore, there is approximately 53,300 square feet of presumed asbestos containing floor tiles and mastic remaining. The 2000 abatement also removed or repaired some of the pipe insulation and roof drains in the facility but did not abate all the material identified in the 1997 asbestos

survey. ACM still remains on the heating system pipe insulation in the Boiler Room and in Room 109; domestic water pipe and fitting insulation in Room 109; mastic on sink of Room 109; and on the heating system pipe fitting insulation located throughout the first floor of the Army side of the building. The locations where ACM and PACM were identified are summarized in **Table 4-2**. The location of the remaining ACM and PACM are shown on **Figure 4-1** and **Figure 4-2**.

4.10 Lead-Based Paint

Lead is regulated under TSCA Title IV (Lead Exposure Reduction, added on October 28, 1992 [Pub. L. 102-550]). The purpose of this legislation is to reduce environmental lead contamination and prevent adverse health effects as a result of lead exposure, particularly in children. Provisions include identifying lead-based paint (LBP) hazards, defining levels of lead allowed in various products, including paint and toys, and establishing state programs for the monitoring and abatement of lead exposure levels, including training and certification for lead abatement workers.

In April 1997, LBP was identified during the renovation of the Building 101 Pistol Range (Knight 1997) and remediation was recommended. Cape Environmental Management, Inc. was contracted to address the lead paint (Cape 1997a). The Pistol Range was demolished in 2003 (TolTest 2003); no report is available documenting completion of a lead removal action.

In August 2003, a visual inspection was conducted within administration building rooms scheduled for repainting (Rooms 187, 192, 214, 213, 216, 217, 271, and 270). In addition, X-Ray Fluorescence Spectroscopy (XRF) analyses were performed on paint samples from Rooms 187 and 192 (TLI 2003). All painted surfaces were found to be intact, although lead was detected in Room 192 on the masonry window molding, the south facing block wall, and the plaster ceiling above the drop ceiling. These components were determined to be intact. The Navy concluded that if painted surfaces in the surveyed locations were in good condition and surface preparation did not breach the top layer of paint, then there was no hazard posed in painting these rooms. The lead-based paint results are summarized in **Table 4-3** and their locations are shown in **Figure 4-3.**

In April 1997, prior to the renovation of the Pistol Range (Building 101), lead dust was identified in the building (Knight 1997). Cape Environmental Management, Inc. was contracted to address the lead dust issue (Cape 1997a). According to Cape Environmental Management, Inc., the facility as-builts indicated a dirt floor with a sand pit next to the target wall. However, during the wipe sampling, they discovered that the floor was concrete and expressed concern that if the range was used prior to the installation of the concrete floor, then lead soil contamination could exist under the concrete slab. Navy personnel (Mack 2006b) indicated that the range was originally constructed with a concrete floor with a sand trap to catch bullets. The Pistol Range building was removed in 2003 (TolTest 2003). According to Navy personnel (Bruce 2006b), the lead dust was removed as part of the Navy contract for Building 101 demolition.

4.11 Radon

Indoor radon concentrations are regulated under TSCA Title III (Indoor Radon Abatement, enacted on October 28, 1988 [Pub. L. 100-551]). The purpose of this legislation was to assist states in responding to the threat to human health posed by exposure to radon. The USEPA is required to publish an updated citizens' guide to radon health risk and to perform studies of the radon levels in schools and in federal buildings.

A radon screening was conducted sometime during the 1980's at NRC Forest Park and included collection of 10 samples in random locations (Martin Marietta 1996). All the sample results were below the Federal guideline of 4 picoCuries per Liter (pCi/L) (Mack 2006), with the highest detected concentration at 0.4 pCi/L (**Table 4-4**). No information was provided on the location of the radon detectors or the date of the survey.

4.12 Air Quality

Air emissions at NRC Forest Park are regulated under the Clean Air Act (CAA).

The NRC Forest Park has two natural gas boilers with an input capacity of 4.8 million British thermal Units per hour (mBtu/hr), which is below the State of Illinois' 10 mBtu/hr permit requirement. NRC Forest Park does not have any other regulated air-emissions generating equipment.

4.13 Water Quality

4.13.1 Drinking Water

The Safe Drinking Water Act (SDWA) of 1974, amended in 1986 and 1996, was passed to protect public health by regulating the nation's pubic drinking water supply and its sources, including rivers, lakes, reservoirs, springs, and groundwater.

Drinking water is supplied to NRC Forest Park by the City of Forest Park. According to the 2000 ECE, facility personnel could not identify if the water system had the appropriate backflow prevention devices. In addition, the 2000 ECE (Navy 2000) indicated that facility personnel could not identify if lead tests on the drinking water coolers and appropriate water taps were conducted. In addition, the ECE could not identify if the water system had the appropriate backflow preventers.

4.13.2 Groundwater

The uppermost bedrock aquifer in Cook County is found in Silurian dolomite formations underlying approximately 300 feet (ft.) of unlithified surficial glacial deposits comprised of clay, silt, sand, and gravel (ISGS 2006a). The porosity and permeability of the rock is derived from fractures and dissolution cavities in the dolomite. The dolomite itself has no matrix porosity; therefore, the aquifer does not produce an adequate water supply for most municipal water wells. Higher yields are obtained from deeper aquifers, particularly the Ironton-Galesville Sandstone, and the upper part of the Mt. Simon Sandstone. The Ironton-Galesville Sandstone formation consists of clean, medium to coarse-grained dolomitic sandstone and consistently has

the largest permeability values of all the bedrock units in northeastern Illinois. It is the most important bedrock aquifer in the county, and municipal wells can obtain relatively large water supplies with high flow rates. The penetrated thickness of the Ironton-Galesville Sandstone formation ranges from 94 to 249 ft. The Mt. Simon Sandstone formation is the deepest aquifer in the county and consists of more than 2,000 ft. of fine- to coarse-grained sandstone. The water quality diminishes with depth and is commonly saline below a depth of 1,300 ft.

Groundwater occurs at a depth of approximately 20 ft. below the ground surface in the vicinity of NRC Forest Park. There are no known groundwater production or monitoring wells located within the boundaries of the NRC Forest Park property.

4.13.3 Stormwater

The Water Pollution Control Act Amendments of 1972, commonly known as the Clean Water Act (CWA), use a variety of regulatory and non-regulatory tools to reduce pollutant discharges into waterways and to manage polluted runoff. A National Pollutant Discharge Elimination System (NPDES) permit is required for all facilities discharging stormwater associated with industrial and/or construction activities.

The NRC Forest Park stormwater system is connected to the City of Forest Park's stormwater system. According to facility personnel, there are no known permits for the facility or storm drains located within NRC Forest Park property boundaries (Marin 2006b).

4.13.4 Surface Water

There are no surface water features within or adjacent to boundaries of the NRC Forest Park (Marin 2006b).

4.13.5 Wastewater

According to NRC Forest Park personnel, the facility wastewater system is connected to the City of Forest Park municipal sewer system (Marin 2006b). There were no known permits for the connection to the municipal system.

A vehicle wash rack was constructed for NRC Forest Park in 1964 (see location in **Figure 3-1**) (Navy 1994) and was connected to the municipal sewer system (Mack 2006b). According to Navy personnel (Mack 2006a), the wash rack was taken out of service in approximately 2001 and was removed in 2003 by the same Contractor that performed the demolition of the Pistol Range building (Mack 2006b).

4.14 Natural Resources

4.14.1 Floodplains

According to the Illinois State Water Survey, no portion of the NRC Forest Park lies within a mapped 100-year flood boundary (ISWS 2006).

4.14.2 Wetlands and Aquatic Habitats (Special Aquatic Sites)

According to the National Wetlands Inventory, there are no wetlands or aquatic habitats within or adjacent to the boundaries of the NRC Forest Park (NWI 2006).

4.14.3 Coastal Zone Areas

The Coastal Zone Protection Act is not applicable to the NRC Forest Park.

4.14.4 Coral Reefs

Coral reef protection requirements are not applicable to the NRC Forest Park.

4.14.5 Fisheries

The Magnuson-Stevens Fishery Conservation and Management Act is not applicable to NRC Forest Park because there are no water bodies on the site.

4.14.6 Marine Mammals

The Marine Mammal Protection Act is not applicable to the NRC Forest Park.

4.14.7 Threatened, Endangered and Other Sensitive Species

There are no known federal or state threatened, endangered, or other sensitive species identified on NRC Forest Park (Marin 2006b).

4.14.8 Geological Hazards

According to the Illinois State Geological Survey (ISGS), on average, there is one earthquake large enough to be felt somewhere in Illinois every year and one earthquake large enough to cause minor damage once per decade (ISGS 2006b). The largest earthquake in recorded history in Illinois occurred on November 9, 1968 and measured 5.4 on the Richter scale (ISGS 2006b).

The likelihood of an earthquake of magnitude 6.3 or greater occurring somewhere in the Central US within the next 15 years is 40-63 percent and 86-97 percent within the next 50 years (ISGS 2006b). The Forest Park area is in an earthquake zone with only a 10 percent chance of an earthquake occurring in a 50 year period, with peak acceleration (ground movement) of 3%g (percent acceleration due to gravity) (USGS 2002). It takes a peak acceleration of 10%g to cause damage buildings; therefore, there is minimal risk of an earthquake that would cause damage in the Forest Park area (USGS 2002).

The Forest Park area is not located in a probable karst area (ILDNR 2006). The karst areas of Illinois are located in the southwestern, southern, and north central parts of the state. There is thus little hazard at NRC Forest Park associated with “sinkholes” from the collapse of underground caverns.

See **Section 4.14.1** for flood hazard information.

4.15 Cultural Resources

Cultural resources at NRC Forest Park are federally regulated under the National Historic Preservation Act, Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act.

4.15.1 Historic Resources

The buildings at the NRC Forest Park are not listed in the National Register of Historic Places (NRHP 2006). It does not appear that the buildings meet the National Historic Preservation Act criteria, but because the administration building was constructed in 1955 and is older then 50 years, a cultural resource survey needs to be completed to confirm its historic status.

4.15.2 Archeological Resources

There are no known archeological resources identified on NRC Forest Park (Marin 2006b).

4.15.3 Native American Graves

There are no known Native American graves identified on NRC Forest Park (Marin 2006b).

4.16 Solid Waste

All solid waste generated by the NRC Forest Park is collected and disposed of off-site by a licensed contractor (Marin 2006b).

4.17 Universal Wastes

Federal universal wastes (as set forth in 40 CFR 273) include batteries, pesticides, thermostats, and lamps. States can modify the universal waste rule and include additional universal waste types, although Illinois follows the Federal designation of universal waste categories.

All universal waste generated at NRC Forest Park is removed and disposed of off-site through a licensed contractor (Marin 2006b).

During the 2003 demolition of the Building 101 Pistol Range, mercury-containing light bulbs were removed from light fixtures in the building (TolTest 2003). The mercury-containing light bulbs were submitted to the NRC Forest Park Facilities Manager for reuse (TolTest 2003).

4.18 Medical Wastes

The NRC Forest Park operates both medical and dental service (Rooms 119, 121A, and 121B). All medical waste generated by these facilities is transported and disposed of off-site by a licensed contractor (Marin 2006c). Locations where medical waste is located or stored are presented in **Figure 4-4**.

4.19 Hazardous Materials

Two 55-gallon drums of caustic liquid, stored in administration building Room 172, are used by the maintenance contractor to clean the boilers.

The Army storage building at the south east corner of the site contains minor amounts of motor oil, transmission fluid, antifreeze, and two small generators with diesel tanks. The Navy storage building at the southwest corner of the site contains a several 1-gallon cans and 5-gallon buckets of latex paint. This paint is relatively new and is not suspected to be lead based.

Locations of hazardous materials storage are presented in **Figure 4-5**.

4.20 Summary of Environmental Conditions

Environmental conditions at NRC Forest Park consist of the following:

- Approximately 53,300 square feet of presumed asbestos containing floor tiles and mastic remain in place. ACM remains on the heating system pipe insulation in the boiler room and in Room 109; domestic water pipe and fitting insulation in Room 109; mastic on sink of Room 109; and on the heating system pipe fitting insulation located throughout the first floor of the Army side of the building.
- Paint chip samples indicated the presence of lead based paint in Room 192. The paint was in good condition at the time of the survey.

All known environmental conditions are presented in **Figure 4-6**.

Based on the information reviewed, there are no locations on the property that have established land use restrictions that must be maintained when NRC Forest Park property is transferred.

5.0 Certification

I certify that the Environmental Conditions of Property Report for the Navy Reserve Center, Forest Park, Illinois, May 2, 2006 and its enclosures were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The information contained within the Environmental Conditions of Property Report for Navy Reserve Center, Forest Park, Illinois, May 2, 2006 and its enclosures is, to the best of my knowledge and belief, true, accurate and complete and accurately reflects the property's condition as of May 2, 2006 based upon my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information.

DAVID DROZD

Name

Signature

5-8-06

Date

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TABLES

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Table 4-1. 1997 Asbestos Survey Results for NRC Forest Park

Homogeneous Area Description	Location	Quantity	Condition	Recommended Action
9”x9” Floor Tile/Mastic, Black	Room #102, 2nd Floor southeast corridor	150 SF	Nonfriable	O&M Program
9”x9” Floor Tile/Mastic, Tan	Rooms # 179, 180, 181	400 SF	Nonfriable	O&M Program
9”x9” Floor Tile/Mastic, Gray	Rooms # 121, 122, 239-255	6500 SF	Nonfriable	O&M Program
12”x12” Floor Tile/Mastic, White/Speckle	Rooms # 119, 206, 210, 212, 261, 265, 267, 270	2500 SF	Nonfriable	O&M Program
12”x12” Floor Tile/Mastic, White/Streaks	Room # 120	300 SF	Nonfriable	O&M Program
12”x12” Floor Tile/Mastic, Black and White Alternating	Room # 120	300 SF	Nonfriable	O&M Program
12”x12” Floor Tile/Mastic, Tan Speckle	Rooms # 114, 202, 257, 262, 264, 266, 268, 271	2500 SF	Nonfriable	O&M Program
12”x12” Floor Tile/Mastic, Green Streaks	Rooms # 179, 180, 189, 192, 202, 263	1200 SF	Nonfriable	O&M Program
12”x12” Floor Tile/Mastic, Green and Black Alternating	Throughout the Administration Building	41000 SF	Nonfriable	O&M Program
Piping Insulation on Heating System (Magnesia-type)	1st floor Northeast Army side Boiler room and closet (109)	1000 LF	Highly friable	Repair
Piping Insulation on Domestic Water System (Cardboard-type)	Closet (109)	500 LF	Moderately friable	Repair
Pipe Fitting Insulation on Domestic Water System (Cardboard-type)	Closet (109)	100 EA	Highly friable	Repair
Pipe Fitting Insulation on Fiberglass (Heating System)	Throughout 1st floor Army side	200 EA	Highly friable	Repair
Pipe Fitting insulation on Roof Drains (Cardboard-type runs)	Throughout the Administration Building	25 EA	Highly friable	Repair
Mastic on Sink	Room # 109	1 EA	Nonfriable	O&M Program
Pipe Insulation on Roof Drains (Cardboard-type)	Throughout the Administration Building	50 EA	Highly friable	Repair
Window Putty	Exterior Windows	800 LF	Nonfriable	O&M Program

Source: Cape 1997b.

Notes:
SF = Square feet
LF = Linear feet
EA = Each
O&M = Operation and Maintenance

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Table 4-2. Asbestos Removal for NRC Forest Park

Building	Location	ACM	Quantity
Administration	First and second floor stairwell landings	Asbestos-containing floor tiles and mastic	approx. 500 SF
Administration	Two roof drains on the second deck	Thermal system insulation	3 LF
Administration	Stairwell of the first deck	Two damaged pipe runs and insulation	Unspecified
Administration	Drill deck	Damaged thermal system insulation of the roof drain	15 LF
Administration	Room 179	ACM fittings on fiberglass pipe runs	Unspecified
Administration	Boiler Room	Damaged insulation on the boiler jacket	1 SF
Administration	Room 189 and 192	Asbestos-containing floor tile and mastic	870 SF
Administration	Room 251	Asbestos-containing floor tile and mastic	180 SF
Pistol Range, Building 101	Roof	Roof flashing and mastic/tar from around roofing vent	Unspecified
Pistol Range, Building 101	Roof	Asbestos-containing tar sealing a roof penetration for the heater flue	5 SF

Sources: TolTest 2000, TolTest 2001, TolTest 2003.

Notes:
ACM = Asbestos-Containing Material
SF = Square Feet
LF = Linear Feet

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Table 4-3. Lead Results for NRC Forest Park

Building	Room	Location	Lead Identified	Media Tested
2003 Sampling				
Administration	187	Painted Walls	No	Paint
Administration	192	Painted Walls	Yes	Masonry window molding, south facing block wall, and the plaster ceiling above the drop ceiling
Administration	213	Painted Walls	No	Visual Inspection
Administration	214	Painted Walls	No	Visual Inspection
Administration	216	Painted Walls	No	Visual Inspection
Administration	217	Painted Walls	No	Visual Inspection
Administration	270	Painted Walls	No	Visual Inspection
Administration	271	Painted Walls	No	Visual Inspection
1997 Sampling				
Pistol Range, Building 101	N/A	Painted Walls	Yes	Paint
Pistol Range, Building 101	N/A	Unknown	Yes	Lead dust from firing activities

Sources: TLI 2003, Knight 1997.

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Table 4-4. Radon Results for NRC Forest Park

Location	Number of Detectors	Radon Concentration (Pci/L)				
		0 to 4	4 to 20	>20	>4	Highest
NRC Forest Park	10	10	0	0	0	0.3

Source: United States Navy Non-Housing Assessment Radon Distribution Table. Martin Marietta Energy Systems. 10 November 1996.

Note: Pci/L = Picocuries per liter

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FIGURES

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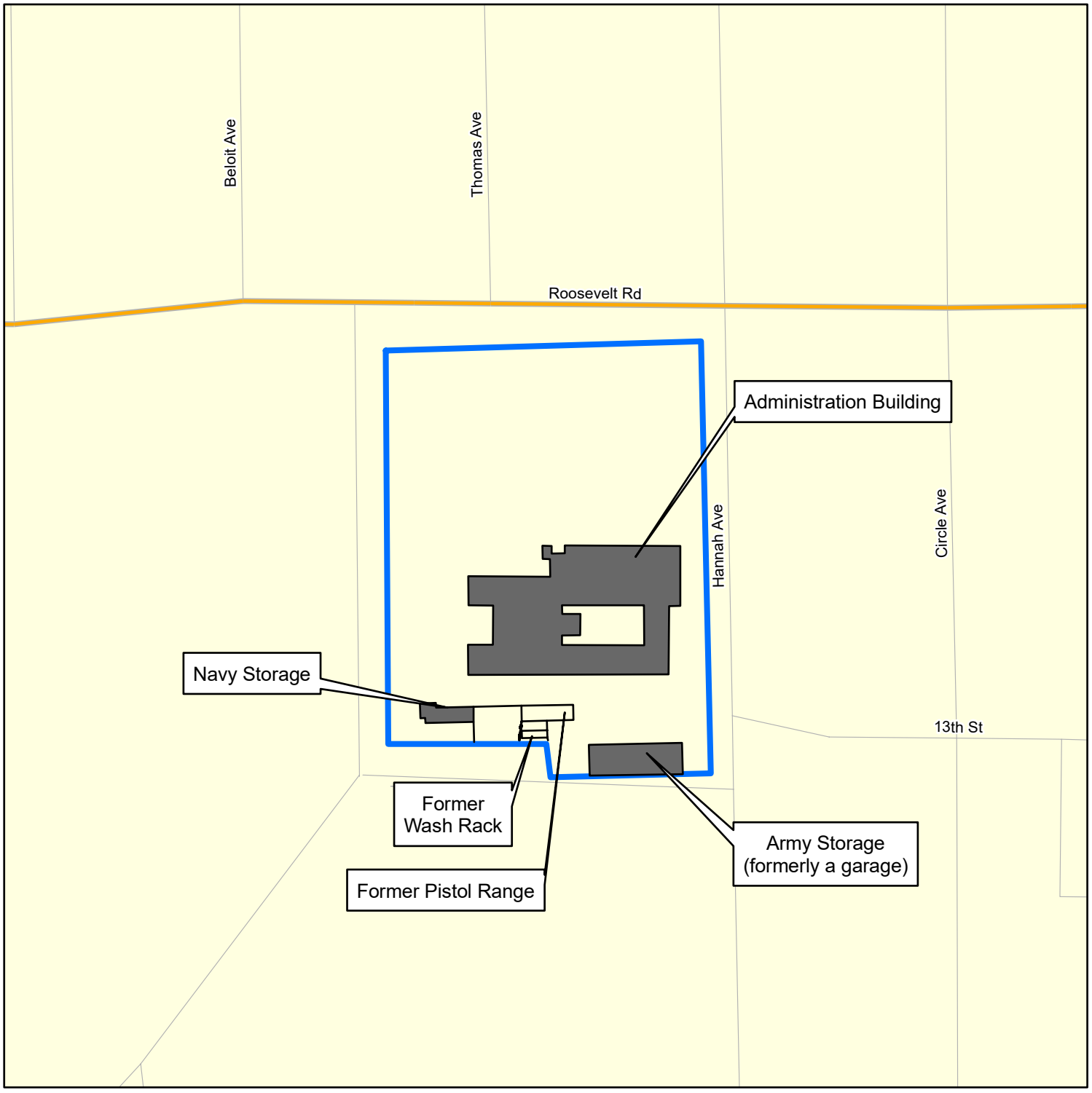
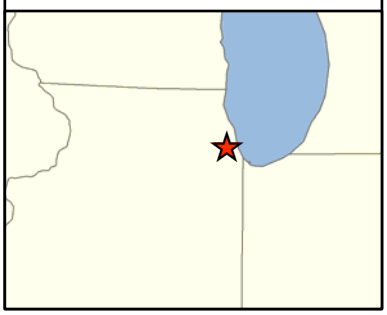


LEGEND

- Site Boundary
- Major Road
- Local Road
- Buildings

SITE LOCATION MAP



NOTES & SOURCES

Coordinate System: UTM Zone 16, NAD 83
Data Sources: Navy 2003

0 100 200 Feet

0 25 50 Meters

NRC
Forest Park, IL

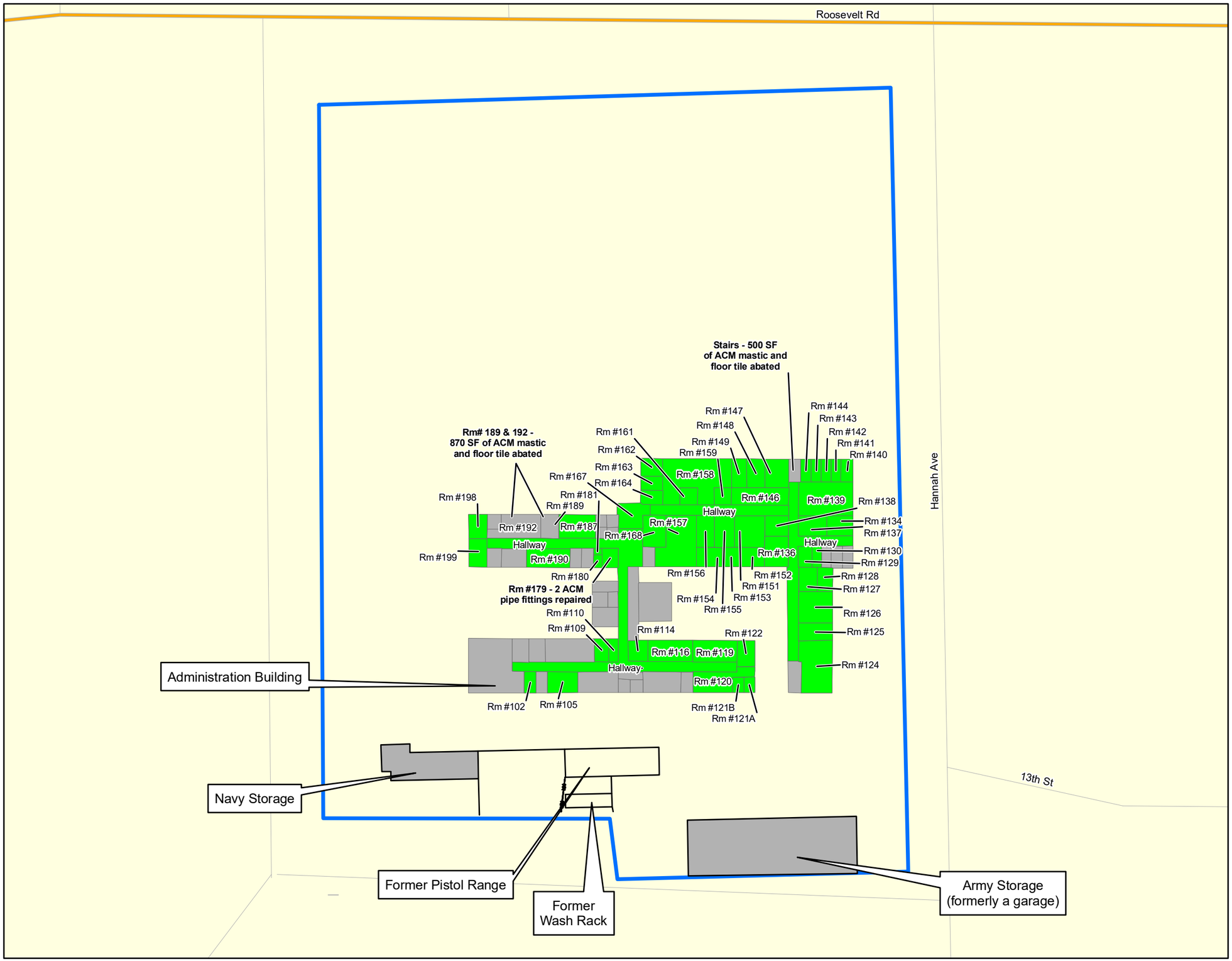
N

USNR

SITE LOCATION MAP

FIGURE
3-1

H:\NAS\ForestPark\Task2\MXD\Fig3-1_SiteLoc.mxd
H:\NAS\ForestPark\Task2\MXD\Fig3-1_SiteLoc.mxd
April 5, 2006 DWN: ABF JBB SLM CHKD: EG



TITLE

LOCATIONS OF ASBESTOS CONTAINING MATERIAL FIRST FLOOR

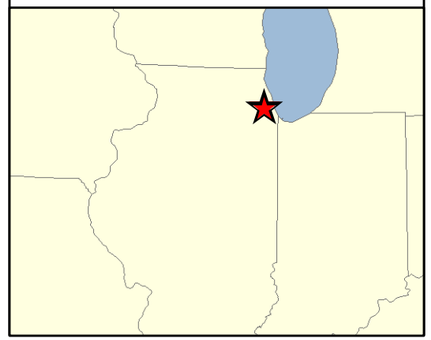
Navy Reserve Center
Forest Park, IL

LEGEND

- Site Boundary
- Major Road
- Local Road
- Buildings
- Locations of Asbestos Containing Material (ACM)

SF - square feet
LF - linear feet

SITE LOCATION MAP



NOTES & SOURCES

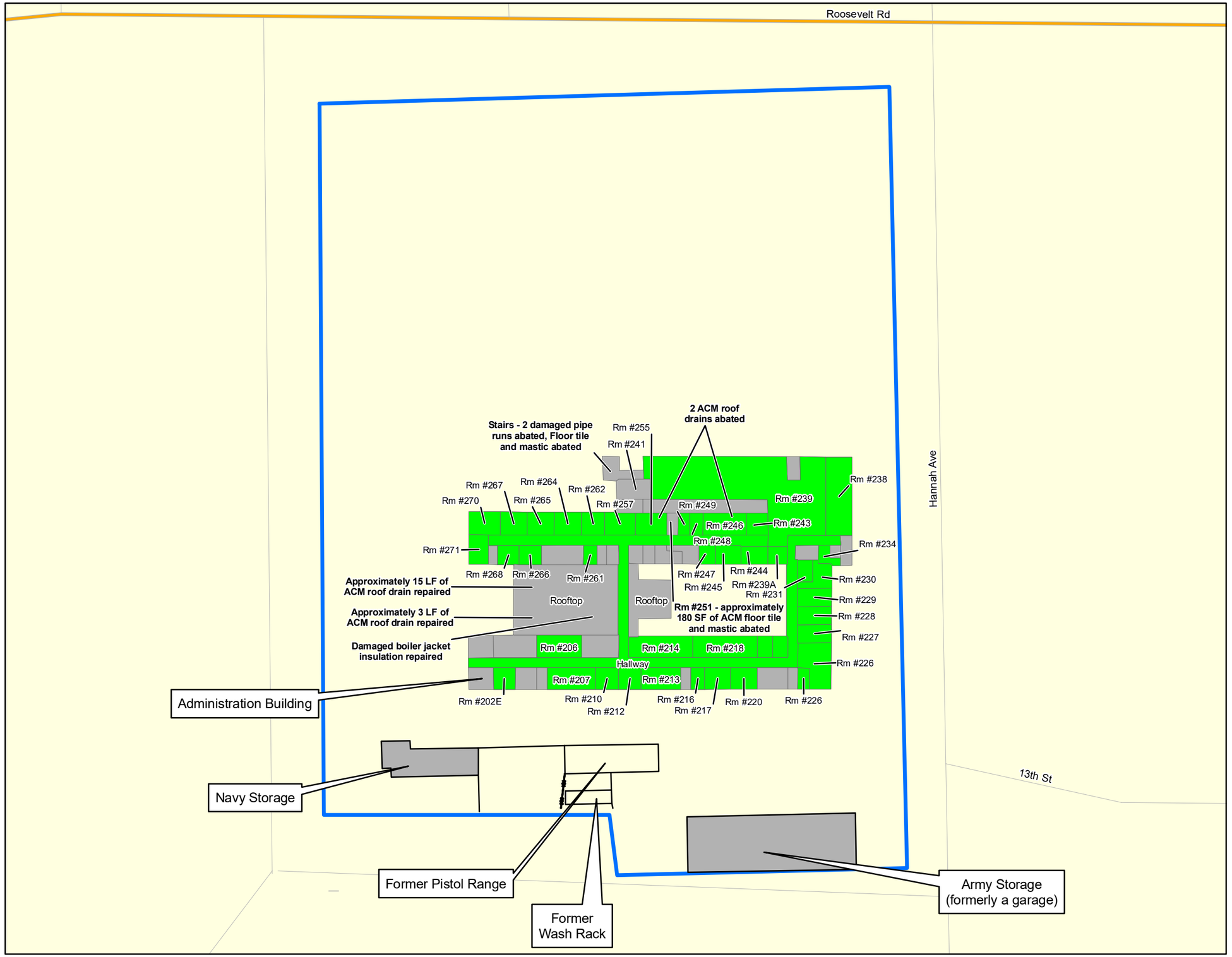
Coordinate System: NAD 83, UTM Zone 16
Data Sources: TolTest 2000, 2001; Cape 1997b

0 37.5 75 Feet
0 10 20 Meters

N

USNR
NAVAL RESERVE CENTER • FOREST PARK, ILLINOIS

FIGURE
4-1



TITLE

LOCATIONS OF ASBESTOS CONTAINING MATERIAL SECOND FLOOR

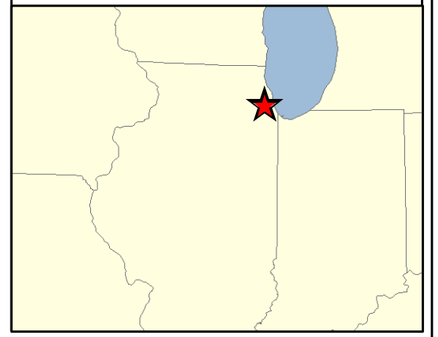
Navy Reserve Center
Forest Park, IL

LEGEND

- Site Boundary
- Major Road
- Local Road
- Buildings
- Locations of Asbestos Containing Material (ACM)

SF - square feet
LF - linear feet

SITE LOCATION MAP



NOTES & SOURCES

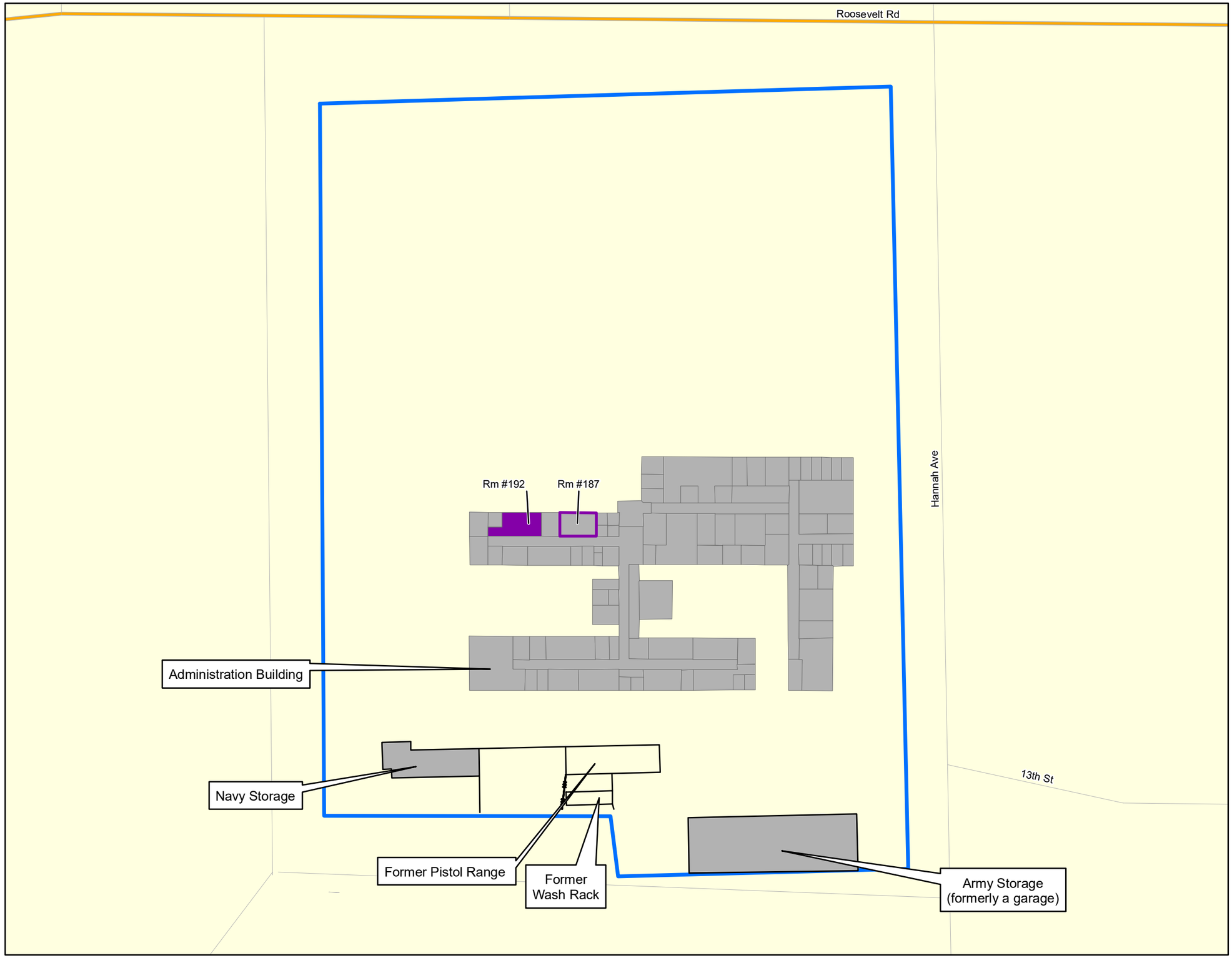
Coordinate System: NAD 83, UTM Zone 16
Data Sources: TolTest 2000, 2001; Cape 1997b
Note: Rooms 242, 240 and 247 listed in Cape 1997b as containing ACM. Could not identify rooms on floor plan.

0 37.5 75 Feet
0 10 20 Meters

N

USNR NAVAL RESERVE CENTER FOREST PARK, ILLINOIS

FIGURE
4-2



TITLE

LEAD-BASED PAINT

Navy Reserve Center
Forest Park, IL

LEGEND

- Site Boundary
- Major Road
- Local Road
- Buildings
- Lead-Based Paint
- Tested for Lead-Based Paint, none detected

SITE LOCATION MAP

NOTES & SOURCES

Coordinate System: NAD 83, UTM Zone 16
Data Sources: TLI 2003

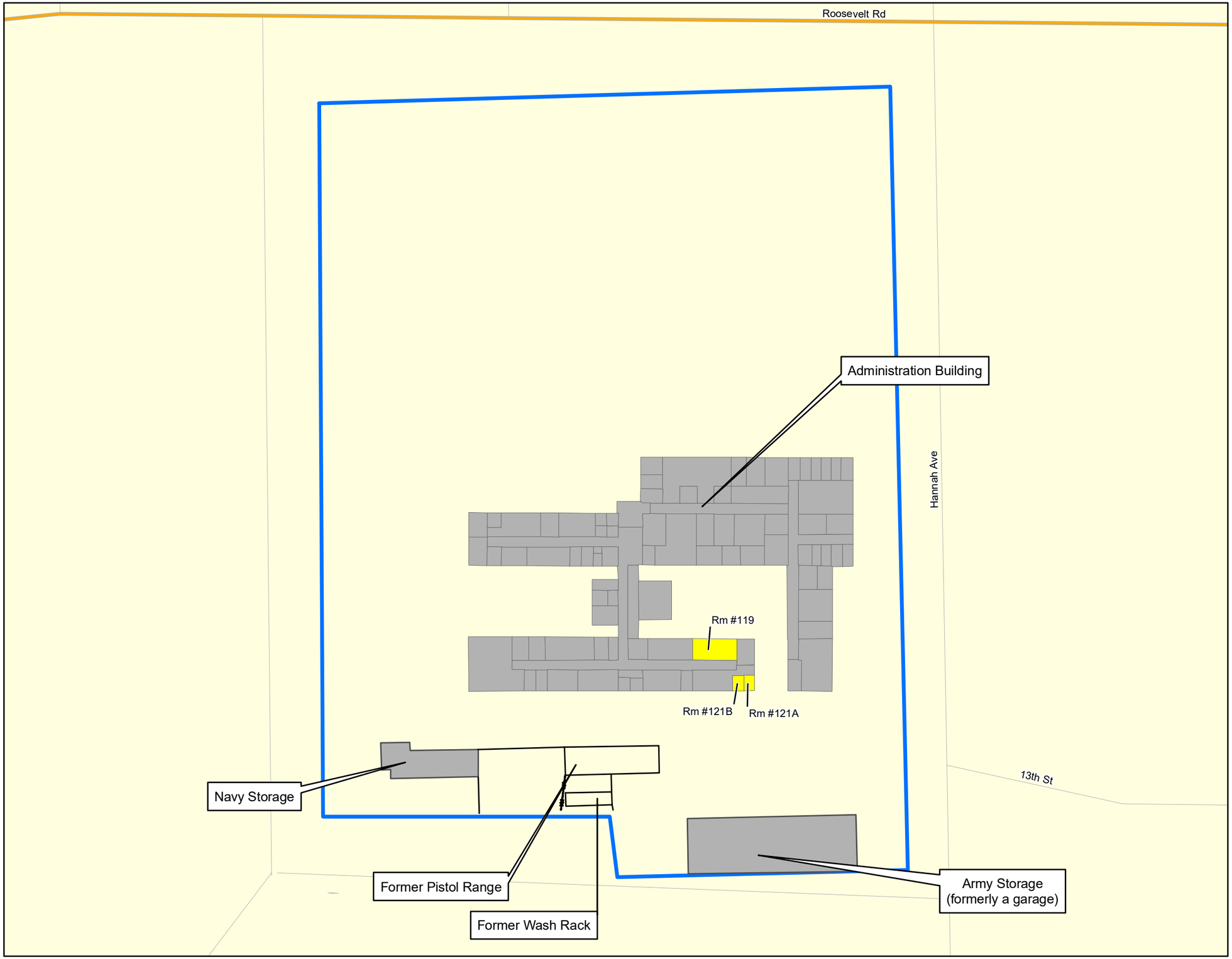
0 37.5 75 Feet
0 10 20 Meters

N

USNR NAVAL RESERVE CENTER FOREST PARK, ILLINOIS

FIGURE
4-3

H:\NAS\ForestPark\Task2\MXD\Fig4-3_Lead.mxd H:\NAS\ForestPark\Task2\Export\Fig4-3_Lead.pdf April 5, 2006 DWN: ABF SLM JBB CHD: EG



TITLE

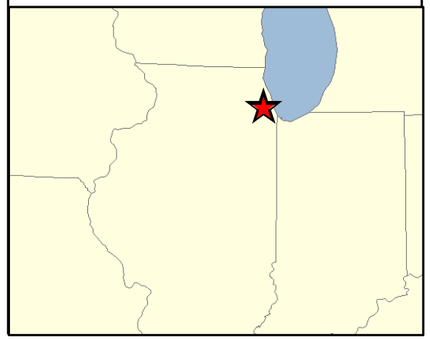
MEDICAL WASTE LOCATIONS

Navy Reserve Center
Forest Park, IL

LEGEND

- Site Boundary
- Major Road
- Local Road
- Buildings
- Medical Waste Locations

SITE LOCATION MAP



NOTES & SOURCES

Coordinate System: NAD 83, UTM Zone 16
Data Sources: Navy 1997, TolTest 2003

0 37.5 75 Feet

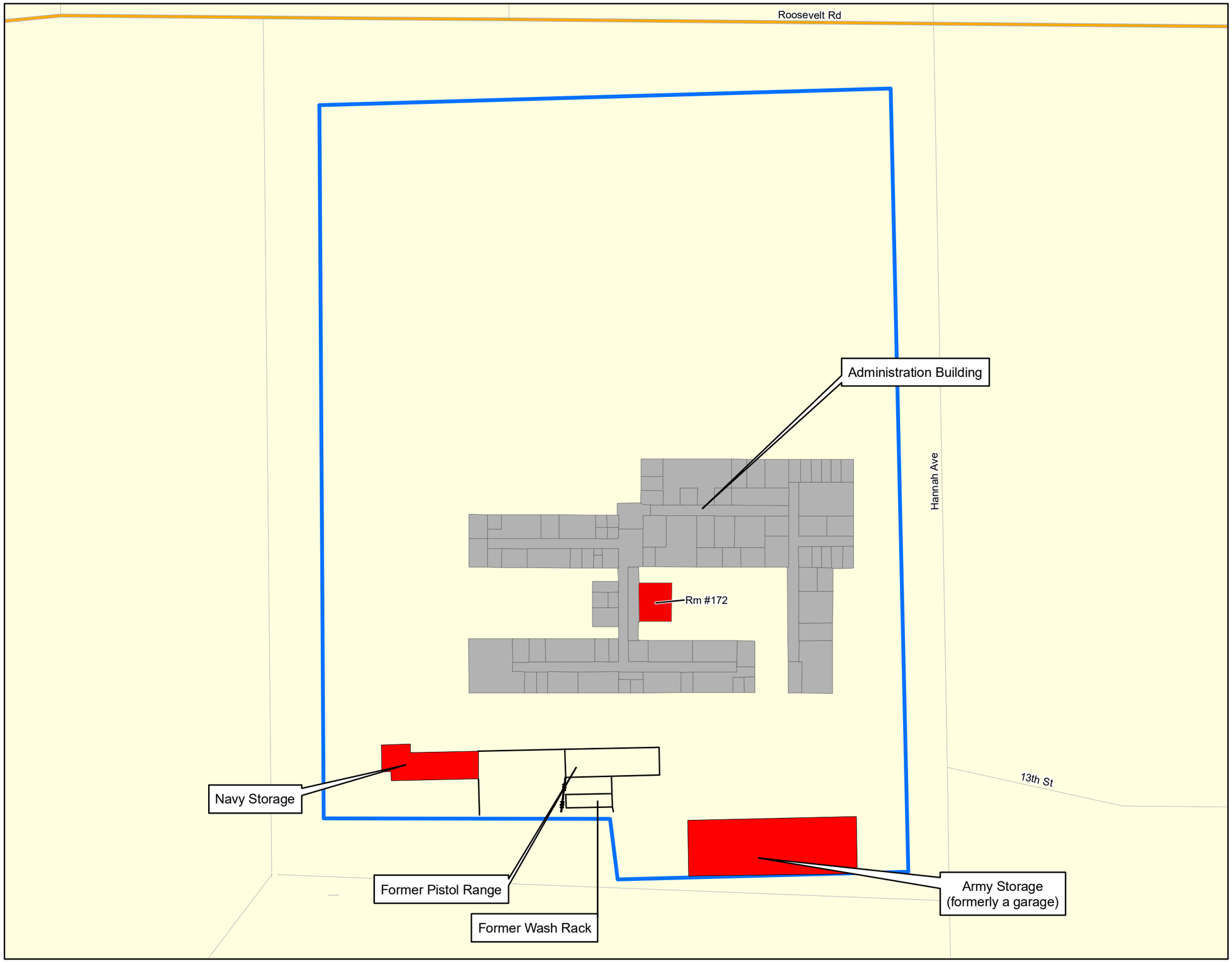
0 10 20 Meters

N

USNR NAVAL RESERVE CENTER FOREST PARK, ILLINOIS

FIGURE
4-4

H:\NAS\ForestPark\Task2\MXD\Fig4-4_Medical.mxd H:\NAS\ForestPark\Task2\Export\Fig4-4_Medical.pdf April 5, 2006 DWN: ABF SLM JBB CHD: EG



TITLE

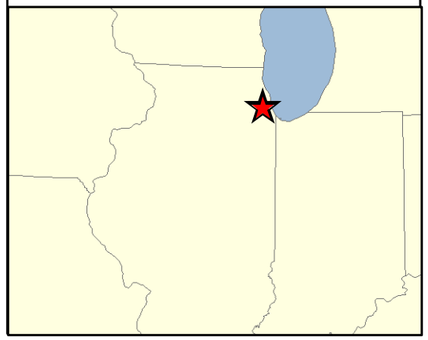
HAZARDOUS MATERIALS LOCATIONS

Navy Reserve Center
Forest Park, IL

LEGEND

- Site Boundary
- Major Road
- Local Road
- Buildings
- Hazardous Substances Locations

SITE LOCATION MAP



NOTES & SOURCES

Coordinate System: NAD 83, UTM Zone 16
Data Sources: Navy 1997, TolTest 2003

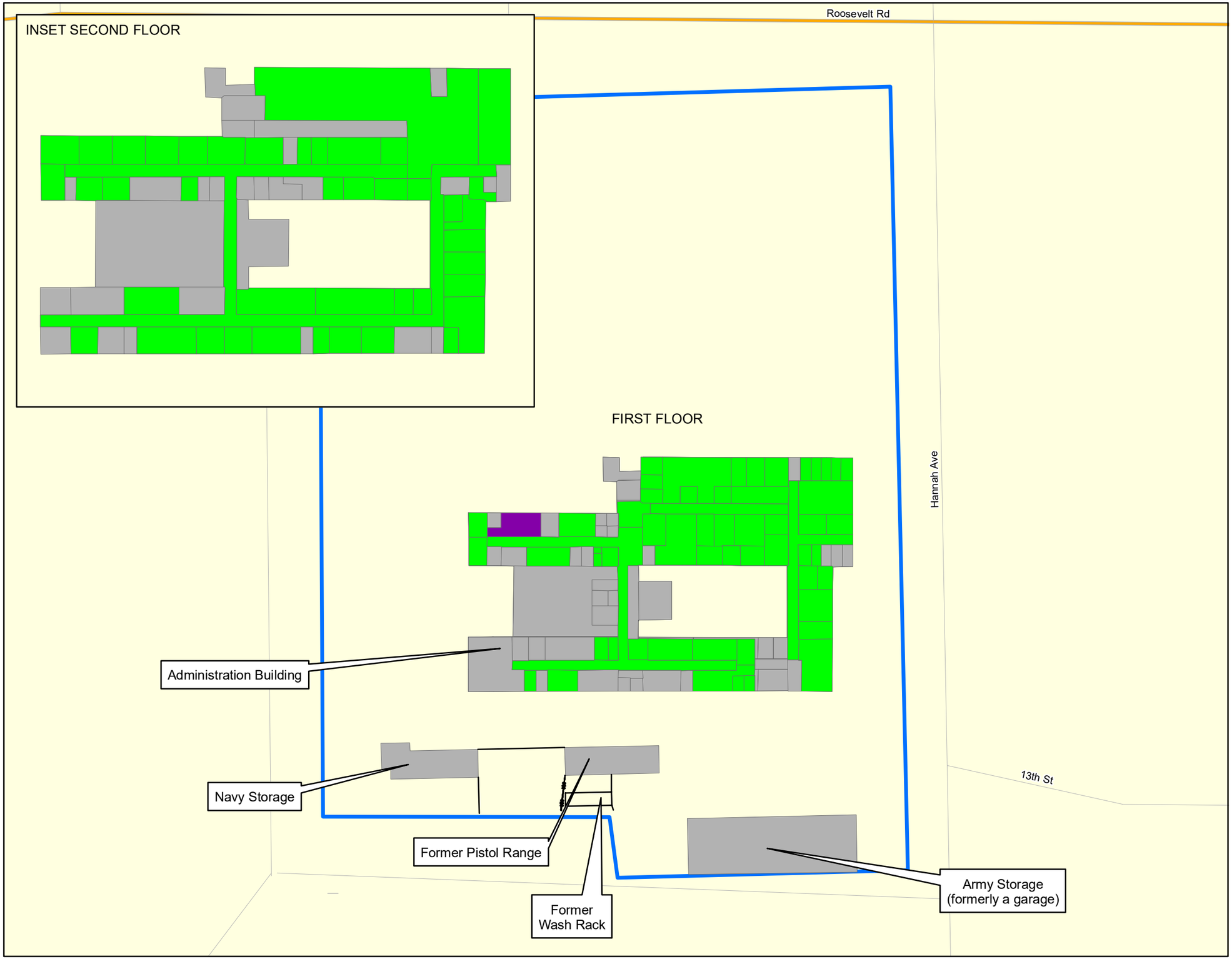
0 37.5 75 Feet
0 10 20 Meters

N

USNR
NAVAL RESERVE CENTER FOREST PARK, ILLINOIS

FIGURE
4-5

H:\NAS\ForestPark\Task2\MXD\Fig4-5_Haz.mxd H:\NAS\ForestPark\Task2\Export\Fig4-5_Haz.pdf April 5, 2006 DWN: ABF SLM JBB CHD: EG



TITLE

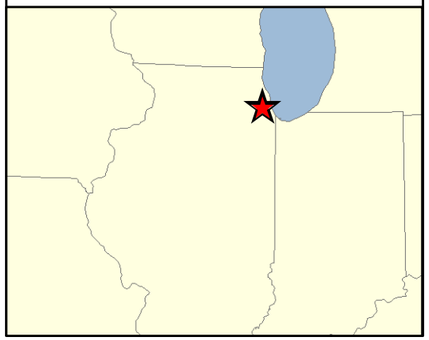
SUMMARY OF ENVIRONMENTAL CONDITIONS

Navy Reserve Center
Forest Park, IL

LEGEND

- Site Boundary
- Major Road
- Local Road
- Buildings
- Locations of Asbestos Containing Material (ACM)
- Lead-Based Paint

SITE LOCATION MAP



NOTES & SOURCES

Coordinate System: NAD 83, UTM Zone 16
Data Sources: Toltest 2000, 2001, 2003;
Navy 1997, 2003; TLI 2003

0 37.5 75 Feet

0 10 20 Meters

N

USNR NAVAL RESERVE CENTER FOREST PARK, ILLINOIS

FIGURE
4-6

H:\NAS\ForestPark\Task2\MXD\Fig4-6_Constraints.mxd H:\NAS\ForestPark\Task2\Export\Fig4-6_Constraints.pdf April 5, 2006 DWN: ABF SLM JBB CHD: EG

APPENDIX A

References

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APPENDIX A
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APPENDIX B

List of Contacts

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APPENDIX B
List of Contacts

Navy ECP Contacts				
Contact Name (Last, First)	**Title/Position**	**Location**	**Telephone Number**	**E-mail Address**
Marin, Arturo	IC2 (sw)	Navy Reserve Center Forest Park, Illinois	710-697-6812	Arturo.Marin@navy.mil
Zamorski, Stephanie	BRAC PMO NE, Realty Specialist	BRAC PMO Northeast	215-897-4905	Stephanie.Zamorski@navy.mil
Preston, Elaine	BRAC PMO NE, Realty Specialist	BRAC PMO Northeast	215-897-4906	Elaine.Preston@navy.mil
Kincaid, Dawn	BRAC Environmental Coordinator	BRAC PMO Northeast	215-897-4915	Dawn.Kincaid@navy.mil
Mack, Bruce	Midwest Region Program Manger, Reserve Environmental Support	Naval Station Great Lakes	547-688-3767 ext. 142	Bruce.G.Mack@navy.mil

AMEC Contacts				
Contact Name (Last, First)	**Title/Position**	**Location**	**Telephone Number**	**E-mail Address**
Chow, Daniel	Program Manager	San Francisco, CA	415-597-7420	daniel.chow@amec.com
Hunt, Celeste	BRAC ECP NE Project Manager	Westford, MA	978-692-9090 ext. 315	celeste.hunt@amec.com
Rice, John	Forest Park ECP Team Leader	Westford, MA	978-692-9090 ext. 233	john.rice@amec.com
Gorman, Erin	Forest Park ECP Project Team Member	Westford, MA	978-692-9090 ext. 396	erin.gorman@amec.com

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TRANSFER AND ACCEPTANCE OF MILITARY REAL PROPERTY

Form Approved
OMB No. 0704-0188

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ORGANIZATION.

1. FROM *(Installation/Activity/District and ZIP Code)*	2. DATE PREPARED *(YYYYMMDD)*	3. PROJECT/JOB NUMBER	4. SERIAL NUMBER
NAVY BRAC PMO NE 4911 South Broad Street Philadelphia, PA 19112-1303			

5. TO *(Installation/Activity/Service, ZIP Code & INSNO)*	6. SITE/INSNO/ NAME	7. CONTRACT NUMBER(S)	8. DRAWING NUMBER(S)
DEPARTMENT OF THE ARMY HQ. 88th Regional Readiness Command (ARRC-CMN-EN) 506 Roeder Circle Fort Snelling, MN 55111-4009	N62757/NRC Forest Park/1730A		

9. TRANSACTION DETAILS

a. [ ] NEW CONST. [X] EXISTING FAC. [ ] CAPITAL IMP. [ ] OTHER *(Specify)*

b. [ ] PHYS. COM. AVAIL. [ ] BENF/O [ ] PARTIAL BOD [ ] FINANCIAL COM. [X] OTHER *(Specify)*
Transfer. Refer to 28. Project Remarks

c. [ ] DRAFT [X] FINAL [ ] INTERIM

d. EFFECTIVE DATE *(YYYYMMDD)* 20070731

10. ITEM NO.	11. FACILITY NO.	12. CATEGORY CODE	13. CATCODE DESCRIPTION	14. TYPE	AREA 15. UNIT OF MEAS 1	AREA 16. TOTAL QUANTITY UM 1	OTHER 17. UNIT OF MEAS 2	OTHER 18. TOTAL QUANTITY UM 2	19. COST	20. FUND SOURCE	21. FUND ORG	22. INTEREST CODE	23. ITEM REMARKS
01		91140	LAND		AC	3.63			12944.00				
02		91140	LAND		AC	2.93			10460.00				
03	100	17115	RESERVE TRAINING BUILDING	P	SF	76201.00			3364399.00				1714001 USARC (MB)
04	102	17115	GARAGE	P	SF	1846.00			15000.00				2140902 OMS (AB)
05	110	21410	VEHICLE MAINTENANCE BUILDING	P	SF	6528.00			183819.00				2140901 OMS (MB)
06	112	69010	ARMED FORCES RESERVE SIGN	S			EA	1.00	3275.00				69030 FAC INFO SIGN
07	109	69010	FLAGPOLE	S			EA	1.00	400.00				
08		85210	PARKING AREA	P	SY	21687.00			47370.00				ORGANIZATIONAL
09		87210	SECURITY PERIMETER FENCE WALL	P			LF	2084.00	8841.00				FENCE

24. STATEMENT OF COMPLETION. The facilities listed hereon are in accordance with maps, drawings, and specifications and change orders approved by the authorized representative of the using agency except for the deficiencies listed on the reverse side.

a. TRANSFERRED BY *(Typed Name and Signature)*
GREGORY C. PRESTON Gregory C. Preston
c. TITLE *(Area Engr./Base Engr./DPW)*
Deputy Director
Real Estate Contracting Officer

b. DATE SIGNED *(YYYYMMDD)*
2007/08/02

25.a. ACCEPTED BY *(Typed Name and Signature)*
TINA M. CROTHERS Tina M. Crothers

b. DATE SIGNED *(YYYYMMDD)*
20070725

c. TITLE *(DPW/RPAO)*
Accountable Property Officer, 88th RRC

26. PROPERTY VOUCHER NUMBER

TRANSFER AND ACCEPTANCE OF MILITARY REAL PROPERTY

Form Approved
OMB No. 0704-0188

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ORGANIZATION.

1. FROM (Installation/Activity/District and ZIP Code)	2. DATE PREPARED (YYYYMMDD)	3. PROJECT/JOB NUMBER	4. SERIAL NUMBER	9. TRANSACTION DETAILS
NAVY BRAC PMO NE 4911 South Broad Street Philadelphia, PA 19112-1303				a. [ ] NEW CONST. [X] EXISTING FAC. [ ] CAPITAL IMP. [ ] OTHER (Specify) b. [ ] PHYS. COM. AVAIL. [ ] BENF/O [ ] PARTIAL BOD [ ] FINANCIAL COM. [X] OTHER (Specify) Transfer. Refer to 28. Project Remarks
5. TO (Installation/Activity/Service, ZIP Code & INSNO)	**6. SITE/INSNO/ NAME**	**7. CONTRACT NUMBER(S)**	**8. DRAWING NUMBER(S)**	c. [ ] DRAFT [X] FINAL [ ] INTERIM d. EFFECTIVE DATE (YYYYMMDD) 20070731
DEPARTMENT OF THE ARMY HQ, 88th Regional Readiness Command (ARRC-CMN-EN) 506 Roeder Circle Fort Snelling, MN 55111-4009	N62757/NRC Forest Park/1703A			

10. ITEM NO.	11. FACILITY NO.	12. CATEGORY CODE	13. CATCODE DESCRIPTION	14. TYPE	AREA 15. UNIT OF MEAS 1	AREA 16. TOTAL QUANTITY UM 1	OTHER 17. UNIT OF MEAS 2	OTHER 18. TOTAL QUANTITY UM 2	19. COST	20. FUND SOURCE	21. FUND ORG	22. INTEREST CODE	23. ITEM REMARKS
10		85220	SIDEWALK	S	SY	85.00			3550.00				
11		87110	STORM SEWER	P			LF	188.00	1752.00				
12		83220	COMBINED SEWER	P			LF	600.00	16990.00				
13		81220	STREET LIGHTING	P			LF	920.00	1750.00				
14		81230	ELECTRICAL DISTRIBUTION LINES	P			LF	525.00	2169.00				
15		84310	FIRE PROTECTION PIPELINE	P			LF	360.00	19563.00				

24. STATEMENT OF COMPLETION. The facilities listed hereon are in accordance with maps, drawings, and specifications and change orders approved by the authorized representative of the using agency except for the deficiencies listed on the reverse side.

a. TRANSFERRED BY (Typed Name and Signature)	b. DATE SIGNED (YYYYMMDD)
GREGORY C. PRESTON c. TITLE (Area Engr./Base Engr./DPW) Deputy Director Real Estate Contracting Officer	20070802

25.a. ACCEPTED BY (Typed Name and Signature)	b. DATE SIGNED (YYYYMMDD)
TINA M. CROTHERS c. TITLE (DPW/RPAO) Accountable Property Officer, 88th RRC	20070725 26. PROPERTY VOUCHER NUMBER

27. CONSTRUCTION DEFICIENCIES *(attach blank sheet for continuations)*	28. PROJECT REMARKS *(attach blank sheet for continuations)*
	See Page 4 for Project Remarks

INSTRUCTIONS

GENERAL. This form has been designed and issued for use in connection with the transfer of military real property between the military departments and to or from other government agencies. It supersedes ENG Forms 290 and 290B (formerly used by the Army and Air Force) and NAVDOCKS Form 2317 (formerly used by the Navy).

Existing instructions issued by the military departments relative to the preparation of DD Form 1354 are applicable to this revised form to the extent that the various items and columns on the superseded forms have been retained. The military departments may promulgate additional instructions, as appropriate.

For detailed instructions on how to fill out this form, please refer to Unified Facilities Criteria (UFC) 1-300-08, dated 17 December 2003.

SPECIFIC DATA ITEMS.

1. **From.** Name and address of the transferring agency.

2. **Date Prepared.** Date of actual preparation. Enter all dates in YYYYMMDD format (Example: March 31, 2004 = 20040331).

3. **Project/Job Number.** Project number on a DD Form 1391 or Individual Job Order Number.

4. **Serial Number.** Sequential serial number assigned by the preparing organization (e.g., 2004-0001).

5. **To.** Name and address of the receiving installation, activity, and service of the Real Property Accountable Officer (RPAO).

6. **Site/INSNO and Name.** Site or installation number and site name where the constructed facility is located.

7. **Contract Number(s).** Contract number(s) for this project.

8. **Drawing Number(s).** Drawing number(s) or CAD identifier(s) for project components.

9. **Transaction Details.**
   a. Type of Transaction. Mark (X) only one box.
   b. When/Event. When or event causing preparation of DD Form 1354. X only one box.
   c. Version. Draft, interim, or final DD Form 1354. X only one box.
   d. Effective Date. Effective date for transaction; start date for depreciation.

10. **Item Number.** Use a separate item number for each facility, no item number for additional usages.

11. **Facility Number.** Unique facility number identified in Real Property Inventory.

12. **Category Code.** The category code describes the facility usage.

13. **Catcode Description.** The category code name which describes the facility usage.

14. **Type.** Type of construction: P for Permanent; S for Semipermanent; T for Temporary.

15. **Area: Unit of Meas 1.** Area unit of measure; use SF, SY, AC only.

16. **Total Quantity UM 1.** The total area for the measure identified in Item 15. Use negative numbers for demolition.

17. **Other: Unit of Meas 2.** Unit of Measure 2 is the capacity or other measurement unit (e.g., LF, MB, EA, etc.).

18. **Total Quantity UM 2.** The total capacity/other for the measure identified in Item 17.

19. **Cost.** Cost for each facility; for capital improvements to existing facilities, show amount of increase only.

20. **Fund Source.** Enter the Fund Source Code for this item, i.e., 01-MILCON, 02-BRAC, 03-O&M, etc.

21. **Funding Organization.** Enter the code for the organization responsible for replacing this facility at the end of its useful life, i.e., 00-Army Active, 01-Army Reserve, 02-Army National Guard, etc.

22. **Interest Code.** Enter the code that reflects government interest or ownership in the facility, i.e., 01-Owned by DoD, 02-Owned by Federal Government (non-DoD), etc.

23. **Item Remarks.** Remarks pertaining only to the item number identified in Item 10; show cost sharing.

24. **Statement of Completion.** Typed name, signature, title, and date of signature by the responsible transferring individual or agent.

25. **Accepted By.** Typed name, signature, title, and date of signature by the RPAO or accepting official.

26. **Property Voucher Number.** Next sequential number assigned by the RPAO in voucher register.

27. **Construction Deficiencies.** List construction deficiencies in project during contractor turnover inspection.

28. **Project Remarks.** Project level remarks, continuation of blocks, and used to explain "other" entries in Item 9.

28. PROJECT REMARKS

The Naval Reserve Center, Forest Park, Illinois consists of approximately 6.56 acres of land and improvements. The property is comprised of two contiguous parcels of land which were acquired by reassignment and transfer from the Naval Ordnance Station, Forest Park, Illinois. The parcels originally formed part of Civil No. 48066, filed in the District Court of the United States for the Northern District of Illinois on 24 December 1941, and amended on 18 March 1942, consisting of 77.79 acres. Approximately 57.29 acres were transferred to the U.S. Postal Service on 23 June 1971, and 13.942 acres were conveyed to the Teacher's Retirement System of the State of Illinois on 14 December 1990. The property is depicted as Parcel "A" on a survey prepared by George Reiter & Associates dated 25 December 1970, revised 15 March 1971, attached hereto as Exhibit "A".

An Environmental Condition of Property (ECP) was completed by the Navy on 2 May 2006. A copy of the ECP is incorporated by reference.

The U.S. Department of the Army will be responsible for all future environmental action on this site. Any additional investigations and remediation of areas of disposal, spills, or storage of waste or materials, whether disclosed in this document or discovered in the future will be the sole responsibility of the Army.

The U.S. Department of the Army (Army) shall notify the U.S. Department of the Navy (Navy) at such time as the property herein is no longer needed for the specified purposes. If, in its sole discretion, the Navy then requests return of the property, the Army shall transfer the property back to the Navy.

Initial: _____ & _____
Navy Army

PLAT OF SURVEY

PARCEL "A"

THAT PART OF THE NORTHEAST QUARTER OF SECTION 24, TOWNSHIP 39 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS BEGINNING AT A POINT ON THE SOUTH LINE OF THE NORTH 53 FEET OF SAID QUARTER 1,292.14 FEET EAST OF THE WEST LINE OF SAID QUARTER, THENCE SOUTH 00 DEGREES 00 MINUTES 00 SECONDS EAST 633 FEET, THENCE SOUTH 89 DEGREES 56 MINUTES 50 SECONDS WEST 242.20 FEET, THENCE NORTH 00 DEGREES 00 MINUTES 00 SECONDS EAST 54 FEET, THENCE SOUTH 89 DEGREES 56 MINUTES 50 SECONDS WEST 228.80 FEET, THENCE NORTH 00 DEGREES 00 MINUTES 00 SECONDS EAST 579.0 FEET TO A POINT ON SAID SOUTH LINE OF THE NORTH 53 FEET, 471 FEET WEST OF THE POINT OF BEGINNING, THENCE NORTH 89 DEGREES 56 MINUTES 50 SECONDS EAST ALONG SAID SOUTH LINE 471 FEET TO THE POINT OF BEGINNING AND CONTAINING 6.561 ACRES MORE OR LESS.

PARCEL "B"

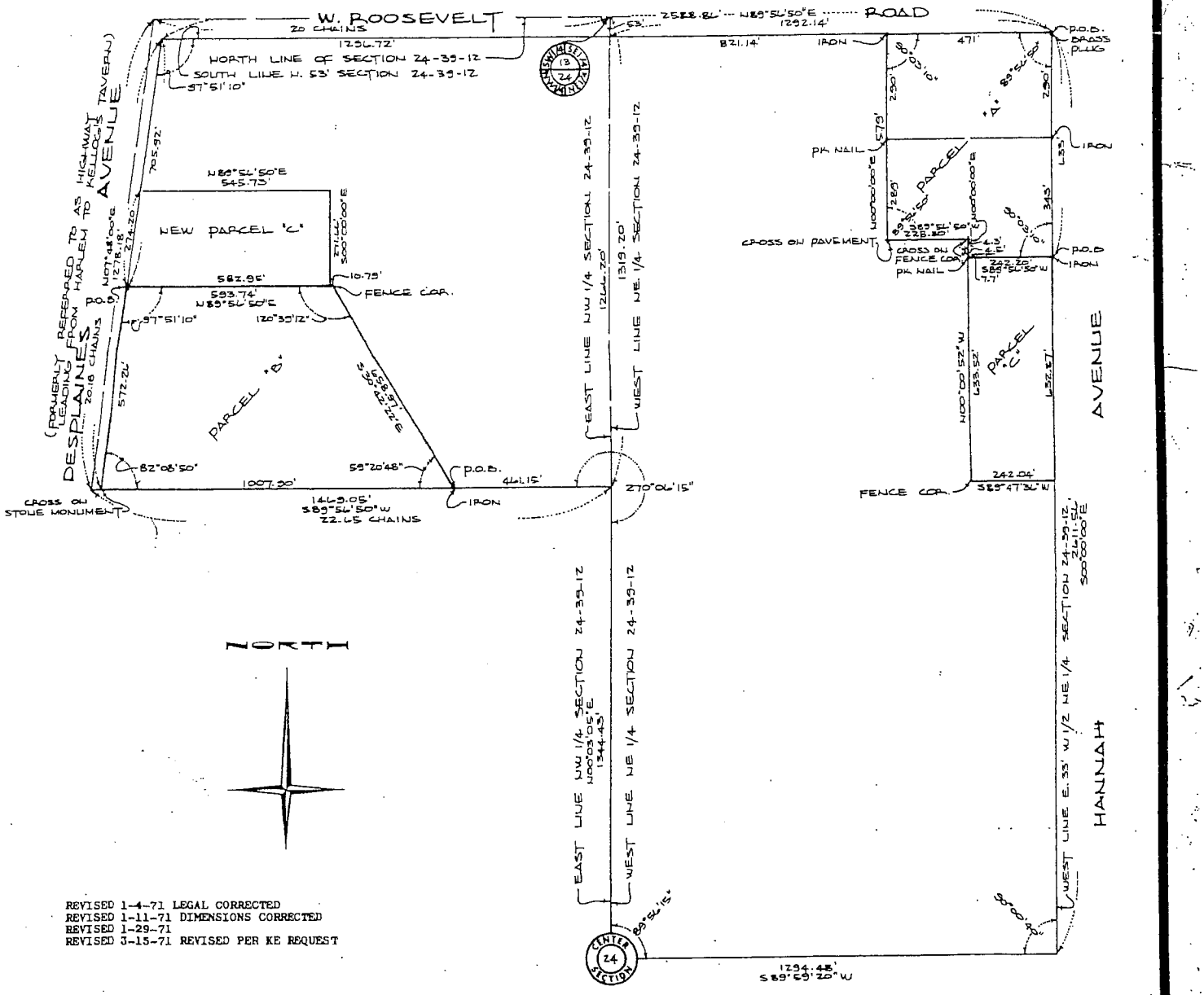
THAT PART OF THE NORTHWEST QUARTER OF SECTION 24, TOWNSHIP 39 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS COMMENCING AT THE SOUTHEAST CORNER OF SAID QUARTER, THENCE NORTH 00 DEGREES 03 MINUTES 05 SECONDS EAST ALONG THE EAST LINE OF SAID QUARTER 1,344.43 FEET TO A POINT 1,319.20 FEET SOUTH OF THE NORTH LINE OF SAID QUARTER, THENCE SOUTH 89 DEGREES 56 MINUTES 50 SECONDS WEST 461.15 FEET TO A POINT OF BEGINNING, THENCE CONTINUING SOUTH 89 DEGREES 56 MINUTES 50 SECONDS WEST 1,007.90 FEET TO THE EASTERLY LINE OF THE HIGHWAY LEADING FROM HARLEM TO KELLOG'S TAVERN, SO CALLED, THENCE NORTH 07 DEGREES 48 MINUTES 00 SECONDS EAST ALONG SAID EASTERLY LINE 572.26 FEET, THENCE NORTH 89 DEGREES 56 MINUTES 50 SECONDS EAST 593.74 FEET, THENCE SOUTH 30 DEGREES 42 MINUTES 22 SECONDS EAST 658.97 FEET TO THE POINT OF BEGINNING AND CONTAINING 10.422 ACRES MORE OR LESS.

PARCEL "C"

THAT PART OF THE NORTHEAST QUARTER OF SECTION 24, TOWNSHIP 39 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS COMMENCING AT A POINT ON THE SOUTH LINE OF THE NORTH 53 FEET OF SAID QUARTER 1,292.14 FEET EAST OF THE WEST LINE OF SAID QUARTER, THENCE SOUTH 00 DEGREES 00 MINUTES 00 SECONDS EAST 633 FEET TO A POINT OF BEGINNING, THENCE CONTINUING SOUTH 00 DEGREES 00 MINUTES 00 SECONDS EAST 632.87 FEET, THENCE SOUTH 89 DEGREES 47 MINUTES 36 SECONDS WEST 242.04 FEET, THENCE NORTH 00 DEGREES 00 MINUTES 52 SECONDS WEST 633.52 FEET, THENCE NORTH 89 DEGREES 56 MINUTES 50 SECONDS EAST 242.20 FEET TO THE POINT OF BEGINNING AND CONTAINING 3.519 ACRES MORE OR LESS.

NEW PARCEL "C"

THAT PART OF THE NORTHWEST QUARTER OF SECTION 24, TOWNSHIP 39 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS DESCRIBED AS COMMENCING AT THE SOUTHEAST CORNER OF SAID NORTHWEST QUARTER, THENCE NORTH 00 DEGREES 03 MINUTES 05 SECONDS EAST 1,344.43 FEET ALONG THE EAST LINE OF SAID QUARTER TO A POINT 1,319.20 FEET SOUTH OF THE NORTH LINE OF SAID QUARTER, THENCE SOUTH 89 DEGREES 56 MINUTES 50 SECONDS WEST (1,469.05 feet) TO THE EASTERLY LINE OF THE HIGHWAY LEADING FROM HARLEM TO KELLOG'S TAVERN, SO CALLED, THENCE NORTH 07 DEGREES 48 MINUTES 00 SECONDS EAST 572.26 FEET ALONG SAID EASTERLY LINE TO THE POINT OF BEGINNING, THENCE CONTINUING NORTHEASTERLY 274.20 FEET ALONG THE LAST DESCRIBED COURSE, THENCE NORTH 89 DEGREES 56 MINUTES 50 SECONDS EAST 545.73 FEET, THENCE SOUTH 00 DEGREES 00 MINUTES 00 SECONDS EAST 271.66 FEET, THENCE SOUTH 89 DEGREES 56 MINUTES 50 SECONDS WEST 582.95 FEET TO THE POINT OF BEGINNING, CONTAINING 3.52 ACRES MORE OR LESS.



REVISED 1-4-71 LEGAL CORRECTED
REVISED 1-11-71 DIMENSIONS CORRECTED
REVISED 1-29-71
REVISED J-15-71 REVISED PER KE REQUEST

STATE OF ILLINOIS
COUNTY OF WILL } S.S.

THIS IS TO CERTIFY THAT I, AN ILLINOIS LAND SURVEYOR, HAVE SURVEYED THE PROPERTY DESCRIBED IN THE ABOVE CAPTION(S) AS SHOWN BY THE ANNEXED PLAT WHICH IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY.

GIVEN UNDER MY HAND AND SEAL AT JOLIET, ILLINOIS, THIS ..... 25TH ..... DAY ..... A.D. 19 70...

ILLINOIS LAND SURVEYOR NO. 1626

BUILDINGS LOCATED AS SHOWN ON THIS .....
..... DAY OF ..... A.D. 19 .....

ILLINOIS LAND SURVEYOR NO. 1626

COMPARE DESCRIPTION AND POINTS BEFORE BUILDING AND REPORT ANY APPARENT DIFFERENCE TO THE SURVEYOR.

REFER TO DEED OR GUARANTEE POLICY FOR BUILDING LINE RESTRICTIONS NOT SHOWN ON PLAT OF SURVEY

GEORGE REITER & ASSOCIATES
LAND SURVEYING AND CIVIL ENGINEERING
81 W. WASHINGTON ST. — JOLIET, ILL.
PHONE 727-5360

Order NO. 70-374 — 8 Round Iron Stake
File NO. FB 58P62 — O Drive Iron Stake
For KAISER ENGINEERS
300 LAKESIDE DRIVE, OAKLAND, CALIFORNIA 94604

Date 12-23-70
Checked CLR
Scale 1"=200'

Exhibit A

DEPARTMENT OF THE ARMY
HEADQUARTERS, 88TH REGIONAL SUPPORT COMMAND
60 SOUTH O STREET
FORT MCCOY, WISCONSIN 54656

REPLY TO
ATTENTION OF

Document disturbance.

November 10, 2008

Department of Public Works

Ms. Anne Haaker
Deputy SHPO
Illinois Historic Preservation Agency
1 Old State Capitol Plaza
Springfield, IL 62701-1512

Dear Ms. Haaker:

As you are aware, the United States Army Reserve has a responsibility under Sections 106 and 110 of the National Historic Preservation Act (NHPA) to manage historic properties under its jurisdiction. As a part of that management, the 88th Regional Support Command (RSC) contracted with Fort McCoy Archaeological Laboratory (FMAL), Ft. McCoy, Wisconsin, to do historic properties inventories on 41 U.S. Army Reserve Centers (USARC) and associated facilities in Illinois. The enclosed report, *Illinois Section 110 Inventory, Volumes I-III, Archaeological Resource Management Series, Reports of Investigation Number 13*, by Heather L. Spencer (March 2000), is the result of these studies.

We are submitting this document for your information, review, and concurrence with its findings. Pursuant to 36 CFR 800.4(a)(ii), we would appreciate your comments on the findings of this report.

FMAL conducted these inventories pursuant to Section 110(a)(1) of the NHPA. During these studies, all of the buildings within the facilities were evaluated for their eligibility for the National Register of Historic Places (NRHP) following the Secretary of Interior's *Standards for Identification and Evaluation*. These investigations required FMAL researchers to confer with and conduct research at the Illinois Historic Preservation Agency (IHPA) on previous relevant architectural and archaeological studies.

FMAL's research determined the locations of previously recorded archaeological sites on or near (i.e., within 1 mile radius) the USARC facilities. During on-site investigations, FMAL conducted pedestrian archaeological assessment, including review of previous construction disturbance. Specific methods used to conduct the inventory and results of this work are included in the attached document.

Three facilities (IL002, COL P. Schulstad USARC in Arlington Heights; IL045/047, Granite City USARC/Charles Melvin Price Support Center, in Granite City; and IL131, Philip H. Sheridan Reserve Center, Highland Park) include buildings that are recommended eligible for

the NRHP. Data from previous archaeological investigations at two of these facilities (IL045/047 and IL131) and at Scott Air Force Base (IL082) are presented and evaluated in this report. In general, FMAL found that there is a low probability for extant archaeological remains at a majority of these facilities.

The U.S. Army Reserve must continue to maintain and operate the USARCs and related facilities as mandated by Congress. Therefore, the continued operation and maintenance of these facilities are the proposed undertaking, as defined under 36 CFR 800.16(y). As long as operation and maintenance do not alter the setting or integrity of those properties listed as eligible for the NRHP, it is our determination that no historic properties will be affected. Should actions be proposed that may affect eligible properties, consultation would be initiated with your office. In addition, we recommend no further archaeological investigations, with the exception of those locations identified in the enclosed reports.

We would appreciate your comments on our determinations for this undertaking. If we do not hear from you within thirty (30) days, we will assume that you concur with our determinations. If you have any questions about this document, or require additional information, please contact our cultural resources specialist, Ms. Carrie Schafer, at 612-713-3825 or by email at carrie.schafer@us.army.mil. Please address and mail written correspondence to COMMANDER, 88th RRC, ATTN: ARRC-CMN-EN (C. SCHAFER), 506 ROEDER CIRCLE, FT. SNELLING, MN, 55111.

Sincerely,

DAVID L. MOORE
Environmental Division Chief

Enclosures

CONCUR
By:
Deputy State Historic Preservation Officer
Date: 4/6/09

FORT McCOY
CULTURAL RESOURCES
MANAGEMENT SERIES

Reports of Investigation No. 13

Illinois Section 110 Inventory
Volume I
March 2000

Fort McCoy Archaeology Laboratory
Directorate of Training and Mobilization
Fort McCoy, WI 54656-5162

Illinois Section 110 Inventory
Volume I

Archaeological Resource Management Series
Reports of Investigation Number 13

Prepared for:

U.S. Army Reserve Command
88th Regional Support Command
Environmental Management Division
Fort Snelling
Minneapolis, Minnesota

Prepared by:

Heather L. Spencer
Fort McCoy Archaeology Laboratory
Directorate of Training and Mobilization
Fort McCoy, Wisconsin
November 1998

Editorial Review:

Jason L. Tish
Fort McCoy Archaeology Laboratory
March 2000

Cover: Stefanich AFRC, Kankakee, Illinois

National Historic Preservation Act of 1966, as Amended Section 110

"In accordance with subsection 101(F) of the National Historic Preservation Act, the Secretary of the Interior in consultation with the Advisory Council on Historic Preservation, has developed the following guidelines for carrying out Federal agency responsibilities under Section 110 of the Act...Federal Agencies should follow these guidelines in establishing, monitoring, reviewing, and evaluating their programs for compliance with Section 110 of the Act. State Historic Preservation Officers should refer to these guidelines when providing assistance to Federal agencies under Sections 101(b)(3)(E) and (F) of the Act. The advisory Council on Historic Preservation [Council] will use these guidelines, as applicable, and recommend their use to Federal agencies, State Historic Preservation Officers, and others in agreements executed pursuant to Section 106 of the Act and 36 CFR Part 800. The Council will also use these guidelines in its review of Federal agency programs under Section 202(a)(6) of the Act...*Section 110(a)(1)*: "The heads of all Federal agencies shall assume responsibility for the preservation of historic properties which are owned or controlled by such agency. Prior to acquiring, constructing, or leasing buildings for purposes of carrying out agency responsibilities, each Federal agency shall use, to the maximum of the extent feasible, historic properties available to the agency. Each agency shall undertake, consistent with the preservation of such properties and the mission of the agency and the professional standards pursuant to Section 101(f) any preservation, as may be necessary to carry out this section." *Section 110(a)(2):* "With the advice of the Secretary and in cooperation with the State Historic Preservation Officer for the State involved, each Federal agency shall establish a program to located, inventory, and nominate to the Secretary all properties under the agency's ownership or controlled by the agency, that appear to qualify for inclusion on the National Register in accordance with the regulations promulgated under Section 110(a)(2)(A). Each Federal agency shall exercise caution to assure that any such property that might qualify for inclusion is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. Section 110(b): "Each Federal agency shall initiate measures to assure that where, as a result of Federal action or assistance carried out by such agency, a historic property is to be substantially altered or demolished, timely steps are taken to make or have made appropriate records, and that such records then be deposited, in accordance with Section 101(a), in the Library of Congress or with such other appropriate agency as may be designated by the Secretary, for future use and reference." *Section 100(c):* "The head of each Federal Agency shall, unless exempted under Section 214, designate a qualified official to be known as the agency's "preservation officer" who shall be responsible for coordinating that agency's activities under the Act. Each Preservation Officer may, in order to be considered qualified, satisfactorily complete and appropriate training program established by the Secretary under Section 110(g)." *Section 100(d):* "Consistent with the agency's mission and mandates, all Federal agencies shall carry out agency programs and projects (including those under which any Federal assistance is provided for any federal license, permit, or other approval is required) in accordance with the purposes of this Act and, give consideration to programs and projects which will further the purposes of this Act." *Section 110(e):* "The Secretary shall review and approve the plans for transferees of surplus federally owned historic properties not later than ninety days after his receipt of such plans to ensure that the prehistorical, historical, architectural, or culturally significant values will be preserved or enhanced. *Section 110(f):* "Prior to the approval of any Federal undertaking which may directly and adversely affected any National Historic Landmark, the head of the responsible Federal agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark, and shall afford the Advisory council on Historic Preservation a reasonable opportunity to comment on the undertaking." *Section 110(g):* "Each Federal agency may include the costs of preservation activities of such agency under this Act as eligible project costs in all undertakings such agency or assisted by such agency. The eligible project costs may also include amounts paid by a federal agency to any state to be used in carrying out, such preservation responsibilities of the federal agency under this Act, and reasonable costs may be charged to Federal licensees and permits as a condition to the issuance of such license or permit." *Section 110(h):* "The Secretary shall establish an annual preservation awards program under which he may make monetary awards in amounts not to exceed $1,000 and provide citations for special achievements to officers and employees of Federal, State, and certified local governments in recognition of their outstanding contributions to the preservation of historic resources. Such programs may include the issuance of annual awards by the President of the United States to any citizen of the United States recommended for such award by the Secretary." *Section 110(I):* "Nothing in this Act shall be construed to require the preparation of an environmental impact statement where such a statement would not otherwise be required under the National Environmental Policy Act 1969, and nothing in this Act shall be construed to provide exemption from any requirement respecting the preparation of such a statement under such Act." *Section 110(j):* "The secretary shall promulgate regulations under which the requirements of this section may be waived in whole or in part in the event of a major natural disaster or an imminent threat to national security."

Abstract

In 1994, the Fort McCoy Archaeology Laboratory, at Fort McCoy, Wisconsin, was contracted by the 88th Regional Support Command (RSC) to conduct a Historic Properties Inventory of all U.S. Army Reserve Centers (USARC) located within the state of Illinois, under the provisions of Section 110 of the National Historic Preservation Act (NHPA). A total of 41 USARC facilities were inventoried during this study. All buildings at the USARC facilities were assessed for their eligibility for the National Register of Historic Places (NRHP). Three facilities (Schulstad USARC in Arlington Heights, Illinois, the Charles Melvin Price Support Center in Granite City, Illinois, and the Philip H. Sheridan Reserve Center in Fort Sheridan, Illinois) include buildings that are eligible for nomination to the NRHP.

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Section 110 Inventory of U.S. Army Reserve Facilities in Illinois

Appendices:

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Introduction

In 1994 the Fort McCoy Archaeology Laboratory was contracted to conduct a Historic Properties Inventory under the provisions of Section 110 of the NHPA of all USARC facilities owned or leased by the 88th Regional Support Command in the state of Illinois. A total of 149 buildings on 41 USARC facilities were surveyed throughout Illinois. This report describes Fort McCoy Archaeology Laboratory's evaluation methods, recordation methods and findings during the completion of this project. This report also provides documentation of sources and informants used in evaluating the actions to determine eligibility for the nomination of the surveyed properties to the NRHP. It also describes consequences if such a course of action were to be undertaken. Recommendations are also included for re-evaluation of facilities when they reach the age criteria of eligibility for the NRHP

Preliminary research included meetings with officials of the Illinois State Historic Preservation Office (SHPO), and historical research conducted at the Illinois Historical Society, regional county courthouses, and local libraries. The Illinois Archaeological Sites Index, maintained by the Illinois SHPO, was consulted to determine the location of known archaeological sites on or near each USARC facility. Personal interviews were conducted with USARC personnel at each facility. Fieldwork for the project was conducted during March-July 1995, June 1997, October 1997, and February 1998.

All Illinois listings in the NRHP were reviewed prior to commencement of fieldwork for the inventory. Those properties on USARC facilities that met the criteria for NRHP eligibility were examined and recorded to assess their potential for nomination to the NRHP. Three USARC facilities (Schulstad USARC, Arlington Heights, Illinois, the Charles Melvin Price Support Center, Granite City, Illinois, and the Philip H. Sheridan Reserve Center, Fort Sheridan, Illinois) have historic structures determined to be potentially eligible for nomination to the NRHP.

Statement of Purpose

The Fort McCoy Archaeology Laboratory Section 110 inventory of the USARC facilities within the state of Illinois was conducted consistent with the *Secretary of the Interior's Standards and Guidelines for Identification and Evaluation* (*Standards*).
The primary goal of the NHPA, according to the *Standards*, is to "preserve prehistoric and historic resources throughout the nation for the inspiration and benefit of present and future generations." In fulfillment of this goal, governmental agencies, within the framework of their missions, are charged with administering federally owned, administered, or controlled prehistoric and historic resources in a spirit of stewardship, and caring for significant prehistoric and historic properties in ways that ensure long-term protection and integrity of those properties.

The *Standards* require agencies to identify, evaluate, and document their historic properties, and nominate them to the NRHP. According to the *Standards*, "identification, evaluation, and documentation of historic properties are critical in the long-term management of historic properties, as well as in program and project specific planning by a federal agency." The *Standards* also require that "the agency manages and maintains its historical properties in ways that preserve the properties' historic, archaeological, architectural, or cultural values," and that "the agency considers historic properties in addition to its own when planning activities that may affect them." Agencies are also required under the *Standards* to develop "a process that identifies and evaluates historic properties in a timely fashion," and "a process that develops and implements agreements regarding the means by which adverse affects on historic properties will be considered." Documentation is also required of historic properties, before they are substantially altered or demolished, and the placement of all documentation in an appropriate repository for future use and research.

In meeting the compliance requirements of Section 110(a)(2) of the NHPA and the *Standards*, researchers from the Fort McCoy Archaeology Laboratory conferred with the Illinois SHPO regarding previous archaeological or historical architectural investigations conducted on or near the Illinois USARC facilities. Previous archaeological and architectural surveys were found for three USARC facilities (Scott Air Force Base, Illinois, the Charles Melvin Price Support Center, Granite City, Illinois, and the Philip H. Sheridan Reserve Center, Fort Sheridan, Illinois). These surveys were conducted by private consulting firms and governmental agencies that methodically analyzed the archaeological and architectural components of each facility and provided recommendations for future management of the identified historic resources. Members of the Fort McCoy Archaeology Laboratory carefully analyzed these reports and compared their results with the actual on-site recordation of the facilities conducted during this inventory. Discrepancies found between existing reports on the facilities and the on-site recordation conducted by members of the Fort McCoy Archaeology Laboratory are described in detail within the individual facility sections of this report. All prior archaeological surveys conducted within one-mile of the USARC facilities were also documented. Historic themes established by the Illinois SHPO were followed in preparation of the historic context and in identifying historic properties.

All fieldwork was conducted by Fort McCoy Archaeology Laboratory personnel who meet the *Secretary of the Interior's Professional Qualification Standards at 36 CFR 61* (Appendix A). The field recordation methods employed in the inventory follow accepted practices within the field of historic research and included, but were not limited to, on-site evaluation and documentation of historic buildings and properties, review of all pertinent historical documentation, and interviews with facilities managers regarding the properties. Assessments of potential eligibility for the NRHP were made based upon the field research, on-site documentation, and post-inventory evaluation.

Factors That May Precipitate a Change in Status

The recommendations contained within this report are based upon the current legal ownership status and physical conditions. Changes in the status of these properties may require a re-evaluation of the property, or additional surveys in compliance with Section 106 of the NHPA. Examples of changes that could necessitate a reevaluation of properties include, but are not limited to, demolition, demolition by neglect, construction, rehabilitation, or transfer of ownership.

Methodology

Members of the Fort McCoy Archaeology Laboratory conducted a formal literature and record search for each facility. The objective of this search was to establish the historical and archaeological context associated with each USARC. Searches conducted at local historical societies and municipal governments provided additional documentary and cartographic information relevant to the historic context of individual USARC facilities. Research was also conducted at the Illinois SHPO offices to obtain information relative to the location of all recorded archaeological sites within a one mile radius of each USARC facility. All existing archaeological sites were documented and evaluated in terms of their significance to USARC locations. An archaeological reconnaissance survey was conducted on the land associated with each USARC facility that included:

1) a records search at the Illinois State Historic Preservation Office for documented prehistoric and historic sites within a one-mile radius of the facility, and;
2) an on-site pedestrian survey of all land on or associated with each facility to identify surface remains of prehistoric and historic archaeological sites.

Architectural Study Methods

The architectural survey undertaken by members of the Fort McCoy Archaeology Laboratory was conducted using guidelines published by the Historic American Building Survey (HABS) and the Illinois SHPO. Data represented in this report was collected with methods that include:

1) a literature review of the historic documents relating to the construction and maintenance of each building on the USARC facilities;

2) an architectural evaluation of the potential NRHP eligibility of each building on the USARC facilities, and;

3) a surface reconnaissance of land associated with each USARC facility.

The historic themes used to evaluate the historic contexts associated with the properties included in this inventory were taken directly from the guidelines identified by the Illinois SHPO in the *Illinois Comprehensive Statewide Historic Preservation Plan*.[1] The results of the historical, architectural, and archaeological surveys conducted by members of the Fort McCoy Archaeological Laboratory are described in the following sections of this report.

Historical Literature Review

The methodology for the Illinois Section 110 Inventory was designed to establish a historic context for each USARC facility in order to assess the eligibility of its buildings for nomination to the NRHP. In preparation for the documentation of each USARC facility, historic research was conducted by members of the Fort McCoy Archaeology Laboratory and included:

1) examination of real property records maintained by the 88th RSC;

2) examination of real property records located at each USARC facility (when available);

3) an interview with the facility manager at each USARC facility;

4) NRHP eligibility nominations filed with the Illinois SHPO (when applicable);

5) examination of the Archaeological Sites Index maintained by the Illinois SHPO;

6) examination of the historic documents housed at the Illinois Historical Society, regional county courthouses, and local libraries, and;

7) examination of previous cultural resource, archaeological, architectural, and environmental surveys available about each USARC facility (when available).

Architectural Fieldwork

Historic research conducted at the 88th RSC Real Property Office on the buildings at each USARC facility was utilized to establish an initial database of the architectural styles that would be encountered during on-site documentation. On-site fieldwork consisted of producing in-depth textual descriptions including:

[1] *Illinois Comprehensive Statewide Historic Preservation Plan*, (Springfield, Illinois: Illinois Historic Preservation Agency, Division of Preservation Services), 1995, pp. 8-10.

Architect/Builder
Type of building
Date of construction
Date of acquisition
Architectural style
Foundation material
Number of bays
Plan shape
Wall construction
Roof type
Roof materials
Chimney construction
Chimney placement
Type and location of entrances
Type and location of fenestration
Relationship of all buildings on the facility
Integrity of each building
Potential threat to the buildings
Future research potential at the facility
Assessment of the potential eligibility of each building to the NRHP under Criteria A, B, C, and D

Photo documentation captured the exterior of each building at the Illinois USARC facilities, including unique architectural elements. Photographs were recorded in 35 mm black and white and Kodak DC 50 digital format. Data collected during on-site documentation and assessment was compiled into the Illinois Section 110 report and entered into USARC databases maintained by the Fort McCoy Archaeology Laboratory.

The Illinois Section 110 Inventory Report

An on-site assessment of the historic, architectural, and archaeological significance was accomplished to determine if buildings and/or districts on each USARC facility were potentially eligible for nomination to the NRHP under Criteria A, B, C, or D. The Illinois Section 110 Inventory is intended to provide the Commander, 88th RSC, with a comprehensive overview of all USARC properties in Illinois. Specifically, this report provides architectural, historic, archaeological, and security information to aid in the management of the physical resources located on USARC facilities controlled by the 88th RSC. Data contained in the individual sections of this report were recorded and presented in accordance with standards established by HABS and the Secretary of the Interior's Professional Qualification Standards at 36 CFR 61.[2]

This report is also designed to allow each facility section to stand independent of the whole report, so that an individual facility manager may remove the section that deals with his facility. Information included in discussions of individual USARC facilities may be repeated in the introduction and discussion sections. Information contained in the individual USARC facility sections include:

Facility Name
Facility Identification Number
Facility Address
USGS 7.5 Minute Series Quadrangle Map
UTM coordinates
Township, Range, and Section reference
Present Ownership/Occupant of the facility
Setting/Landscape
Archaeological Resources
Security
Historical Context
Architectural Information
Building Descriptions
Eligibility
Recommendations
Sources

[2]Historic American Building Survey, *Historian's Procedures Manual*, (Washington, D.C.: Department of the Interior, National Park Service), 1984, p. 2-50. "Transmitting Documentation to HABS/HAER: WASO," technical manual updated provided by the Historic American Building Survey/Historic American Engineering Record (Washington, D.C.: National Park Service), 1989, p. 27-32.

National Register Criteria of Evaluation

Every building on each USARC facility was assessed for its eligibility to the NRHP as defined in 36 CFR Part 60. The criteria used to evaluate the eligibility of properties for nomination to the NRHP assesses the significance of each facility in terms of its contribution to American history, historic persons, architecture, engineering, and archaeological research. The NRHP criteria and criteria considerations include:

Criteria:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in buildings…that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
>
> A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B. That are associated with the lives of persons significant in our past; or
>
> C. That embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that posses high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D. That have yielded, or may be likely to yield, information important in prehistory or history.[3]

Criteria Considerations:

> Properties that would ordinarily not be eligible for the NRHP will qualify if they fall within the following categories:
>
> A. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or
>
> B. A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with the historic person or event; or
>
> C. A birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or buildings directly associated with his productive life; or

[3] *The Section 110 Guidelines: Annotated Guidelines for Federal Agency Responsibilities under Section 110 of the National Historic Preservation Act*, Section III, February 1988.

D. A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

E. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

F. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance; or

G. A property achieving significance within the past 50 years if it is of exceptional importance.[4]

Historic Context

The documented history of Illinois extends more than 10,000 years and includes many cultural traditions that formed the unique character of the settlement of the state. Due to the scope and complexity of the state's history, it cannot be discussed in detail in this report. The Illinois Historic Preservation Agency, Division of Preservation Services of the Illinois SHPO has determined relevant research themes for cultural resource management. Unless otherwise noted, the following historic contexts are based on material found in the Illinois Comprehensive Statewide Historic Preservation Plan.[5]

Prehistoric Background

Archaeologists temporally divide Illinois prehistory into distinct cultural traditions distinguished from one another through cultural markers. Food procurement, mobility vs. sedentary lifeways, group size, technology, trade patterns, and burial practices are unique to each cultural tradition. As expected, not all regions underwent the same transitions simultaneously. Consequently, cultural traditions vary temporally from region to region. Traditionally, North American prehistory of the Great Lakes Region is divided into three major periods: Paleo-Indian, Archaic, and Woodland. Jeske (1988) has assigned a temporal framework to these divisions for the state of Illinois.

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[4] Ibid.

[5] *Illinois Comprehensive Statewide Historic Preservation Plan*, (Springfield, Illinois: Illinois Historic Preservation Agency, Division of Preservation Services), 1995, pp. 8-10.

The Paleo-Indian Tradition

According to Jeske (1988), the Illinois Paleo-Indian Tradition began ca. 1199 B.P. and lasted until 999 B.P. Paleo-Indians were nomadic people who traveled in small, extended family groups and hunted large game animals. Early Paleo-Indian culture relied upon large fluted projectile points, called Clovis or Folsom points, as their primary instruments for hunting.[6] These projectile points consisted of a rock with worked, or "knapped," edges forming a point and fastened to a piece of wood to construct spears and javelins. Additional tools consisted of scrapers, blades, chisels, and wedges made from stone, wood, and bone materials.[7] As Paleo-Indian culture grew more complex, a series of new shapes and styles of points had evolved by the Late Paleo-Indian Period ca. 999 B.P.[8] Archaeologists believe that mass-hunting combined with a shift in climatic conditions caused extinction of the game animals Paleo-Indian tribes relied upon for survival. The loss of traditional hunting signaled a cultural change into the Early Archaic Period.

The Archaic Period

Paleo-Indian people relied almost entirely on large game as their primary food source. Mass extinction of large game animals prompted a change in subsistence strategy. Archaic groups began to exploit a variety of food sources. This new food procurement strategy allowed people to spend more time in one area exploiting all possible sources, moving only when resources became scarce. Therefore, this period is characterized by larger groups of people who are less nomadic. The archaic period is divided into the Early Archaic, dated 999-899 B.P., Middle Archaic, dated 799-499 B.P. and the Late Archaic, dated 499-159 B.P. Early Archaic sites are often found on river terraces and areas near marshes. The cultural patterns of the Early Archaic period remain similar to those of the Paleo-Indian Tradition, although more information is needed fully to understand their lifeways.

More distinct changes in prehistoric behavior occur in the Middle Archaic period. With the advent of a warmer and drier climate, people moved to permanent water sources near larger bodies of water. They then exploited stable food resources such as nuts and seeds, manufactured tool kits with many tool types, and became more sedentary.[9] Sites from the Middle Archaic tradition appear in the archaeological record with increased frequency.

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[6] Ibid.

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[7] Ronald J. Mason, "The Paleo-Indian Tradition," *The Wisconsin Archaeologist*, vol. 67, number 3-4, September-December, 1986, p. 184 and 187..

[8] Ibid., p. 195.

[9] Ibid.

People of the Late Archaic period continued the basic lifeways of earlier periods, but developed some adaptive changes, including technological advances, increased sedentary living patterns, larger populations, complex trade networks, and ceremonial mortuary practices. Technological advances in food procurement allowed tribal groups to remain in one place for extended periods and increase their population size. Sedentary lifeways contributed to increased trade networks, and more complex burial practices. Notably, Late Archaic people seemed to attach spiritual significance to the burial ceremony of their dead, expressed by the inclusion of grave goods.[10] The end of the Archaic period saw a continued increase in sedentary living patterns as larger population groups maintained the semi-permanent habitations began in earlier, Late Archaic periods. The domestication of plants and the beginning of horticulture supplemented traditional collecting and gathering for food. Complex mortuary traditions began to evolve. The sedentary lifestyles permitted the development of the increased societal complexities of the Woodland Period.

The Woodland Period

The Woodland period is divided into Early Woodland, 2600 to 2200 B.P., Middle Woodland, 2200 to 1700 B.P. and Late Woodland, 1700 to 1000 B.P. The Early Woodland period is similar to the Late Archaic except for the appearance of the rough, grit-tempered pottery produced by Early Woodland cultures.[11] The two distinguishing characteristics of the Woodland Period are the inception of pottery manufacture and the introduction of domesticated horticulture. Both advances allowed Woodland Period societies to increase sedentary lifeways to support larger populations. The increased domestication of tribal life enhanced inter-tribal interrelationships between geographically distinct areas, as surplus agricultural goods were traded for exotic items.

Members of the Adena Culture were the most prominent peoples of the Early Woodland Period in the Ohio Valley. The Adena Culture consisted of small seasonal villages subsisting by hunting and gathering practices with rudimentary horticulture practices also evident.[12] Continued establishment of semi-permanent seasonal villages supported the development of a mortuary system in which the Adena constructed artificial earthen mounds where they buried their dead. Mounds built by the Adena represented a significant development in their culture, as increasingly complex burial ceremonies and traditions required sequential internment at permanent locations.[13]

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[10]Ibid.

[11]Ibid.

[12]Susan L. Woodward and Jerry N. McDonald, *Indian Mounds of the Middle Ohio Valley: A Guide to Adena and Ohio Hopewell Sites*, (Blacksburg, Virginia: The McDonald and Woodward Publishing Company), 1986, pp. 6, 11-12.

[13]Ibid., pp. 11-13.

The Middle Woodland Period is associated with the Hopewellian Culture of the Ohio and Illinois Valley. Burial mounds, exotic grave goods derived from long distance trade networks, and increased regionalism first appeared during this period.[14] Archaeological evidence shows that people were interacting in larger geographical spheres and trading exotic items over long distances such as the Rocky Mountains, Appalachian Mountains, Great Lakes, and the Gulf regions. The Hopewell developed elaborate burial practices that included the construction of rectangular charnel houses in which bodies were prepared for death. High status members of Hopewellian society were buried in the charnel houses with elaborate individual graves. When all burial space was used, the charnel house was then buried under a conical mound.[15] At lease 28 Middle Woodland mounds, including a serpent-shaped mound, are found in northeastern Illinois in Cook county.[16]

The Late Woodland Period, 1845 to 1450 B.P., included both the Hopewellian and Mississippian Cultures that seemingly coexisted within the Ohio and Illinois Valley for a short time.[17] The Late Woodland Period signaled an end to the elaborate grave practices and long-distance trade networks that were typical of the Hopewellian Culture. Effigy mounds occurred infrequently during the Late Woodland Period in Northern Illinois. Archaeologists believed that Woodland people eventually abandoned their traditions and adopted that of the Mississippian Culture.[18] Evidence from Mississippian sites in both northern and southern Illinois supports this theory. Larger villages, increased maize agriculture, and interaction with Cahokia, the geographical and cultural center of Mississippian Culture, characterized the Late Woodland Period throughout Illinois. Increased class differentiation accompanied by controlled distribution of goods also appears at this time. The Mississippian Culture differed from the Hopewellian Culture with the establishment of permanent settlements located near ceremonial "temple" mounds.[19] Notable Mississippian sites in Illinois include Anker, Hoxie Farm, and Oak Forest in the north and Cahokia in the southwest part of the state.[20] The Late Woodland Period closes the prehistoric period as European voyagers began exploring the

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[14]M. Metzinger, S. McCarthy, B. Spoonamore, C. Randl, and G. Bert, *Literature Review, Architectural Evaluation, and Phase I Archaeological Reconnaissance of Selected Portions of Fort Sheridan, Illinois*, p. 49.

[15]Susan L. Woodward, *Indian Mounds of the Middle Ohio Valley*, pp. 16-23.

[16]Ibid.

[17]Ibid., p. 6.

[18]P.S. Essenpries, *Archaeological Investigations of the Fort Sheridan Military Reservation, Lake County, Illinois*, (East Meadow, New York: P/RA Research, Inc.), 1980, p. 6.

[19]Susan L. Woodward, *Indian Mounds of the Middle Ohio Valley*, P. 6.

[20]P.S. Essenpries, *Archaeological Investigations of the Fort Sheridan Military Reservation*, p. 6.

Ohio and Illinois Valley in the late 16th and early 17th centuries and established contact with regional Native American groups.

Historic Indian Period

As Europeans arrived in Illinois they encountered huge earth works, the origin of which they could not explain. To reconcile the coincidence of the carefully engineered mounds with their unknown builders, Europeans created a myth that credited the mound construction to early European explorers. According to the myth, the "mound builders" were romanticized as a people with great intelligence and culture who had somehow died out. All that remained of this vanished race were the grand earthworks that paid homage to their extinct culture. Most Europeans could not accept that the ancestors of the existing Native American Tribes were the mound builders. A few educated men, including Thomas Jefferson, questioned the myth and conducted "archaeological" investigations. Jefferson trenched through a mound on his property in Virginia. His published notes describe four distinct layers superimposed within the mound. Each layer contained multiple burials. Based on his knowledge of Native American group burial practices, Jefferson concluded that the myth was false.[21] These and other investigations provided credible evidence that the extant historic Native American tribes were in fact decedents of the "mound builders."

By 1650, Native American groups within Illinois, who had previously lived within a sedentary, maize-based agricultural society, returned to a hunting and gathering economy in response to increased regional turbulence caused by European exploration. Traditional Native American villages and cultivated areas were destroyed as European settlers pushed in; traders established trading posts near tribal boundaries. Tribes in Illinois, including the Shawnee, Miami, Kickapoo, and Illiniwek were pushed south and west first by the Iroquois, who in 1671 claimed most of Illinois as their territory, and later by incoming European settlers.[22]

French Exploration Era

The era of French exploration of Illinois began in 1634, with the voyages of Jean Nicolet.[23] Nicolet embarked on the journey to find a trade route to the Pacific Ocean, but returned with reports of the Native American tribes living in the Mississippi Valley. A series of Iroquois raids halted French expeditions west until 1661, when the potential for a lucrative fur trade motivated the French government to invest in establishing trade routes along the Great Lakes

[21] M. Coe, D. Snow, and E. Benson, *Atlas of Ancient America*, (Oxford: Equinox), 1986, p. 25.

[22] Pauketat, p. 13.

[23] Caruso, p. 118.

and the Mississippi River Valley.[24] In 1673, Louis Joliet and Father Jacques Marquette were sent to survey the Mississippi Valley and establish contact with Native American tribes in the region. Guided by the advice of local Native American groups, Joliet and Marquette traveled via the Illinois and Des Plaines Rivers throughout much of Illinois.[25]

In 1674, Robert Cavelier, Sieur de LaSalle, was charged with establishing colonial settlements and military outposts in Illinois. Large scale colonization efforts were obstructed by threats of Iroquois raids, who chose to remain loyal to their Dutch and English trading partners along the Saint Lawrence River.[26] Between 1680 and 1683, LaSalle constructed two forts in Illinois, Fort Crevocoeur, near the present site of Peoria, and Fort St. Louis on the Illinois River near Utica. The garrisons attracted more traders and commerce to Illinois; however in 1696, the French government declared that western trade routes were not successful enough to justify the price of maintaining military posts in the region.[27] All western trade routes were officially closed, but trade illegally continued with Native American tribes of the Mississippi Valley region.

The number of illegal fur traders continued to rise in the Mississippi Valley and in 1702 the French government made another attempt to control trade with Native Americans. A series of forts and trading posts were secured along the Mississippi River between St. Louis, Illinois and Biloxi, Mississippi to provide regional superintendents over the fur trade. The trading posts grew into sizable villages as French traders married members of local Native American tribes and adventurous settlers began moving south from Quebec.[28] By 1721, the French government had "reorganized" its American holdings and created new political districts and judicial courts in Louisiana, Arkansas, and Illinois.[29]

By 1750, the English explorers began encroaching into French trade routes in Canada, the Great Lakes, and in the Mississippi Valley and building British trading posts to compete with the French fur trade.[30] In addition, American colonists began pushing into French territory overland as settlers began pushing westward from the eastern seaboard. Tensions between England and France erupted in 1756, as they entered the Seven Years War on the European

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[24] Theodore Calvin Pease and Marguerite Jenison Pease, *The Story of Illinois*, (Chicago, Illinois: University of Chicago Press), 1965, p. 3.

[25] Caruso, p. 26-31.

[26] Pease and Pease, *Story of Illinois*, pp. 6-7.

[27] Ibid., pp. 8-9.

[28] Ibid., p. 9.

[29] Ibid., p. 10-11.

[30] Ibid., pp. 12-13.

Continent, which subsequently spilled over into their American colonies as the French and Indian War. England defeated the France in 1763, and France "ceded to England all France had claimed east of the Mississippi save New Orleans."[31] Thus, the British gained control of the French fur trade throughout Canada and the Mississippi Valley.

British Exploration Era

British colonists had encroached into French territory along the Mississippi Valley since the 1750s. In 1763, England received legal title to the land as a reparation after the French and Indian War in 1763. England saw the economic potential of taking over the fur trade established by the French as part of their new world empire. However, they soon realized the problems with ruling a distant economic venture. Within the first years of their rule, the British government developed a plan to control trade, the American westward migration, and how to regulate American dealings with local Native American tribes.[32] In 1766, William Pitt, Secretary of State for the southern Department of the Earl of Shelburne, was assigned to design a plan to control and settle the Mississippi Valley. He initiated the placement of superintendents at military and trading posts throughout the Great Lakes and Mississippi Valley who exercised control over trade and settlement within their jurisdictions. Under British rule, French-Canadians were allowed to remain in St. Louis and Ste. Genevieve within Illinois territory and in Quebec, Canada. French traders remaining in Illinois continued to trade in areas outside the reach of the British military. Their primary markets were diverted from Quebec down the Mississippi River to the French port of New Orleans.[33]

British and American traders were eager to take over the French trade routes. However, they were not well received by regional Native American tribes who had opposed them during the French and Indian War.[34] American colonists who moved into unsupervised areas of Ohio and the Mississippi Valley further complicated problems between indigenous peoples and settlers. They began threatening removal of regional Native American tribes before the British government had implemented removal policies for native peoples during the 1760s. It became apparent by the 1770s, that the British government could not effectively control the Mississippi Valley.[35] As a result, Illinois was made a subordinate county to the state of Virginia in 1778. The Virginia legislature divided Illinois into three districts: Kaskaskia, Cahokia, and Vincennes.[36] The British colonial government maintained control of Illinois

[31]Ibid.

[32]Ibid., pp. 16-18.

[33]Ibid.

[34]Ibid., pp. 21-24.

[35]Ibid., pp. 28-31.

[36]Ibid., 38.

until the end of the Revolutionary War in 1783, when legal title to the region was transferred to the newly formed United States of America.

American Settlement Era

American settlers had pushed into the Ohio and Mississippi Valley by 1774, when England transferred legal title to all territory south of the Great Lakes to the United States in 1783.[37] Although in possession of the territory, the United States did not take active control of the region until 1816, but did attempt to control British trade on the Mississippi River and the Great Lakes.[38] The United States lacked a strong presence in the territory and could not enforce limits and regulations on British traders. The condition worsened until the United States and England went to war over trade rights in the northwestern territories in the War of 1812. American settlers and United States military troops fought British troops along the Great Lakes and in the Mississippi Valley. Americans who accused the British of supplying weapons to Native American tribes who were resisting American rule in the northwestern territories heightened tension during the war.[39] The United States won a diplomatic victory when a treaty was signed in 1815 that restricted British trade to areas north of the Great Lakes.

By 1800, American settlers had begun to move into Illinois in substantial numbers. Opposition from Native American tribes was countered by settlers without regard to official United States policies.[40] Most Native American groups throughout the Ohio and Mississippi Valleys had become dependent on trade with the British and had allied themselves with England during the Revolutionary War. Thus, they did not trust American settlers and United States government representatives. The United States had a series of problems identifying the legal boundaries of land held by Native American groups during the 1780s, and American negotiators aggressively pushed negotiations with Native American leaders, pressuring them to leave Illinois territory.[41] This created tension between American settlers and Native American tribes that lasted until the 1830s.

Illinois experienced rapid development after the War of 1812 as continuous waves of settlers began building agricultural communities and regional governments throughout the territory.[42]

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[37]Ibid., p. 34.

[38]Ibid., 49.

[39]Ibid., 65.

[40]Ibid., 49-50.

[41]Ibid., 36.

[42]Ibid., p. 79.

Early settlers largely consisted of "backwoodsmen" and "squatters" who were individualists moving away from advancing society, farming small parcels of land for a few seasons before continuing to move further west.[43] Permanent settlers soon followed, and farmers from eastern states purchased land and moved their goods, families, and livestock to Illinois to build successful agricultural communities. Eastern "gentlefolk" were the last to arrive in Illinois, after sizable communities had developed.[44] "Gentlefolk" were well-educated men and their families who had left commercial and political positions in the east to lead the organization and growth of Illinois government and society.

Most agricultural communities began as a series of farms centered around grist or saw mills that serviced their needs to process local grain harvests. As more farms were established in the region, commercial businesses followed to provide supplies and convenient services for farmers and their families. By the 1820s, most towns and villages in Illinois contained stores, churches, newspapers, and blacksmiths that participated in barter agreements with farmers for their services. Reliable financial institutions, however, did not arrive until the 1830s when eastern banks agreed to support western settlement.[45] Town governments remained rudimentary until the late 1830s, as local farmers acted as community legislators and law enforcement officials when the need arose. Regional governments were little better and consisted of annual meetings of county governors, circuit and probate courts.[46] By 1818, the large influx of settlers elevated the territorial population to 60,000 and Illinois was granted statehood. A second wave of immigration hit Illinois in the 1830s and 1840s, as settlers began arriving in the region through expanded overland routes in Kentucky the newly constructed Erie Canal between Ohio and New York.[47] Thousands of farmers moved their families from the east and built new communities in Illinois overnight.

As more settlers came to the region, the few remaining Native American tribes in the state were pressured into ceding their land to the Illinois government and moved west of the Mississippi River, usually with military escorts. Many tribes retaliated against American settlement and waged regional battles to retain control of their land. Two such battles included the Winnebago War, fought near the Wisconsin and Illinois border in 1827, and the Black Hawk War in northwestern Illinois in 1832. The Black Hawk War began when American settlers took control of a Sauk and Fox village on the east side of the Mississippi River near St. Louis without regard for appropriate treaties or other diplomatic processes.[48]

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[43]Ibid., p. 84.

[44]Ibid., p. 85.

[45]Ibid., pp. 88-90.

[46]Ibid., p. 98.

[47]Ibid., p. 117.

[48]Ibid., p. 118.

Black Hawk, chief of the village, then led a defense of his homelands that included raids against American settlements between St. Louis and northern Illinois. Illinois and Wisconsin militia troops and the United States Army were called upon by state legislators to stamp out the beleaguered and poorly equipped Native Americans. U.S. troops pursued Black Hawk and his men to the Wisconsin-Illinois border where they were forced to surrender after losing the battles of Wisconsin and Bad Axe. Black Hawk was summarily imprisoned and his people were forcibly removed west of the Mississippi River. Many future Illinois politicians were volunteers in the state militia during the Black Hawk War, including future President of the United States, Abraham Lincoln.[49]

Many of the first regions to be settled in Illinois clustered around the rich soil in the southern and eastern sections of the state. Traditional agricultural methods known to farmers of the 1820s could not be used in the prairies of northwestern Illinois. However, technological advances in the 1830s and 1840s created stronger farming equipment that made tilling the tough prairie soil possible. Thus, the door was thrown open for settlement of the last remaining portion of the state and communities such as Rockford and Peoria were established. The number of Illinois counties grew from forty-five in 1826 to one hundred counties by 1854.[50] Stronger farming communities led to stable financial institutions developing throughout the state and currency transactions replaced traditional barter arrangements as payment for goods and services.

In 1836, the state of Illinois began working on a series of "internal improvements" designed to streamline transportation throughout the state and provide direct access to the large ports and eastern cities.[51] Improvements included the construction of the Illinois and Michigan Canal in the growing city of Chicago and a series of railroad lines crossing the state. In addition, the state capitol was moved from the city of Vandalia to Springfield, as the latter was more centrally located within the state.[52] The Illinois and Michigan Canal was completed in 1842, but attaining financial backing for the planned railroad lines was not obtained until 1848. The first railroads constructed in the state ran from St. Louis to the terminus of the Illinois and Michigan Canal in Chicago. This provided a direct link for goods shipped along the Mississippi River to eastern markets via the Great Lakes. After the resounding success of the first lines, a series of rail lines were constructed between rural towns, regional cities, and ports on the Great Lakes. By 1860, an increasingly dense network of railroads spread across the state and Chicago had become the transportation hub for the state.[53] On the eve of the Civil War, Illinois had begun to industrialize as shipping and manufacturing interests were

[49]Ibid., p. 119.

[50]Ibid., pp. 102-103, 120.

[51]Ibid., p. 125.

[52]Ibid., pp. 125-128.

[53]Ibid., pp. 125-134.

beginning to grow and immigration of incoming settlers changed from native born American farmers to European immigrant laborers.

Tension grew throughout Illinois society during the Antebellum Era over the issue of slavery through the late 1850s. Slavery had been allowed to remain where it had previously existed in America with the Compromise of 1824. Residents of southern Illinois supported the continuation of slavery and the induction of "slave states" into the United States. However, abolitionists centered in northern Illinois aggressively advocating the abolition of slavery with increasing fervor and anti-slavery societies grew in popularity in the 1840s and 1850s.[54] The problem hit fevers pitch in the late 1850s, when Stephen A. Douglas and Abraham Lincoln participated in a series of public debates on the issue of slavery. Both were running for the position of Illinois representative to the U.S. Senate in 1857 and 1858. The now legendary debates were held in communities throughout the Illinois including the cities of Springfield, Quincy, Ottawa, Jonesboro, Galesburg, Alton, Charleston, and Freeport. Douglas won the seat in the Senate, however, Lincoln won the 1860 presidential election on the anti-slavery platform he had developed while serving in the Illinois legislature during the 1850s.

Although regional feelings were strongly divided on issues such as slavery and states rights, Illinois elected to support the Union upon the outbreak of the Civil War in 1861. Douglas toured southern Illinois urging citizens to put aside their feelings on slavery and unite to save the country from breaking apart. His efforts were successful, and Illinois led the nation in supplying troops for the Union Army. Illinois volunteers fought in every theater of battle but were most notably successful in holding the Mississippi River and border state of Kentucky for the Union. An armistice was signed between the United States and the Confederate States of America on April 9, 1865, and President Lincoln was assassinated four days later. Although many in southern Illinois opposed his political views, they openly mourned his death when his body was entombed in Springfield. Lincoln's assassination marked the end of the Antebellum Era in Illinois and the rest of the nation, both of which would feel the growing pains of industrialization by 1870.

Industrialization and Growth

By 1860, Illinois had made initial steps toward industrialization by constructing a series of railroads and canals across the state. The Industrial Revolution experienced during the postwar era permanently changed the economic and social components of Illinois. The traditional agriculture-based society of 1860 would become a new urban industrialized society by 1900.[55] Agriculture dominated the Illinois economy before the Civil War. However, by 1870, territories in the western United States began producing agricultural products to compete with Illinois farmers. The continued development of railroads from western states

[54]Ibid., pp. 147-149.

[55]Ibid., pp. 186-187.

provided a direct link to eastern markets driving the price of grain down and began pushing Illinois farming into decline.[56] By the 1880s, eastern investors began to move manufacturing plants into Illinois cities and towns that were closer to the natural resources they needed. New companies producing agricultural implements, meat products, lumber, carriages, wagons, and clothing were constructed in large cities and rural areas around the state. They manufactured their products using immigrant and local workforces and shipped them by railroad to distribution centers in Chicago and St. Louis. In 1870, the net profit made by Illinois industries was more than one million dollars and rose to over twenty million dollars by 1890 as manufacturing became the base of Illinois society.[57]

The excessive growth of industry in the late nineteenth century, was in part based on the use of a cheap labor force of European immigrants that arrived in steady streams beginning in 1870. Immigrants from Ireland, Germany, Scandinavia, Eastern and Southern Europe fled economic and social turmoil in their homelands to seek a better life in the United States. Chicago became a popular destination for those who sought to work in its ever-increasing business district. Skilled and unskilled workers lived in overcrowded sections of Chicago and worked twelve and fourteen-hour days to hold jobs in manufacturing and processing plants in the city for low wages. Many immigrants brought their ideals of socialism, communism, Marxism, and workers rights with them to the United States. As industrial success soared during the late nineteenth century, so too did labor unrest, and by 1880, a series of labor and craft unions were competing for a political voice.

[56]Ibid., 195.

[57]Ibid., p. 188.

In the late nineteenth century, Chicago was hit by a series of violent strikes that pitted management against workers throughout the city. During the 1880s, strikes became increasingly tense and routinely erupted into violence. One such example was the 1886 Haymarket Riot where strikers locked out of the McCormick manufacturing plant clashed with police at a union meeting at the old Chicago Haymarket and resulted in many deaths.[58] Tragedies such as the Haymarket Riot pushed union leaders to create political advocate organizations, such as the Industrial Workers of the World and the American Federation of Labor, to control state unions and mediate labor strikes by 1900.[59]

Late nineteenth century Illinois society grew with equal vigor. Theaters, hotels, restaurants, and mansions became common in the upscale sections of Chicago's north side, as industrialists eagerly displayed their wealth. Educational institutions, from local public schools to the University of Chicago, established an intellectual basis for the middle and upper classes of Chicago society.[60] By 1900, technological advancements (including the mass production of steel and the development of incandescent lights) caused a change in American architecture. Commercial and industrial buildings rose from small wooden frame buildings to large steel skyscrapers and warehouses. The Chicago School of architecture grew from this movement, as architects such as William Le Baron Jenney, Louis Sullivan, Daniel Burnham, and William Holabird, incorporated classical elements in commercial buildings that brought historicism into turn of the century architecture.[61] In addition, industrialized cities experienced the phenomena of overcrowding and the creation of "suburbs." Suburbs were designed to provide clean and quiet homes for those who could afford a daily commute into the city. Wealthy industrialists and upper and middle class white-collar workers moved to the suburbs to escape the overcrowding in the city. By the close of the nineteenth century, Illinois had moved from a series of agricultural communities to industrialized cities that would continue to grow through the twentieth century.

Modern Era

The United States entry into World War I in 1917 marked a permanent change in the social and economic structure of Illinois. From 1917 to the present, federal agencies played a growing role in business and social activities as Illinois became an active

[58]Ibid., pp. 190-191.

[59]Ibid.

[60]Ibid.

[61]Leland M. Roth, *A Concise History of American Architecture*, New York, New York: Harper & Row Publishers, 1979, pp. 172-173, 272.

participant in national economic and social trends.[62] Between 1917 and 1918, the United States government drew heavily from Illinois resources to fill the need for the war effort. The U.S. Department of Defense used Fort Sheridan, located north of Chicago, to train large numbers of officers from the Midwest. Likewise, Scott Field (later Scott Air Force Base) was constructed near East St. Louis, to train new companies of air pilots for duty in Europe.[63] In addition, Illinois industries received lucrative contracts to produce weapons, clothing, and foodstuffs. The state responded to the war by supplying large numbers of soldiers and financial support of the war effort. In the spirit of patriotism, the state legislature began to carry out a series of programs designed to protect American interests. In 1918, the Illinois State Council for Defense investigated all official political, social, and labor organizations within the state to ensure they supported U.S. war policies.[64] It also created the American Protective League to investigate anti-American sentiments within the state. The league used civilian volunteers to identify and report individuals and organizations who spoke out against the United States war policies.[65]

On the surface Illinois seemed to prosper during the 1920s as industrial growth and prosperity continued to show an unending rise. However, the prices of agricultural products dropped sharply in the postwar years and caused small farms to fail and state banks to overextend themselves. When the U.S. stock market crashed in 1929, Illinois industry and agriculture were hit hard and unemployment within the state rose at alarming rates.[66] Industrial factories in the north and coal mining operations in the south forced thousands of men into the ever-growing unemployment lines in attempts to cut their expenses to survive the economic crisis. Soon after the crash, the state found itself without any forms of relief for the unemployed. In 1932, the state senate created the Illinois Emergency Relief Commission to provide some relief for the poor. Later that year, the federal government took control of the organization and used it as a first step to implementing Public Works Administration (PWA) and Works Progress Administration (WPA) programs in the state. In 1939, the state legislature began to redesign the states' economy and made occupational, sales, income, and utility taxes the bases of future financial earnings.[67]

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[62]Pease and Pease, *The Story of Illinois*, p. 226.

[63]Ibid., p. 239.

[64]Ibid., pp. 229-239.

[65]Ibid., p. 228.

[66]Ibid., pp. 241-243.

[67]Ibid., pp. 243-246, 247.

The Illinois economy was rescued by lucrative manufacturing contracts awarded to industries within the state during World War II.[68] Manufacturers of weapons, vehicles, airplanes, food, and clothing hired thousands of men, and later women, to fill orders for the war effort. Unemployment was further reduced when hundreds of thousands of men joined the armed forces and Illinois recruited new members to its National Guard and National Militia units. Fort Sheridan became the reception center and headquarters for the 6th Army Corps, and the U.S. Air Corps began intensive training of pilots, technicians, and radio operators at Scott Field.[69]

Illinois maintained its prosperity in the postwar years but industry changed to adapt technologically advanced methods of production. From agriculture and manufacturing to mining, new machines were used to raise production and lower costs. Small farms in rural counties were bought out by large commercial farming corporations that replaced workers with machines to plow, water, harvest, and process crops in a fraction of the time it took individual farmers. This resulted in major population shifts within the state as people began to move out of rural areas to seek employment in urban areas.[70] Likewise, mining operations in southern Illinois expanded with the aid of new technology and oil, gas, lead, stone, and clay. The methods of extracting coal from existing mines shifted from shaft mining to strip mining with the invention of large earth moving equipment by the 1960s.[71] In addition, manufacturers around the state began to rely heavily on trucking and passenger air travel, a departure from dependency on traditional railroad travel. Subsequently the state of Illinois set to work constructing an impressive network of highways and airports throughout the state by the 1970s.[72] Today, Illinois continues to struggle and succeed with the problems of balancing an agriculture and industrial-based society that grows larger and more complex with each passing decade.

[68]Ibid., p. 247.

[69]Ibid., pp. 247-249.

[70]Ibid., pp. 255-256.

[71]Ibid., p. 250.

[72]Ibid., pp. 260-264.

History of the 88th Regional Support Command

The following history of the 88th RSC was written by members of the Public Affairs Office (PAO) and Office of the Command Historian, and is quoted verbatim.[73]

> The 88th U.S. Army Reserve Regional Support Command (RSC) was established in 1996 at Fort Snelling, St. Paul, Minn. as the command and control and support headquarters for all Reserve units in the six state region of the upper Midwest. Twenty-seven-thousand soldiers and some 253 Reserve combat support (CS) and combat service support (CSS) units in Minnesota, Wisconsin, Illinois, Indiana, Michigan and Ohio all call 88th RSC their higher headquarters.
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> The RSC is composed of 11 Major Subordinate Commands (MSCs) and four Direct Reporting Units (DRUs). These MSCs are made up of engineer, medical, maintenance, transportation, supply, military police and military intelligence units, to name a few. The RSC also supports nearly 11,000 additional soldiers serving in Direct Reporting Units to the U. S. Army Reserve Command (USARC), Atlanta, Georgia.
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> The mission of the 88th RSC is to provide ready units for active duty deployment at a moments notice. The bulk of the Total Army's CS and CSS (medical, transportation, quartermaster, signal, engineer, maintenance, military police, public affairs and port operations) units reside in the Army Reserve. In peacetime, unit members train for mobilization. They also participate in projects and disaster relief operations in the communities where they live and work.
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> The history of the 88th begins with the 88th Infantry Division. The division was organized on August 25, 1917 at Camp Dodge, Iowa. In August 1918, the division arrived in France. During World War I, the men of the "Cloverleaf Division," as they were called, fought with distinction in the Alsace campaign. The division returned to Camp Dodge and was demobilized on June 10, 1919. Two years later, it was reconstituted in the organized reserves at Minneapolis, Minn.
>
> In July 1942, the 88th Division was ordered to active service at Camp Gruber, Okla. It went overseas in December 1943, and fought gallantly in

[73]Office of the Command Historian, 88th RSC. The information quoted in the text was provided by members of the 88th RSC Public Affairs Office that sent the file via electronic mail (e-mail) on February 5, 1998. The entire e-mail transmission is included in the text.

the North Apennines, Po Valley and Rome-Arno campaigns. From the date of its landing in Naples until the end of hostilities, the 88th Division was one of the most battle-tested divisions, earning the nickname "Blue Devils" for their aggressive fighting style. The 88th suffered nearly 15,000 killed, wounded, or missing in action in around a year of hard combat, virtually replacing the whole division in that time. The 88th remained in Italy as part of the Trieste Occupation Forces. It was inactivated at Leghorn, Italy, in October 1947.

The 88th RSC now proudly bears the numeric designation and wears the shoulder insignia of this historic combat division

Forest Park, Illinois

Identification Information
Forest Park Armed Forces Reserve Center
Facility Identification Number: IL027/1730A
7402 West Roosevelt Road, Forest Park, Cook County, Illinois 60130-2587
Map reference: Berwyn, Ill. Quadrangle, USGS 7.5 Minute Series
UTM: Z16, 432245E, 4634660N
T39N R12E, Section 24
Present Owner/Occupant: The facility is owned by the U.S. Navy for use as an Armed Forces Reserve Center. It is used jointly as a training center for Army, Navy, Marine, and Coast Guard reserve units. The 88th RSC leases space in the east wing of the reserve center building and in an adjacent storage building for its training activities.

Setting/Landscape
The facility is located in an urban residential area near Forest Park, Illinois (Figure 110). It is landscaped with grass and trees. The 88th RSC leases space in two buildings and 4 acres of land from the Navy at the Forest Park AFRC.

Historical Context
Forest Park, located approximately 10 miles west of Chicago, grew out of population increase resulting from the industrial revolution in Chicago during the late nineteenth century. The Industrial Revolution was "a rapid major change in the economy...marked by the general introduction of power-driven machinery."[1] A technological advance attributed to the Industrial Revolution included the advancement of transportation systems both in and out of major American cities. In American society, the Industrial Revolution resulted in the definition of a new "middle class" population of professional managers and administrators who were neither company executives nor laborers.

The industrial boom attracted many European immigrants, many of whom settled within the city of Chicago to work as laborers in local industrial factories. By the late nineteenth century, the immigrant population living and working in Chicago had risen so drastically that the city's residential districts began to deteriorate. This decline caused the upper and middle class white-collar workers to move out of the city to a new type of residential area called "suburbs." Suburbs were designed to provide a clean and quiet living place for those who could afford to commute into the city for work. Given its proximity to Chicago Forest Park grew into a sizable suburb by the middle twentieth century. The development of industrial and transportation service in communities

[1] *Merriam-Webster's Collegiate Dictionary*, tenth edition, (Springfield, Massachusetts: Merriam-Webster, Incorporated), 1996, p. 596.

outside Chicago, caused more middle class workers to move to Forest Park since the end of World War II. Forest Park is still home to commuters working in the Chicago area.[2]

Forest Park AFRC was constructed in Forest Park in 1955 for use as a military training center.

Archaeological Resources
A record search at the Illinois State Historic Preservation Office revealed that three recorded archaeological sites (Ck-36, Ck-168, & Ck-312) are located within 3 miles of the facility.[3] These sites are not on land associated with Forest Park AFRC and are not affected by training activities conducted by facility personnel. Forest Park AFRC is located on land that has been extensively disturbed by the construction of the facility. An on-site assessment determined that there is a low probability of extant archaeological remains on the property.

Security
Security at Forest Park AFRC consists of chain link fencing topped with barbed wire surrounding the Organizational Maintenance Shop and military equipment parking area.

Architectural Information
The buildings at Forest Park AFRC are constructed with concrete blocks and have brick veneer. The Reserve Center building has experienced several renovations including the addition of building sections to the north, south, and east sides of the original structure. The buildings are in good condition but possess no significant architectural character or merit.

Reserve Center (IL027-001)
The Reserve Center functions as an administration office and drill facility for Army and Naval reserve units at Forest Park AFRC. The 88th RSC administration offices are located in the eastern wing of the building. Constructed in 1955, it is a two-story irregular-shaped building consisting of two rectangular building sections joined by a central corridor section, and a T-shaped wing on the east side of the building. An interior courtyard is formed between the four building sections. The building rests on a poured concrete foundation and has concrete block walls and a brick facade. The main entrance to the building is a recessed entry in the center of the north side of the building. A series of single-light fixed windows are located around the perimeter of the building. The

[2] *Illinois: A Descriptive and Historic Guide*, ed. Harry Hansen, (New York, New York: Hastings House Publishers), 1974, pp. 565-566.

[3] Elaine Bluhm, "Illinois State Museum Archaeological Survey: Forest Home Cemetery (Ck-36)," 1957, "Illinois Archaeological Survey: Ck-168," 1973, and B. Nowicki, "Illinois Archaeological Survey: Ck-312," n.d. The above documentation was found in archaeological site files at the Illinois State Historic Preservation Office in Springfield, Illinois.

windows on the north and south rectangular sections and the central joining sections are divided into a series of four-window sets with concrete pilasters between them (Figure 113). A flat roof covers the building.

Organizational Maintenance Shop (IL027-002)

The Organizational Maintenance Shop functions as a vehicle maintenance facility. Constructed in 1955, it is a one-story rectangular building that rests on a concrete foundation and has concrete block walls and brick facade (Figure 115). Four metal overhead retractable bay door are located on the west side of the building. Two metal pedestrian doors are located on the south wall, and third is located on the north wall. A pair of two light double hung windows with metal plain slip sills are located on the south side of the building. A low pitch gable roof covers the structure.

Eligibility

Forest Park AFRC does not meet the qualifications for nomination to the National Register of Historic Places, under Criteria A, B, C, or D, and thus is recommended not eligible to the National Register of Historic Places. A records search combined with an on-site investigation of the facility determined that there is no direct relationship between the facility and prehistoric or historic events (Criterion A), there is no association with significant persons involved in prehistoric or historic events (Criterion B), buildings on the facility are not architecturally or technologically significant (Criterion C), and the facility is unlikely to hold future research potential (Criterion D).

Recommendations

No additional review under Section 110 of the National Historic Preservation Act (NHPA) is recommended. However, additional review will be necessary if specific undertakings require compliance with Section 106 of the NHPA (36 CFR 800).

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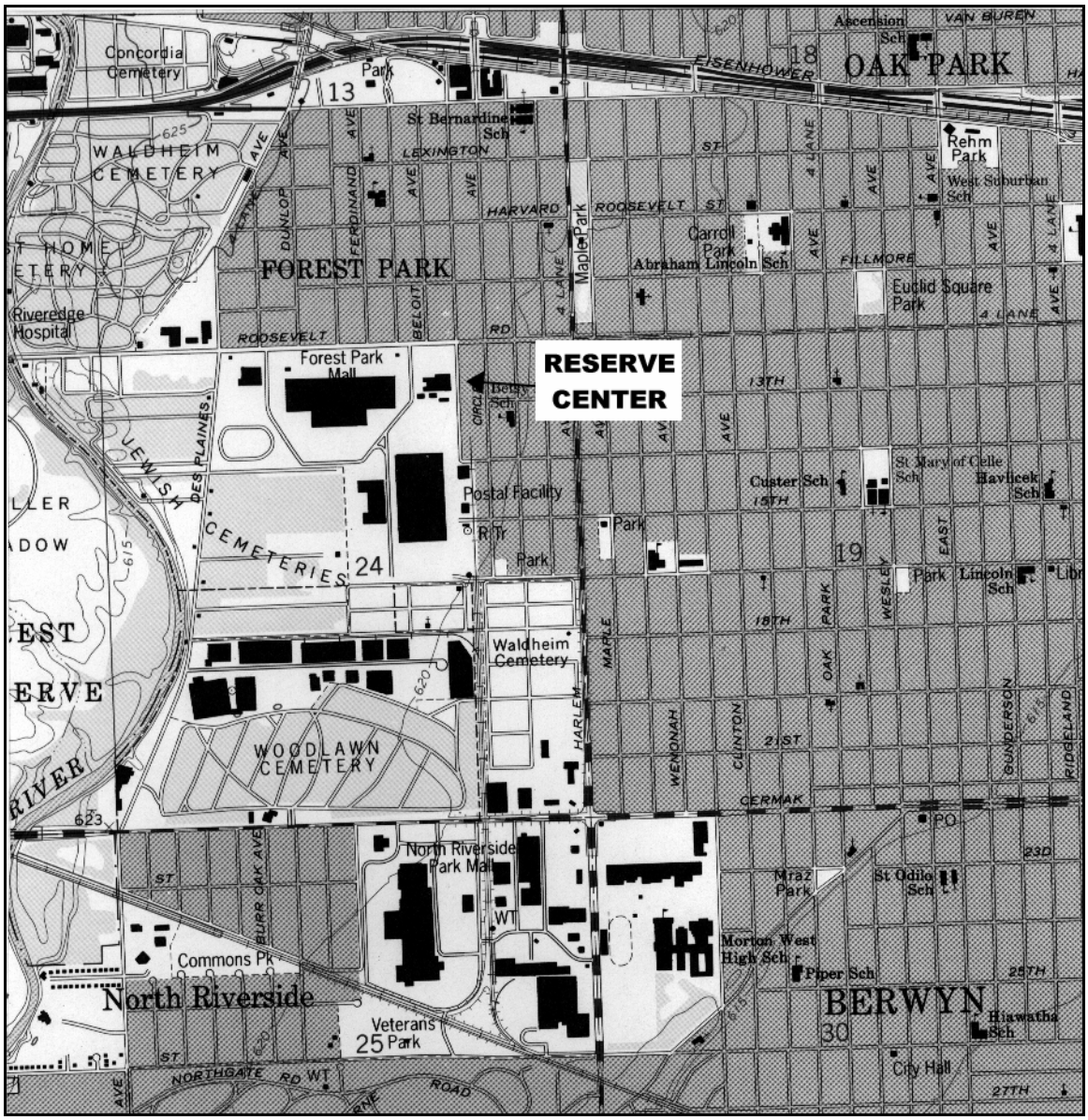

Berwyn, Ill. Quadrangle, USGS 7.5 Minute Series

Figure 110. Location of the Forest Park AFRC, Forest Park, IL.

Figure 111. Forest Park AFRC: Reserve Center, facing S.

Figure 112. Forest Park AFRC: Reserve Center, facing S.

Figure 113. Forest Park AFRC: Reserve Center, facing NE

Figure 114. Forest Park AFRC: Organizational Maintenance Shop facing SW.

Discussion

The Secretary of the Interior has issued *The Secretary of the Interior's Guidance for Federal Agency Historic Preservation Programs* (Guidelines) to be observed when complying with Section 110 of the NHPA, as amended. These guidelines establish 12 *Standards* for compliance with the requirements of Section 110. Those *Standards* pertinent to the **Illinois Section 110 Inventory** follow, with a description of **how this report aids in compliance** with each standard. (For complete discussion of all *Standards* and Guidelines see Appendix A)

Standard 1: *The agency carries out its programs and activities in ways that support the goals of the National Historic Preservation Act (110.D).* The NHPA was enacted to preserve and document historic and prehistoric resources in the United States. Before a resource can be preserved or documented, it must first be identified. This report aids the 88th Regional Support Command (RSC) in identifying the historic or prehistoric resources within the boundaries of each of their USARC facilities in the state of Illinois.

Standard 3: *The agency identifies, evaluates, and documents its historic properties and nominates them for listing in the National Register of Historic Places (110.a2).* This report is a comprehensive NRHP evaluation of 88th RSC facilities in the State of Illinois. Completed tasks included on-site assessment of 42 facilities with a total of 149 buildings, a historic sites records review at the Illinois SHPO, evaluation of SHPO historic records, and oral interviews with personnel connected with the facilities.

Standard 4: *The agency manages and maintains its historic properties in ways that preserve the properties' historic, archaeological, architectural, or cultural values (110.a.2.B).* This report complies with the *Standards* goal of completing a management inventory of historic properties controlled by federal agencies. Structures at two facilities were determined to be eligible for the nomination to the NRHP (COL P. Schulstad USARC in Arlington Heights, Illinois, and the Charles Melvin Price Support Center in Granite City, Illinois). These findings could not have been supported without a comprehensive inventory and evaluation of 88th RSC facilities. Although a comprehensive search of records at the Illinois SHPO found no 88th RSC properties (owned or leased) that have been determined eligible for nomination to the NRHP, an on-site evaluation of buildings located on 88th RSC facilities (owned or leased) identified eight buildings that meet Criteria A and/or C for nomination to the NRHP. In addition, Section 110 and Section 106 investigations have been completed at the Philip H. Sheridan Reserve Center, located in Highland Park, Illinois, to identify and record building that meet Criteria A and C for nomination to the NRHP. Three separate surveys were completed by members of the USACERL, HABS, and the Fort McCoy Archaeology Laboratory between 1980 and 1998.

Standard 6: *The agency consults with appropriate government agencies (local, state, and federal), Indian tribes, Native Hawaiian organizations, and the private sector regarding its preservation activities (110.a.2.D).* The Illinois SHPO was consulted before and during the project. Consultations with the SHPO ensured that both federal law and state guidelines were followed, and that the project addressed any concerns of the SHPO. The contextual history

included in this report follows the themes addressed in *Illinois Comprehensive Statewide Historic Preservation Plan*.[1]

Standard 8: *The agency documents historic properties before they are substantially altered or demolished and places the documentation in an appropriate repository for future use and research (110.b).* The 88th RSC facilities were photographed in both film and digital formats, and textually described within the report. Existing files of historic documentation were copied when possible, and placed in the supporting documentation files. Each source was cited in the bibliography. Supporting documentation and historical records for this inventory are permanently archived at the Fort McCoy Archaeology Laboratory, Wisconsin, and are available to the 88th RSC for inspection. Copies of this report are submitted to the Illinois SHPO, the Great Lakes Intertribal Alliance, and the Army Environmental Center, Aberdeen Proving Grounds, Maryland.

The remaining *Guidelines* (Standards 2, 5, 7, 9, 10, 11, and 12) are not directly addressed because of either their inapplicability or their being in excess of the scope of the report.

[1] *Illinois Comprehensive Statewide Historic Preservation Plan*, Springfield, Illinois: Illinois Historic Preservation Agency Division of Preservation Services, 1995, pp. 8-10.

Summary

This project inventoried and assessed 88th RSC Reserve Centers throughout the State of Illinois. A review of the Illinois Archaeological Site Inventory files was also conducted to determine if any previously identified archaeological sites were located within the U.S. Army Reserve Center facilities in Illinois. Existing environmental or security problems were noted and forwarded to the 88th RSC for action.

The Illinois Section 110 Inventory included 42 Reserve Center facilities with 149 buildings constructed over a time span exceeding fifty years. The Reserve Center buildings on most of these 42 facilities generally fit into three categories: the drill center, the direct support/area support facility, and recently constructed multi-use Reserve Centers. The Maintenance Shops in Illinois generally fit into two main building types: the standardized multi-bay garage with a shed roof, and the standardized multi-bay garage with a gable roof. Three unique architectural styles were encountered at the COL P. Schulstad USARC in Arlington Heights, Charles Melvin Price Support Center in Granite City, and Philip H. Sheridan Reserve Center in Highland Park that are representative of distinct patterns associated with different periods in American history. COL P. Schulstad USARC contains 12 buildings constructed as a NIKE Missile Site designed to protect the Chicago area during the Cold War Era. The buildings have not been modified since their original construction. They maintain their historic context, and they are representative of Cold War Era events. The Charles Melvin Price Support Center contains two World War II Era monitor style warehouses that were constructed as part of the Granite City Depot. The Granite City Depot had an important role in the mobilization of war goods during World War II. The Philip H. Sheridan Reserve Center contains 45-50 World War II Temporary style buildings constructed during a nationwide construction program in preparation for the United States entrance into the war.

This report fulfills the requirements of Section 110 of the National Historic Preservation Act of 1966. It also provides a historic baseline for all facilities owned or leased by the 88th RSC in Illinois. Individual facility managers will find this report helpful in managing the maintenance of their facilities, and in establishing compliance with Section 110 of the NHPA. This report also assists the Commander of the U.S. Army Reserve 88th RSC in his obligation for the preservation of historic properties owned or leased by the 88th RSC in compliance with *Section 110(a)(1), Section 110(a)(2), and Section 110(a)(2)(A)* of the NHPA. Further historical assessments are recommended when each facility reaches 50 years of age, or when specific undertakings require compliance with Section 106 of the NHPA (36 CFR 800).

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Appendix A:

The Secretary of the Interior's Standards and Guidelines
for
Federal Agency Historic Preservation Programs
April 1998*

* The text of Appendix A was copied directly from the National Park Service Internet site at http://www2.cr.nps.gov/pad/sec110.htm

The Secretary of the Interior's Standards and Guidelines
for
Federal Agency Historic Preservation Programs
Pursuant to the National Historic Preservation Act

Published in Final
Federal Register 24 April 1998

Introduction

Section 110 of the National Historic Preservation Act (16 U.S.C. 470)

Section 110 of the National Historic Preservation Act (hereinafter referred to as NHPA or the Act) sets out the broad historic preservation responsibilities of Federal agencies and is intended to ensure that historic preservation is fully integrated into the ongoing programs of all Federal agencies. This intent was first put forth in the preamble to the National Historic Preservation Act upon its initial adoption in 1966. When the Act was amended in 1980, section 110 was added to expand and make more explicit the statute's statement of Federal agency responsibility for identifying and protecting historic properties and avoiding unnecessary damage to them. Section 110 also charges each Federal agency with the affirmative responsibility for considering projects and programs that further the purposes of the NHPA, and it declares that the costs of preservation activities are eligible project costs in all undertakings conducted or assisted by a Federal agency.

The 1992 amendments to the Act further strengthened the provisions of section 110. Under the law, the head of each Federal agency must do several things. First, he or she must assume responsibility for the preservation of historic properties owned or controlled by the agency. Each Federal agency must establish a preservation program for the identification, evaluation, nomination to the National Register, and protection of historic properties. Each Federal agency must consult with the Secretary of the Interior (acting through the Director of the National Park Service) in establishing its preservation programs. Each Federal agency must, to the maximum extent feasible, use historic properties available to it in carrying out its responsibilities. The 1992 additions to section 110 also set out some specific benchmarks for Federal agency preservation programs, including:

(a) historic properties under the jurisdiction or control of the agency are to be managed and maintained in a way that considers the preservation of their historic, archeological, architectural, and cultural values;

(b) historic properties not under agency jurisdiction or control but potentially affected by agency actions are to be fully considered in agency planning;

(c) agency preservation-related activities are to be carried out in consultation with other Federal, State, and local agencies, Indian tribes, Native Hawaiian organizations, and the private sector;

(d) agency procedures for compliance with section 106 of the Act are to be consistent with regulations issued by the Advisory Council on Historic Preservation; and

(e) an agency may not grant assistance or a license or permit to an applicant who damages or destroys historic property with the intent of avoiding the requirements of section 106, unless specific circumstances warrant such assistance.

The complete text of section 110 is included as Appendix A to these Guidelines. Also included as Appendix B are sections 1 and 2 of the NHPA that set out the purposes and policies of that Act. Anyone unfamiliar with the purposes of the Act or with the specific provisions of section 110 as amended in 1992 should refer to those texts in addition to the revised Guidelines.

Section 110 Guidelines - Background and Format

The Section 110 Guidelines were first published in the Federal Register on February 17, 1988 (53 FR 4727-46). This second edition has been revised to incorporate the 1992 amendments to the Act and to make the Guidelines easier to use.

These Guidelines neither replace nor incorporate other statutory authorities, regulations, or *The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation*. These Guidelines show how Federal agencies should address these various other requirements and guidelines in carrying out their responsibilities under the Act. The head of each Federal agency, acting through its Preservation Officer, should become familiar with all the statutes, regulations, and guidelines that bear upon the agency historic preservation program required by section 110.

This second edition of the Section 110 Guidelines follows a format significantly different from that of its predecessor. The first edition followed the sequence of the statute and provided detailed guidance for each subsection of section 110. The current edition instead takes the form of standards and guidelines that will assist each Federal agency in establishing a preservation program that meets the various requirements of section 110.

Agency Use of These Standards and Guidelines for Evaluating Their Programs

The preservation and use of historic properties and their careful consideration in agency planning and decision-making are in the public interest, are consistent with the declaration of policy set forth in the NHPA, and must be a fundamental part of the mission of any Federal agency. These standards and guidelines are intended to assist Federal agency personnel and the agency head in carrying out their policies, programs,

and projects in a manner consistent with the requirements and purposes of section 110 of the NHPA, related statutory authorities, and existing regulations and guidance.

An agency should use these standards and guidelines, and consultation with the Secretary and others, to ensure that the basic individual components of a preservation program called for in section 110 are in place. The preservation program should also be fully integrated into both the general and specific operating procedures of the agency. The agency's preservation program should interact with the agency's management systems to ensure that historic preservation issues are considered in decision-making. The program should try to ensure that the agency's officials, employees, contractors, and other responsible parties have sufficient budgetary and personnel resources needed to identify, evaluate, nominate, manage, and use the historic properties under agency care or affected by agency actions.

Consultation and Technical Assistance

Section 110(a)(2) requires that agency preservation programs be established "in consultation with the Secretary." Federal agencies seeking such consultation should contact the Associate Director, Cultural Resource Stewardship and Partnerships, National Park Service, Department of the Interior, 1849 C Street, NW, Washington, D.C. 20240. Consultation with the Secretary regarding an agency's program will be based upon the degree to which that program is consistent with the Act and with the standards and guidelines that follow. Upon request, the Secretary will also provide informal technical assistance to any agency on questions concerning the establishment or improvement of the agency's historic preservation program. Requests for technical assistance should also be addressed to the Associate Director, Cultural Resources Stewardship and Partnerships, National Park Service.

Section 202(a)(6) of the Act provides that the Advisory Council may review Federal agency preservation programs and recommend improvements to such agencies. Where the Council carries out such a review, it will base any recommendations on its own regulations and policy statements, and on the standards and guidelines that follow.

The Secretary of the Interior's Standards for Federal Agency Historic Preservation Programs

STANDARD 1. Each Federal agency establishes and maintains a historic preservation program that is coordinated by a qualified Preservation Officer, and that is consistent with and seeks to advance the purposes of the National Historic Preservation Act. The head of each Federal agency is responsible for the preservation of historic properties owned or controlled by the agency. [Sec. 110(a)(1), Sec. 110(a)(2), Sec. 110(c), and Sec. 110(d)].

STANDARD 2. An agency provides for the timely identification and evaluation of historic properties under agency jurisdiction or control and/or subject to effect by agency

actions. [Sec. 110(a)(2)(A), and Sec. 112]

STANDARD 3. An agency nominates historic properties under the agency's jurisdiction or control to the National Register of Historic Places. [Sec. 110(a)(2)(A)].

STANDARD 4. An agency gives historic properties full consideration when planning or considering approval of any action that might affect such properties. [Sec.110(a)(2)((B),(C), and (E), Sec. 110(f) and Sec. 402(16 U.S.C. 470a-2)]

STANDARD 5. An agency consults with knowledgeable and concerned parties outside the agency about its historic preservation related activities. [Sec. 110(a)(2)(D)].

STANDARD 6. An agency manages and maintains historic properties under its jurisdiction or control in a manner that considers the preservation of their historic, architectural, archeological, and cultural values. [Sec. 110(a)(1), Sec. 110 (a)(2)(B), Sec. 110(b)].

STANDARD 7. An agency gives priority to the use of historic properties to carry out agency missions.[Sec. 110(a)(1)].
For a cross-reference of each standard to the parts of 110 see Appendix A.

The Secretary's Standards and Guidelines for Federal Agency Historic Preservation Programs

These guidelines have no regulatory effect. Instead, they are the Secretary's formal guidance to each Federal agency on meeting the requirements of section 110 of the Act. The following guidelines provide information on the steps an agency must take to establish and maintain a preservation program that meets each of the applicable Secretary's Standards.

STANDARD 1. Each Federal agency establishes and maintains a historic preservation program that is coordinated by a qualified Preservation Officer, and that is consistent with and seeks to advance the purposes of the National Historic Preservation Act. The head of each Federal agency is responsible for the preservation of historic properties owned or controlled by the agency.

[Sec. 110(a)(1),

Sec. 110(a)(2), Sec. 110(c), and Sec. 110(d)].

GUIDELINES:

Agency Programs.

(a) An agency historic preservation program must include specific provisions to ensure, to the extent feasible given the agency's mission and mandates, the full consideration and appropriate preservation of historic properties under the agency's jurisdiction or control and of other historic properties affected by the agency's actions. [Sec. 110(a)(2)(B)]

(b) An agency historic preservation program is embodied in agency-wide policies, procedures, and activities. An agency historic preservation program is the vehicle for ensuring that the agency's mission-driven activities are carried out in a manner consistent with the purposes of National Historic Preservation Act. The program is not an activity carried out separate and apart from the activities mandated by the agency mission.

(c) The identification, evaluation, and preservation of historic properties must be the fundamental goal of any Federal agency preservation program. [Sec. 110(a)(2)]. However, an agency's ability to achieve this goal is affected by its own mission and by whether it owns and manages historic property:

(1) In those cases where historic property is under the jurisdiction and control of the agency, the agency has an affirmative responsibility to manage and maintain such property in a manner that takes into account the property's historic significance. In addition, the Federal agency has an affirmative responsibility to seek and use historic properties to the maximum extent feasible in carrying out its activities. [Sec. 110(a)(1) and Sec. 110(a)(2)(B)]

(2) Where an agency carries out its mission through the award of grant funds for specific activities, and where those activities will inevitably affect historic properties, the agency should, to the maximum extent feasible, design its programs to encourage grantees to retain and make appropriate use of historic properties in carrying out grant-funded activities.

(3) Where an agency's historic preservation activities are limited to considering the impact of federally licensed, or permitted activities initiated by non-federal entities on non-federally owned historic properties, the agency's preservation responsibility may be more narrowly cast as seeking to avoid or minimize any adverse effects to such properties that might otherwise occur as a result of such activities.

(d) An agency historic preservation program must be established in consultation with the Secretary of the Interior. [Sec. 110(a)(2)]. Consultation with the Secretary regarding an agency's historic preservation program will be based on these Standards and Guidelines.

(e) The agency historic preservation program must be an effective and efficient vehicle through which the agency head can meet his or her statutory responsibilities for the preservation of historic properties. [Sec. 110(a)(2)]. Compliance with responsibilities pursuant to section 106 of the Act is an integral part of an agency's overall historic preservation program. That program, however, is not simply intended to meet agency section 106 responsibilities to "take into account" the effects of its undertakings on historic properties. The program described in section 110(a)(2) is an agency-wide approach to achieving the goals set forth in the NHPA. It should be fully integrated into both the general and specific operating procedures of the agency.

(f) The preservation program should interact with the agency's budgetary and financial management systems to:

(1) ensure that historic preservation issues are considered before budgetary decisions are made that foreclose historic preservation options, and

(2) ensure that the historic preservation program itself is adequately funded to enable it to perform its functions.

(g) To avoid needless duplication of effort and increased workload in developing and implementing its program, the agency should carefully review and consider using those existing policies, procedures, approaches and standards that are government-wide, i.e., applicable to all preservation programs, and develop only those that need to be agency-specific. Preservation programs can be expected to differ based on the extent to which:

(1) agencies manage, own, or exercise control over historic properties;

(2) historic properties play a significant role in agency activities through active use (e.g.,

for recreation, interpretation, public access/use, transportation, office space);

(3) agencies are engaged in public education/interpretation, or multiple-use resource management; or,

(4) agencies are in a position to influence actions affecting historic properties.

(h) Agency funding decisions for historic preservation work should be based on a determination of the prudent level of investment for a specific undertaking. That determination, in turn, should acknowledge that preservation costs are eligible project costs on an equal footing with other planning, design, construction, environmental protection, and mitigation needs and requirements. Similarly, the cost of caring for, documenting, and otherwise preserving artifacts, records, and remains related to historic properties is an eligible project cost. [Sec. 110(g)]. The agency may contract with a State Historic Preservation Officer (SHPO), another Federal agency, or other public or private organization as appropriate to assist it in carrying out the agency's historic preservation work.

(i) Where preservation activity is a condition of obtaining a Federal license or permit, or Federal approval, or is subject to a delegation of authority by a Federal agency, the recipient may be expected to incur reasonable costs. [Sec. 110(g)]. Because it is difficult to establish fair standards that would be applicable in all cases, "reasonable costs" should not be determined using inflexible criteria, such as a flat fee or a standard percentage of a budget, but rather should be determined on a case-by-case basis.

(j) An efficient preservation program should allow the agency to do more than simply meet its section 110 and 106 responsibilities. In order to eliminate duplicative effort and assist in agency planning, the preservation program should be coordinated with actions the agency takes to meet the requirements of other relevant and related Federal statutes (e.g., NAGPRA, the Archaeological Resources Protection Act (ARPA), the American Indian Religious Freedom Act (AIRFA), and the National Environmental Policy Act (NEPA)) in a comprehensive, anticipatory manner.

Preservation Officer

(k) The agency position responsible for coordinating the preservation program is the Preservation Officer required of all agencies by section 110(c) of the NHPA (unless specifically exempted under section 214 of the NHPA). A Preservation Officer may have other agency duties in addition to historic preservation coordination, depending on the magnitude and degree of the agency's historic preservation activities and responsibilities. [Sec. 110(c)].

(l) Agency officials designated as Preservation Officers should have substantial experience administering Federal historic preservation activities and/or specifically assigned staff under their supervision who have such experience. Section 112 of the

NHPA requires that agency personnel or contractors responsible for historic resources, meet qualification standards established by the Office of Personnel Management in consultation with the Secretary.

(m) Each Preservation Officer should have sufficient agency-wide authority, staff, and other resources to carry out section 110 responsibilities effectively. Agency administrative systems should ensure that the Preservation Officer can review and comment meaningfully on all agency programs and activities and interact with the agency's planning and project management systems in such a way as to influence decisions potentially affecting historic resources. The Preservation Officer should have sufficient authority and the agency should have sufficient control systems to ensure that decisions made pursuant to section 106 and section 110 about the treatment of such resources are in fact carried out.

(n) In agencies where significant preservation responsibilities are delegated to regional or field offices, or Federal facilities or installations, the agency head should also appoint qualified preservation officials at those levels. Such officials should ensure that their actions and conduct of historic preservation activities are coordinated with, and consistent with, those of the central office Preservation Officer for that agency.

(o) The agency should ensure that its personnel management system identifies those personnel with preservation responsibilities, includes such responsibilities in their position descriptions and performance elements and standards, and appropriately rewards high-quality performance. In addition, the agency should provide for ongoing training in historic preservation for all agency personnel with preservation responsibilities.

STANDARD 2. An agency provides for the timely identification and evaluation of historic properties under agency jurisdiction or control and/or subject to effect by agency actions. [Sec. 110(a)(2)(A) and Sec. 112].

GUIDELINES:

(a) Identification and evaluation of historic properties are critical steps in their long-term management, as well as in project-specific planning by Federal agencies. Normally, an agency must identify the full range of historic properties that may be affected by an agency program or activity, including, but not limited to, historic buildings and structures, archaeological sites, traditional cultural properties, designed and other cultural landscapes, historic linear features such as roads and trails, historic objects such as signs and street furniture, and historic districts comprising cohesive groups of such properties. [Sec. 110(a)(2)(A)]. Effective management of historic properties requires that they first be identified and evaluated. The level of identification needed can vary depending on the nature of the property or property type, the nature of the agency's management authority, and the nature of the agency's possible effects on the property.

(b) The Secretary of the Interior has issued standards and guidelines for identification and

evaluation of historic properties (in *The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* [48 FR 44720-44726]), which should be used to ensure that the preservation program's identification and evaluation procedures will be adequate and appropriate. Identification and evaluation of historic properties must be conducted by professionally qualified individuals. [Sec. 101(g), Sec. 101(h), and Sec. 112]

(c) Agency efforts to identify and evaluate historic properties should include early consultation with the State Historic Preservation Officer, or the Tribal Preservation Officer as appropriate, to ensure that such efforts benefit from and build effectively upon any relevant data already included in the State's or Tribe's inventory. For information on consulting with an Indian tribe that has assumed State Historic Preservation Officer functions pursuant to section 101(d)(2) of the Act, see Standard 6, Guideline 7(b). Agencies are encouraged to share with the appropriate SHPO and Tribal Preservation Officer, information about historic properties gathered through their identification and evaluation activities.

(d) Where an agency is planning an action that is not aimed at specific land areas (for example, a nationwide program of assistance to local governments, farmers, or low-income homeowners), and the identification of specific historic properties subject to effect is not feasible, the agency should nevertheless consider what types of historic properties may be affected directly or indirectly, and consider strategies that will minimize adverse effect and maximize beneficial effect on those properties. Such consideration must be carried out in consultation with SHPOs, Tribal Preservation Officers, local governments, Indian tribes, Native Hawaiian organizations, and the interested public as appropriate (110(a)(2)(E)(ii)).

(e) Where an agency is planning an action that could affect historic properties directly or indirectly (e.g., a land-use or construction project; a project that could change the way land or buildings are used or developed, or alter the social, cultural, or economic character of a community; and any program of assistance to or the issuance of a license for such activities), identification and evaluation should take place at the earliest possible stage of planning, and be coordinated with the earliest phases of any environmental review carried out under the National Environmental Policy Act and/or related authorities. Identification and evaluation efforts must be carried out in consultation with SHPOs, Tribal Preservation Officers, local governments, Indian tribes, Native Hawaiian organizations, and the interested public as appropriate (110(a)(2)(E)(ii).

(f) Where identification and evaluation are carried out as a part of long-term planning, it may be appropriate to conduct background studies to develop a "predictive model" of historic property distributions that can be used in evaluating the likely effects of particular land management projects as the program proceeds. In some cases, depending on management needs for a particular project or activity, it may not be necessary to identify exhaustively every historic property or historic property type. It may also be appropriate and cost-effective to carry out the work in phases organized around particular

property types or other such coherent units. For example, if historic architecture is of greater immediate concern than Native American traditional properties or archeological sites, a survey of architecture alone may be appropriate during a particular budget year, with archeological survey and ethnographic studies deferred until later. However, identification is not complete until all historic properties have been identified. Such work should be developed in consultation with SHPOs, Tribal Preservation Officers, local governments, Indian tribes and Native Hawaiian organizations as appropriate, and other parties that may have knowledge of, or interest in, such properties.

(g) Identification of historic properties is an ongoing process. As time passes, events occur, or scholarly and public thinking about historical significance changes. Therefore, even when an area has been completely surveyed for historic properties of all types it may require re-investigation if many years have passed since the survey was completed. Such follow-up studies should be based upon previously obtained information, may focus upon filling information gaps, and should consider re-evaluation of properties based upon new information or changed historical understanding.

STANDARD 3. An agency nominates historic properties under the agency's jurisdiction or control to the National Register of Historic Places. [Sec. 110(a)(2)(A)].

GUIDELINES

(a) The first step in designing a program for the nomination of historic properties is to determine what role nomination will play in the agency's overall preservation program. For example:

(1) An agency that controls relatively few historic properties may find it realistic to nominate them all to the National Register, and then manage them accordingly. An agency with a great many historic properties will need to establish explicit priorities for identifying, nominating, and preserving properties.

(2) Placement on the National Register may help justify budgeting funds for preservation or management of a historic property, so agencies may want to give priority to nominating properties as a first step in upgrading their maintenance and providing for their continued active service in carrying out agency programs. Further, development of National Register-level documentation provides information on the property that will assist the agency in its subsequent property management decisions.

(3) An agency with an excellent internal program for identifying and preserving historic properties may find that other determinants, such as whether a property is to be managed and interpreted as a site of public interest, are more useful in establishing nomination priorities.

(4) An agency that regularly transfers property out of Federal ownership may find it useful to give higher priority to nominating properties to be transferred, at the expense of

other properties, in those cases where placement on the National Register may make preservation more likely once a property is no longer under Federal management.

(b) Beyond serving the agency's own internal management needs, the National Register is the nation's formal repository of information on historic properties. To the extent that the National Register is incomplete, its usefulness as a planning and educational tool is diminished. Consequently, an agency should generally strive to nominate the historic properties under its jurisdiction or control to the National Register.

(c) The Secretary of the Interior already has in place Standards and Guidelines for registration of historic properties (in *The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44726-44728) that details the process that should be followed in formally recognizing historic properties as significant. These Standards and Guidelines, along with the National Register Bulletin #16, *Guidelines for Completing National Register Forms*, provide guidance on completing National Register nomination forms. National Register regulations (36 CFR 60) set forth the nomination process.

STANDARD 4. An agency gives historic properties full consideration when planning or considering approval of any action that might affect such properties. [Sec. 110(a)(2)(B),(C), and (E), and Sec. 402 (16 U.S.C. 470a-2)].

GUIDELINES:

All Historic Properties

(a) Each Federal agency has an affirmative responsibility under section 110 of the National Historic Preservation Act to consider its activities' effects on our nation's historic properties. This responsibility extends to a systematic consideration of properties not under the jurisdiction or control of the agency, but potentially affected by agency actions. [Sec. 110(a)(2)(C)].

(b) Full consideration of historic properties includes assessment of the widest range of preservation alternatives early in program or project planning, coordinated to the extent feasible with other kinds of required planning and environmental review.

(c) Full consideration of historic properties includes consideration of all kinds of effects on those properties: direct effects, indirect or secondary effects, and cumulative effects. Effects may be visual, audible, or atmospheric. Beyond the effects from physical alteration of the resource, itself, effects on historic properties may result from changes in such things as local or regional traffic patterns, land use, and living patterns.

(d) Full consideration of historic properties includes an obligation to solicit and consider the views of others in planning and carrying out agency preservation activities (See Standard 5 on Consultation). [Sec. 110(a)(2)(D)].

(e) Full consideration of historic properties must include development of and adherence to agency procedures for section 106 review that are consistent with the regulations of the Advisory Council on Historic Preservation, and, as necessary, with certain provisions of the Native American Graves Protection and Repatriation Act. [Sec. 110(a)(2)(E)(i), (ii), and (iii)].

(f) The term "consistent with the regulations issued by the Council" as used in the NHPA means that an agency's procedures provide for the identification and evaluation of historic properties, the assessment of project and program effects on them, and consultation (specifically including consultation with the State Historic Preservation Officer, Tribal Preservation Officer or other Native American groups where appropriate, and other affected parties) to determine appropriate treatment or mitigation. Such procedures must either adhere to and expand upon the process set out in 36 CFR 800, or include modifications or alternatives to that process that have been reviewed and approved by the Council. Implementation of procedures consistent with the Council's regulations means that those procedures are carried out in a manner consistent with the Guidelines for Standard 1 above.

(g) Full consideration of historic properties includes development of procedures to identify, discourage, and guard against "anticipatory demolition" of a historic property by applicants for Federal assistance or license. Agency procedures should include a system for early warning to applicants and potential applicants that anticipatory demolition of a historic property may result in the loss of Federal assistance, license or permit, or approval for a proposed undertaking. When an historic property is destroyed or irreparably harmed with the express purpose of circumventing or preordaining the outcome of section 106 review (e.g., demolition or removal of all or part of the property) prior to application for Federal funding, a Federal license, permit, or loan guarantee, the agency considering that application is required by section 110(k) to withhold the assistance sought, unless the agency, after consultation with the Council, determines and documents that "circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant." [Sec. 110(k)].

(h) Agency preservation procedures for section 106 compliance must provide for the disposition of Native American, Alaskan, and Hawaiian human remains and cultural items from Federal or tribal land consistent with section 3(c) of the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA).

[Sec. 110(2)(E)(iii)]. The applicable NAGPRA sections on disposition [sections 3(c)(3) and 3(a) & (b)] vest "ownership and right of control" according to a hierarchy of relationships to the cultural items. See NAGPRA (25 U.S.C. 3002(c)) and the Department of Interior's regulations implementing this Act (43 CFR Part 10) for detailed information.

(i) In those cases where consultation pursuant to section 106 does not produce a

Memorandum of Agreement (MOA) governing how an agency will "take into account" the adverse effects of its undertaking on historic properties, section 110(l) requires that the final decision(s), reached after consideration of the Council's comments, be made by the agency head and not by any subordinate official, that it be explicit and informed, and that it be a part of the public record available for review. [Sec. 110(l)].

National Historic Landmarks

(j) National Historic Landmarks (NHL) are designated by the Secretary under the authority of the Historic Sites Act of 1935, which authorizes the Secretary to identify historic and archaeological sites, buildings, and objects which "possess exceptional value as commemorating or illustrating the history of the United States." Section 110(f) of the NHPA requires that Federal agencies exercise a higher standard of care when considering undertakings that may directly and adversely affect NHLs. The law requires that agencies, "to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark." In those cases when an agency's undertaking directly and adversely affects an NHL, or when Federal permits, licenses, grants, and other programs and projects under its jurisdiction or carried out by a state or local government pursuant to a Federal delegation or approval so affect an NHL, the agency should consider all prudent and feasible alternatives to avoid an adverse effect on the NHL. [Sec. 110(a)(2)(B) and Sec. 110(f)].

(k) Where such alternatives appear to require undue cost or to compromise the undertaking's goals and objectives, the agency must balance those goals and objectives with the intent of section 110(f). In doing so, the agency should consider:

(1) the magnitude of the undertaking's harm to the historical, archaeological and cultural qualities of the NHL;

(2) the public interest in the NHL and in the undertaking as proposed, and,

(3) the effect a mitigation action would have on meeting the goals and objectives of the undertaking.

(l) The Advisory Council's regulations implementing section 106 include specific provisions that also implement section 110(f). These regulations require that the Council must be included in any consultation following a determination by the Federal agency that a Federal or federally assisted undertaking will have an adverse effect on an NHL. The Council must notify the Secretary and may request the Secretary to provide a report to the Council detailing the significance of the affected NHL under section 213 of the NHPA and recommending measures to avoid, minimize or mitigate adverse effects. The Council shall report the outcome of the section 106 process to the Secretary and the head of the agency responsible for the undertaking.

Foreign Historic Properties

(m) In accordance with section 402 of the National Historic Preservation Act Amendments of 1980

(P.L. 96-515) and with Executive Order 12114 (issued January 4, 1979), the agency's preservation program should ensure that, when carrying out work in other countries, the agency will consider the effects of such actions on historic properties, including World Heritage Sites and properties that are eligible for inclusion in the host country's equivalent of the National Register.

(n) The agency's preservation program should ensure that those agency officials, contractors, and other parties responsible for implementing section 402 of the NHPA (16 U.S.C. 470a-z) and Executive Order 12114 have access to personnel with appropriate levels and kinds of professional expertise in historic preservation to identify and assist in the management of such properties.

(o) Efforts to identify and consider effects on historic properties in other countries should be carried out in consultation with the host country's historic preservation authorities, with affected communities and groups, and with relevant professional organizations.

STANDARD 5. An agency consults with knowledgeable and concerned parties outside the agency about its historic preservation related activities. [Sections 110(a)(2)(D) and (E)(ii)].

GUIDELINES:

Consultation General Principles

(a) Consultation means the process of seeking, discussing, and considering the views of others, and, where feasible, seeking agreement with them on how historic properties should be identified, considered, and managed. Consultation is built upon the exchange of ideas, not simply providing information. Whether consulting on a specific project or on broader agency programs, the agency should:

(1) make its interests and constraints clear at the beginning;

(2) make clear any rules, processes, or schedules applicable to the consultation;

(3) acknowledge others' interests and seek to understand them;

(4) develop and consider a full range of options; and,

(5) try to identify solutions that will leave all parties satisfied.

(b) Consultation should include broad efforts to maintain ongoing communication with

all those public and private entities that are interested in or affected by the agency's activities and should not be limited to the consideration of specific projects.

(c) Consultation should be undertaken early in the planning stage of any Federal action that might affect historic properties. Although time limits may be necessary on specific transactions carried out in the course of consultation (e.g., the time allowed to respond to an inquiry), there should be no hard-and-fast time limit on consultation overall. Consultation on a specific undertaking should proceed until agreement is reached or until it becomes clear to the agency that agreement cannot be reached.

(d) While specific consultation requirements and procedures will vary among agencies depending on their missions and programs, the nature of historic properties that might be affected, and other factors, consultation should always include all affected parties. Section 110(a)(2)(D) specifies that an agency's preservation-related activities be carried out in consultation with other Federal, State, and local agencies, Indian tribes, Native Hawaiian organizations, and the private sector. Section 110(a)(2)(E)(ii) requires an agency's procedures for compliance with section 106 to provide a process for the identification and evaluation of historic properties and the development and implementation of agreements, in consultation with SHPOs, local governments, Indian tribes, Native Hawaiian organizations, and the interested public, as appropriate. In addition to having a formal role under the Act, SHPOs and Tribal Preservation Officers can assist in identifying other parties with interests, as well as sources of information.

(e) The agency needs to inform other agencies, organizations, and the public in a timely manner about its projects and programs, and about the possibility of impacts on historic resources of interest to them. However, the agency cannot force a group to express its views, or participate in the consultation. These groups also bear a responsibility, once they have been made aware that a Federal agency is interested in their views, to provide them in a suitable format and in a timely fashion.

(f) Agency efforts to inform the public about its projects and programs and about the possibility of impacts on historic resources must be carried out in a manner consistent with the provisions of section 304 of the Act, which calls for withholding from disclosure to the public information on the location, character, or ownership of a historic resource where such disclosure may:

(1) cause a significant invasion of privacy;

(2) risk harm to the historic resource; or,

(3) impede the use of a traditional religious site by practitioners.

Consultation with Native Americans

(g) Inclusion of Indian tribes and Native Hawaiian organizations in the consultation

process is imperative and is specifically mandated by the Act [Sec. 110(a)(2)(D)]:

(1) properties with traditional religious and cultural importance to Native American and Native Hawaiian groups may be eligible for the National Register; such properties must be considered, and the appropriate Native American and/or Native Hawaiian groups must be consulted in project and program planning through the section 106 review process (see NHPA Sec. 101(d)(6)(A&B);

(2) Section 101(d)(2) of the Act provides that Indian tribes may assume State Historic Preservation Officer responsibilities on tribal lands, when approved to do so by the Secretary of the Interior. In those cases where a tribe has assumed such responsibilities on tribal lands, a Federal agency must consult with the tribe instead of the SHPO, in order to meet agency responsibilities for consultation pursuant to the Act;

(3) the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) establishes consultation requirements (43 CFR 10) that may affect or be affected by consultation pursuant to section 106 of the NHPA concerning activities on Federal and Tribal lands that could affect human remains and cultural items. The Archeological Resources Protection Act of 1979 and its uniform regulations also require consultation with tribes and provide a formal process of notification (16 U.S.C. 470cc-dd);

(4) Section 110 requires that an agency's efforts to comply with section 106 must also be consistent with the requirements of section 3(c) of NAGPRA concerning the disposition of human remains and Native American cultural items from Federal and tribal lands.

(h) Where those consulted do not routinely or customarily participate in traditional governmental means of consultation (e.g., through public meetings, exchanges of correspondence), reasonable efforts should be made to accommodate their cultural values and modes of communication.

STANDARD 6. An agency manages and maintains historic properties under its jurisdiction or control in a manner that considers the preservation of their historic, architectural, archeological, and cultural values. [Sec. 110(a)(1), Sec. 110 (a)(2)(B), Sec. 110(b)].

GUIDELINES:

(a) Historic properties include any prehistoric or historic districts, sites, buildings, structures, or objects listed in, or eligible for inclusion in, the National Register of Historic Places, including artifacts, records, and material remains related to such properties. To the extent feasible, as part of its property management program, the agency should endeavor to retain historic buildings and structures in their traditional uses and to maintain significant archeological sites and landscapes in their undisturbed condition. [See *Secretary of the Interior's Standards for the Treatment of Historic Properties* (36 CFR 68), and *Guidelines for Preserving, Rehabilitating, Restoring &*

Reconstructing Historic Buildings and *Guidelines for the Treatment of Historic Landscapes*.]

(b) Where it is no longer feasible to continue the traditional use of a historic structure or to maintain a significant archeological site or cultural landscape in undisturbed condition, the agency should consider an adaptive use that is compatible with the historic property. Adaptive use proposals must be reviewed in accordance with section 106 of the Act. The agency should consider as wide a range of adaptive use options as is feasible given its own management needs, cost factors, and the needs of preservation. A use that severely damages or destroys a historic property is not consistent with the section 110(a)(1) requirement to preserve historic properties in accordance with the professional standards established pursuant to section 101(g) of the Act.

(c) Where modification of a historic property is required to allow it to meet contemporary needs and requirements, the agency should ensure that *The Secretary of the Interior's Standards for the Treatment of Historic Properties* and its accompanying guidelines are followed. Agencies are authorized and directed by section 110(a)(1) to carry out (or cause a lessee or concessioner to carry out) whatever preservation work is necessary (e.g., rehabilitation or documentation) in preparation for use. Proposals to modify historic properties must be reviewed in accordance with section 106 of the Act. When such modification requires disturbance of the earth, and it is not feasible to avoid and protect significant archeological resources, the archeological resources should be excavated and the data recovered. Excavations should focus on areas that will be disturbed during the project, but overall excavation efforts should be governed by a research design intended to recover significant data contained in the site. Doing so may require excavation of adjacent deposits of the site. All archeological work should conform to the Secretary's "Standards for Archeological Documentation." Under sections 101(a)(7)(A) and 110, agencies are also responsible for ensuring that prehistoric and historic material remains and associated records recovered in conjunction with projects and programs are deposited in repositories capable of proving adequate long-term curatorial services (see 36 CFR 79). Additional requirements for the management and ongoing care of archeological resources may be found in the Antiquities Act (16 U.S.C. 431-433) and the Archeological Resource Protection Act (16 U.S.C. 470aa-mm), and their attendant regulations.

(d) Until and unless decisions are made to manage them in some other manner, historic properties, and properties not yet formally evaluated that may meet the criteria for inclusion in the National Register, should be maintained so that their preservation is ensured through adherence to *The Secretary of the Interior's Standards for the Treatment of Historic Properties*.

(e) The relative cost of various management strategies for a historic structure, ranging from full restoration, to rehabilitation and adaptive use to demolition and replacement with a modern building, should be carefully and objectively considered, with reference to the pertinent requirements of Executive Order 11912, as amended, to the pertinent criteria established in OMB Circular A-94, and to the pertinent principles and methods

set forth in the National Bureau of Standards Life-Cycle Costing Manual (NBS Handbook 135).

(f) Applicable long and short-term costs should be carefully considered as part of any cost analysis. It is often the case that the short-term costs of preserving and rehabilitating a historic structure are balanced by long-term savings in maintenance or replacement; on the other hand, failure to perform needed cyclic maintenance may shorten the life of a building and decrease the value of investment in its rehabilitation.

(g) Where it is not feasible to maintain a historic property, or to rehabilitate it for contemporary use, the agency may elect to modify it in ways that are inconsistent with the Secretary's "Standards for Rehabilitation," allow it to deteriorate, or demolish it. However, the decision to act or not act to preserve and maintain historic properties should be an explicit one, reached following appropriate consultation within the section 106 review process and in relation to other management needs.

(h) Where the agency determines in accordance with section 106 that maintaining or rehabilitating a historic property for contemporary use in accordance with the Secretary's Standards is not feasible, the agency must provide for appropriate recording of the historic property in accordance with section 110(b) before it is altered, allowed to deteriorate, or demolished.

STANDARD 7. An agency gives priority to the use of historic properties in carrying out agency missions. [Sec. 110(a)(1)].

GUIDELINES:

(a) For the most part, use of historic properties involves the integration of those properties into the activities directly associated with the agency's mission. However, the agency should also be open to the possibility of other uses, such as the use of traditional sacred sites or plant gathering areas by Native Americans, or use of an archeological site as a public interpretive facility.

(b) An agency with historic properties under its jurisdiction and control should maintain an inventory of those properties that notes the current use and condition of each property. The agency should provide for regular inspection of the properties and an adequate budget for their appropriate maintenance.

(c) Section 110(a)(1) applies not only to historic properties under an agency's ownership or control, but to other historic properties available to an agency. An agency that requires the use of non-federal property is required to give priority to the use of historic properties. In such cases the agency should notify potential private-sector offerors of this priority and, if feasible, offer incentives to help ensure that historic properties will be offered.

(d) Where an agency carries out its mission through the award of grant funds for specific activities, and where those activities will inevitably affect historic properties, the agency should, to the extent feasible, design its grants programs so as to encourage grantees to retain and make appropriate use of historic properties in carrying out grant-funded activities.

(e) As provided for in section 111 of the Act, the agency should consider leases, exchanges, and management agreements with other parties as means of providing for the continuing or adaptive use of historic properties.

(f) Surplus properties that are listed in or have been formally determined eligible for the National Register can be transferred to State, tribal, and local governments for historic preservation purposes through the Historic Surplus Property Program. Additionally, properties or portions of surplus properties may be made available to States or local agencies at no cost for parks and recreation through application to the Federal Lands-to-Parks Program. Contact the NPS' Heritage Preservation Services Division or its Recreation Resources Assistance Division in Washington, D.C., for more information on these programs.

(g) The use of historic properties is not mandated where it can be demonstrated to be economically infeasible, or where historic properties will not serve the agency's requirements. The agency's responsibility is to balance the needs of the agency mission, the public interest in protecting historic properties, the costs of preservation, and other relevant public interest factors in making such decisions.

Definitions

(a) The Act or NHPA means the National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470 et seq.

(b) Advisory Council or Council means the agency, fully titled the Advisory Council on Historic Preservation, established pursuant to section 201 of Title II of the NHPA, that is to be afforded a reasonable opportunity under sections 106 and 110(f) of the NHPA to comment with regard to proposed undertakings, as defined in section 301(7) of the NHPA; that reviews Federal programs pursuant to section 202(a)(6) of the NHPA; and with whose regulations outlining the procedures for complying with the requirements of section 106 of the NHPA ("Protection of Historic Properties," found at 36 CFR Part 800) in accordance with section 110(a)(2)(E)(i), other Federal agencies procedures for compliance with section 106 must be consistent.

(c) Agency Head means the individual Departmental Secretary, Executive Director or Administrator of an agency, as defined in the Council's regulations (36 CFR Part 800).

(d) Cultural items is defined in the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA, 25 U.S.C 3002(c)). It includes human remains; associated and

unassociated funerary objects (consisting of items intentionally placed with the body in a grave, including those not in possession of a Federal agency); sacred objects, ceremonial objects important to the practice of Native American traditional religions; and objects of cultural patrimony, those items having historical, traditional, or cultural importance to Indian tribes themselves. For a complete definition see section 2(3)(A)-(D) of NAGPRA, and the Department of Interior's regulations implementing the provisions of the Act at 43 CFR Part 10.

(e) Historic property or historic resource is defined at section 301(5) of the NHPA and means any prehistoric or historic district, site, building, structure, landscape or object included in, or eligible for inclusion in the National Register, including artifacts, records, and material remains related to such a property or resource. Section 101(d)(6)(A) of the National Historic Preservation Act provides that "properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization may be determined to be eligible for inclusion on the National Register."

(f) Historic resource (see definition for "historic property").

(g) Indian tribe or tribe is defined at section 301(4) of the NHPA and means an Indian tribe, band, nation, or other organized group or community, including a Native village, Regional Corporation or Village Corporation, as those terms are defined in section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. 1602), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians. The Secretary of the Interior is responsible for determining an Indian tribe's eligibility for those special programs and services.

(h) Memorandum of Agreement means the document that records the terms and conditions which have been agreed upon to resolve the adverse effects of an undertaking upon historic properties.

(i) National Register is defined at section 301(6) of the NHPA and means the list of districts, sites, buildings, structures and objects significant in American history, architecture, archeology, engineering, and culture established under section 101 of the NHPA and maintained by the Secretary of the Interior and fully titled the "National Register of Historic Places."

(j) Native Hawaiian is defined in the NHPA at section 301(17) and means any individual who is a descendant of the aboriginal people who, prior to 1778, occupied and exercised sovereignty in the area that now constitutes the State of Hawaii.

(k) Native Hawaiian organization as defined at section 301(18) of the NHPA means any organization which—

(1) serves and represents the interests of Native Hawaiians;

(2) has as a primary and stated purpose the provision of services to Native Hawaiians; and,

(3) has demonstrated expertise in aspects of historic preservation that are culturally significant to Native Hawaiians.

The term includes, but is not limited to, the Office of Hawaiian Affairs of the State of Hawaii and *Hui Malama I Na Kapuna O Hawai'i Nei*, an organization incorporated under the laws of the State of Hawaii.

(l) Preservation or historic preservation as defined in the NHPA at section 301(8) includes identification, evaluation, recordation, documentation, curation, acquisition, protection, management, rehabilitation, restoration, stabilization, maintenance, research, interpretation, conservation, and education and training regarding the foregoing activities or any combination of the foregoing activities.

(m) Preservation Officer means the individual in the agency responsible for managing the agency's historic preservation program and coordinating all preservation activities. All federal agencies are required to appoint a Preservation Officer under section 110(c) of the National Historic Preservation Act (unless specifically exempted under section 214 of the NHPA). The Preservation Officer and the Agency Head are not necessarily one and the same individual.

(n) Secretary is defined at section 301(11) of the NHPA and means the Secretary of the Interior acting through the Director of the National Park Service, except where otherwise specified.

(o) Secretary's Standards means the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (available from the National Park Service), the project and program standards and guidelines for implementing the NHPA. They are technical guidance concerning archeological and historic preservation activities and methods. The complete Secretary's Standards currently address each of the following activities: Preservation Planning, Identification, Evaluation, Registration, Historical Documentation, Architectural and Engineering Documentation, Archeological Documentation, Treatment of Historic Properties (including Rehabilitation), and Professional Qualifications.

(p) State Historic Preservation Officer (SHPO) means the official appointed or designated pursuant to section 101(b)(1) of the NHPA to administer the State historic preservation program or a representative designated to act for the SHPO.

(q) Traditional Cultural Property is defined as a property that is associated with cultural practices or beliefs of a living community that (1) are rooted in that community's history, and (2) are important in maintaining the continuing cultural identity of the community. Readers should refer to National *Register Bulletin 38: Guidelines for Evaluating and*

Documenting Traditional Cultural Properties (available from the National Park Service) for more information.

(r) Tribal Preservation Officer or Tribal Historic Preservation Officer means the official appointed or designated by the Tribe to carry out the historic preservation program responsibilities that the Tribe has assumed pursuant to section 101(d) of the NHPA.

(s) Tribal lands is defined at section 301(14) of the NHPA and means—

(1) all lands within the exterior boundaries of any Indian reservation; and,

(2) all dependent Indian communities.

(t) Undertaking as defined in the NHPA at section 301(7) means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including—

(1) those carried out by or on behalf of the agency;

(2) those carried out with Federal financial assistance;

(3) those requiring a Federal permit, license, or approval; and,

(4) those subject to State or local regulation administered pursuant to a delegation or approval by a Federal agency.

Addendum A

Section 110 of the National Historic Preservation Act (16 U.S.C. 470h-2):

(a)(1) The heads of all Federal agencies shall assume responsibility for the preservation of historic properties which are owned or controlled by such agency. Prior to acquiring, constructing, or leasing buildings for purposes of carrying out agency responsibilities, each Federal agency shall use, to the maximum extent feasible, historic properties available to the agency. Each agency shall undertake, consistent with the preservation of such properties and the mission of the agency and the professional standards established pursuant to section 101(g), any preservation, as may be necessary to carry out this section. [Standards 1, 6 and 7].

(2) Each Federal agency shall establish (unless exempted pursuant to section 214), in consultation with the Secretary [of the Interior], a preservation program for the identification, evaluation, and nomination to the National Register of Historic Places, and protection of historic properties.

[Standard 1]. Such program shall ensure –

(A) that historic properties under the jurisdiction or control of the agency are identified, evaluated, and nominated to the National Register [Standards 2 and 3];

(B) that such properties under the jurisdiction or control of the agency as are listed in or may be eligible for the National Register are managed and maintained in a way that considers the preservation of their historic, archeological, architectural, and cultural values in compliance with section 106 and gives special consideration to the preservation of such values in the case of properties designated as having national significance [Standard 4];

(C) that the preservation of properties not under the jurisdiction or control of the agency, but subject to be potentially affected by agency actions are given full consideration in planning [Standards 4 and 6];

(D) that the agency's preservation-related activities are carried out in consultation with other Federal, State, and local agencies, Indian tribes, Native Hawaiian organizations carrying out historic preservation planning activities, and with the private sector [Standard 5]; and,

(E) that the agency's procedures for compliance with section 106 –

(i) are consistent with regulations issued by the [Advisory] Council [on Historic Preservation] pursuant to section 211 [Standard 4];

(ii) provide a process for the identification and evaluation of historic properties for listing in the National Register and the development and implementation of agreements, in consultation with State Historic Preservation Officers, local governments, Indian tribes, Native Hawaiian organizations, and the interested public, as appropriate, regarding the means by which adverse effects on such properties will be considered [Standard 4]; and,

(iii) provide for the disposition of Native American cultural items from Federal or tribal land in a manner consistent with section 3(c) of the Native American Graves Protection and Repatriation Act

(25 U.S.C. 3002(c)) [Standard 4].

(b) Each Federal agency shall initiate measures to assure that where, as a result of Federal action or assistance carried out by such agency, a historic property is to be substantially altered or demolished, timely steps are taken to make or have made appropriate records, and that such records then be deposited, in accordance with section 101(a), in the Library of Congress or with such other appropriate agency as may be designated by the Secretary, for future use and reference [Standard 6].

(c) The head of each Federal agency shall, unless exempted under section 214, designate a qualified official to be known as the agency's "preservation officer" who shall be responsible for coordinating that agency's activities under this Act. Each Preservation Officer may, in order to be considered qualified, satisfactorily complete an appropriate training program established by the Secretary under section 101(h) [Standard 1].

(d) Consistent with the agency's mission and mandates, all Federal agencies shall carry out agency programs and projects (including those under which any federal assistance is provided or any Federal license, permit, or other approval is required) in accordance with the purposes of this Act and, give consideration to programs and projects which will further the purposes of this Act [Standard 1].

(e) The Secretary shall review and approve the plans of transferees of surplus federally owned historic properties not later than ninety days after his receipt of such plans to ensure that the prehistorical, historical, architectural, or culturally significant values will be preserved or enhanced [Standard 7].

(f) Prior to the approval of any Federal undertaking which may directly and adversely affect any National Historic Landmark, the head of the responsible Federal agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark, and shall afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking [Standard 4].

(g) Each Federal agency may include the costs of preservation activities of such agency under this Act as eligible project costs in all undertakings of such agency or assisted by

such agency. The eligible project costs may also include amounts paid by a Federal agency to any State to be used in carrying out such preservation responsibilities of the Federal agency under this Act, and reasonable costs may be charged to Federal licensees and permittees as a condition to the issuance of such license or permit [Standard 1].

(h) The Secretary shall establish an annual preservation awards program under which he may make monetary awards in amounts not to exceed $1,000 and provide citations for special achievement to officers and employees of Federal, State, and certified local governments in recognition of their outstanding contributions to the preservation of historic resources. Such program may include the issuance of annual awards by the president of the United States to any citizen of the United States recommended for such award by the Secretary.

(i) Nothing in this Act shall be construed to require the preparation of an environmental impact statement where such statement would not otherwise be required under the National Environmental Policy Act of 1969, and nothing in this Act shall be construed to provide any exemption from any requirement respecting the preparation of such a statement under such Act.

(j) The Secretary shall promulgate regulations under which the requirements of this section may be waived in whole or in part in the event of a major natural disaster or an imminent threat to the national security.

(k) Each Federal agency shall ensure that the agency will not grant a loan, loan guarantee, permit, license, or other assistance to an applicant who, with intent to avoid the requirements of section 106, has intentionally significantly adversely affected a historic property to which the grant would relate, or having the legal power to prevent it, allowed such significant adverse effect to occur, unless the agency, after consultation with the Council, determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant [Standard 4].

(l) With respect to any undertaking subject to section 106 which adversely affects any property included in or eligible for inclusion in the National Register, and for which a Federal agency has not entered into an agreement with the Council, the head of such agency shall document any decision made pursuant to section 106. The head of such agency may not delegate his or her responsibilities pursuant to such section. Where a section 106 memorandum of agreement has been executed with respect to an undertaking, such memorandum shall govern the undertaking and all of its parts [Standard 4].

Addendum B

Purposes of the National Historic Preservation Act:

Section 110(d) of the National Historic Preservation Act (the Act) calls on all Federal agencies, consistent with their mission and mandates, to carry out their activities in accordance with the purposes of the Act and to consider programs and projects that will further the purposes of the Act. The purposes of the Act are set forth in sections 1 and 2. These sections are directly germane to all Federal preservation programs:

Section 1 (b) The Congress finds and declares that –

(1) the spirit and direction of the Nation are founded upon and reflected in its historic heritage;

(2) the historical and cultural foundations of the Nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people;

(3) historic properties significant to the Nation's heritage are being lost or substantially altered, often inadvertently, with increasing frequency;

(4) the preservation of this irreplaceable heritage is in the public interest so that its vital legacy of cultural, educational, aesthetic, inspirational, economic, and energy benefits will be maintained and enriched for future generations of Americans;

(5) in the face of ever-increasing extensions of urban centers, highways, and residential, commercial, and industrial developments, the present governmental and non-governmental historic preservation programs and activities are inadequate to ensure future generations a genuine opportunity to appreciate and enjoy the rich heritage of our Nation;

(6) the increased knowledge of our historic resources, the establishment of better means of identifying and administering them, and the encouragement of their preservation will improve the planning and execution of federal and federally assisted projects and will assist economic growth and development; and,

(7) although the major burdens of historic preservation have been borne and major efforts initiated by private agencies and individuals, and both should continue to play a vital role, it is nevertheless necessary and appropriate for the Federal Government to accelerate its historic preservation programs and activities, to give maximum encouragement to agencies and individuals undertaking preservation by private means, and to assist State and local governments and the National Trust for Historic Preservation in the United States to expand and accelerate their historic preservation programs and

activities.

Section 2: It shall be the policy of the Federal Government, in cooperation with other nations and in partnership with the States, local governments, Indian tribes, and private organizations and individuals to—

(1) use measures, including financial and technical assistance, to foster conditions under which our modern society and our prehistoric and historic resources can exist in productive harmony and fulfill the social, economic, and other requirements of present and future generations;

(2) provide leadership in the preservation of the prehistoric and historic resources of the United States and of the international community of nations and in the administration of the national preservation program in partnership with the States, Indian tribes, Native Hawaiians, and local governments;

(3) administer federally owned, administered, or controlled prehistoric and historic resources in a spirit of stewardship for the inspiration and benefit of present and future generations;

(4) contribute to the preservation of non-federally owned prehistoric and historic resources and give maximum encouragement to organizations and individuals undertaking preservation by private means;

(5) encourage the public and private preservation and utilization of all usable elements of the Nation's historic built environment; and

(6) assist State and local governments, Indian tribes and Native Hawaiian organizations and the National Trust for Historic Preservation in the United States to expand and accelerate their historic preservation programs and activities.

Appendix B:

Illinois Section 110 Inventory
Database Sheet

Appendix C:

Illinois Section 110 Inventory

Database Sheet

FAC ID/INSNO	FACNUM	Facility Name/Address	NRHP Eligibility	Year Built	Construction	Original Use	Evaluation	Condition
IL002/17580	AR144	COL P. Schulstad USARC, Reserve Center, 1515 W. Central Road, Arlington Heights, IL	Currently Ineligible	1993	Block/Brick	Administration	1997	Good
IL002/17580	AR201	COL P. Schulstad USARC OMS, 1515 W. Central Road, Arlington Heights, IL 60005-2475	Currently Ineligible	1993	Block/Brick	Maintenance	1997	Good
IL002/17580	BP202	COL P. Schulstad USARC Battle Sim. Center, 1515 W. Central Road, Arlington Heights, IL	Currently Ineligible	1995	Block/Brick	Instruction	1997	Good
IL002/17580	-	COL P. Schulstad USARC Building 202, 1515 West Central Road, Arlington Heights, IL	Currently Ineligible	1993	Block/Brick	Utility	1997	Good
IL002/17580	-	COL P. Schulstad USARC Building 104, 1515 West Central Road, Arlington Heights, IL	Potentially Eligible	1957	Block	NIKE Site Barracks	1997	Good
IL002/17580	-	COL P. Schulstad USARC Building 105, 1515 West Central Road, Arlington Heights, IL	Potentially Eligible	1957	Block	NIKE Site Barracks	1997	Good
IL002/17580	-	COL P. Schulstad USARC Building 106, 1515 West Central Road, Arlington Heights, IL	Potentially Eligible	1957	Block	NIKE Site Barracks	1997	Good
IL002/17580	-	COL P. Schulstad USARC Building 107, 1515 West Central Road, Arlington Heights, IL	Potentially Eligible	1957	Block	NIKE Site Barracks	1997	Good
IL002/17580	-	COL P. Schulstad USARC Building 108, 1515 West Central Road, Arlington Heights, IL	Potentially Eligible	1957	Block	NIKE Site Barracks	1997	Good
IL002/17580	-	COL P. Schulstad USARC Building 109, 1515 West Central Road, Arlington Heights, IL	Potentially Eligible	1957	Block	NIKE Site Barracks	1997	Good
IL002/17580	-	COL P. Schulstad USARC Building 140, 1515 West Central Road, Arlington Heights, IL	Potentially Eligible	1957	Block	NIKE Site	1997	Good
IL002/17580	-	COL P. Schulstad USARC Building 141, 1515 West Central Road, Arlington Heights, IL	Potentially Eligible	1957	Block	NIKE Site	1997	Good
IL002/17580	-	COL P. Schulstad USARC Building 142, 1515 West Central Road, Arlington Heights, IL	Potentially Eligible	1957	Concrete	NIKE Site Water Tank	1997	Good
IL002/17580	-	COL P. Schulstad USARC Building 143, 1515 West Central Road, Arlington Heights, IL	Potentially Eligible	1957	Block	NIKE Site	1997	Good
IL002/17580	-	COL P. Schulstad USARC Building 144, 1515 West Central Road, Arlington Heights, IL	Potentially Eligible	1957	Block/Lead	NIKE Site/Command	1997	Good
IL002/17580	-	COL P. Schulstad USARC Building 145, 1515 West Central Road, Arlington Heights, IL	Potentially Eligible	1957	Block	NIKE Site	1997	Good
IL003/17815	AU001	Fox Valley Memorial USARC Reserve Center, 661 Sullivan Road, Aurora, IL	Currently Ineligible	1959	Block/Brick	Administration	1997	Good
IL003/17815	AU002	Fox Valley Memorial USARC OMS, 661 Sullivan Road, Aurora, IL	Currently Ineligible	1959	Block/Brick	Maintenance	1997	Good
IL004/1705B	LL101	Peoria AFRC(AMSA #48) Reserve Center, 3101 S. Airport Road, Box 500, Bartonville, IL	Currently Ineligible	1989	Block/Brick	Administration	1997	Good
IL004/1705B	LL102	Peoria AFRC (AMSA #48) OMS, 3101 South Airport Road, Box 500, Bartonville, IL	Currently Ineligible	1989	Block/Brick	Maintenance	1997	Good
IL005/17825	00272	PFC R. Gantner USARC Reserve Center, 500 South Belt East, Belleville, IL	Currently Ineligible	1960	Block/Brick	Administration	1997	Good
IL005/17825	00310	PFC R. Gantner USARC OMS, 500 South Belt East, Belleville, IL	Currently Ineligible	1960	Block/Brick	Maintenance	1997	Good
IL006/17830	00328	Bloomington USARC Reserve Center, 1117 Lafayette, Bloomington, IL	Currently Ineligible	1960	Block/Brick	Administration	1997	Good
IL006/17830	00329	Bloomington USARC OMS, 1117 Lafayette, Bloomington, IL	Currently Ineligible	1960	Block/Brick	Maintenance	1997	Good
IL007/17827	00001	SGT Bruce G. Howerter USARC Reserve Center, 2080 North 4th Avenue, Canton, IL	Currently Ineligible	1976	Block/Brick	Administration	1997	Good
IL007/17827	00002	SGT Bruce G. Howerter USARC OMS, 2080 North 4th Avenue, Canton, IL	Currently Ineligible	1976	Block/Brick	Maintenance	1997	Good
IL009/17835	00277	SFC E.L. Copple USARC Reserve Center, 904 E. Martin L.King Junior Drive, Centralia, IL	Currently Ineligible	1958	Block/Brick	Administration	1997	Good
IL009/17835	00278	SFC E.L. Copple USARC OMS, 904 East Martin Luther King Junior Drive, Centralia, IL	Currently Ineligible	1958	Block/Brick	Maintenance	1997	Good
IL013/17847	CC001	Gibson USARC Reserve Center, 4454 W. Cermak Road, Chicago, IL	Currently Ineligible	1951	Block/Brick	Administration	1997	Good
IL013/17847	CC097	Gibson USARC OMS, 4454 W. Cermak Road, Chicago, IL	Currently Ineligible	1951	Block/Brick	Maintenance	1997	Good
IL010/17848	CK001	Lincolnwood USARC Reserve Center, 6230 North Kedzie Avenue, Chicago, IL	Currently Ineligible	1951	Block/Brick	Administration	1997	Good
IL010/17848	CK096	Lincolnwood USARC OMS, 6230 North Kedzie Avenue, Chicago, IL	Currently Ineligible	1990	Block/Brick	Maintenance	1997	Good
IL012/ -	-	North Park USARC Reserve Center, 3131 West Bryn Mawr Avenue, Chicago, IL	Currently Ineligible	1957	Block/Brick	Administration	1997	Good
IL012/ -	-	North Park USARC OMS, 3131 West Bryn MAwr Avenue, Chicago, IL	Currently Ineligible	1957	Block	Maintenance	1997	Good
IL012/ -	-	North Park USARC Storage Building, 3131 West Bryn Mawr Avenue, Chicago, IL	Currently Ineligible	ca. 1957	Block	Storage	1997	Good
IL012/ -	-	North Park USARC Building 401, 3131 West Bryn Mawr Avenue, Chicago, IL	Currently Ineligible	1957	Block	Administration	1997	Good
IL012/ -	-	North Park USARC Building 402, 3131 West Bryn Mawr Avenue, Chicago, IL	Currently Ineligible	1957	Block	Barracks	1997	Good
IL012/ -	-	North Park USARC Building 403, 3131 West Bryn Mawr Avenue, Chicago, IL	Currently Ineligible	1957	Block	Mess Hall	1997	Good

~ The 88th RSC no longer has a responsibility to comply with the NHPA regarding this building.

*No additional review under NHPA unless required to be in compliance with Section 106

Appendix C:

Illinois Section 110 Inventory

Database Sheet

FAC ID/INS#	FacNum	Facility Name/Address	NRHP	Built	Construction	Original Use	Evaluation	Condition
IL011/17849	CP001	SGT James W. Robinson Jr. USARC Reserve Center, 7400 South Pulaski, Chicago, IL	Currently Ineligible	1973	Block/Brick	Administration	1997	Good
IL011/17849	CP002	SGT James W. Robinson Jr. USARC OMS, 7400 South Pulaski, Chicago, IL	Currently Ineligible	1973	Block/Brick	Maintenance	1997	Good
IL020/17861	00283	CPT Robert H. Chapman USARC Reserve Center, 2408 East Main Street, Danville, IL	Currently Ineligible	1958	Block/Brick	Administration	1997	Good
IL020/17861	00284	CPT Robert H. Chapman USARC OMS, 2408 East Main Street, Danville, IL	Currently Ineligible	1958	Block/Brick	Maintenance	1997	Good
IL001/17812	DA001	Parkhurst USARC Reserve Center, 100 S. Frontage Road, Darien, IL	Currently Ineligible	1995	Metal	Administration	1997	Good
IL001/17812	DA002	Parkhurst USARC OMS, 100 S. Frontage Road, Darien, IL	Currently Ineligible	1995	Block	Maintenance	1997	Good
IL021/17863	00001	Dexter USARC Reserve Center, 2300 West 22nd Street, Decatur, IL	Currently Ineligible	1972	Block/Brick	Administration	1997	Good
IL021/17863	00004	Dexter USARC OMS, 2300 West 22nd Street, Decatur, IL	Currently Ineligible	1972	Block/Brick	Maintenance	1997	Good
IL023/17865	00231	PVT Perry E. Modrow USARC Reserve Center, 5020 State Street, East St. Louis, IL	Currently Ineligible	1957	Block/Brick	Administration	1997	Good
IL023/17865	00233	PVT Perry E. Modrow USARC OMS, 5020 State Street, East St. Louis, IL	Currently Ineligible	1961	Block/Brick	Maintenance	1997	Good
IL025/17896	JT001	Joliet JTA Tank Maintenance Building, P.O. Box 278, Elwood, IL	Currently Ineligible	1991	Block	Maintenance	1997	Good
IL025/17896	-	Joliet JTA Tank Maintenance Storage Building, P.O. Box 278, Elwood, IL	Currently Ineligible	Unknown	Metal	Storage	1997	Good
IL026/17870	00315	SSG R.F. Walton USARC Reserve Center, 1002 West Leninger Road, Fairfield, IL	Currently Ineligible	1960	Block/Brick	Administration	1997	Good
IL026/17870	00316	SSG R.F. Walton USARC OMS, 1002 West Leninger Road, Fairfield, IL	Currently Ineligible	1960	Block	Maintenance	1997	Good
IL027/1730A	LL201	Forest Park AFRC Reserve Center, 7402 West Roosevelt Road, Forest Park, IL	Currently Ineligible	1955	Block/Brick	Administration	1997	Good
IL027/1730A	LL202	Forest Park AFRC OMS, 7402 West Roosevelt Road, Forest Park, IL	Currently Ineligible	1955	Block/Brick	Maintenance	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 113-A, Fort Sheridan, IL	Currently Ineligible	unknown	Block/Metal	Administration	1998	Fair
IL131/17887		Philip H. Sheridan Reserve Center Building 113-A Storage, Fort Sheridan, IL	Currently Ineligible	unknown	Block/Metal	Storage	1998	Good
IL131/17887	see Karyn	Philip H. Sheridan Reserve Center Building 120, Fort Sheridan, IL	Currently Ineligible	1984	Metal	Storage	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 122, Fort Sheridan, IL	Currently Ineligible	1984	Metal	Storage	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 128, Fort Sheridan, IL	Currently Ineligible	1959	Block	Maintenance	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 130, Fort Sheridan, IL	Currently Ineligible	unknown	Block	Ramp	1998	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 131, Fort Sheridan, IL	Currently Ineligible	unknown	Block	Ramp	1998	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 137-A, Fort Sheridan, IL	Not Eligible	ca. 1890	Brick	Storage	1998	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 143, Fort Sheridan, IL	Currently Ineligible	1951	Block/Metal	Storage	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 144, Fort Sheridan, IL	Currently Ineligible	1951	Block/Metal	Storage	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 145, Fort Sheridan, IL	Currently Ineligible	1951	Block/Metal	Storage	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 146, Fort Sheridan, IL	Currently Ineligible	1951	Block/Metal	Storage	1998	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 147, Fort Sheridan, IL	Currently Ineligible	1985	Block/Metal	Storage	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 149, Fort Sheridan, IL	Currently Ineligible	1993	Block/Metal	Storage	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 181, Fort Sheridan, IL	Currently Ineligible	1987	Block	Administration	1998	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 375, Fort Sheridan, IL	Currently Ineligible	unknown	Block	Administration	1998	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 380, Fort Sheridan, IL	Currently Ineligible	1949	Block	NIKE Missle Site	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 382, Fort Sheridan, IL	Currently Ineligible	1941	Block/Metal	Storage	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 383, Fort Sheridan, IL	Currently Ineligible	1963	Block/Metal	Storage	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 475, Fort Sheridan, IL	Currently Ineligible	1976	Block/Brick	Administration	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 528, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Maintenance	1998	Good
IL131/17887		Philip H. Sheridan Reserve Center Building C-526, Fort Sheridan, IL	Currently Ineligible	unknown	Metal	Utiliy	1998	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 538, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Fire Station	1993	Good
FAC ID/INS#	FacNum	Facility Name/Address	NRHP	Built	Construction	Original Use	Evaluation	Condition
IL131/17887		Philip H. Sheridan Reserve Center Building 544, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Maintenance	1993	Good

~ The 88th RSC no longer has a responsibility to comply with the NHPA regarding this building.

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Appendix C:
Illinois Section 110 Inventory
Database Sheet

FAC ID/INS#	FacNum	Facility Name/Address	NRHP	Built	Construction	Original Use	Evaluation	Condition
IL131/17887		Philip H. Sheridan Reserve Center Building 553, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Storehouse	1993	Poor
IL131/17887		Philip H. Sheridan Reserve Center Building 563, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Post Office	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 566, Fort Sheridan, IL	Currently Ineligible	ca. 1970	Metal	Water Tower	1998	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 573, Fort Sheridan, IL	Currently Ineligible	1970	Block/Brick	Barracks	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 574, Fort Sheridan, IL	Currently Ineligible	1992	Block/Brick	Administration	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 574-A, Fort Sheridan, IL	Currently Ineligible	1992	Block/Brick	Utility	1998	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 598, Fort Sheridan, IL	Currently Ineligible	1993	Block	Post Exchange	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 599, Fort Sheridan, IL	Currently Ineligible	1993	Block	Commissary	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 600, Fort Sheridan, IL	Currently Ineligible	1993	Block/Brick	Barracks	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 615, Fort Sheridan, IL	Currently Ineligible	1993	Block/Brick	Assembly Hall	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building T-634, Fort Sheridan, IL	Programmatic Agreement	ca. 1941	Block/Wood	Administration	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building T-639, Fort Sheridan, IL	Programmatic Agreement	ca. 1941	Block/Wood	Administration	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building T-649, Fort Sheridan, IL	Programmatic Agreement	ca. 1941	Block/Wood	Administration	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 698, Fort Sheridan, IL	Currently Ineligible	1988	Block	Storage	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 699, Fort Sheridan, IL	Currently Ineligible	1988	Block/Metal	Storage	1997	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 67, Fort Sheridan, IL	Not Eligible	1935	Block/Wood/Metal	Warehouse	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 68, Fort Sheridan, IL	Not Eligible	1945	Block	Locomotive Shelter	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 70, Fort Sheridan, IL	Not Eligible	1935	Block/Wood/Metal	Warehouse	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 82, Fort Sheridan, IL	Declared Eligible by SHPO	1905	Limestone/Brick	Barracks	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 109, Fort Sheridan, IL	Not Eligible	1907	Wood/Brick	NCO Quarters	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 110, Fort Sheridan, IL	Not Eligible	1907	Wood/Brick	NCO Quarters	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 111, Fort Sheridan, IL	Not Eligible	1907	Wood/Brick	NCO Quarters	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 113, Fort Sheridan, IL	Not Eligible	1908	Brick	NCO Quarters	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 114, Fort Sheridan, IL	Not Eligible	1908	Wood/Brick	NCO Quarters	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 123, Fort Sheridan, IL	Not Eligible	1936	Block/Wood/Metal	Maintenance	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 125, Fort Sheridan, IL	Not Eligible	1941	Block/Wood	Filling Station	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 132, Fort Sheridan, IL	Not Eligible	1935	Block/Wood/Metal	Warehouse	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 133, Fort Sheridan, IL	Not Eligible	1936	Block/Wood/Metal	Shed	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 137, Fort Sheridan, IL	Not Eligible	1939	Block/Brick/Metal	Maintenance	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 139, Fort Sheridan, IL	Not Eligible	1939	Block/Brick/Metal	Maintenance	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 379, Fort Sheridan, IL	Not Eligible	1939	Block/Metal	Maintenance	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 415, Fort Sheridan, IL	Not Eligible	1930	Block/Wood	Maintenance	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 423, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Barracks	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 432, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Barracks	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 434, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Barracks	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 435, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Barracks	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 436, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Barracks	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 437, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Barracks	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 438, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Barracks	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 439, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Barracks	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 444, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Guard House	1993	Good

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Appendix C:
Illinois Section 110 Inventory
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IL131/17887		Philip H. Sheridan Reserve Center Building 448, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood/Brick	Infirmary	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 459, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Barracks	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 460, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Barracks	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 528, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood/Metal	Maintenance	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 565, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Barracks	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 564, Fort Sheridan, IL	Programmatic Agreement	1941	Block/Wood	Barracks	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 575, Fort Sheridan, IL	Not Eligible	1945	Block/Wood	Mess Hall	1993	Good
IL131/17887		Philip H. Sheridan Reserve Center Building 575-A, Fort Sheridan, IL	Programmatic Agreement	c.1940	Block	Storage/Utility	1997	Good
IL041/17879	GL001	2LT C. Heller USARC Reserve Center, 181 E. Fremont Street, Galesburg, IL	Currently Ineligible	1961	Block/Brick	Administration	1997	Good
IL041/17879	GL002	2LT C. Heller USARC OMS, 181 E. Fremont Street, Galesburg, IL	Currently Ineligible	1961	Block/Brick	Maintenance	1997	Good
IL047/17884	00203	Charles Melvin Price Support Center Building 203, Granite City, IL	Currently Ineligible	1942	Block /Brick	Administration	1997	Good
IL047/17884	00213	Charles Melvin Price Support Center Building 213, Granite City, IL	Currently Ineligible	Unknown	Metal	Storage	1997	Good
IL047/17884	-	Charles Melvin Price Support Center Building 306, Granite City, IL	Potentially Eligible	1942	Block/Brick	Warehouse	1997	Good
IL047/17884	00307	Charles Melvin Price Support Center Building 307, Granite City, IL	Potentially Eligible	1942	Block/Brick	Warehouse	1997	Good
IL047/17884	00333	Charles Melvin Price Support Center Building 333, Granite City, IL	Currently Ineligible	Unknown	Metal	Storage	1997	Good
IL047/17884	00344	Charles Melvin Price Support Center Buiding 344, Granite City, IL	Currently Ineligible	Unknown	Metal	Hanger	1997	Good
IL047/17884	00444	Charles Melvin Price Support Center Building 444, Granite City, IL	Currently Ineligible	Unknown	Block	Storage	1997	Good
IL050/17885	HA001	Zega Brothers USARC Reserve Center, 400 West 167th Street, Harvey, IL	Currently Ineligible	1961	Block/Brick	Administration	1997	Good
IL050/17885	HA002	Zega Brothers USARC OMS, 400 West 167th Street, Harvey, IL	Currently Ineligible	1961	Block/Brick	Maintenance	1997	Good
-	-	Homewood North Post USARC Building 1, 18695 187th Street, Homewood, IL	Currently Ineligible	1955	Block	Guard House	1997	Poor
-	-	Homewood North Post USARC Building 2, 18695 187th Street, Homewood, IL	Currently Ineligible	1955	Block/Stucco	NIKE Missle Site	1997	Poor
-	-	Homewood North Post USARC Building 3, 18695 187th Street, Homewood, IL	Currently Ineligible	1955	Block/Stucco	NIKE Missle Site	1997	Poor
-	-	Homewood North Post USARC Building 4, 18695 187th Street, Homewood, IL	Currently Ineligible	1955	Block/Stucco	NIKE Missle Site	1997	Poor
-	-	Homewood North Post USARC Building 5, 18695 187th Street, Homewood, IL	Currently Ineligible	1955	Block/Stucco	NIKE Missle Site	1997	Poor
-	-	Homewood North Post USARC Building 6, 18695 187th Street, Homewood, IL	Currently Ineligible	1955	Metal	NIKE Missle Site	1997	Poor
-	-	Homewood North Post USARC Building 7, 18695 187th Street, Homewood, IL	Currently Ineligible	1955	Block	NIKE Missle Site	1997	Poor
-	-	Homewood North Post USARC Building 8, 18695 187th Street, Homewood, IL	Currently Ineligible	1955	Block	NIKE Missle Site	1997	Poor
-	-	Homewood North Post USARC Building 9, 18695 187th Street, Homewood, IL	Currently Ineligible	1955	Block	NIKE Missle Site	1997	Poor
-	-	Homewood North Post USARC Building 10, 18695 187th Street, Homewood, IL	Currently Ineligible	1955	Block	NIKE Missle Site	1997	Poor
IL051/17549	HM001	Homewood Vietnam Vet.s Memorial USARC Res. Ctr. 18960 Halstead Street, Homewood, IL	Currently Ineligible	1993	Block	Administration	1997	Good
IL051/17549	HM002	Homewood Vietnam Vet.s Memorial USARC OMS, 18960 Halstead Street, Homewood, IL	Currently Ineligible	1993	Block	Maintenance	1997	Good
IL052/17940	JR001	Joliet USARC Reserve Center, 622 Railroad Street, Joliet, IL	Currently Ineligible	1938	Concrete/Brick	Administration	1997	Good
IL052/17940	JR002	Joliet USARC OMS, 622 Railroad Street, Joliet, IL	Currently Ineligible	Unknown	Metal	Maintenance	1997	Good
IL052/17940	-	Joliet USARC Unit Storage Building, 622 Railroad Street, Joliet, IL	Currently Ineligible	Unknown	Block	Storage	1997	Good
IL052/17940	-	Joliet USARC Electrial Utiliy Building, 622 Railroad Street, Joliet, IL	Currently Ineligible	Unknown	Block	Utility	1997	Good
IL052/17940	-	Joliet USARC Utilty Building, 622 Railroad Street, Joliet, IL	Currently Ineligible	Unknown	Block	Utility	1997	Good
FAC ID/INS#	FacNum	Facility Name/Address	NRHP	Built	Construction	Original Use	Evaluation	Condition
IL052/17940	-	Joliet USARC Storage Building, 622 Railroad Street, Joliet, IL	Currently Ineligible	Unknown	Metal	Storage	1997	Fair
IL052/17940	-	Joliet USARC Storage Building, 622 Railroad Street, Joliet, IL	Currently Ineligible	Unknown	Metal	Storage	1997	Fair
IL053/17894	JL001	Louis Joliet AFRC Reserve Center, 2709 McDonough Street, Joliet, IL	Currently Ineligible	1965	Block/Brick	Administration	1997	Good
IL053/17894	JL002	Louis Joliet AFRC, OMS, 2709 McDonough Street, Joliet, IL	Currently Ineligible	Unknown	Block/Brick	Maintenance	1997	Good
IL056/17897	KA001	CPT A.M. Stefanich USARC Reserve Center, 1600 Willow Street, Kankakee, IL	Currently Ineligible	1959	Block/Brick	Administration	1997	Fair

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Illinois Section 110 Inventory

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IL056/17897	KA002	CPT A.M. Stefanich USARC OMS, 1600 Willow Street, Kankakee, IL	Currently Ineligible	1959	Block/Brick	Maintenance	1997	Poor
IL057/1743E	LL501	Stefanich AFRC Reserve Center, 1191 E. 400 S. Road, Kankakee, IL	Currently Ineligible	1991	Block/Brick	Administration	1997	Good
IL057/1743E	LL502	Stefanich AFRC OMS, 1191 E. 400 S. Road, Kankakee, IL	Currently Ineligible	1991	Block/Brick	Maintenance	1997	Good
IL035/17898	LF900	North Shore Memorial USARC, Res. Ctr., 401 Anderson Road, Lake Forest, IL	Currently Ineligible	1976	Block/Brick	Administration	1998	Good
IL035/17898	LF902	North Shore Memorial USARC, OMS, 401 Anderson Road, Lake Forest, IL	Currently Ineligible	1976	Block/Brick	Maintenance	1998	Good
IL058/17905	00347	PF R.G. Wilson USARC, Reserve Center, 1001 W DeYoung Street, Marion, IL	Currently Ineligible	1962	Block/Brick	Administration	1998	Good
IL058/17905	00348	PF R.G. Wilson USARC, OMS, 1001 W. DeYoung Street, Marion, IL	Currently Ineligible	1962	Block/Brick	Maintenance	1998	Good
IL061/17505	OP101	AMSA #45, Building 101, 15750 LaGrange Road, Orland Park, IL	Currently Ineligible	1956	Block	Maintenance	1997	Fair
IL061/17505	OP102	AMSA #45, Building 102, 15750 LaGrange Road, Orland Park, IL	Currently Ineligible	1956	Block	Maintenance	1997	Fair
IL061/17505	OP103	AMSA #45, Building 103, 15750 LaGrange Road, Orland Park, IL	Currently Ineligible	1956	Block	Administration	1997	Fair
IL061/17505	OP105	AMSA #45, Building 105, 15750 LaGrange Road, Orland Park, IL	Currently Ineligible	1956	Block	Guard House	1997	Fair
IL061/17505	OP106	AMSA #45, Building 106, 15750 LaGrange Road, Orland Park, IL	Currently Ineligible	1956	Block	Barracks	1997	Fair
IL061/17505	OP107	AMSA #45, Building 107, 15750 LaGrange Road, Orland Park, IL	Currently Ineligible	1959	Block/Aluminum	Storage	1997	Fair
IL061/17505	OP112	AMSA #45, Building 112, 15750 LaGrange Road, Orland Park, IL	Currently Ineligible	1956	Block	Pump House	1997	Fair
IL061/17505	OP113	AMSA #45, Building 113, 15750 LaGrange Road, Orland Park, IL	Currently Ineligible	1956	Block	Missile Assembly	1997	Fair
IL061/17505	OP114	AMSA #45, Building 114, 15750 LaGrange Road, Orland Park, IL	Currently Ineligible	1956	Metal	Generator House	1997	Fair
IL061/17505	OP115	AMSA #45, Building 115, 15750 LaGrange Road, Orland Park, IL	Currently Ineligible	1956	Concrete/Metal	Septic Drain	1997	Fair
IL063/17925	PE001	Robert E. Ward USARC, Reserve Center, 1429 Northmoor Road, Peoria, IL	Currently Ineligible	1971	Block	Administration	1998	Fair
IL063/17925	PE380	Robert E. Ward USARC, OMS, 1429 Northmoor Road, Peoria, IL	Currently Ineligible	1971	Block	Maintenance	1998	Fair
IL064/17928	PR001	Veterans Memorial USARC, Reserve Center, 2700 Plank Road, Peru, IL	Currently Ineligible	1971	Block/Brick	Administration	1998	Good
IL064/17928	PR002	Veterans Memorial USARC, OMS, 2700 Plank Road, Peru, IL	Currently Ineligible	1971	Block/Brick	Maintenance	1998	Good
IL065/17935	00278	Lincoln-Douglas USARC, Reserve Center, 601 N. 36th Street, Qunicy, IL	Currently Ineligible	1958	Block/Brick	Administration	1998	Good
IL065/17935	00279	Lincoln-Douglas USARC, OMS, 601 N. 36th Street, Qunicy, IL	Currently Ineligible	1958	Block/Brick	Maintenance	1998	Good
IL067/ -	-	RKFD USARC, Reserve Center, 185 15th Street , Rockford, IL	Currently Ineligible	1948	Block/Brick/Metal	Administration	1998	Poor
IL067/ -	-	RKFD USARC, OMS, 185 15th Street , Rockford, IL	Currently Ineligible	1948	Block	Maintenance	1998	Poor
IL067/ -	-	RKFD USARC, Storage Building, 185 15th Street , Rockford, IL	Currently Ineligible	unknown	Metal	Storage	1998	Poor
IL066/17955	RK001	Rockford USARC, Reserve Center, 1130 Arthur Avenue, Rockford, IL	Currently Ineligible	1956	Block/Brick	Administration	1997	Good
IL066/17955	RK002	Rockford USARC, OMS, 1130 Arthur Avenue, Rockford, IL	Currently Ineligible	1956	Block/Brick	Maintenance	1997	Good
IL069/17850	CO001	Fort Dearborn USARC, Reserve Center, 6540 N Mannhein Road, Rosemont, IL	Currently Ineligible	1961	Block/Brick	Administration	1997	Good
IL069/17850	CO002	Fort Dearborn USARC, OMS, 6540 N Mannhein Road, Rosemont, IL	Currently Ineligible	1961	Block/Brick	Maintenance	1997	Good
IL082/1780B	-	Scott AFB, Building 1961, Scott Air Force Base, IL	Currently Ineligible	1987	Block/Metal	Offices/Commercial	1992	Good
IL082/1780B	-	Scott AFB, Building 3675, Scott Air Force Base, IL	Currently Ineligible	1987-1995	Metal	Maintenance/Storage	1992	Good
IL072/17965	00001	MAJ Michael D. O'Donnel USARC, Res. Ctr., 4480 S. 6th Street, Springfield, IL	Currently Ineligible	1981	Block/Brick	Administration	1997	Good
IL072/17965	00002	MAJ Michael D. O'Donnel USARC, OMS, 4480 S. 6th Street, Springfield, IL	Currently Ineligible	1981	Block/Brick	Maintenance	1997	Good
FAC ID/INS#	FacNum	Facility Name/Address	NRHP	Built	Construction	Original Use	Evaluation	Condition
IL073/17840	00001	2LT R.H. Stephens USARC, Reserve Center, 2001 E. Main Street, Urbana, IL	Currently Ineligible	1962	Block/Brick	Administration	1997	Good
IL073/17840	00002	2LT R.H. Stephens USARC, OMS, 2001 E. Main Street, Urbana, IL	Currently Ineligible	1962	Block/Brick	Maintenance	1997	Good
IL074/17985	WA001	Waukegan AFRC, Reserve Center, 1721 N. McAree Road, Waukegan, IL	Currently Ineligible	1957	Concrete/Brick	Administration	1997	Good
IL074/17985	WA001	Waukegan AFRC, OMS, 1721 N. McAree Road, Waukegan, IL	Currently Ineligible	1957	Block/Brick	Maintenance	1997	Good
IL089/17995	00257	1LT A.J. Ellison USARC, Reserve Center, 100 Anderson Avenue, Wood River, IL	Currently Ineligible	1957	Block/Brick	Administration	1997	Good
IL089/17995	00311	1LT A.J. Ellison USARC, OMS, 100 Anderson Avenue, Wood River, IL	Currently Ineligible	1957	Block/Brick	Maintenacne	1997	Good

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88th REGIONAL SUPPORT COMMAND

FINAL SANITARY AND STORM SEWER VIDEO INSPECTION REPORT

IL027 FOREST PARK AFRC
7402 West Roosevelt Road
Forest Park, Illinois 60130

MWH

BUILDING A BETTER WORLD

July 2009

FINAL SANITARY AND STORM SEWER VIDEO INSPECTION REPORT

IL027 FOREST PARK AFRC
7402 WEST ROOSEVELT ROAD
FOREST PARK, ILLINOIS 60130

Prepared For:

88th Regional Support Command
506 Roeder Circle
Fort Snelling, Minnesota 55111

Prepared By:

MWH Americas, Inc.
175 West Jackson Boulevard, Suite 1900
Chicago, Illinois 60604

JULY 2009

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ACRONYMS AND ABBREVIATIONS

AFRC	Armed Forces Reserve Center
D/S	Downstream
GIS	Geographic Information System
GPS	Global Positioning System
H & S	Health and Safety
I & I	Inflow and Infiltration
MEP	Military Equipment Parking
MWH	MWH Americas, Inc.
NPR	National Power Rodding
OWS	Oil/Water Separator
POV	Privately Owned Vehicle
PPE	Personal Protective Equipment
RCP	Reinforced Concrete Pipe
RSC	Regional Support Command
SDSFIE	Spatial Data Standard for Facilities, Infrastructure, and Environment
U/S	Upstream
VCP	Vitrified Clay Pipe

1.0 INTRODUCTION

MWH Americas, Inc. (MWH) was contracted by the United States Army Corps of Engineers, Omaha District, DACA45-03-D-0001, Delivery Order #0021, to perform storm and sanitary sewer surveys for the 88th Regional Support Command (RSC). The purpose is to identify and document the location and condition of the storm and sanitary sewers. This report documents the video inspection of the storm and sanitary sewers at the Armed Forces Reserve Center (AFRC) facility located in Forest Park, Illinois.

1.1 SITE BACKGROUND

The Forest Park AFRC (IL027) is located at 7402 West Roosevelt Road in Forest Park, Illinois. The site is approximately 47 acres, and contains three buildings with associated asphalt parking and grass-covered areas. Sanitary wastewater is directed to the combined sewer system operated by the Village of Forest Park. Storm water is collected in the storm sewer system and is combined into the sanitary sewer system before exiting the facility property.

1.2 PURPOSE OF VIDEO INSPECTION

The purpose of the sewer survey was to identify and document the following information for each storm and sanitary sewer system at the Forest Park AFRC:

- The condition and location of the storm and sanitary sewers, subsequent outfalls, and any cross connections that may exist
- The condition of any Oil/Water Separator (OWS) connected to the system
- Possible repair recommendations for any defects that may exist

1.3 REPORT ORGANIZATION

The report is organized as follows:

- Section 2.0 – Video Inspection and Cleaning: Describes the video inspection and cleaning activities, provides the pipe diameters and lengths, and discusses the condition of the sanitary and storm sewers.
- Section 3.0 – Conclusions and Recommendations: Presents conclusions of the video inspection and provides recommendations for rectifying noted problems.

- Appendix A – Spatial Data Standard for Facilities, Infrastructure, and Environment (SDSFIE) Attribute Definitions: Presents a glossary of the SDSFIE attributes used to create the shape file for the geodatabase.

- Appendix B – Inspection Review and National Power Rodding (NPR) Video Inspection Reports: Includes the results of MWH's review of video inspection tapes and the video inspection reports provided by the subcontractor.

- Appendix C – Manhole Inspection Reports: Presents the manhole inspection reports completed for each surveyed manhole.

- Appendix D – Photo Documentation: Presents photographs of the inspected manholes and site features.

- Appendix E – Historical Drawings: Presents historical drawings of the Reserve Center that were referenced during the sewer survey.

1.4 KEY PERSONNEL

The key project personnel are as follows:

Mr. Martin Pansch
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2.0 VIDEO INSPECTION AND CLEANING

This section discusses the video inspection and light cleaning of the sanitary (Section 2.1) and storm sewer (Section 2.2) systems performed at the Forest Park AFRC located in Forest Park, Illinois. The inspection was completed from May 19 to 21, 2008. National Power Rodding (NPR), a Carlyon Company of Chicago, Illinois, performed all activities described herein under subcontract to MWH. A MWH Site Representative, Mr. Christopher Swan, was present to observe and coordinate activities with the Facility Manager.

The sanitary and storm sewer systems are discrete in portions of the Forest Park AFRC but ultimately merge at a number of points throughout the infrastructure creating a combined sewer before exiting the site (Figure 1). Sanitary sewer was defined as segments connecting a building's sanitary sewer output to the point where the downstream flow comes in contact with any other segment containing any potential upstream storm sewer input. Storm sewer segments were defined as any segment with any potential upstream storm water input. Sanitary and storm sewer infrastructure is discussed separately in Sections 2.1 and 2.2, respectively, to maintain consistency with the reporting format used for the 88th RSC.

In addition to the video inspection and cleaning activities, the MWH Site Representative documented the location of the sanitary and storm sewer systems. A portable Global Positioning System (GPS) device was used to establish northing and easting coordinates for each manhole, catch basin, and storm drain associated with the sanitary and storm sewer systems at the facility along with other site features. The data collected from the GPS device was uploaded into a Geographic Information System (GIS) database to provide the 88th RSC with updated drawings of the sanitary and storm sewer system (Figure 1). An electronic deliverable of the sewer system locations in the form of a SDSFIE geodatabase and shape file was also prepared. A glossary of SDSFIE Attribute Definitions is provided in Appendix A.

The video inspections were performed using a remote-controlled, self-advancing video camera. The camera was operated from NPR's van and was connected to a video monitor, VCR, and computer. Camera sizes appropriate to pipe diameters were used. The smallest self-advancing camera, or crawler, fits into a 6-inch diameter pipe. In some instances, a smaller diameter 'mini-cam' was used when the normal crawler could not fit in the pipe. Mini-cam inspections produce no printed reports, have a much lower quality of video, and can only travel a maximum of 125 feet, depending on pipe conditions. The mini-cam was only used for 4- or 6-inch diameter pipes for verification of important connections. National Power Rodding's video inspection reports are provided in Appendix B.

During the inspection, toilets, sinks, and floor drains inside the USARC buildings were assumed to discharge to the sanitary sewers. Roof drains were assumed to discharge to the surface or storm sewers, unless drawings provided by the 88th RSC indicated otherwise. In

most cases, these connections were not video inspected because the pipes were too narrow to allow passage of the video camera. Instead, they were verified using the drawings and visual inspections. If the drawings and field observations did not agree, dye or running water testing was performed to determine where connections existed.

Pipe diameters, lengths, and conditions were documented during each video inspection. Pipe diameters were estimated from the video feed from the camera. Pipe lengths were automatically tracked as the camera was advanced. During the inspection, pipe conditions were observed on a video monitor and recorded digitally and on videocassette. MWH performed a detailed review of the video inspections to further assess pipe conditions (Appendix B.1). In some cases, the detailed review noted additional defects that were not documented in the field, and therefore do not appear on the inspection reports from NPR. Copies of the digital video files and videocassettes are maintained in MWH's project files.

A manhole inspection report was completed for each accessible manhole, catch basin, and storm drain at the facility to document its condition. The MWH Site Representative noted the condition of the manhole cover, frame and seal, riser/corbel, bench, and any visible Inflow and Infiltration (I & I) on the manhole inspection reports (Appendix C). Photographs of each manhole are provided in Appendix D. The manholes and catch basins were identified using the naming schemes provided on historical figures, or created by the MWH Site Representative when necessary.

In addition to the video inspection activities, light cleaning was performed, as necessary, using a high-pressure hose fitted with a water-jetting nozzle. The water-jetting nozzle sprayed jets of water backward while at the same time sending a jet of water forward, thus propelling the hose through the pipe while clearing the way in front of the nozzle. Light cleaning is defined as two or fewer passes with the high-pressure hose and water-jetting nozzle. Heavy cleaning is defined as more than two passes, and was not performed during this inspection event. Water for pipe cleaning was obtained from on-site hydrants, with prior approval from Mr. John Dalinis, Facility Management Specialist Supervisor and Ms. Diann Shim, Facility Engineer. National Power Rodding's vacuum truck, which was equipped with a high-powered compressor, supplied the pressure.

A brief Health and Safety (H & S) tailgate meeting was conducted among representatives of NPR and MWH each morning before work commenced. Potential hazards associated with the planned activities were discussed, as well as required Personal Protective Equipment (PPE). Potential hazards include severe weather (e.g., thunderstorms, tornadoes), biological hazards (e.g., biting insects, snakes), and potential exposure to sewage, pressurized water, and overhead equipment. Required PPE included hard hats, steel toe boots, protective eyewear, and gloves.

2.1 SANITARY SEWERS

The purpose of the video inspection of the sanitary sewer system was to document pipe conditions and to determine sanitary sewer line locations and their associated outfalls. Figure 1 shows the sanitary sewer system layout.

Sanitary manhole MH1 is located in the Military Equipment Parking (MEP) area south of Building 100. Manhole MH1 has six upstream connections (Building 100, Upstream East, clean-out CO1, Building 110, catch basin CB21, and the former wash rack) and one downstream connection to manhole MH2. Due to the diameter of the connecting segments and/or the orientation within the manhole, some of the segments were inspected using a mini-cam.

The 6-inch Vitrified Clay Pipe (VCP) segment connecting manhole MH1 upstream north to Building 100 was partially inspected using the mini-cam for approximately 76 out of 100 feet. The inspection stopped when the mini-cam was impeded by a segment joint and debris. One blind connection, which connects to upstream catch basin CB1, was observed approximately 21 feet upstream of manhole MH1 (discussed further in Section 2.2). The 15-inch VCP connecting manhole MH1 upstream east to "Upstream East" (as referenced throughout this report) was inspected in its entirety using a camera-mounted crawler. At 100 feet, the inspection stopped at two connections located at the end of this segment. One connection was in the direction of the inspection (east) and stopped the inspection due to a change in pipe diameter. The other lateral connection in this segment was from the north connecting upstream to catch basin CB2. Further discussion of the segment connecting catch basin CB2 to the "Upstream East" segment is presented in Section 2.2.

The 6-inch VCP segment connecting manhole MH1 upstream southeast to Building 110 was partially inspected using a mini-cam. The inspection was performed for approximately 76 out of 85 feet until a turn in the line to the south restricted the mini-cam from advancing further. Running water tests confirmed the connections to Building 110. The 6-inch VCP segment connecting manhole MH1 upstream south to clean-out CO1 was completely inspected using a mini-cam. A 2-inch steel pipe connected manhole MH1 to the northwest in the direction of the former wash rack (Appendix E). No inspection equipment was small enough to survey this segment and no drain or upstream access point was found to perform a dye or running water test. It's assumed that this line was abandoned at the same time that the grease rack/wash area was decommissioned, therefore this segment is not included in Table B.1 or shown on Figure 1. The last upstream connection to catch basin CB21 is discussed in detail in Section 2.2.

The 18-inch VCP connecting manhole MH1 downstream west to manhole MH2 was inspected using two starting points due to debris that impeded a complete inspection starting from one location. The inspection of this segment initiated from manhole MH1 was inspected for approximately 35 feet using a camera-mounted crawler. The inspection was stopped due to debris in the line that impeded the crawler from advancing further. The inspection of this segment initiated from downstream manhole MH2 was inspected for

approximately 180 feet using a camera-mounted crawler and was stopped due to debris as well. This segment is approximately 245 feet and was not fully inspected despite light cleaning and efforts to perform the inspection from both starting points.

Manhole MH2 is located at the entrance to the facility in the Privately Owned Vehicle (POV) parking area southwest of Building 102. Manhole MH2 has 3 upstream connections (Upstream West, Upstream South, manhole MH1) and one downstream connection to manhole MH6. The inspection for the segment connecting manholes MH1 and MH2 is discussed above. The 36-inch reinforced concrete pipes (RCPs) connecting manhole MH2 upstream to "Upstream South" and "Upstream West" (as noted throughout this report) were each inspected for 50 feet using a camera-mounted crawler. These segments were inspected for 50 feet to ensure that the sewer segments were inspected to a point off of the facility property. The 36-inch VCP connecting manhole MH2 downstream north to manhole MH6 was completely inspected using a camera-mounted crawler.`

Manhole MH4 is located north of Building 100 in the POV parking area and has five upstream connections. One of these is exclusively from storm catch basins and will be discussed further in Section 2.2. The remaining upstream connections include (Upstream East, manhole MH3, Building 100 [South], Building 100 [Southeast]) and one downstream connection to manhole MH5. The 15-inch VCP segment connecting manhole MH4 upstream to "Upstream East" was inspected completely using a camera-mounted crawler. This upstream terminus of this segment had been previously abandoned using brick and mortar and showed no sign of infiltration. The 8-inch VCP segment connecting manhole MH4 upstream southeast to Building 100 (Southeast) was partially inspected using a mini-cam for approximately 76 of 100 feet due to several turns in the line. The 12-inch VCP segment connecting manhole MH4 upstream south to Building 100 (South) was partially inspected for approximately 45 of 100 feet using a camera-mounted crawler. At approximately 45 feet a pipe size change stopped the inspection from advancing further.

The 8-inch VCP segment connecting manhole MH4 upstream southeast to manhole MH3 was completely inspected using a mini-cam after accessing the segment from both access points. Approximately 90 feet of this segment was inspected starting from manhole MH3 and approximately 12 feet was inspected starting from manhole MH4. A few feet of overlap in the inspection of this segment was performed to ensure a compete survey. The other connections to manhole MH3 are exclusively from storm catch basins. A discussion of these connections is discussed further in Section 2.2.

The 15-inch VCP segment connecting manhole MH4 downstream west to manhole MH5 was completely inspected using a camera-mounted crawler for 94 feet.

Manhole MH5 is located north of Building 100 in the POV parking area and has four upstream connections (manhole MH4, Building 100 top sewer line, Building 100 bottom sewer line, catch basins CB9/CB10/CB11 [all one segment]) and one downstream connection to manhole MH6. The segment connecting manhole MH5 upstream east to manhole MH4 was completely inspected as discussed above. The first segment inspected

connecting manhole MH5 upstream south to Building 100 (Building 100 top sewer line) was a 8-inch VCP. This segment was partially inspected for approximately 75 of 99 feet using a mini-cam. The inspection was stopped when a change in pipe diameter was encountered. The second segment inspected connecting manhole MH5 upstream south to Building 100 (Building 100 bottom sewer line) was a 6-inch VCP. This segment was partially inspected for approximately 15 feet using a mini-cam. The inspection was stopped after significant debris was encountered; the segment is suspected to have been abandoned during the expansion construction activities (Appendix E) and was not included on Figure 1.

The segment connecting manhole MH5 upstream to "Upstream North" (connecting with catch basins CB9, CB10, and CB11) was partially inspected for approximately 90 of 220 feet using a mini-cam. This segment and the association to catch basins CB9, CB10, and CB11 will be discussed further in Section 2.2.

The 15-inch VCP connecting manhole MH5 downstream west to manhole MH6 was inspected using two starting points due to debris that impeded a complete inspection starting from one location. The inspection of this segment initiated from manhole MH5 was inspected for approximately 90 feet using a camera-mounted crawler. The inspection was stopped due to debris in the line that impeded the crawler from advancing further. The inspection of this segment initiated from downstream manhole MH6 was inspected for approximately 145 feet using a camera-mounted crawler and was stopped due to debris as well. This segment is approximately 245 feet and was incompletely inspected despite light cleaning and efforts to perform the inspection from both starting points.

Manhole MH6 is located northwest of Building 100 in the POV parking area and has three upstream connections (Upstream West, manhole MH2, manhole MH5) and one downstream connection to manhole MH7 - downstream north and exit to municipal sewer system. The 36-inch RCP connecting manhole MH6 to "Upstream West" (as noted throughout this report) was inspected for 50 feet using a camera-mounted crawler. This segment was inspected for 50 feet to ensure that the sewer segment was inspected to a point off of the facility property. The 36-inch RCP connecting manhole MH2 and manhole MH6 was completely inspected, as discussed above. The 15-inch RCP connecting manholes MH5 and MH6 was incompletely inspected, as discussed above. The 36-inch RCP segment from manhole MH6 downstream to manhole MH7 - downstream north and exit to municipal sewer system was completely inspected using a camera-mounted crawler to a connection off of facility property. However, manhole MH7 could not be located on the surface. Manhole MH7 is the exit point for the sewer system at the Forest Park AFRC.

At most, two OWSs were formerly located in the MEP parking area, west of Building 110, based on historical drawings (Appendix E). According to the FM, field observations, and historical drawings, both former OWSs are no longer in place. The most recent drawing provided, from 1977, indicates that the first OWS was removed and replaced by a triple basin OWS. It is unclear whether the triple basin OWS was installed, but no evidence was

found on the surface to confirm either the installation or removal. It is assumed that no OWSs presently exist in the area west of Building 110.

The video inspection revealed that the sanitary sewers were in generally good condition. Light cleaning was performed to remove small amounts of debris before inspection. All pipe segments are either VCP or RCP. A total of 1,903 feet of sanitary sewer segments were inspected. There were no sanitary sewer segments that could not be televised. Appendix B.1 tabulates the findings of the video inspection, and Appendix B.2 presents detailed inspection reports for each sanitary sewer segment.

2.2 STORM SEWERS

The purpose of the video inspection of the storm sewer system was to document pipe conditions and to determine storm line locations and their associated outfalls. Figure 1 shows the storm sewer system layout.

The internal inspection of all catch basins at the Forest Park AFRC facility was not completed with the exception of catch basins CB1, CB2, CB3, CB5, CB13, and CB14. Most of the catch basin covers at the Forest Park AFRC could not be opened, most likely from re-surfacing activities. An attempt to open each catch basin was made by MWH and NPR personnel. However, only those mentioned above were successfully opened. Opening the remaining covers would have caused significant damage to the catch basin covers and frames. As a test, an attempt to open two of the inaccessible catch basins by whatever means necessary was attempted with the permission and participation of the Forest Park AFRC Facility Management Specialist Supervisor, Mr. John Dalinis. An attempt to open catch basins CB6 and CB7 revealed that significant damage would be done at each location if opened by force. Covers could not be separated from frames, and ultimately the frame came loose before the seal between the cover and frame could be broken. Additionally, manhole or catch basin maintenance was not in the scope of this task. Furthermore, a discussion with Mr. Dalinis and the SEM, Mr. Eric Johnson, concluded that opening the inaccessible catch basin covers with irreversible damage was not beneficial since almost all catch basins were significantly full of debris (which would make inspection nearly impossible).

Catch basin CB1 is located in the MEP area south of Building 100 and north of Building 110. The bottom of this catch basin was filled with more than 12-inches of debris, mostly sand, and the pipe segment could not be located (Appendix D, Photograph 28). Based on historical drawings (Appendix E), one segment (size and material unknown), connects downstream south to catch basin CB1. A running water test was performed to confirm the connection to manhole MH1. The test indicated that storm water collected in catch basin CB1 ultimately connects with manhole MH1, which is part of the sanitary sewer system. An inspection of the sanitary sewer segment from manhole MH1 connecting upstream north to Building 100 (Section 2.1) shows a tap in the line at

approximately 21 feet which is from catch basin CB1. Due to the high amount of debris in the catch basin, no video inspection was performed for this segment.

Catch basin CB2 is located in the MEP area south of Building 100 and north of Building 110. One upstream connection north to catch basin CB3 and one downstream connection south were observed in catch basin CB2. The crawler-mounted camera could not be used due to the narrowness and depth of the catch basin. The 6-inch VCP segment connecting catch basin CB2 downstream south to "Downstream South" was completely inspected using a mini-cam. A large piece of debris, possibly a piece of broken pipe or brick, was observed blocking the connecting tap to the downstream segment from sanitary manhole MH1 to "Upstream East" (Section 2.1). The segment connecting catch basin CB2 upstream north to catch basin CB3 was not inspected starting from catch basin CB2 due to significant debris in the catch basin and in the line. Light cleaning was attempted, but the amount of debris in the segment restricted the mini-cam from fitting into the 6-inch VCP segment. An inspection of this segment initiated from catch basin CB3 is discussed below.

Catch basin CB3 is located in the courtyard area of Building 100. The cover could not be opened for the same reasons mentioned at the beginning of this section. At the request and permission of the Facility Management Specialist Supervisor, Mr. John Dalinis and the State Environmental Manager, Mr. Eric Johnson, the open-vented cover to catch basin CB3 was broken in using a sledgehammer, leaving the remaining cover sealed to the frame, to gain access. One downstream connection to catch basin CB2 was observed. The 6-inch VCP segment from catch basin CB3 to catch basin CB2 was partially inspected for approximately 50 of 130 feet using a mini-cam. The inspection could not advance any further after passing through debris and a series of turns in the line. A running water test confirmed the ultimate connection to manhole MH1, however no flow was observed in catch basin CB2. The significant debris in catch basin CB2 may have prevented observation of flow from the surface.

Catch basin CB4 is located in the MEP area, just south of the locked gate located on the east side of Building 100. Unsuccessful attempts to open this catch basin were made, and caution was used not to damage the cover since its location is in the primary traffic access point to the MEP area. Through the open great cover, standing water (greater than 1 foot) was observed. Without internal access, one connection was observed connecting downstream north to catch basin CB5. This segment was not inspected since there was no access to catch basin CB4 and due to a drop connection within catch basin CB5 intersecting this segment, discussed below.

Catch basin CB5 is located in the POV parking area and is located on the east side of Building 100. Catch basin CB5 contains one drop connection which connects two segments including upstream south to catch basin CB4 and downstream northwest to manhole MH3. No inspection from catch basin CB5 as a starting point could be made due to a drop connection within catch basin CB5. Additionally, the top half of the drop connection was cemented shut, so an attempt to inspect the segment using a mini-cam was not possible (Appendix D, Photograph 37).

Sanitary/storm manhole MH3 is located east-northeast of Building 100. Based on historical drawings (Appendix E) and inspection results, manhole MH3 is the final location before the storm sewer system on the east side of Building 100/MEP area combines with the sanitary sewer system at manhole MH4. One upstream segment connects to catch basin CB5 and one downstream segment connects to manhole MH4. The 6-inch VCP segment connecting manhole MH3 upstream south to catch basin CB5 was inspected for approximately 48 feet. At 48 feet (starting from manhole MH3), a drop connection was encountered connecting catch basin CB5 to this segment (Figure 1). The drop connection configuration involved a turn in the line that restricted the mini-cam from advancing further. This drop connection is the convergence point from CB4 and CB5 into this segment. As discussed above, there was no access from catch basin CB4 to approach the inspection from the reverse direction.

The storm sewer infrastructure in the POV parking area, north of Building 100, is comprised of 12 catch basins arranged in four columns, consisting of three catch basins each, oriented north to south (Figure 1). These columns of catch basins connect downstream south to the sanitary sewer segments from manholes MH4, MH5, and MH6 which ultimately drain north off of the facility property via manhole MH7. Of the 12 catch basins in the POV parking area, only two covers (catch basins CB13 and CB14) were successfully opened in order to perform an internal inspection and as access to video inspection. It appears as though two modifications of each catch basin's configuration have been used historically at the facility.

Each catch basin (CB6 through CB17), north of Building 100, has a 6-inch connection on the north and south wall within the catch basin (Appendix D, Photograph 55). The catch basin configuration seems to have originally been designed with the catch basins connected in series, draining north and south. However, all of these segments were observed to be abandoned. As noted in Appendix D, Photographs 53 and 55, roots, debris, and gravel were observed in all north and south connections in the accessible catch basins. These north and south connections are believed to be nonfunctional.

Additional 6-inch connections were observed in the bottom southwest bench/riser area of each catch basin (CB6 through CB17). However, most catch basins were significantly filled with debris. Of the catch basins that could be opened, the configuration of the catch basin and the amount of debris inhibited the fit of the camera-mounted crawler or mini-cam apparatus, restricting the video inspection of all catch basins. Running water and dye tests confirmed that the catch basins no longer drained via the north-south series connections. Rather, the catch basins were observed to drain out of the 6-inch connection in the bottom southwest area of each catch basin. Dye and/or running water tests were performed in at least one catch basin from each north-south column of catch basins. A discussion of the findings for each north-south column of catch basins is discussed below.

The easternmost column of catch basins in the POV area includes catch basins CB6 through CB8. As discussed above, unsuccessful attempts were made to open each catch

basin. A dye test was performed in catch basins CB6, CB7, and CB8. With the exception of the catch basin where the test was initiated, no dye was observed in any catch basin in either the associated or adjacent columns. However, when dye tests were performed in catch basins CB6, CB7, and CB8, dye was observed in manhole MH4 coming from Upstream East (due east of manhole MH4) (Figure 1). As noted in Section 2.1, a tap to the north at approximately 6.1 feet east of manhole MH4 was observed in the segment from manhole MH4 upstream to Upstream East. MWH believes that catch basins CB6 though CB8 connect by blind connection to a north-south oriented segment (Segment Q in Appendix B.1) which in turn connects by blind connection to the segment between manhole MH4 and Upstream East (Figure 1).

The second column from the east of catch basins in the POV area includes catch basins CB9 through CB11. As discussed above, unsuccessful attempts were made to open each catch basin. A dye test was performed in catch basins CB9, CB10, and CB11. With the exception of the catch basin where the test was initiated, no dye was observed in any catch basin in either the associated or adjacent columns. However, when dye tests were performed in catch basins CB9, CB10, and CB11, dye was observed entering manhole MH5 from due north (Figure 1). This 6-inch VCP segment was partially inspected using the mini-cam for 90 out of approximately 220 feet. The inspection stopped when segment joints were encountered and the mini-cam couldn't advance further. MWH believes that catch basins CB9 though CB11 connect by blind connection to a north-south oriented segment (Segment V in Appendix B.1) which in turn connects to manhole MH5 (Figure 1). The blind connection to catch basin CB9 was observed with the mini-cam.

The third column from the east of catch basins in the POV area includes catch basins CB12 through CB14. Catch basin CB12 could not be opened, but catch basins CB13 and CB14 were opened successfully. Significant debris was observed in both catch basins. A dye test was performed in catch basins CB13 and CB14. With the exception of the catch basin where the test was initiated, no dye was observed in any catch basin in either the associated or adjacent columns. However, when dye tests were performed in catch basins CB13 and CB14, dye was observed in manhole MH6 coming from the east in the segment from manhole MH6 upstream to manhole MH5 (Figure 1). Several taps to the north were observed in the segment between manholes MH5 and MH6. MWH believes that each catch basin (CB12 though CB14) connect by blind connection to the east-west segment between manholes MH5 and MH6 (Figure 1).

The westernmost column (fourth column from the east) of catch basins in the POV area includes catch basins CB15 through CB17. As discussed above, unsuccessful attempts were made to open each catch basin. Significant debris was observed in both catch basins. A running water test was performed during the inspection of the segment between manholes MH5 to MH6 in catch basins CB15, CB16, and CB17. With the exception of the catch basin where the test was initiated, no water was observed in any catch basin in either the associated or adjacent columns. However, when running water tests were performed in catch basins CB15, CB16, and CB17, water was observed entering the main segment (from manholes MH5 to MH6) through separate taps (Figure 1). Several taps were observed on

the north side of the segment connecting manholes MH5 and MH6. MWH believes that each catch basin (CB15, CB16, and CB17) connects by blind connection to the east-west oriented segment between manholes MH5 and MH6 (Figure 1).

Two catch basins, CB18 and CB19, are located west of Building 100 in the POV area. As discussed above, unsuccessful attempts were made to open each catch basin. Significant debris was observed in both catch basins. A running water test was performed during the inspection of the segment between manholes MH5 to MH6 in catch basins CB18 and CB19. With the exception of the catch basin where the test was initiated, no water was observed in any of the adjacent catch basin. However, when running water tests were performed in each catch basin, water was observed entering the main segment (from manholes MH5 to MH6) through separate taps (Figure 1). Several taps were observed on the south side of the segment connecting manholes MH5 and MH6. MWH believes that each catch basin (CB18 and CB19) connects by blind connection to the east-west oriented segment between manholes MH5 and MH6 (Figure 1).

Catch basin CB20 is located south of Building 100 in the POV area. As discussed above, unsuccessful attempts were made to open this catch basin. The catch basin was in deteriorating condition as the southwest portion of the frame and cover is sinking into the asphalt. Standing water (approximately 1 foot deep) was observed through the open-vent grate. One connection downstream south was observed, but the material and size of the segment could not be determined. It is assumed that this catch basin connects via blind connection to the segment connecting manholes MH1 and MH2 (Figure 1).

The 6-inch VCP segment connecting manhole MH1 upstream south to catch basin CB21 was completely inspecting using a mini-cam. Catch basin CB21 is in the area of a former OWS and during inspection it was unclear whether catch basin CB21 replaced the OWS and the associated 6-inch VCP pipe.

One catch basin, CB22, could not be located on the surface and may have been removed (Appendix D, Photographs 70 and 71). A tap (oriented south) was observed during the inspection between manholes MH5 and MH6 approximately due north of the presumed location of catch basin CB22. It is unclear if this segment is functioning or abandoned.

The video inspection revealed that the storm sewers were generally in good condition, but very inaccessible. Light cleaning was performed to remove small amounts of debris before inspection, as applicable. Pipe segment material included VCP, although the majority of the storm sewer infrastructure could not be assessed due to limited access. A total of 261 feet of storm sewer segments were inspected. Table 1 lists storm segments that could not be completely televised. Appendix B.1 tabulates the findings of the video inspection, and Appendix B.3 presents detailed inspection reports for each sewer segment.

Table 1 - Storm Sewer Segments without Televising

U/S	D/S	Reason for no inspection
CB1	MH1	No access. Significant debris (could not locate segment opening).
CB4	MH3	No access. Could not open catch basin CB4 and a drop connection / turn in the line impeded video inspection initiated from manhole MH3.
CB6	MH4	Could not open catch basin. Catch basin connects to another segment via blind connection, so access from another starting point was not possible.
CB7	MH4	Could not open catch basin. Catch basin connects to another segment via blind connection, so access from another starting point was not possible.
CB8	MH4	Could not open catch basin. Catch basin connects to another segment via blind connection, so access from another starting point was not possible.
CB9	MH5	Could not open catch basin. Catch basin connects to another segment via blind connection, so access from another starting point was not possible.
CB10	MH5	Could not open catch basin. Catch basin connects to another segment via blind connection, so access from another starting point was not possible.
CB11	MH5	Could not open catch basin. Catch basin connects to another segment via blind connection, so access from another starting point was not possible.
CB12	MH6	Could not open catch basin. Catch basin connects to another segment via blind connection, so access from another starting point was not possible.
CB13	MH6	Catch basin connects to another segment via blind connection and debris in the catch basin restricted segment access; access from another starting point was not possible.
CB14	MH6	Catch basin connects to another segment via blind connection and debris in the catch basin restricted segment access; access from another starting point was not possible.
CB15	MH6	Could not open catch basin. Catch basin connects to another segment via blind connection, so access from another starting point was not possible.
CB16	MH6	Could not open catch basin. Catch basin connects to another segment via blind connection, so access from another starting point was not possible.
CB17	MH6	Could not open catch basin. Catch basin connects to another segment via blind connection, so access from another starting point was not possible.
CB18	MH6	Could not open catch basin. Catch basin connects to another segment via blind connection, so access from another starting point was not possible.
CB19	MH6	Could not open catch basin. Catch basin connects to another segment via blind connection, so access from another starting point was not possible.
CB20	MH2	Could not open catch basin. Catch basin connects to another segment via blind connection, so access from another starting point was not possible.
CB22	MH6	Could not locate catch basin. Either buried or removed.

D/S – Downstream
U/S – Upstream

3.0 CONCLUSIONS AND RECOMMENDATIONS

Several localized pipe defects were found in the inspected sanitary and storm sewer systems surveyed at the Forest Park AFRC in Forest Park, IL. The following sections provide a summary of the defects found in the sanitary and storm sewer segments based on MWH's review of the video inspections completed by NPR along with MWH's conclusions and recommendations for corrective actions.

3.1 SANITARY SEWER INSPECTION

Several localized pipe defects were found in the sanitary sewer system. Of the 19 sanitary sewer pipe segments, 5 of the pipe segments were found to need immediate action and the condition of eight pipe segments needs to be monitored. For the remaining segments, no defects were found during the inspection. Table 2 lists sanitary sewer segments prioritized in order of severity of defects (action and possible action) as well as additional detailed descriptions of defects. Detailed data for all pipe segments are provided in Appendix B.1.

Table 2 - Sanitary Sewer Video Inspection Recommendations

U/S	D/S	Recommendation	Recommendation Comments
MH1	MH2	Action	Clear sedimentation and inspect remaining length. Perform periodic inspections to monitor the condition of the cracks and offset joint. Perform periodic cleanings to control mineral deposits and sedimentation.
MH5	MH6	Action	Clear sedimentation and inspect remaining length, Perform periodic inspections to monitor the condition of the cracks and offset joints. Perform periodic cleanings to control mineral deposits and sedimentation.
Building 100	MH1	Action	Clear sedimentation and inspect remaining length. Perform periodic inspections to monitor the condition of the cracks. Perform periodic cleanings to control the sedimentation.
Upstream East	MH4	Action	Perform periodic inspections to monitor the condition of the offset joint. Perform periodic cleanings to control the mineral deposit and sedimentation.
Building 100-2	MH5	Action	Confirm that pipe is abandoned, otherwise clean out.
MH4	MH5	Possible Action	Perform periodic inspections to monitor the condition of the cracks Perform periodic cleanings to control the sedimentation.

U/S	D/S	Recommendation	Recommendation Comments
Building 100 (South)	MH4	Possible Action	Perform periodic inspections to monitor the condition of the offset joint and longitudinal crack. Perform periodic cleanings to control the mineral deposit.
Upstream East	MH1	Possible Action	Perform periodic inspections to monitor the condition of the offset joints and line sags. Perform periodic cleanings to control the mineral deposit.
Upstream West	MH6	Possible Action	Perform periodic cleanings to control sedimentation.
Upstream South	MH2	Possible Action	Perform periodic cleanings to control sedimentation.
MH2	MH6	Possible Action	Perform periodic cleanings to control sedimentation.
Upstream West	MH2	Possible Action	Perform periodic cleanings to control mineral deposits.
MH6	Downstream North	Possible Action	Perform periodic cleanings to control mineral deposits.

D/S – downstream
U/S – upstream

The segments from manholes MH1 to MH2, MH5 to MH6, and Building 100 to manhole MH1, have severe sedimentation that blocked the camera. The sedimentation should be cleared and the remaining length of the pipes should be inspected. Additionally, the segments from manholes MH1 to MH2 and from manholes MH5 to MH6 have minor to moderate longitudinal and multiple cracks, minor offset joints, and minor to moderate mineral deposits. The segment from Building 100 to manhole MH1 has minor to moderate annular cracks. The segment from Upstream East to manhole MH4 has a moderate offset joint, minor mineral deposits, and moderate sedimentation. All of these pipes should be periodically inspected to monitor the condition of the cracks and offset joints for further deterioration and possible repair and periodically cleaned to control the mineral deposits and sedimentation.

The segment from Building 100-2 to manhole MH5 has severe sedimentation that blocked the camera. The pipe was suspected to be abandoned. It should be confirmed that the pipe is abandoned; otherwise the sedimentation should be cleared out and the segment re-inspected.

The segments from manholes MH4 to MH5, Upstream West to manhole MH6, Upstream South to manhole MH2, and from manholes MH2 to MH6 have minor to moderate sedimentation. Additionally, the segment from manholes MH4 to MH5 has minor multiple cracks. These pipes should be periodically inspected to monitor the condition of the cracks for further deterioration and possible repair and periodically cleaned to control the sedimentation.

The segments from Building 100 (South) to manhole MH4 and from Upstream East to manhole MH1 have minor and moderate offset joints and minor and moderate mineral deposits. Additionally, the segment from Upstream East to manhole MH1 has minor line sags and the segment from Building 100 (South) to manhole MH4 has a minor longitudinal crack. The pipes should be periodically inspected to monitor the condition of the offset joints, line sags, and cracks and periodically cleaned to control the mineral deposits.

The segments from Upstream West to manhole MH2 and from manhole MH6 to Downstream North have minor mineral deposits. The pipes should be periodically cleaned to control the mineral deposits.

Tables 3 presents a summary of recommendations for sanitary sewer manholes that may require maintenance due to defects identified during inspection. Manhole inspection forms can by viewed in Appendix C.1.

Table 3 - Sanitary Sewer Manhole Inspection Recommendations

Manhole ID	Defects	Recommendation
MH1	Defective brick/mortar, steps/ladder, debris on bench	Repair broken bricks and defective mortar and clean up debris on bench.
MH2	Steps on ladder are broken and very sharp.	Replace or remove sharp ladder rungs.
MH4	Defective brick/mortar in frame/riser and debris on bench.	Repair broken bricks and defective mortar and clean up debris on bench.
MH5	Frame is offset.	Perform periodic inspections to verify that the frame is not making manhole inaccessible.

3.2 STORM SEWER INSPECTION

Several localized pipe defects were found in the storm sewer system. Complete or partial inspections were possible in only five of the 14 storm sewer pipe segments as described in the previous section. Of the five storm sewer pipe segments inspected, one of the pipe segments was found to need immediate action and the condition of two pipe segments needs to be monitored. For the other two segments inspected, no defects were found during the inspection. Table 4 lists storm sewer segments prioritized in order of severity of defects (action and possible action) as well as additional detailed descriptions of defects. Detailed data for all pipe segments are provided in Appendix B-1.

Table 4 - Storm Sewer Video Inspection Recommendations

U/S	D/S	Recommendation	Recommendation Comments
CB3	CB2	Action	Clear sedimentation and inspect remaining length. Perform periodic cleanings to control sedimentation.
CB21	MH1	Possible Action	Perform periodic inspections to monitor the condition of the offset joints. Perform periodic cleanings to control sedimentation.
CB2	Downstream South	Possible Action	Perform periodic inspections to monitor the condition of the offset joint.

D/S – downstream
U/S – upstream

The segment from catch basins CB3 to CB2 has severe sedimentation that blocked the camera. The sedimentation should be cleared and the remaining length of the pipes should be inspected. Additionally, the segment has minor sedimentation. The pipe should be periodically cleaned to control the sedimentation.

The segments from catch basin CB21 to manhole MH1 and from catch basin CB2 to Downstream South have minor to moderate offset joints. Additionally, the segment from catch basin CB21 to manhole MH1 has moderate sedimentation. The segments should be periodically inspected to monitor the condition of the offset joints for further deterioration and possible repair and periodically cleaned to control the sedimentation.

The majority of the catch basins at the Forest Park AFRC could not be opened most likely due to lack of activity and paving operations throughout the historical use of the POV parking area. It is generally recommended that all catch basins at the site are opened, cleaned of debris / sediment, and inspected. Tables 5 presents a summary of recommendations for storm sewer manholes and catch basins that may require maintenance due to defects identified during inspection. Manhole and catch basin inspection forms can by viewed in Appendix C.2.

Table 5 - Storm Sewer Manhole Inspection Recommendations

Manhole ID	Defects	Recommendation
CB1	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.
CB2	Significant debris in catch basin.	Clear out debris.
CB3	Cover broken, debris on bench, standing water.	Replace cover and frame; clear out debris.
CB4	Could not open or separate cover from frame. Significant debris and standing water in catch basin.	Repair cover and frame; clear out debris.
CB6	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.
CB7	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.
CB8	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.
CB9	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.
CB10	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.
CB11	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.
CB12	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.
CB13	Significant debris in catch basin.	Clear out debris.
CB14	Significant debris in catch basin.	Clear out debris.
CB15	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.
CB16	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.
CB17	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.
CB18	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.
CB19	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.
CB20	Could not open or separate cover from frame. Significant debris in catch basin.	Repair cover and frame; clear out debris.

Manhole ID	Defects	Recommendation
CB22	Catch basin is either buried or removed.	If catch basin is still in place, uncover and raise to ground level. Verify records or historical references to indicate that there is no catch basin.

CRS\THD\

O:\2091000-2091999\2091049\Sewer Surveys\Sites\Illinois\IL027 - Forest Park\Final Report\Final IL027 SI Report - Text v.3.doc

FIGURES

LEGEND:

- Catch Basin
- Cleanout
- Manhole
- Fence Line
- Gate Line
- Not Video Inspected Sewer Line
- Video Inspected Sewer Line
- Taps

Sewer Line Deficiency

- Annular Cracks
- Longitudinal Cracks
- Line Sag
- Multiple Cracks
- Mineral Deposit
- Offset Joint
- Sedimentation/Solid Deposits

Notes:

1. Combined Sewer System components were surveyed with Trimble Pro XRS/GEOXT in May 2008 by MWH.
2. Base map layers (roads, buildings, etc) were obtained from the 88th RRC GIS program in March 2008.

0 50 100 200 300 Feet

Combined Sewer GIS Layer Development

IL027 Forest Park AFRC

88th Regional Readiness Command (RRC)

United States Army Reserves

MWH

2091049.21040130

Figure 1

APPENDIX A
SDSFIE ATTRIBUTE DEFINITIONS

ENTITY SET NAME
improvement

ENTITY CLASS NAME
improvement_general

TABLE NAME	TABLE LONG NAME	TABLE TYPE	KEY COLUMN	VER
imgenfnc	Fence	Graphic	1250	1.40
TABLE DEFINITION	This table contains data about fences.			

DATA TYPE	CHAR LENGTH	DOMAIN TABLE	SOURCE	ATTRIBUTE NAME	DEFINITION
Unique Data Identifier				**datalink**	Graphic Key. A unique identifier generated by Computer-Aided Design and Drafting (CADD) or Geographic Information System (GIS) software that is used to link the database record to a specific graphic feature.
I	0				
Primary Key Identifier				**fence_id**	Primary Key. A unique, user defined identifier for each record or instance of an entity.
C	20				
FOREIGN KEY JOIN to cmgenmap				**map_id**	Foreign Key. Used to link the record to the appropriate map.
I	0				
FOREIGN KEY JOIN to cmgenmet				**meta_id**	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
C	20				
FOREIGN KEY JOIN to cmmedmed				**media_id**	Foreign Key. Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.
C	20				
FOREIGN KEY JOIN to cmgencrd				**coord_id**	Foreign Key. Used to link the record to the appropriate point coordinate record(s).
C	20				
Erected Date				**date_erect**	The date when the fence was first erected. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
I	1				
Fencing Material Name Code				**fenc_typ_d**	A code indicating the fencing material used.
C	16	d_fentyp			
Top Barrier Material Code				**fenc_top_d**	Any special material used as an upper barrier on the fence.
C	16	d_fentyp			
Height Dimension				**fence_ht**	The overall distance from the surface of the ground to the top of the fence.
D					
Fence Length Dimension				**fence_len**	The overall distance from one end of the fence to the other.
D					
Dimension Unit of Measure Code				**dim_u_d**	The unit of measure for the dimensions of the fence.
C	16	d_uomdis			
Electrified or Sensored Boolean Value Code				**electric_d**	A Boolean indicating whether the fence is electrified or contains remote sensors.
C	16	d_boolen			

User Flag Text	C	20		**user_flag**	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
FOREIGN KEY JOIN to cddodins	C	20		**instln_id**	Foreign Key. Used to link the record to the applicable INSTALLATION record.
FOREIGN KEY JOIN to cmgenfac	C	20		**facil_id**	Foreign Key. Used to link the record to the Facility Record.
Graphic Attribute Raster GValue	R			**grid_value**	A numeric identification of a raster element in an image or grid that represents the feature.
X Coordinate	D			**coord_x**	The x component of individual coordinate point.
Y Coordinate	D			**coord_y**	The y component of individual coordinate point.
Z Coordinate	D			**coord_z**	The z component of individual coordinate point.
From X Coordinate	D			**frcoord_x**	The x component of the ending (downstream/downgradient) coordinate point.
From Y Coordinate	D			**frcoord_y**	The y component of the ending (downstream/downgradient) coordinate point.
From Z Coordinate	D			**frcoord_z**	The z component of the ending (downstream/downgradient) coordinate point.
To X Coordinate	D			**tocoord_x**	The x component of the beginning (upstream/upgradient) coordinate point.
To Y Coordinate	D			**tocoord_y**	The y component of the beginning (upstream/upgradient) coordinate point.
To Z Coordinate	D			**tocoord_z**	The z component of the beginning (upstream/upgradient) coordinate point.
Use Code	C	16	d_fenuse	**fenc_use_d**	Code indicating what purpose the fence serves. [USACE OPERATIONS]
Wire Gauge Type Code	C	16	d_gautyp	**gau_typ_d**	Code indicating the type of wire gauge used for the fence. [USACE OPERATIONS]
FOREIGN KEY JOIN to cmgenpoc	C	50		**poc_id**	FOREIGN KEY - Links the record to CMGENPOC through primary key POC_ID. [USACE OPERATIONS]
Post Spacing Dimension	I	0		**fen_space**	The dimension between the fence posts. [USACE OPERATIONS]
Gate Corner Post Type Code	C	16	d_gatpos	**gat_pst_d**	The material that is used for the gate corner post. [USACE OPERATIONS]
FOREIGN KEY JOIN to imgnimnt	C	20		**immnt_id**	FOREIGN KEY - Links the record to IMGNIMNT through primary key IMMNT_ID.
Narrative Text	C	240		**narrative**	A description or other unique information concerning the subject item, limited to 240 characters. [Cherry Point]
Purpose Text				**purpose**	Purpose, a summary of what is contained within the fence

	C	30		[Cherry Point]		
Coating Code					**coating**	Describes the fence's sealant or manufacture installed coating.
	C	16		[Cherry Point]		
Country Code					**country_d**	2-letter Country Designator.
	C	16	d_faccou	[Air Force]		
Feature Length Dimension					**feat_len**	The overall length of the feature.
	D			[Center]		
Length Unit of Measure Code					**length_u_d**	The unit of measure for the length of the feature.
	C	16	d_uomdis	[Center]		

ENTITY SET NAME
improvement

ENTITY CLASS NAME
improvement_general

TABLE NAME	TABLE LONG NAME	TABLE TYPE	KEY COLUMN	VER
imgengat	Gate	Graphic	1251	1.40

TABLE DEFINITION This table contains data about gates or other entrances through fences or walls.

DATA TYPE	CHAR LENGTH	DOMAIN TABLE	SOURCE	ATTRIBUTE NAME	DEFINITION
Unique Data Identifier				**datalink**	Graphic Key. A unique identifier generated by Computer-Aided Design and Drafting (CADD) or Geographic Information System (GIS) software that is used to link the database record to a specific graphic feature.
I	0				
Primary Key Identifier				**gate_id**	Primary Key. A unique, user defined identifier for each record or instance of an entity.
C	20				
FOREIGN KEY JOIN to cmgenmap				**map_id**	Foreign Key. Used to link the record to the appropriate map.
I	0				
FOREIGN KEY JOIN to cmgenmet				**meta_id**	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
C	20				
FOREIGN KEY JOIN to cmmedmed				**media_id**	Foreign Key. Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.
C	20				
FOREIGN KEY JOIN to cmgencrd				**coord_id**	Foreign Key. Used to link the record to the appropriate point coordinate record(s).
C	20				
Erected Date				**date_erect**	The date when the gate was first installed. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
I	1				
Opening Time				**open_time**	The time of day in local time when the gate opens. Leave blank for gates open 24 hours per day. Format for time of day is HHMMSS. Use the standard 24 hour clock.
I	2				
Closing Time				**time_close**	The time of day in local time when the gate closes Format for time of day is HHMMSS. Use the standard 24 hour clock.
I	2				
Type Code				**gate_typ_d**	The gate material and method of construction.
C	16	d_fentyp			
Guard Available Boolean Value Code				**attended_d**	A Boolean indicating whether the gate is tended by a guard or other individual.
C	16	d_boolen			
Electrified or Sensored Boolean Value Code				**electric_d**	A Boolean indicating whether the fence is electrified or contains remote sensors.
C	16	d_boolen			
Height Dimension				**gate_ht**	The overall distance from the surface of the ground to the top of the gate.
D					
Gate Length Dimension				**gate_len**	The overall distance from one end of the gate to the other.
D					

Dimension Unit of Measure Code	C	16	d_uomdis		**dim_u_d**	The unit of measure for the dimensions of the gate.
Top Barrier Material Code	C	16	d_fentyp		**gate_top_d**	Any special material used as an upper barrier on the gate.
User Flag Text	C	20			**user_flag**	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
FOREIGN KEY JOIN to cddodins	C	20			**instln_id**	Foreign Key. Used to link the record to the applicable INSTALLATION record.
FOREIGN KEY JOIN to cmgenfac	C	20			**facil_id**	Foreign Key. Used to link the record to the Facility Record.
Graphic Attribute Raster GValue	R				**grid_value**	A numeric identification of a raster element in an image or grid that represents the feature.
X Coordinate	D				**coord_x**	The x component of individual coordinate point.
Y Coordinate	D				**coord_y**	The y component of individual coordinate point.
Z Coordinate	D				**coord_z**	The z component of individual coordinate point.
Military Control Type Code	C	16	d_cntrl		**cntl_typ_d**	The code which indicates whether or not there are key numbers for the gate.
From Y Coordinate	D				**frcoord_y**	The y component of the ending (downstream/downgradient) coordinate point.
From Z Coordinate	D				**frcoord_z**	The z component of the ending (downstream/downgradient) coordinate point.
To Y Coordinate	D				**tocoord_y**	The y component of the beginning (upstream/upgradient) coordinate point.
From X Coordinate	D				**frcoord_x**	The x component of the ending (downstream/downgradient) coordinate point.
To X Coordinate	D				**tocoord_x**	The x component of the beginning (upstream/upgradient) coordinate point.
To Z Coordinate	D				**tocoord_z**	The z component of the beginning (upstream/upgradient) coordinate point.
Lock Key Code	C	20		[USACE OPERATIONS]	**lock_keycd**	Gate lock combination if the gate is locked
Use Code	C	16	d_fenuse	[USACE OPERATIONS]	**gat_use_d**	Code indicating what the gate is used for.
Gauge Type Code	C	16	d_gautyp	[USACE OPERATIONS]	**gau_typ_d**	Code indicating the type of wire gauge used for the fence.
Corner Post Code	C	16	d_gatpos	[USACE OPERATIONS]	**gat_pst_d**	The material that is used for the gate corner post.
Post Spacing Dimension					**pst_space**	The spacing dimension of the gate posts.

	I	0		[USACE OPERATIONS]	
FOREIGN KEY JOIN to cmgenpoc				**poc_id**	FOREIGN KEY - Links the record to CMGENPOC through primary key POC_ID.
	C	50		[USACE OPERATIONS]	
FOREIGN KEY JOIN to imgnimnt				**immnt_id**	FOREIGN KEY - Links the record to IMGNIMNT through primary key IMMNT_ID.
	C	20			
Feature Length Dimension				**feat_len**	The overall length of the feature.
	D			[Center]	
Length Unit of Measure Code				**length_u_d**	The unit of measure for the length of the feature.
	C	16	d_uomdis	[Center]	

ENTITY SET NAME
utilities

ENTITY CLASS NAME
utilities_storm_system

TABLE NAME	TABLE LONG NAME	TABLE TYPE	KEY COLUMN	VER
utstofit	Storm System Fitting Location	Graphic	1419	1.40
TABLE DEFINITION	This table contains data about a storm water system fitting.			

DATA TYPE	CHAR LENGTH	DOMAIN TABLE	SOURCE	ATTRIBUTE NAME	DEFINITION
Unique Data Identifier				**datalink**	Graphic Key. A unique identifier generated by Computer-Aided Design and Drafting (CADD) or Geographic Information System (GIS) software that is used to link the database record to a specific graphic feature.
I	0				
Primary Key Identifier				**stofitt_id**	Primary Key. A unique, user defined identifier for each record or instance of an entity.
C	20				
FOREIGN KEY JOIN to cmgenmap				**map_id**	Foreign Key. Used to link the record to the appropriate map.
I	0				
FOREIGN KEY JOIN to cmgenmet				**meta_id**	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
C	20				
FOREIGN KEY JOIN to cmmedmed				**media_id**	Foreign Key. Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.
C	20				
FOREIGN KEY JOIN to cmgencrd				**coord_id**	Foreign Key. Used to link the record to the appropriate point coordinate record(s).
C	20				
Acquired Date				**date_acqrd**	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
I	1				
Disposition Code				**dispostn_d**	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
C	16	d_dpobj			
Type Discriminator Code				**type_d**	Discriminator. The kind, class, or group of the subject item.
C	16	d_wasfit			
Material Composition Code				**mat_d**	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
C	16	d_pipmat			
Size Code				**size_d**	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
C	16	d_vpidia			
Fitting Width Dimension				**fit_width**	The width dimension of the subject item measured at its' widest point.
D					
Fitting Length Dimension				**fit_lgth**	The overall length of the fitting.
D					
Fitting Depth Dimension				**fit_depth**	The depth below the ground surface or cover measured from the top of the subject item.
D					

Dimension Unit of Measure Code				**dim_u_d**	The units of measure for the length.
	C	16	d_uomdis		
FOREIGN KEY JOIN to cmgenman				**manuf_id**	Foreign Key. An operator generated identifier used to identify a specific manufacturer.
	C	50			
Model Number Code				**model_no**	The Model, Product, Catalog, or Item Number of subject item.
	C	12			
Serial Number Code				**serial_no**	The manufacturer's serial, or unique identification number of the subject item.
	C	15			
FOREIGN KEY JOIN to utstodbn				**basin_id**	Foreign Key. An operator generated identifier that uniquely identifies the subject item.
	C	20			
FOREIGN KEY JOIN to utstodcg				**stodcrg_id**	Foreign Key. An operator generated identifier used locally to reference the discharge identification for the subject item.
	C	20			
FOREIGN KEY JOIN to cddodins				**instln_id**	Foreign Key. Used to link the record to the applicable INSTALLATION record.
	C	20			
FOREIGN KEY JOIN to bggenstr				**buildng_id**	Foreign Key. Used to link the record to an associated facility (building, structure).
	C	20			
FOREIGN KEY JOIN to cmgenprj				**project_id**	Foreign Key. Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.
	C	50			
FOREIGN KEY JOIN to utstisec				**stosect_id**	Foreign Key. Used to link the record to an associated pipe or cable section.
	C	20			
Narrative Text				**narrative**	A description or other unique information concerning the subject item, limited to 240 characters.
	C	240			
User Flag Text				**user_flag**	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
	C	20			
FOREIGN KEY JOIN to cmgenfac				**facil_id**	Foreign Key. Used to link the record to the Facility Record.
	C	20			
Graphic Attribute Raster GValue				**grid_value**	A numeric identification of a raster element in an image or grid that represents the feature.
	R				
X Coordinate				**coord_x**	The x component of individual coordinate point.
	D				
Y Coordinate				**coord_y**	The y component of individual coordinate point.
	D				
Z Coordinate				**coord_z**	The z component of individual coordinate point.
	D				
FOREIGN KEY JOIN to cmgenown				**owner_id**	Foreign Key. Used to link the record to the owner.
	C	50			
Cover Depth Dimension				**coverdepth**	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground storm water line fitting.
	R		[Air Force]		
Depth Unit of Measure Code				**depth_u_d**	The unit of measure for depth.
	C	16	d_uomdis [Center]		

ENTITY SET NAME
utilities

ENTITY CLASS NAME
utilities_storm_system

TABLE NAME	TABLE LONG NAME	TABLE TYPE	KEY COLUMN	VER
utstoinl	Inlet	Graphic	1422	1.40
TABLE DEFINITION	This table contains data about inlets for a storm water system.			

DATA TYPE	CHAR LENGTH	DOMAIN TABLE	SOURCE	ATTRIBUTE NAME	DEFINITION
Unique Data Identifier				**datalink**	Graphic Key. A unique identifier generated by Computer-Aided Design and Drafting (CADD) or Geographic Information System (GIS) software that is used to link the database record to a specific graphic feature.
I	0				
Primary Key Identifier				**stoinlt_id**	Primary Key. A unique, user defined identifier for each record or instance of an entity.
C	20				
FOREIGN KEY JOIN to cmgenmap				**map_id**	Foreign Key. Used to link the record to the appropriate map.
I	0				
FOREIGN KEY JOIN to cmgenmet				**meta_id**	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
C	20				
FOREIGN KEY JOIN to cmmedmed				**media_id**	Foreign Key. Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.
C	20				
FOREIGN KEY JOIN to cmgencrd				**coord_id**	Foreign Key. Used to link the record to the appropriate point coordinate record(s).
C	20				
Acquired Date				**date_acqrd**	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
I	1				
Disposition Code				**dispostn_d**	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
C	16	d_dpobj			
Step Domain Discriminator Code				**inlet_st_d**	Discriminator. The step domain code for an inlet.
C	16	d_dinl			
Invert Dimension				**invert_elv**	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
D					
Weir Dimension				**weir_elv**	Elevation of the weir invert.
D					
Elevation Unit of Measure Code				**elv_u_d**	The unit of measure for elevation, usually feet (ft) or meters (m).
C	16	d_uomdis			
Design Capacity Volume				**cpcty_dgn**	The design flow capacity of the subject item.
D					
Flow Unit of Measure Code				**flow_u_d**	The unit of measure for flow rate.
C	16	d_uomrat			

FOREIGN KEY JOIN to cmgenman			
	C	50	
Model Number Code			
	C	12	
FOREIGN KEY JOIN to utstodcg			
	C	20	
FOREIGN KEY JOIN to utstodbn			
	C	20	
FOREIGN KEY JOIN to imerobdw			
	C	20	
FOREIGN KEY JOIN to cddodins			
	C	20	
FOREIGN KEY JOIN to cmgenprj			
	C	50	
Narrative Text			
	C	240	
User Flag Text			
	C	20	
FOREIGN KEY JOIN to cmgenfac			
	C	20	
Graphic Attribute Raster GValue			
	R		
X Coordinate			
	D		
Y Coordinate			
	D		
Z Coordinate			
	D		
FOREIGN KEY JOIN to cmgenown			
	C	50	

manuf_id	Foreign Key. An operator generated identifier used to identify a specific manufacturer.
model_no	The Model, Product, Catalog, or Item Number of subject item.
stodcrg_id	Foreign Key. An operator generated identifier used locally to reference the discharge identification for the subject item.
basin_id	Foreign Key. An operator generated identifier that uniquely identifies the subject item.
weir_id	Foreign Key. An operator generated identifier used to locally identify a weir.
instln_id	Foreign Key. Used to link the record to the applicable INSTALLATION record.
project_id	Foreign Key. Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.
narrative	A description or other unique information concerning the subject item, limited to 240 characters.
user_flag	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
facil_id	Foreign Key. Used to link the record to the Facility Record.
grid_value	A numeric identification of a raster element in an image or grid that represents the feature.
coord_x	The x component of individual coordinate point.
coord_y	The y component of individual coordinate point.
coord_z	The z component of individual coordinate point.
owner_id	Foreign Key. Used to link the record to the owner.

ENTITY SET NAME
utilities

ENTITY CLASS NAME
utilities_storm_system

TABLE NAME	TABLE LONG NAME	TABLE TYPE	KEY COLUMN	VER
utstopip	Storm System Line	Graphic	1425	1.40
TABLE DEFINITION	This table contains data about a storm water system pipe.			

DATA TYPE	CHAR LENGTH	DOMAIN TABLE	SOURCE	ATTRIBUTE NAME	DEFINITION
Unique Data Identifier				**datalink**	Graphic Key. A unique identifier generated by Computer-Aided Design and Drafting (CADD) or Geographic Information System (GIS) software that is used to link the database record to a specific graphic feature.
I	0				
Primary Key Identifier				**stopipe_id**	Primary Key. A unique, user defined identifier for each record or instance of an entity.
C	20				
FOREIGN KEY JOIN to cmgenmap				**map_id**	Foreign Key. Used to link the record to the appropriate map.
I	0				
FOREIGN KEY JOIN to cmgenmet				**meta_id**	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
C	20				
FOREIGN KEY JOIN to cmmedmed				**media_id**	Foreign Key. Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.
C	20				
FOREIGN KEY JOIN to cmgencrd				**coord_id**	Foreign Key. Used to link the record to the appropriate point coordinate record(s).
C	20				
Acquired Date				**date_acqrd**	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
I	1				
Disposition Code				**dispostn_d**	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
C	16	d_dpobj			
Use Discriminator Code				**use_d**	Discriminator. The use code for storm sewer line.
C	16	d_dpipe			
Type Code				**type_d**	A field indicating the kind, class, or group of the subject item.
C	16	d_pipety			
Material Composition Code				**mat_d**	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
C	16	d_pipmat			
Lined Code				**lined_d**	An indicator as to whether the pipe is lined or not (yes/no).
C	16	d_boolen			
Size Code				**size_d**	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
C	16	d_vpidia			
Width Dimension				**pipe_width**	The width dimension of the subject item, measured from opposite inside faces.
D					

Length Dimension	R		
Dimension Unit of Measure Code	C	16	d_uomdis
Invert Elevation Node 1 Dimension	D		
Invert Elevation Node 2 Dimension	D		
Elevation Unit of Measure Code	C	16	d_uomdis
Maximum Pressure Rate	D		
Normal Pressure Rate	D		
Pressure Unit of Measure Code	C	16	d_uompre
Bottom Slope Dimension	D		
Slope Unit of Measure Code	C	16	d_uomang
Screen Type Code	C	16	d_culscn
Hydrographic Drainage Zone Code	C	16	d_drnzon
Drainage Pipe Material Texture Code	C	16	d_drntex
Drainage Pattern Code	C	16	d_drnptn
FOREIGN KEY JOIN to utwattpt	C	20	
FOREIGN KEY JOIN to cmgenman	C	50	
Model Number Code	C	12	
FOREIGN KEY JOIN to utstodbn	C	20	
FOREIGN KEY JOIN to utstodcg	C	20	
FOREIGN KEY JOIN to cddodins	C	20	
FOREIGN KEY JOIN to bggenstr	C	20	

pipe_lgth	The length of pipe, measured from node to node along the pipe centerline .
dim_u_d	The units of measure for the length.
inv_elv_1	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum.
inv_elv_2	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum.
elv_u_d	The unit of measure for elevation, usually feet (ft) or meters (m).
press_max	The manufacturer's or industry standard's maximum pressure rating of the subject item.
press_norm	The normal operating pressure of the storm system pipe.
press_u_d	The unit of measure for pressure.
slope_bot	The slope of the bottom of the subject item expressed as a percentage.
slope_u_d	The unit of measure for slope.
scrn_ty_d	The type of screen used to cover the end of the culvert.
drng_zon_d	Local name of assigned hydrographic drainage zones.
drng_tex_d	The texture of the material surrounding the pipe.
drng_pat_d	The drainage pattern of the material surrounding the pipe.
watplnt_id	Foreign Key. The site specific unique identification name or number of the treatment plant.
manuf_id	Foreign Key. An operator generated identifier used to identify a specific manufacturer.
model_no	The Model, Product, Catalog, or Item Number of subject item.
basin_id	Foreign Key. An operator generated identifier that uniquely identifies the subject item.
stodcrg_id	Foreign Key. An operator generated identifier used locally to reference the discharge identification for the subject item.
instln_id	Foreign Key. Used to link the record to the applicable INSTALLATION record.
buildng_id	Foreign Key. Used to link the record to an associated facility (building, structure).

FOREIGN KEY JOIN to cmgenprj	C	50		**project_id**	Foreign Key. Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.
FOREIGN KEY JOIN to utstopst	C	20		**stostat_id**	Foreign Key. Used to link the record to an associated station (pump station, pressure reducing station).
FOREIGN KEY JOIN to utstisec	C	20		**stosect_id**	Foreign Key. Used to link the record to an associated pipe or cable section.
Narrative Text	C	240		**narrative**	A description or other unique information concerning the subject item, limited to 240 characters.
User Flag Text	C	20		**user_flag**	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
FOREIGN KEY JOIN to cmgenfac	C	20		**facil_id**	Foreign Key. Used to link the record to the Facility Record.
Graphic Attribute Raster GValue	R			**grid_value**	A numeric identification of a raster element in an image or grid that represents the feature.
X Coordinate	D			**coord_x**	The x component of individual coordinate point.
Y Coordinate	D			**coord_y**	The y component of individual coordinate point.
Z Coordinate	D			**coord_z**	The z component of individual coordinate point.
From X Coordinate	D			**frcoord_x**	The x component of the ending (downstream/downgradient) coordinate point.
From Y Coordinate	D			**frcoord_y**	The y component of the ending (downstream/downgradient) coordinate point.
From Z Coordinate	D			**frcoord_z**	The z component of the ending (downstream/downgradient) coordinate point.
To X Coordinate	D			**tocoord_x**	The x component of the beginning (upstream/upgradient) coordinate point.
To Y Coordinate	D			**tocoord_y**	The y component of the beginning (upstream/upgradient) coordinate point.
To Z Coordinate	D			**tocoord_z**	The z component of the beginning (upstream/upgradient) coordinate point.
FOREIGN KEY JOIN to cmgenown	C	50		**owner_id**	Foreign Key. Used to link the record to the owner.
FOREIGN KEY JOIN to hysurcrs	C	20	[REEGIS]	**sur_crs_id**	Foreign Key. Used to link the record to the applicable water course record.
Feature Name	C	30	[REEGIS]	**feat_name**	Any commonly used name of the culvert.
Cover Depth Dimension	R		[Air Force]	**coverdepth**	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground storm water line pipe.
Depth Unit of Measure Code				**depth_u_d**	The unit of measure for depth.

	C	16	d_uomdis	[Center]	
Length Unit of Measure Code				**length_u_d**	The unit of measure for the length of the feature.
	C	16	d_uomdis	[Center]	

ENTITY SET NAME
utilities

ENTITY CLASS NAME
utilities_wastewater_system

TABLE NAME	TABLE LONG NAME	TABLE TYPE	KEY COLUMN	VER
utwwtmh	Waste Water Junction	Graphic	1460	1.40
TABLE DEFINITION	This table contains data about a waste water system manhole.			

DATA TYPE	CHAR LENGTH	DOMAIN TABLE	SOURCE	ATTRIBUTE NAME	DEFINITION
Unique Data Identifier				**datalink**	Graphic Key. A unique identifier generated by Computer-Aided Design and Drafting (CADD) or Geographic Information System (GIS) software that is used to link the database record to a specific graphic feature.
I	0				
Primary Key Identifier				**wwtmnhl_id**	Primary Key. An operator generated identifier unique for a sanitary sewer manhole.
C	20				
FOREIGN KEY JOIN to cmgenmap				**map_id**	Foreign Key. Used to link the record to the appropriate map.
I	0				
FOREIGN KEY JOIN to cmgenmet				**meta_id**	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
C	20				
FOREIGN KEY JOIN to cmmedmed				**media_id**	Foreign Key. Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.
C	20				
FOREIGN KEY JOIN to cmgencrd				**coord_id**	Foreign Key. Used to link the record to the appropriate point coordinate record(s).
C	20				
Disposition Code				**dispostn_d**	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
C	16	d_dpobj			
Use Discriminator Code				**use_d**	Discriminator. An attribute that differentiates the use of the subject item.
C	16	d_dwwtmh			
Type Code				**type_d**	A field indicating the kind, class, or group of manhole for the subject utility.
C	16	d_mh_ty			
Manhole Number of Pipes Quantity				**no_pipes**	The number of the pipes entering and exiting the subject item.
S					
Rim Dimension				**rim_elv**	The elevation of exterior top surface of the subject item's lid, hatch, rim, or roof in feet (English units) or meters (SI units) above some datum.
D					
Invert Dimension				**invert_elv**	The top surface elevation of the subject item's interior floor/bottom in feet (English units) or meters (SI units) above some datum.
D					
Elevation Unit of Measure Code				**elv_u_d**	The unit of measure for elevation, usually feet (ft) or meters (m).
C	16	d_uomdis			
Material Composition Code				**mat_d**	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
C	16	d_pipmat			

Manhole Diameter Dimension	D		
Manhole Length Dimension	D		
Width Dimension	D		
Dimension Unit of Measure Code	C	16	d_uomdis
Drain Type Code	C	16	d_tydrn
Manhole Liner Type Code	C	16	d_mhline
Manhole Reactance Amount	C	30	
Manhole Neutralization Agent Name	C	30	
FOREIGN KEY JOIN to cmgenman	C	50	
Model Number Code	C	12	
FOREIGN KEY JOIN to utwticol	C	20	
Tributary Utility Subsystem Code	C	20	
FOREIGN KEY JOIN to cddodins	C	20	
FOREIGN KEY JOIN to bggenstr	C	20	
FOREIGN KEY JOIN to cmgenprj	C	50	
Narrative Text	C	240	
User Flag Text	C	20	
FOREIGN KEY JOIN to cmgenfac	C	20	
Graphic Attribute Raster GValue	R		
X Coordinate	D		
Y Coordinate			

mh_dia	The diameter dimension of the subject item, measured from inside face of wall to inside face of opposite wall.
mh_len	The length dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
mh_width	The width dimension of the subject item, from outside face of exterior wall/side to outside face of opposite exterior wall/side.
dim_u_d	The units of measure for the length.
drain_ty_d	The type of subject item drain.
liner_ty_d	The type of liner used if the pit/manhole is used for neutralizing chemicals.
reactant	The chemical in the incoming waste stream being neutralized.
neut_agent	The chemical agent in the pit which chemically neutralizes the in stream reactant.
manuf_id	Foreign Key. An operator generated identifier used to identify a specific manufacturer.
model_no	The Model, Product, Catalog, or Item Number of subject item.
distrct_id	Foreign Key. An operator generate identifier used locally to reference a specific distribution or collection district for the subject utility.
tribut_cod	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.
instln_id	Foreign Key. Used to link the record to the applicable INSTALLATION record.
buildng_id	Foreign Key. Used to link the record to an associated facility (building, structure).
project_id	Foreign Key. Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.
narrative	A description or other unique information concerning the subject item, limited to 240 characters.
user_flag	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
facil_id	Foreign Key. Used to link the record to the Facility Record.
grid_value	A numeric identification of a raster element in an image or grid that represents the feature.
coord_x	The x component of individual coordinate point.
coord_y	The y component of individual coordinate point.

	D				
Z Coordinate				**coord_z**	The z component of individual coordinate point.
	D				
FOREIGN KEY JOIN to cmgenown				**owner_id**	Foreign Key. Used to link the record to the owner.
	C	50			
FOREIGN KEY JOIN to utwwtuti				**ww_util_id**	FOREIGN KEY - Links the record to UTWWTUTI through primary key WW_UTIL_ID.
	C	20			
Acquired Date				**date_acqrd**	Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915). Date on which the manhole or wastewater junction box was acquired, or installed.
	I	1	[Cherry Point]		
Step Number				**no_steps**	Number of manhole steps.
	I	0	[Cherry Point]		
Illicit Flow Indication Code				**illict_d**	Indication whether or not (yes/no) illicit flow was detected in manhole or box.
	C	16	d_boolen [Cherry Point]		
Feature Descriptive Text				**feat_desc**	The text describing a wastewater manhole.
	C	60	[Cherry Point]		

ENTITY SET NAME
utilities

ENTITY CLASS NAME
utilities_wastewater_system

TABLE NAME	TABLE LONG NAME	TABLE TYPE	KEY COLUMN	VER
utwwtpip	Drain Field	Graphic	1463	1.40
TABLE DEFINITION	This table contains data about a waste water system pipe.			

DATA TYPE	CHAR LENGTH	DOMAIN TABLE	SOURCE	ATTRIBUTE NAME	DEFINITION
Unique Data Identifier				**datalink**	Graphic Key. A unique identifier generated by Computer-Aided Design and Drafting (CADD) or Geographic Information System (GIS) software that is used to link the database record to a specific graphic feature.
I	0				
Primary Key Identifier				**pipe_id**	Primary Key. A unique, user defined identifier for each record or instance of an entity.
C	20				
FOREIGN KEY JOIN to cmgenmap				**map_id**	Foreign Key. Used to link the record to the appropriate map.
I	0				
FOREIGN KEY JOIN to cmgenmet				**meta_id**	Foreign Key. Used to link the record to the applicable feature level metadata record(s).
C	20				
FOREIGN KEY JOIN to cmmedmed				**media_id**	Foreign Key. Used to link the record to associated multimedia records that reference data such as imagery, video, audio, scanned documents, drawings, and other digital media.
C	20				
FOREIGN KEY JOIN to cmgencrd				**coord_id**	Foreign Key. Used to link the record to the appropriate point coordinate record(s).
C	20				
Acquired Date				**date_acqrd**	The date on which the subject item was originally acquired or purchased. Format for date is YYYYMMDD (i.e., September 15, 1994 = 19940915).
I	1				
Disposition Code				**dispostn_d**	The status of the subject item (e.g., permanent, temporary, proposed, abandoned, etc.), from lists or entered from field inspections.
C	16	d_dpobj			
Use Discriminator Code				**use_d**	Discriminator. The use code for wastewater lines.
C	16	d_dwwtln			
Type Code				**type_d**	A field indicating the kind, class, or group of the subject item.
C	16	d_pipety			
Material Composition Code				**mat_d**	The material composition of the subject item, such as wood, concrete, steel, cast iron, plastic, etc.
C	16	d_pipmat			
Lined Code				**lined_d**	An indicator as to whether the pipe is lined or not (yes/no).
C	16	d_boolen			
Length Dimension				**pipe_lgth**	The length of pipe, measured from node to node along the pipe centerline .
R					
Size Code				**size_d**	The manufacturers designated size, or nominal (i.e., rounded to the nearest unit) diameter for the subject item (e.g., 1in gas hydrant, 2in meter, 6in pipe).
C	16	d_vpidia			

Dimension Unit of Measure Code	C	16	d_uomdis
Invert Elevation Node 1 Dimension	D		
Invert Elevation Node 2 Dimension	D		
Elevation Unit of Measure Code	C	16	d_uomdis
Maximum Pressure Rate	D		
Normal Operating Pressure Rate	D		
Pressure Unit of Measure Code	C	16	d_uompre
Bottom Slope Dimension	D		
Slope Unit of Measure Code	C	16	d_uomang
Drainage Pattern Code	C	16	d_drnptn
Drainage Pipe Material Texture Code	C	16	d_drntex
FOREIGN KEY JOIN to utwwttpt	C	20	
Area	D		
Area Size Unit of Measure Code	C	16	d_uomare
Perimeter Dimension	D		
Perimeter Unit of Measure Code	C	16	d_uomdis
FOREIGN KEY JOIN to cmgenman	C	50	
Model Number Code	C	12	
FOREIGN KEY JOIN to utwticol	C	20	
FOREIGN KEY JOIN to utwwtstk	C	20	
Tributary Utility Subsystem Code	C	20	

dim_u_d	The units of measure for the length.
inv_elv_1	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_1 in feet (English units) or meters (SI units) above some datum.
inv_elv_2	The elevation of the bottom of pipe (i.e., pipe invert) at node_id_2 in feet (English units) or meters (SI units) above some datum.
elv_u_d	The unit of measure for elevation, usually feet (ft) or meters (m).
press_max	The manufacturer's or industry standard's maximum pressure rating of the subject item.
press_norm	The normal operating pressure of the waste water system pipe.
press_u_d	The unit of measure for pressure.
slope_bot	The slope of the bottom of the subject item expressed as a percentage.
slope_u_d	The unit of measure for slope.
drng_pat_d	The drainage pattern of the material surrounding the pipe.
drng_tex_d	The texture of the material surrounding the pipe.
wwtplnt_id	Foreign Key. The site specific unique identification name or number of the treatment plant.
area_size	The size of the area, zone, or polygon in square units.
area_u_d	The unit of measure for area.
perim	The distance around the boundary of the area, zone, or subject item in linear units.
perim_u_d	The unit of measure for length
manuf_id	Foreign Key. An operator generated identifier used to identify a specific manufacturer.
model_no	The Model, Product, Catalog, or Item Number of subject item.
distrct_id	Foreign Key. An operator generate identifier used locally to reference a specific distribution or collection district for the subject utility.
wwstank_id	Foreign Key. An operator generated identifier used to locally identify the subject item.
tribut_cod	An operator generated identifier used locally to identify a tributary subsystem of the main utility system.

FOREIGN KEY JOIN to cddodins				**instln_id**	Foreign Key. Used to link the record to the applicable INSTALLATION record.
	C	20			
FOREIGN KEY JOIN to bggenstr				**buildng_id**	Foreign Key. Used to link the record to an associated facility (building, structure).
	C	20			
FOREIGN KEY JOIN to cmgenprj				**project_id**	Foreign Key. Used to link the record to the appropriate project or contract under which the item was studied, collected, installed, purchased, or managed.
	C	50			
FOREIGN KEY JOIN to utwwtpst				**station_id**	Foreign Key. Used to link the record to an associated station (pump station, pressure reducing station).
	C	20			
FOREIGN KEY JOIN to utwtisec				**wwtsect_id**	Foreign Key. Used to link the record to an associated pipe or cable section.
	C	20			
Narrative Text				**narrative**	A description or other unique information concerning the subject item, limited to 240 characters.
	C	240			
User Flag Text				**user_flag**	An operator defined work area. This attribute can be used by the operator for user defined system processes. It does not effect the subject item's data integrity and should not be used to store the subject item's data.
	C	20			
FOREIGN KEY JOIN to cmgenfac				**facil_id**	Foreign Key. Used to link the record to the Facility Record.
	C	20			
Graphic Attribute Raster GValue				**grid_value**	A numeric identification of a raster element in an image or grid that represents the feature.
	R				
X Coordinate				**coord_x**	The x component of individual coordinate point.
	D				
Y Coordinate				**coord_y**	The y component of individual coordinate point.
	D				
Z Coordinate				**coord_z**	The z component of individual coordinate point.
	D				
From X Coordinate				**frcoord_x**	The x component of the ending (downstream/downgradient) coordinate point.
	D				
From Y Coordinate				**frcoord_y**	The y component of the ending (downstream/downgradient) coordinate point.
	D				
From Z Coordinate				**frcoord_z**	The z component of the ending (downstream/downgradient) coordinate point.
	D				
To X Coordinate				**tocoord_x**	The x component of the beginning (upstream/upgradient) coordinate point.
	D				
To Y Coordinate				**tocoord_y**	The y component of the beginning (upstream/upgradient) coordinate point.
	D				
To Z Coordinate				**tocoord_z**	The z component of the beginning (upstream/upgradient) coordinate point.
	D				
FOREIGN KEY JOIN to cmgenown				**owner_id**	Foreign Key. Used to link the record to the owner.
	C	50			
Line Location Type Code				**piplty_d**	The location of the pipeline in relevance to the earth's surface.
	C	16	d_piplty [USGS]		

FOREIGN KEY JOIN to utwwtuti					**ww_util_id**	FOREIGN KEY - Links the record to UTWWTUTI through primary key WW_UTIL_ID.
	C	20				
Cover Depth Dimension					**coverdepth**	The depth of cover. The depth measured from top of ground's surface (or grade) to top of underground wastewater line pipe.
	R			[Air Force]		
Depth Unit of Measure Code					**depth_u_d**	The unit of measure for depth.
	C	16	d_uomdis	[CENTER]		
Length Unit of Measure Code					**length_u_d**	The unit of measure for the length of the feature.
	C	16	d_uomdis	[Center]		

APPENDIX B
INSPECTION REVIEW AND NATIONAL POWER RODDING VIDEO INSPECTION REPORTS

APPENDIX B.1
SEWER VIDEO INSPECTION REVIEW TABLE

Appendix B.1
IL027 Forest Park AFRC
Forest Park, Illinois
Sewer Video Inspection Review

Pipe Segment	Dia. (in)	Material	Shape	Type	Location	U/S	D/S	Starting Location	Televised Length (ft)	Approx. Total Length (ft)	Entire Length Televised? (Y/N)[1]	Lateral Connections		Turn in Pipe		Vertical Bend	Other[2]	Defects[2]	Inspection Comments	Recommendation	Recommendation Comments	Defect Rank (most to least urgent)
												Location[2]	Type	Location[3]	Direction (In Direction of Flow)	Location[3]						
A	6	UNK	Circular	Storm	MEP	CB1	Segment G	CB1	0	28	N								Unable to perform inspection due to significant debris (greater than 12") in catch basin CB1. Debris was so significant that the connection could not be located in CB1. According to historical drawings, CB1 connects via blind connection between Building 100 and manhole MH1.	Action	Clean out catch basin and inspect segment.	10
B	6	VCP	Circular	Storm	MEP	CB2	Segment D	CB2	32	32	Y							Minor offset joint, ~10 feet	1) Surveyed using a MINICAM. Location information for defects are approximated. Inspections performed using MINICAM do not produce inspection reports. 2) Survey stopped when a blockage in the line at the tap (as observed during inspection from MH1 to Upstream East) was encountered and the MINICAM could not advance further.	Possible Action	Perform periodic inspections to monitor the condition of the offset joint.	16
C	6	VCP	Circular	Storm	MEP	CB3	CB2	CB3	50	130	N							Minor sedimentation, 20-25 feet Severe sedimentation, 48-50 feet	1) Surveyed using a MINICAM. Location information for defects are approximated. Inspections performed using MINICAM do not produce inspection reports. 2) Survey stopped when debris and turns in the line were encountered and the MINICAM could not advance further.	Action	Clear sedimentation and inspect remaining length. Perform periodic cleanings to control sedimentation.	6
C	6	VCP	Circular	Storm	MEP	CB3	CB2	CB2	0	130	N								Unable to perform inspection due to significant debris in the line.	Action	Clear sedimentation and inspect remaining length. Perform periodic cleanings to control sedimentation.	8
D	15	VCP	Circular	Sanitary	MEP	Upstream East	MH1	MH1	100	100	Y	99.7@9	Factory-t				99.7 - Change in pipe diameter to 6".	Minor offset joint, 45 feet Minor offset joint, 52 feet Minor offset joint, 74 feet Minor offset joint, 86 feet Minor offset joint, 91 feet Minor line sag, 35-41 feet Minor line sag, 55-61 feet Minor mineral deposit, 40 feet@12-6	1) Inspection performed to completion using crawler. 2) Inspection stopped after reaching the abandoned end of pipe.	Possible Action	Perform periodic inspections to monitor the condition of the offset joints and line sags. Perform periodic cleanings to control the mineral deposit.	15
E	6	VCP	Circular	Sanitary	MEP	Building 110	MH1	MH1	76	85	N						~70 - Change in pipe material. ~70 - Turn in pipe. ~76 - Turn in pipe.	No defects observed.	1) Surveyed using a MINICAM. Location information for defects are approximated. Inspections performed using MINICAM do not produce inspection reports. 2) Survey stopped when a vertical turn in the line was encountered and the MINICAM could not advance further.	No Action	No recommendation.	--
F	6	VCP	Circular	Sanitary	MEP	CO1	MH1	MH1	26	26	Y							No defects observed.	1) Surveyed using a MINICAM. Location information for defects are approximated. Inspections performed using MINICAM do not produce inspection reports. 2) Survey stopped when a turn in the line was encountered and the MINICAM could not advance further.	No Action	No recommendation.	--
G	6	VCP	Circular	Sanitary	MEP	Building 100	MH1	MH1	76	100	N							Minor annular crack, ~20 feet@9-6 Minor annular crack, ~25 feet@12-12 Moderate annular crack, ~70 feet@12-12 Minor sedimentation, ~50 feet Severe sedimentation, ~76 feet	1) Surveyed using a MINICAM. Location information for defects are approximated. Inspections performed using MINICAM do not produce inspection reports. 2) Survey stopped when debris in the line was encountered and the MINICAM could not advance further.	Action	Clear sedimentation and inspect remaining length. Perform periodic inspections to monitor the condition of the cracks. Perform periodic cleanings to control the sedimentation.	4
H	18	VCP	Circular	Sanitary	MEP/ POV	MH1	MH2	MH2	180	245	N	63@10 117.2@10 141.1@10	Break-in Break-in Factory-t					Moderate multiple cracks, 168-170 feet@6-12 Minor offset joint, 71 feet Minor offset joint, 102 feet Minor mineral deposits, 11-19 feet@3-9 Severe sedimentation, 180 feet	Inspection stopped after significant debris restricted the crawler from advancing further.	Action	Clear sedimentation and inspect remaining length. Perform periodic inspections to monitor the condition of the cracks and offset joint. Perform periodic cleanings to control mineral deposits and sedimentation.	1
H	18	VCP	Circular	Sanitary	MEP	MH1	MH2	MH1	35	245	N							Minor offset joint, 25 feet Minor sedimentation, 13-23 feet Severe sedimentation, 23-35 feet	Inspection stopped after significant debris restricted the crawler from advancing further.	Action	Clear sedimentation and inspect remaining length. Perform periodic inspections to monitor the condition of the offset joint.	5
I	6	VCP	Circular	Storm	MEP	CB21	MH1	MH1	41	41	Y							Moderate offset joint, ~20 feet Moderate offset joint, ~23 feet Moderate sedimentation, ~10 feet	1) Surveyed using a MINICAM. Location information for defects are approximated. Inspections performed using MINICAM do not produce inspection reports. 2) Survey stopped when a turn in the line was encountered and the MINICAM could not advance further.	Possible Action	Perform periodic inspections to monitor the condition of the offset joints. Perform periodic cleanings to control sedimentation.	13
J	36	VCP	Circular	Sanitary	POV	MH2	MH6	MH2	313	313	Y	48.2@10 114.6@12 117.9@10 177.6@12 185.9@10 253.1@10	Break-in Break-in Break-in Break-in Break-in Break-in					Minor sedimentation, 50-100 feet	Inspection performed to completion using crawler.	Possible Action	Perform periodic cleanings to control sedimentation.	19

Appendix B.1
IL027 Forest Park AFRC
Forest Park, Illinois
Sewer Video Inspection Review

Pipe Segment	Dia. (in)	Material	Shape	Type	Location	U/S	D/S	Starting Location	Televised Length (ft)	Approx. Total Length (ft)	Entire Length Televised? (Y/N)[1]	Lateral Connections		Turn in Pipe		Vertical Bend	Other[2]	Defects[2]	Inspection Comments	Recommendation	Recommendation Comments	Defect Rank (most to least urgent)
												Location[2]	Type	Location[3]	Direction (In Direction of Flow)	Location[3]						
K	36	RCP	Circular	Sanitary	POV	Upstream South	MH2	MH2	50	50	Y	21.1@2	Break-in					Minor sedimentation, 20-50 feet	1) Inspection performed to completion using crawler. 2) Inspection performed for 50' south to survey slightly past property boundary.	Possible Action	Perform periodic cleanings to control sedimentation.	18
L	36	RCP	Circular	Sanitary	POV	Upstream West	MH2	MH2	50	50	Y							Minor mineral deposits, 40-50 feet@12-12	1) Inspection performed to completion using crawler. 2) Inspection performed for 50' west to survey slightly past property boundary.	Possible Action	Perform periodic cleanings to control mineral deposits.	20
M	8	VCP	Circular	Sanitary	POV	MH3	MH4	MH3	90	100	N							No defects observed.	1) Surveyed using a MINICAM. Location information for defects are approximated. Inspections performed using MINICAM do not produce inspection reports. 2) Survey stopped when the MINICAM could not advance further.	No Action	No recommendation.	--
M	8	VCP	Circular	Sanitary	POV	MH3	MH4	MH4	12	100	N							No defects observed.	1) Surveyed using a MINICAM. Location information for defects are approximated. Inspections performed using MINICAM do not produce inspection reports. 2) Survey stopped when overlap with inspection starting at manhole MH3 was reached.	No Action	No recommendation.	--
N	6	UNK	Circular	Storm	POV	CB5	MH3	MH3	48	48	Y							No defects observed.	1) Surveyed using a MINICAM. Location information for defects are approximated. Inspections performed using MINICAM do not produce inspection reports. 2) Survey stopped at drop-connection to catch basin CB5 (turn in line).	No Action	No recommendation.	--
O	8	VCP	Circular	Sanitary	POV	Building 100 (Southeast)	MH4	MH4	76	100	N							No defects observed.	1) Surveyed using a MINICAM. Location information for defects are approximated. Inspections performed using MINICAM do not produce inspection reports. 2) Survey stopped when a turn in the line was encountered and the MINICAM could not advance further.	No Action	No recommendation.	--
P	12	VCP	Circular	Sanitary	POV	Building 100 (South)	MH4	MH4	45	100	N	42@3 44.8@9	Factory-t Factory-t				44.8 - Change in pipe diameter	Minor longitudinal crack, 27-30 feet @11 Moderate offset joint, 43 feet Moderate mineral deposit, 43 feet@7-12	Survey stopped when a split in the line was encountered (turn to right and pipe size change straight) and the crawler could not advance further.	Possible Action	Perform periodic inspections to monitor the condition of the offset joint and longitudinal crack. Perform periodic cleanings to control the mineral deposit.	14
Q	15	VCP	Circular	Sanitary	POV	Upstream East	MH4	MH4	73	73	Y	6.1@9	Factory-t					Moderate offset joint, 7 feet Minor mineral deposit, 7 feet@12-12 Minor mineral deposit, 22-50 feet@3-9 Moderate sedimentation, 6-11 feet	Inspection performed to completion using crawler.	Possible Action	Perform periodic inspections to monitor the condition of the offset joint. Perform periodic cleanings to control the mineral deposit and sedimentation.	11
R	15	VCP	Circular	Sanitary	POV	MH4	MH5	MH4	94	94	Y							Minor multiple cracks, 84-89 feet@9-3 Moderate sedimentation, 6-14 feet	Inspection performed to completion using crawler.	Possible Action	Perform periodic inspections to monitor the condition of cracks. Perform periodic cleanings to control the sedimentation.	12
S	8	VCP	Circular	Sanitary	POV	Building 100 Top Connection	MH5	MH5	75	99	N						~75 - Change in diameter.	No defects observed.	1) Surveyed using a MINICAM. Location information for defects are approximated. Inspections performed using MINICAM do not produce inspection reports. 2) Survey stopped when a turn in the line was encountered and the MINICAM could not advance further.	No Action	No recommendation.	--
T	6	VCP	Circular	Sanitary	POV	Building 100 Bottom Connection	MH5	MH5	15	15	Y							Severe sedimentation, ~15 feet	1) Surveyed using a MINICAM. Location information for defects are approximated. Inspections performed using MINICAM do not produce inspection reports. 2) Survey stopped at end of the line, which is suspected as being previously abandoned.	Action	Confirm that pipe is abandoned, otherwise clean out.	7
U	15	VCP	Circular	Sanitary	POV	MH5	MH6	MH5	90	245	N							Minor longitudinal crack, 3-10 feet@9 Minor longitudinal crack, 7.5-10 feet@3 Minor longitudinal crack, 28-37 feet@12 Minor longitudinal crack, 67-85 feet@12 Minor multiple cracks, 10-28 feet@9-3 Minor offset joint, 3 feet Minor offset joint, 31 feet Minor offset joint, 41 feet Minor offset joint, 85 feet Minor sedimentation, 7-10 feet Severe sedimentation, 89.7 feet	Inspection stopped after significant debris restricted the crawler from advancing further.	Action	Clear sedimentation and inspect remaining length, Perform periodic inspections to monitor the condition of the cracks and offset joints. Perform periodic cleanings to control the sedimentation.	2
U	15	VCP	Circular	Sanitary	POV	MH5	MH6	MH6	145	245	N	42.0@10 60.2@10 62.4@10 65.0@2 74.6@2 76.7@10 130.6@2 133.0@10 142.9@9 145.3@10	Break-in Break-in Break-in Break-in Break-in Break-in Break-in Break-in Break-in Break-in					Minor longitudinal crack, 22-60 feet@6 Minor longitudinal crack, 40-55 feet@12 Minor longitudinal crack, 87-98 feet@7 Minor offset joint, 17 feet Moderate mineral deposits, 65 feet@2-6 Moderate mineral deposits, 74 feet@2-6 Severe sedimentation, 145 feet	Inspection stopped after significant debris restricted the crawler from advancing further at 145 feet.	Action	Clear sedimentation and inspect remaining length. Perform periodic inspections to monitor the condition of the cracks and offset joint. Perform periodic cleanings to control mineral deposits.	3
V	6	VCP	Circular	Storm	POV	Upstream North	MH5	MH5	90	220	N							No defects observed.	1) Surveyed using a MINICAM. Location information for defects are approximated. Inspections performed using MINICAM do not produce inspection reports. 2) Survey stopped when segment joints were encountered at least 80' into the survey and the MINICAM could not advance further. 3) Catch basins CB9, CB10, and CB11 could not be opened.	No Action	No recommendation.	--

Appendix B.1
IL027 Forest Park AFRC
Forest Park, Illinois
Sewer Video Inspection Review

Pipe Segment	Dia. (in)	Material	Shape	Type	Location	U/S	D/S	Starting Location	Televised Length (ft)	Approx. Total Length (ft)	Entire Length Televised? (Y/N)[1]	Lateral Connections		Turn in Pipe		Vertical Bend	Other[2]	Defects[2]	Inspection Comments	Recommendation	Recommendation Comments	Defect Rank (most to least urgent)
												Location[2]	Type	Location[3]	Direction (In Direction of Flow)	Location[3]						
W	36	RCP	Circular	Sanitary	POV	MH6	Exit to Municipal Sewer System / MH7 (Off-site)	MH6	232	232	Y	23.8@10 95.5@10 157.8@10	Break-in Break-in Break-in					Minor mineral deposits, 144.4 feet@12-12	Inspection performed to completion using crawler.	Possible Action	Perform periodic cleanings to control mineral deposits.	21
X	36	RCP	Circular	Sanitary	POV	Upstream West	MH6	MH6	50	50	Y							Minor sedimentation, 8-50 feet	1) Inspection performed to completion using crawler. 2) Inspection performed for 50' west to survey slightly past property boundary.	Possible Action	Perform periodic cleanings to control sedimentation.	17
Y	6	UNK	Circular	Storm	MEP	CB4	CB5	NA	0	78	N								1) Segment not inspected because cover to catch basin CB4 could not be opened. Access from catch basin CB5 was not possible (drop connection). 2) A running water test was performed to confirm connection.	Action	Clear sedimentation and inspect.	9
Z	6	UNK	Circular	Storm	POV	Upstream North	Segment Q	NA	NA	220	N								None of the segments connecting catch basins CB6, CB7, or CB8 ultimately to manhole MH4 were inspected. None of the catch basins could be opened and all catch basins connect to a segment that connects by a blind connection in between MH3 and MH4. Dye testing confirmed all connections.	No Action	No recommendation.	--
AA	6	UNK	Circular	Storm	POV	CB6	Segment Q	NA	NA	NA	N								This segment could not be inspected due to manhole configuration/access and blind connections to the downstream segment.	Possible Action	Open and perform cleaning of sedimentation in catch basin and inspect.	32
AB	6	UNK	Circular	Storm	POV	CB7	Segment Q	NA	NA	NA	N								This segment could not be inspected due to manhole configuration/access and blind connections to the downstream segment.	Possible Action	Open and perform cleaning of sedimentation in catch basin and inspect.	33
AC	6	UNK	Circular	Storm	POV	CB8	Segment Q	NA	NA	NA	N								This segment could not be inspected due to manhole configuration/access and blind connections to the downstream segment.	Possible Action	Open and perform cleaning of sedimentation in catch basin and inspect.	34
AD	6	UNK	Circular	Storm	POV	CB9	Segment V	NA	NA	NA	N								This segment could not be inspected due to manhole configuration/access and blind connections to the downstream segment.	Possible Action	Open and perform cleaning of sedimentation in catch basin and inspect.	35
AE	6	UNK	Circular	Storm	POV	CB10	Segment V	NA	NA	NA	N								This segment could not be inspected due to manhole configuration/access and blind connections to the downstream segment.	Possible Action	Open and perform cleaning of sedimentation in catch basin and inspect.	36
AF	6	UNK	Circular	Storm	POV	CB11	Segment V	NA	NA	NA	N								This segment could not be inspected due to manhole configuration/access and blind connections to the downstream segment.	Possible Action	Open and perform cleaning of sedimentation in catch basin and inspect.	37
AG	6	UNK	Circular	Storm	POV	CB12	Segment U	NA	NA	220	N								The segment connecting catch basin CB12 ultimately to manhole MH6 was not inspected. Catch basin CB12 could not be opened and inspected. Catch basin CB12 connects to a segment that connects by a blind connection in between MH5 and MH6. Dye testing confirmed all connections.	Possible Action	Open and perform cleaning of sedimentation in catch basin and inspect.	22
AH	6	UNK	Circular	Storm	POV	CB13	Segment U	NA	NA	220	N								The segment connecting catch basin CB13 ultimately to manhole MH6 was not inspected. Catch basin CB13 was opened and inspected. Catch basin CB13 connects to a segment that connects by a blind connection in between MH5 and MH6. Dye testing confirmed all connections.	Possible Action	Perform cleaning of sedimentation in catch basin and inspect.	23
AI	6	UNK	Circular	Storm	POV	CB14	Segment U	NA	NA	220	N								The segment connecting catch basin CB14 ultimately to manhole MH6 was not inspected. Catch basin CB14 was opened and inspected. Catch basin CB14 connects to a segment that connects by a blind connection in between MH5 and MH6. Dye testing confirmed all connections.	Possible Action	Perform cleaning of sedimentation in catch basin and inspect.	24
AJ	6	UNK	Circular	Storm	POV	CB15	Segment U	NA	NA	220	N								The segment connecting catch basin CB15 ultimately to manhole MH6 was not inspected. The catch basin could not be opened. The catch basin connects to a segment that connects by a blind connection in between MH5 and MH6. Dye testing confirmed all connections.	Possible Action	Open and perform cleaning of sedimentation in catch basin and inspect.	25
AK	6	UNK	Circular	Storm	POV	CB16	Segment U	NA	NA	220	N								The segment connecting catch basin CB16 ultimately to manhole MH6 was not inspected. The catch basin could not be opened. The catch basin connects to a segment that connects by a blind connection in between MH5 and MH6. Dye testing confirmed all connections.	Possible Action	Open and perform cleaning of sedimentation in catch basin and inspect.	26
AL	6	UNK	Circular	Storm	POV	CB17	Segment U	NA	NA	220	N								The segment connecting catch basin CB17 ultimately to manhole MH6 was not inspected. The catch basin could not be opened. The catch basin connects to a segment that connects by a blind connection in between MH5 and MH6. Dye testing confirmed all connections.	Possible Action	Open and perform cleaning of sedimentation in catch basin and inspect.	27
AM	6	UNK	Circular	Storm	POV	CB18	Segment U	NA	NA	85	N								Catch basin CB18 ultimately connects to manhole MH6, but CB18 could be opened and it connects to a by a blind connection in between MH5 and MH6. Dye testing confirmed this connections.	Possible Action	Open and perform cleaning of sedimentation in catch basin and inspect.	28

Appendix B.1
IL027 Forest Park AFRC
Forest Park, Illinois
Sewer Video Inspection Review

Pipe Segment	Dia. (in)	Material	Shape	Type	Location	U/S	D/S	Starting Location	Televised Length (ft)	Approx. Total Length (ft)	Entire Length Televised? (Y/N)[1]	Lateral Connections		Turn in Pipe		Vertical Bend	Other[2]	Defects[2]	Inspection Comments	Recommendation	Recommendation Comments	Defect Rank (most to least urgent)
												Location[2]	Type	Location[3]	Direction (In Direction of Flow)	Location[3]						
AN	6	UNK	Circular	Storm	POV	CB19	Segment U	NA	NA	200	N								Catch basin CB19 ultimately connects to manhole MH2, but CB19 could not be opened for inspection. Flow from catch basin CB19 connects by a blind connection between manholes MH5 and MH6. Dye testing confirmed connections.	Possible Action	Open and perform cleaning of sedimentation in catch basin and inspect.	29
AO	6	UNK	Circular	Storm	POV	CB20	Segment H	NA	NA	58	N								Catch basin CB20 ultimately connects to manhole MH2, but CB20 could not be opened for inspection. Flow from catch basin CB20 connects by a blind connection between manholes MH1 and MH2. Dye testing confirmed connections.	Possible Action	Open and perform cleaning of sedimentation in catch basin and inspect.	30
AP	6	UNK	UNK	Storm	POV	CB22	Segment H	NA	NA	100	N								An area adjacent to Building 100 contained a ground disturbance which may be a (former) catch basin CB22 (Appendix D, Photos 70 and 71). The catch basin may have been removed during renovation.	Possible Action	Confirm the presence or absence of catch basin CB22. If present, open and perform cleaning of sedimentation in catch basin and inspect.	31

Notes:
* Segment inspected with mini-cam. The mini-cam does not generate a National Power Rodding Inspection Report.
[1] Y = View of pipe segment was not obstructed, N = View of pipe segment was obstructed because camera was blocked and the survey was abandoned or the camera was submerged in water and the survey lacked a clear view of the pipe segment.
[2] Location is the number of feet from recording start location and the position as if looking at a clock (distance in feet @ clock position)
[3] Sedimentation is loose debris that usually can be flushed with normal line cleaning. Mineralization are hard mineral deposits that must be cut and removed.
[4] Minor defect - a small defect that does not appear to be causing immediate problems (e.g., hairline cracks, small amounts of sediment).
Moderate defect - any defect in between minor and severe (e.g., sediment or offset joints that cause some disturbance to the camera during the inspection).
Severe defect - a defect that blocks the camera from proceeding or appears to present imminent pipe failure.
[5] Periodic inspection varies based on the type and severity of the defect. The general inspection recommendations are every 2-3 years for root defects, and every 5-10 years for cracks, offset joints, and mineralization defects.

D/S downstream
Dia. diameter
ft. feet
in. inch
RCP reinforced concrete pipe
U/S upstream
VCP vitrified clay pipe

APPENDIX B.2
SANITARY SEWER INSPECTION REPORTS

National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
Upstream East
Downstream
MH1

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/19/2008	10:24 AM	M.E.P.	FOREST PARK

Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	1			

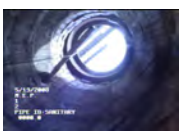
Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
UPSTEAM EAST				Sanitary	Upstream		15

Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Vitrified Clay Pipe				100	0	537	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	

1

Ftg.	Code	Description	Position	Comment
99.7	AOC	Access Point - Other Special Chamber		UP STEAM LINE 6"



Ftg.	Code	Description	Position	Comment
0.0	AMH	Access Point - Manhole		DS MH

UPSTEAM EAST

Generated on Friday, 5/23/2008 at 04:08 PM by the PipeTech® TV inspection system.

National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
MH1

Downstream
MH2

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/19/2008	11:42 AM	M.E.P.	FOREST PARK

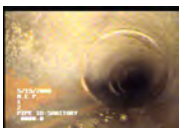
Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	MH-1			

Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
MH-2				Sanitary	Downstream		15

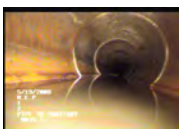
Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Vitrified Clay Pipe				35	537	926	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	

MH-1



Ftg.	Code	Description	Position	Comment
0.0	AMH	Access Point - Manhole		us mh



Ftg.	Code	Description	Position	Comment
35.5	MSA	Survey Abandoned		HVY DEBRIE

MH-2

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National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
MH1

Downstream
MH2

MH2

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/21/2008	9:23 AM	WEST SIDE DRIVE	FOREST PARK

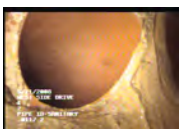
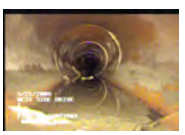
Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	1			

Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
2				Sanitary	Upstream		15

Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Reinforced Concrete Pipe				180	5444	10048	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	

1

	Ftg.	Code	Description	Position	Comment
	180.4	MSA	Survey Abandoned		CAMERA BLOCKED BY DEBRIE
	141.1	TF	Tap, Factory Made	10	
	117.2	TB	Tap, Break-in / Hammer	10	
	63.0	TB	Tap, Break-in / Hammer	10	
	0.0	AMH	Access Point - Manhole		DS MH

2

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National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
Upstream West
Downstream
MH2

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/20/2008	1:16 PM	WEST SIDE DRIVE	FOREST PARK

Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	LINE WEST			

Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
2				Sanitary	Upstream		36

Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Reinforced Concrete Pipe				50	3901	4109	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	

LINE WEST

Ftg.	Code	Description	Position	Comment
51.6	MSA	Survey Abandoned		50' ONLY
0.0	AMH	Access Point - Manhole		DS MH

2

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National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
Upstream South
Downstream
MH2

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/20/2008	1:25 PM	WEST SIDE DRIVE	FOREST PARK

Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	LINE SOUTH			

Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
2				Sanitary	Upstream		36

Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Reinforced Concrete Pipe				50	4109	4321	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	

MH2

Ftg.	Code	Description	Position	Comment
0.0	AMH	Access Point - Manhole		DS MH

Ftg.	Code	Description	Position	Comment
21.1	TB	Tap, Break-in / Hammer		2

Ftg.	Code	Description	Position	Comment
52.4	MSA	Survey Abandoned		50' ONLY

Upstream South

National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
MH2

Downstream
MH6

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
2MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

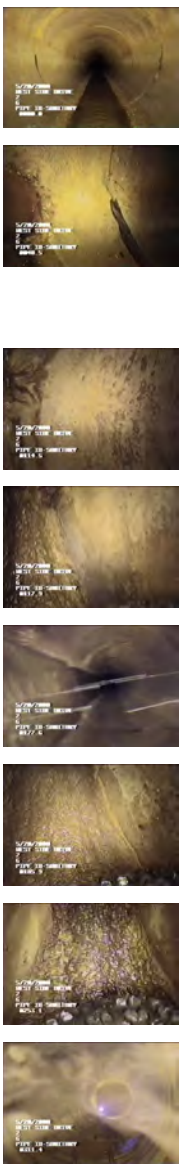
P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/20/2008	12:06 PM	WEST SIDE DRIVE	FOREST PARK

Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	2			

Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
6				Sanitary	Downstream		36

Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Vitrified Clay Pipe			313	313	2516	3328	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	



	Ftg.	Code	Description	Position	Comment
2					
	0.0	AMH	Access Point - Manhole		us mh
	48.7	TB	Tap, Break-in / Hammer	10	
	114.6	TB	Tap, Break-in / Hammer	12	
	117.9	TB	Tap, Break-in / Hammer	10	
	177.6	TBA	Tap, Break-in / Hammer: Active	12	
	185.9	TB	Tap, Break-in / Hammer	10	
	253.1	TB	Tap, Break-in / Hammer	10	
	313.0	AMH	Access Point - Manhole		DS MH
6					

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National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
MH6

Downstream
MH7 (Buried) - Downstream North / Exit to Municipal Sewer System

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
2MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/20/2008	12:45 PM	WEST SIDE DRIVE	FOREST PARK

Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	6			

Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
7				Sanitary	Downstream		36

Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Vitrified Clay Pipe			232	232	3328	3901	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	





	Ftg.	Code	Description	Position	Comment
6					
	0.0	AMH	Access Point - Manhole		us mh
	23.8	TB	Tap, Break-in / Hammer	10	
	95.5	TB	Tap, Break-in / Hammer	10	
	157.8	TB	Tap, Break-in / Hammer	10	
	232.0	AMH	Access Point - Manhole		DS MH

NORTH

Generated on Friday, 5/23/2008 at 03:11 PM by the PipeTech® TV inspection system.

National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
Upstream West

Downstream
MH6

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/20/2008	1:52 PM	WEST SIDE DRIVE	FOREST PARK

Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	LINE WEST			

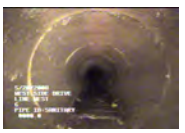
Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
6				Sanitary	Upstream		36

Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Reinforced Concrete Pipe				50	0	136	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	

LINE WEST

Ftg.	Code	Description	Position	Comment
50.3	MSA	Survey Abandoned		50' ONLY.
0.0	AMH	Access Point - Manhole		DS MH



6

National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
MH5

Downstream
MH6

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
2MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/20/2008	10:11 AM	FRONT OF BUILDING 100	FOREST PARK

Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	MH-5			

Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
MH-6				Sanitary	Downstream		15

Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Vitrified Clay Pipe				90	1350	1721	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	

MH-5

Ftg.	Code	Description	Position	Comment
0.0	AMH	Access Point - Manhole		us mh

Ftg.	Code	Description	Position	Comment
89.7	MSA	Survey Abandoned		CAMERA BLOCKED BY DEBRIE

MH-6

National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
MH5

Downstream
MH6

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

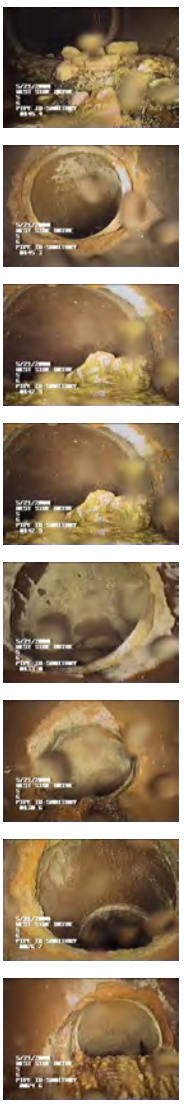
P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/20/2008	10:11 AM	WEST SIDE DRIVE	FOREST PARK

Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	MH-5			

Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
MH-6				Sanitary	Upstream		15

Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Reinforced Concrete Pipe			250	145	4315	5444	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	



MH-5

Ftg.	Code	Description	Position	Comment
145.4	MSA	Survey Abandoned		Camera blocked by debrie
145.3	TB	Tap, Break-in / Hammer	10	
142.9	TB	Tap, Break-in / Hammer	9	
142.9	DAE	Deposits Attached: Encrustation	9	
133.0	TBC	Tap, Break-in / Hammer: Capped	10	
130.6	TBA	Tap, Break-in / Hammer: Active	2	
76.7	TB	Tap, Break-in / Hammer	10	
74.6	TBA	Tap, Break-in / Hammer: Active	2	

MH-6

National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
MH5

Downstream
MH6

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/20/2008	10:11 AM	WEST SIDE DRIVE	FOREST PARK

Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	MH-5			

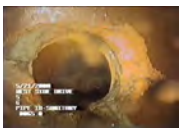
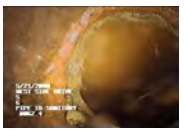
Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
MH-6				Sanitary	Upstream		15

Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Reinforced Concrete Pipe			250	145	4315	5444	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	

MH-5

Ftg.	Code	Description	Position	Comment
65.0	TBA	Tap, Break-in / Hammer: Active	2	
62.4	TBA	Tap, Break-in / Hammer: Active	10	
60.2	TB	Tap, Break-in / Hammer	10	
42.0	TB	Tap, Break-in / Hammer	10	
6.0	AMH	Access Point - Manhole		DS MH 6


MH-6

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National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
MH4

Downstream
MH5

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
2MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/20/2008	9:17 AM	FRONT OF BUILDING 100	FOREST PARK

Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	MH-4			

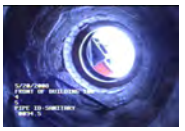
Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
MH-5				Sanitary	Downstream		15

Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Vitrified Clay Pipe			94	94	926	1350	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	

MH-4

Ftg.	Code	Description	Position	Comment
0.0	AMH	Access Point - Manhole		us mh



Ftg.	Code	Description	Position	Comment
94.5	AMH	Access Point - Manhole		DS MH

MH-5

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National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
Building 100 (South)

Downstream
MH4

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
2MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

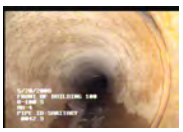
P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/20/2008	10:59 AM	FRONT OF BUILDING 100	FOREST PARK

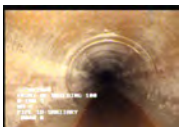
Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	B-100 S			

Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
MH-4				Sanitary	Upstream		15

Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Vitrified Clay Pipe			45	45	2207	2516	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	





B-100 S

Ftg.	Code	Description	Position	Comment
44.8	TF	Tap, Factory Made	9	
44.8	MMC	Material Change		PIPE - FROM 10" TO 4"
42.9	TF	Tap, Factory Made	3	
0.0	AMH	Access Point - Manhole		DS MH

MH-4

Generated on Friday, 5/23/2008 at 04:04 PM by the PipeTech® TV inspection system.

National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

MWH

Upstream
Upstream East
Downstream
MH4

Surveyors name	Certificate Number	System Owner	Survey Customer	Drainage Area	Engineer
2MICHAEL BERTHELOT	04-5090	FOREST PARK	MWH		

P/O No.	Pipeline Segment Reference	Date	Time	Location (Street Name and number)	Locality
	SANITARY	5/20/2008	10:26 AM	FRONT OF BUILDING 100	FOREST PARK

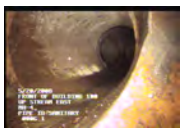
Further Location details	Upstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade
	UP STREAM EAST			

Downstream Manhole Number	Rim to Invert	Grade to Invert	Rim to Grade	Use of Sewer	Direction	Flow Control	Height
MH-4				Sanitary	Upstream		15

Width	Shape	Material	Ln. Method	Pipe Joint Length	Total Length	Length Surveyed	Counter Start	Counter End	Tape / Media Number
	Circular	Vitrified Clay Pipe			73	73	1721	2207	MB-1

Purpose	Sewer Category	Pre-Cleaning	Cleaned	Weather	Additional Information
Maintenance Related		Jetting		Dry	

T MH4



Ftg.	Code	Description	Position	Comment
0.0	AMH	Access Point - Manhole		DS MH
6.1	TF	Tap, Factory Made	9	
14.5	MMC	Material Change		PIPE FROM 15" TO 12"
73.3	AEP	Access Point - End of Pipe		

Upstream East

Generated on Friday, 5/23/2008 at 01:46 PM by the PipeTech® TV inspection system.

APPENDIX B.3
STORM SEWER INSPECTION REPORTS

None of the storm sewer segments at the Forest Park AFRC (IL027) were video inspected using the camera-mounted crawler. The storm sewer segments that were video inspected were completed using the mini-cam, which does not produce reports.

APPENDIX C
MANHOLE INSPECTION REPORTS

APPENDIX C.1
SANITARY SEWER MANHOLE INSPECTION REPORTS

MANHOLE INSPECTION REPORT

Manhole Number: MH1 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/19/08 1000

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Sanitary

GENERAL

Status: ☒ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☒ Pre-Cast ☒ Cast-in-Place ☒ Brick ☐ Other _____

Condition: ☐ Excellent ☒ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☒ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☐ Dry ☒ Wet

COVER

Type: ☐ Open Pick Hole ☒ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☐ Open Grate

Fit: ☒ Tight ☐ Loose ☐ Rocking

Condition: ☒ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☒	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☒	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☒ Good ☐ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☒ Good ☐ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☒ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☒	☐	☐	☐	☐	☐ _____
Offset	☐	☒	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☒	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated

Materials: ☑ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☑	☐	☐	☑	☐	☐	☐ _____
Steps/Ladder	☑	☐	☐	Poor Steps	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☑ Fair (Debris) ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

CONNECTIONS

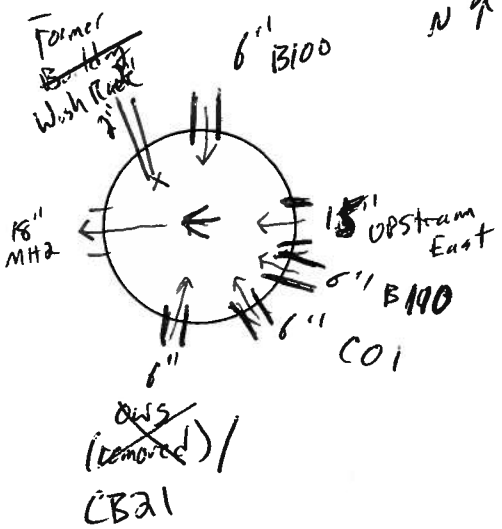
6" (SE, B103) ☐ ☑
15" (E) ☐ ☑

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (N)	☐	☑	☐	☐	☐	☐	☐ _____
Size: 18" (W)	☐	☑	☐	☐	☐	☐	☐ _____
Size: 6" (S)	☐	☑	☐	☐	☐	☐	☐ _____
Size: 6" (SE, C01)	☐	☑	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS:

~~7303-7308~~
7203-7208

- 2" connection to NW is abandoned. Probably formerly connected to removed wash rack.
- Debris on bench

MANHOLE INSPECTION REPORT

Manhole Number: MH2 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Sanitary

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☑ Brick ☐ Other _____

Condition: ☐ Excellent ☑ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☐ Dry ☑ Wet

COVER

Type: ☑ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☐ Open Grate

Fit: ☑ Tight ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☑ Good ☐ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☑ Good ☐ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☒ Good ☐ Fair ☐ Poor ☐ Deteriorated

Materials: ☒ Brick ☐ Block ☐ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☒	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☒	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☒	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☒	☐	☐	☐	☐	☐ _____
Roots	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☒	☐	☐	☐	☐	☐ _____

Steps okay, but top step is sharp

BENCH

Material: ☐ None ☒ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☒ Good ☐ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☒ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

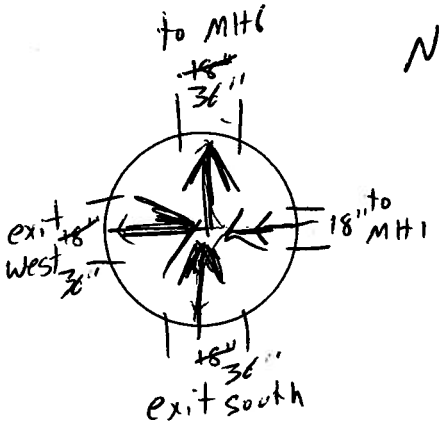
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 18"(N)	☐	☒	☐	☐	☐	☐	☐ _____
Size: 36" 18"(W)	☐	☒	☐	☐	☐	☐	☐ _____
Size: 36" 18"(S)	☐	☒	☐	☐	☐	☐	☐ _____
Size: 36" 18"(E)	☐	☒	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS: 7232-7233

2 Steps on ladder eroding and not safe (sharp edges)

O:\2091000-2091999\2091049\Sewer Surveys\Templates\Manhole Inspection Form.doc

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: MH4 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Sanitary

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☑ Cast-in-Place ☑ Brick ☐ Other _____

Condition: ☐ Excellent ☑ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☐ Dry ☑ Wet

COVER

Type: ☐ Open Pick Hole ☑ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☐ Open Grate

Fit: ☑ Tight ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☑ Good ☐ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☑ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑	☐	☐	☐	☐	☐ _____
Offset (loose brick)	☑	☐	☐	☑	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☒ Good ☐ Fair ☐ Poor ☐ Deteriorated

Materials: ☒ Brick ☐ Block ☒ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☒	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☒	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☒	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☒	☐	☐	☐	☐	☐ _____
Roots	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☒	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☐ Precast ☐ Brick ☐ Block ☒ Poured ☐ Other: _____

Condition: ☐ Good ☒ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☒ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

CONNECTIONS

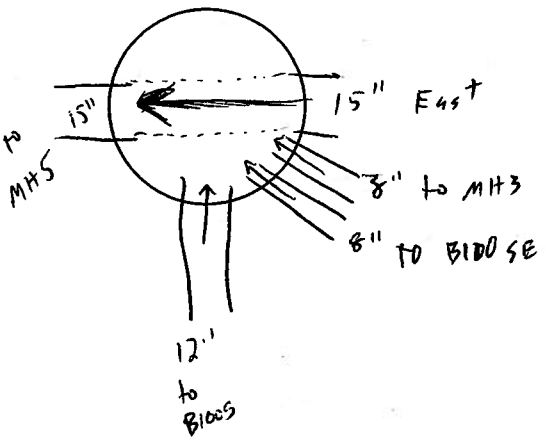
15"(D) ☐ ☒

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 12"(S)	☐	☒	☐	☐	☐	☐	☐ _____
Size: 8"(SE, B100)	☐	☒	☐	☐	☐	☐	☐ _____
Size: 8"(SE, MH3)	☐	☒	☐	☐	☐	☐	☐ _____
Size: 15"(E)	☐	☒	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS:

7220 - 7222

- Debris on bottom of manhole

MH4

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: MH5 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: San. Sew

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☐ Pre-Cast ☑ Cast-in-Place ☑ Brick ☐ Other _____

Condition: ☑ Excellent ☐ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☐ Dry ☑ Wet

COVER

Type: ☐ Open Pick Hole ☑ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☐ Open Grate

Fit: ☑ Tight ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☑ Good ☐ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☑ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑	☐	☐	☐	☐	☐ _____
Offset	☑	☐	☐	☑	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☒ Good ☐ Fair ☐ Poor ☐ Deteriorated

Materials: ☒ Brick ☐ Block ☒ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☒	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☒	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☒	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☒	☐	☐	☐	☐	☐ _____
Roots	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☒ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☒ Good ☐ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☒ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

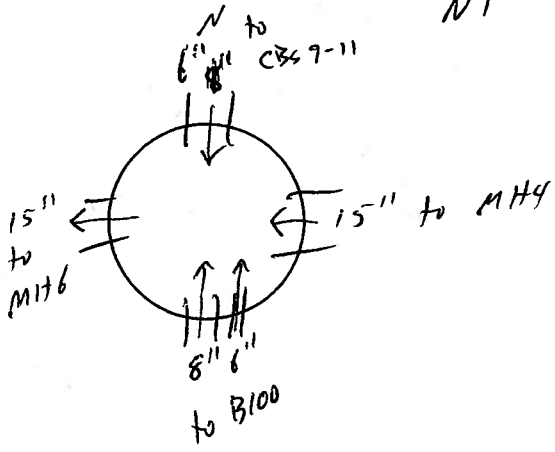
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 15" (W)	☐	☒	☐	☐	☐	☐	☐ _____
Size: 8" (S)	☐	☒	☐	☐	☐	☐	☐ _____
Size: 6" (S)	☐	☒	☐	☐	☐	☐	☐ _____
Size: 15" (E)	☐	☒	☐	☐	☐	☐	☐ _____
Size: 8" (N)	☐	☒	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS:

7223-7226

Some debris on bench.

MH5

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: MH6 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Sanitary

GENERAL

Status: ☒ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☒ Pre-Cast ☐ Cast-in-Place ☒ Brick ☐ Other _____

Condition: ☒ Excellent ☐ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☒ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☐ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☒ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☐ Open Grate

Fit: ☒ Tight ☐ Loose ☐ Rocking

Condition: ☒ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☒	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☒	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☒ Good ☐ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☒ Good ☐ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☒ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☒	☐	☐	☐	☐	☐ _____
Offset	☐	☒	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☒	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☑ Good ☐ Fair ☐ Poor ☐ Deteriorated

Materials: ☑ Brick ☐ Block ☐ Precast ☐ Poured ☐ Other _____

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☑ Poured ☐ Other: _____

Condition: ☑ Good ☐ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

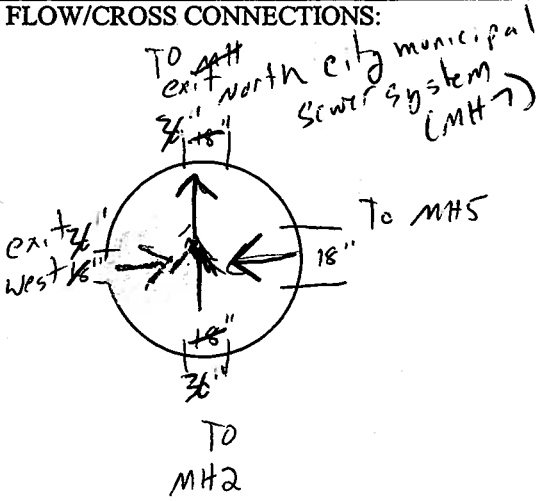
Infiltration Observed (gpm): _____

CONNECTIONS

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Size: 36" ~~18"~~ (W)	☐	☑	☐	☐	☐	☐	☐ _____
Size: 36" ~~18"~~ (S)	☐	☑	☐	☐	☐	☐	☐ _____
Size: 18" (E)	☐	☑	☐	☐	☐	☐	☐ _____
Size: 36" ~~18"~~ (N)	☐	☑	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS:

7230 - 7231

Flow to north and west

MWH MONTGOMERY WATSON HARZA

APPENDIX C.2
STORM SEWER MANHOLE INSPECTION REPORTS

MANHOLE INSPECTION REPORT

Manhole Number: MH3 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/18

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☑ Excellent ☐ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☑ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☑ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☐ Open Grate

Fit: ☑ Tight ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☑ Good ☐ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☑ Good ☐ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☒ Good ☐ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☒ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☒	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☒	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☒	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☒	☐	☐	☐	☐	☐ _____
Roots	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☒	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☒ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☒ Good ☐ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☒ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

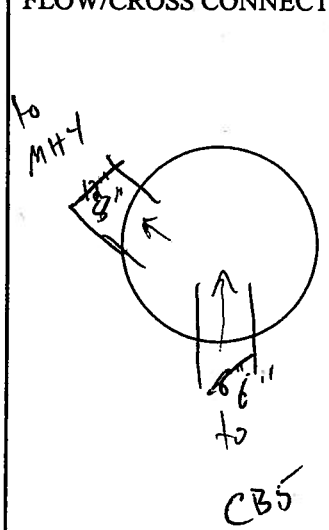
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 8" X8" (NW)	☐	☒	☐	☐	☐	☐	☐ _____
Size: 6" S" (S)	☐	☒	☐	☐	☐	☐	☐ _____
Size: _____	☐	☒	☐	☐	☐	☐	☐ _____
Size: _____	☐	☒	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS: 7218-7219

MH3

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB1 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/19/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☐ Good ☑ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☑ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☑ Vent ☐ Open Grate

Fit: ☑ Tight ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☑ Good ☐ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☑ Good ☐ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☑ Good ☐ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

BENCH

Material: ☑ None ☐ Precast ☐ Brick ☐ Block ☐ Poured ☑ Other: obstructed

Condition: ☐ Good ☐ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

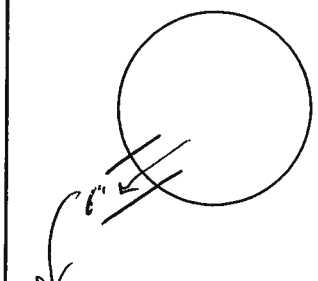
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (SW)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS: NA



According to drawing 6" Connection to line between MH1 and B100

COMMENTS:
- Greater than 12" of Sediment in manhole
- 7209-7210
- Could not locate & exit pipe in CB, too much debris.

CB1

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB2 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☑ Cast-in-Place ☑ Brick ☐ Other _____

Condition: ☐ Excellent ☑ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☑ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☑ Vent ☐ Open Grate

Fit: ☑ Tight ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☑ Good ☐ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☑ Good ☐ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☒ Fair ☐ Poor ☐ Deteriorated

Materials: ☒ Brick ☐ Block ☒ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☒	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☒	☐ Slightly	☐ Heavy	☒	☐	☐	☐ _____
Defective Brick/Mortar	☒	☐	☐	☒	☐	☐	☐ _____
Steps/Ladder	☐	☒	☐	☐	☐	☐	☐ _____
Roots	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☒	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☒ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☒ Good ☐ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☒ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): Sediment on bench

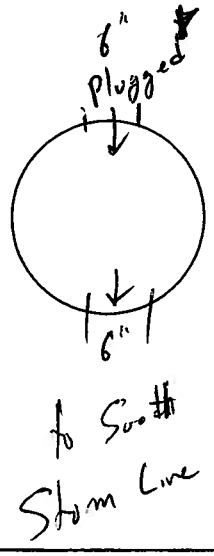
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (S)	☒	☐	☐	☒	☐	☐	☐ _____
Size: 6" (N)	☐	☒	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



N ↑

COMMENTS:

7214 – 7215
- Debris on bench
* Formerly connected to B100, according to drawings.

MANHOLE INSPECTION REPORT

Manhole Number: CB3 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☑ Brick ☐ Other _____

Condition: ☐ Excellent ☐ Good ☑ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☐ Dry ☑ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☑ Open Grate

Fit: ☑ Tight ☐ Loose ☐ Rocking

Condition: ☐ Good ☐ Corroded ☑ Cracked / broken ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☑ Good ☐ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☑ Good ☐ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

* Vegetation growing on seal. Seal is slanted.

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☒ Good ☐ Fair ☐ Poor ☐ Deteriorated

Materials: ☒ Brick ☐ Block ☒ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☒	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☒	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☒	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☒	☐	☐	☐	☐	☐ _____
Roots	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☒ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☒ Fair (debris) ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☒ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

CONNECTIONS

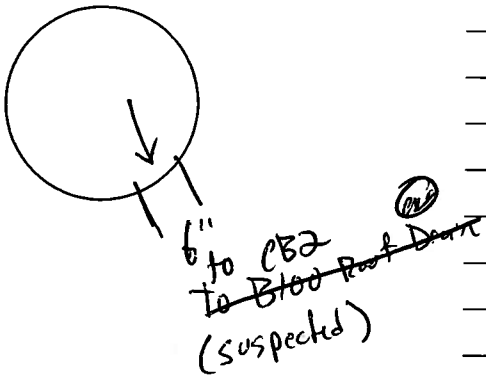
ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: _____	☐	☒	☐	☐	☐	☐	☐ _____
Size: _____	☐	☒	☐	☐	☐	☐	☐ _____
Size: _____	☐	☒	☐	☐	☐	☐	☐ _____
Size: _____	☐	☒	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:

NA



COMMENTS: 7227-7229

Manhole cover broken through in place after FM granted permission to gain access to manhole. Cover was used to frame. Heavy debris in manhole and line. Line may be abandoned.

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB4 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☒ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☐ Pre-Cast ☐ Cast-in-Place ☐ Brick unknown ☐ Other _____

Condition: ☐ Excellent ☒ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Could not open cover

Surface Description: ☒ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☐ Dry ☒ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☒ Open Grate

Fit: ☒ Tight ☐ Loose ☐ Rocking

Condition: ☒ Good (But stuck to cover) ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☒	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☒	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☒ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☒ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☐ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☒ but stuck to cover	☐	☐	☐	☐	☐ _____
Offset	☐	☒	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☒	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☒ Fair ☐ Poor ☐ Deteriorated

Materials: ☒ Brick ☐ Block ☒ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☒	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☒	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☒	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☒	☐	☐	☐	☐	☐ _____
Roots	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☐ Precast ☐ Brick ☐ Block ☐ Poured ☒ Other: Unknown

Condition: ☐ Good ☒ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☒ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

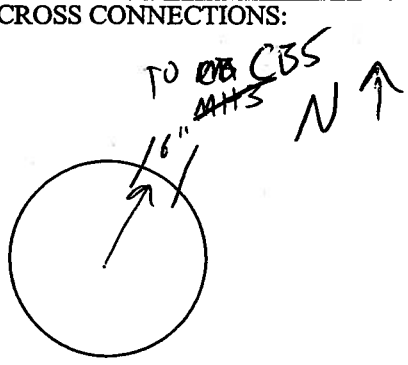
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (NE)	☐	☒	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS: 7262-7263

CB Cover stuck to frame. Several attempts made to loosen, but no success. Cover not broken open since CB4 is located near a high traffic area.

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB5 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☑ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☐ Good ☑ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☐ Dry ☑ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☑ Vent ☐ Open Grate

Fit: ☑ Tight ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☑ Good ☐ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☑ Good ☐ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

MWH MONTGOMERY WATSON HARZA

CORBEL/RISER

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated

Materials: ☑ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☑	☐	☐	☑	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☑ Good ☐ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

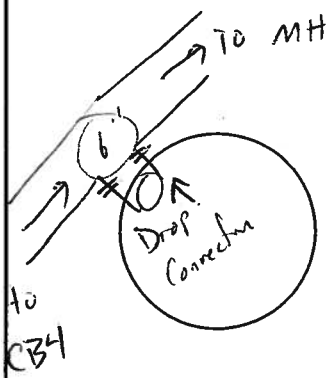
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" Drop	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS: 7216-7217

Up/down drop connection.

Up opening cemented shut

CB5

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB6 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☑ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Could not open Cover

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☐ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☑ Open Grate

Fit: ☑ Tight (stuck to frame) ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☑ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☑ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑ Stuck to cover	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☒ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☒ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☒	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☒	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☒	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☒	☐	☐	☐	☐	☐ _____
Roots	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☒	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☒ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☒ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☒ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

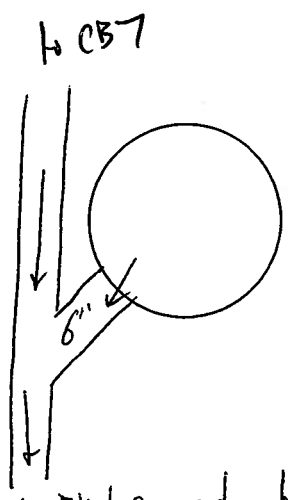
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (Sw)	☐	☒	☐	☐	☐	☐	☐ _____
Size: _____	☐	☒	☐	☐	☐	☐	☐ _____
Size: _____	☐	☒	☐	☐	☐	☐	☐ _____
Size: _____	☐	☒	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



to Blind connection between ~~MH3~~ MH4 and Upstream East

COMMENTS:

7238-7239

Could not open cover (Sealed to frame)

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB7 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☑ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Could not open cover

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☑ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☑ Open Grate

Fit: ☑ Tight Stuck to frame ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☑ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☑ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑ Stuck to cover	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

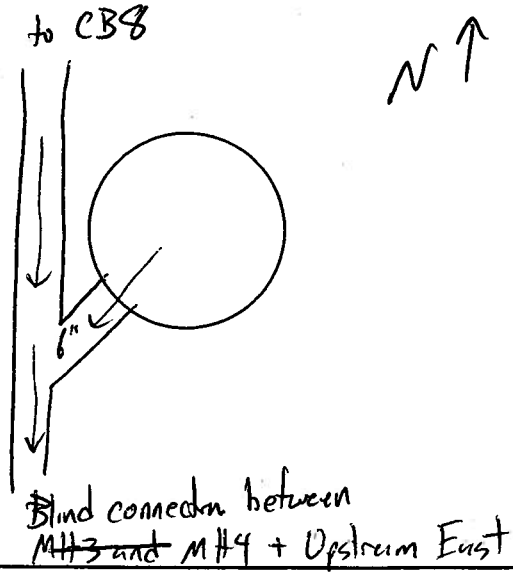
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (SW)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☒	☐	☐	☐	☐	☐ _____
Size: _____	☐	☒	☐	☐	☐	☐	☐ _____
Size: _____	☐	☒	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS: 7260 - 7261

Could not open cover (Sealed to frame)

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB8 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Could not open cover

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☑ Good ☐ Poor/ Deteriorated

☐ Surcharge? Height _____

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☑ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☑ Open Grate

Fit: ☑ Tight Stuck to frame ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☑	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☑ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☑ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑ Stuck to cover	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

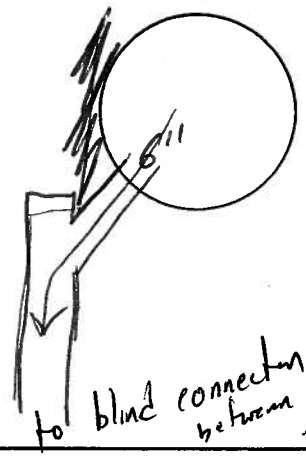
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (SE)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS:

7249-7250

Cover stuck to frame, could not open

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB 9 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Strm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Could not open cover

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☑ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☑ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☑ Open Grate

Fit: ☑ Tight Stuck ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☑ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☑ Fair Stuck ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑ Stuck to cover	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

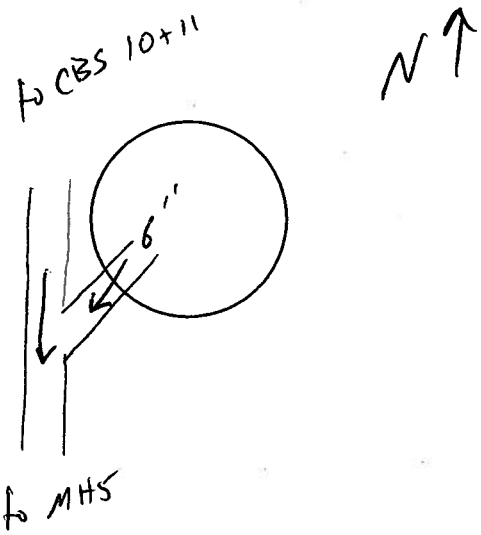
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6"(SE)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS:

7236-7237

Cover sealed to frame, could not open.

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB10 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Could not open cover

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☑ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☐ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☑ Open Grate

Fit: ☑ Tight Stuck ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☑ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☑ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑ Stuck	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

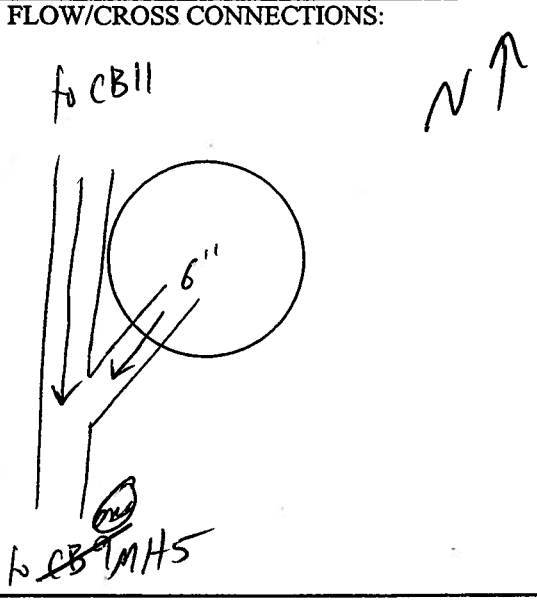
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (SE)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS:

7258-7259

Could not open cover, stuck to frame

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB11 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☑ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Could not open cover

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☑ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☑ Open Grate

Fit: ☑ Tight Stuck ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☑ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☑ Fair Stuck ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☐ Stuck	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

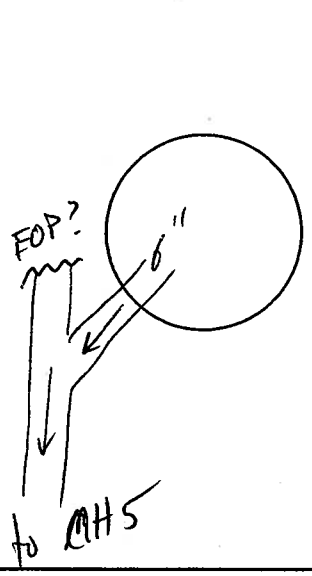
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6"(SE)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS:

7247-7248

Could not open cover, stuck shut w/ frame.

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB12 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☑ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Could not open cover

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☑ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☑ Open Grate

Fit: ☑ Tight Stuck ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☑ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☑ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑ Stuck	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☒ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☒ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☒	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☒	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☒	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☒	☐	☐	☐	☐	☐ _____
Roots	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☒ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☒ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☒ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

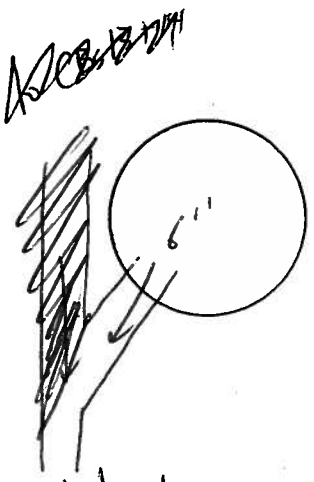
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (SE)	☐	☒	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



to blind connection between MH5 + MH6

COMMENTS: 7234-7235

Could not open cover, fused to frame.

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB13 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☑ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☑ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☑ Open Grate

Fit: ☑ Tight ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☑ Good ☐ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☑ Good ☐ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☑ Good ☐ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☑ Good ☐ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

CONNECTIONS

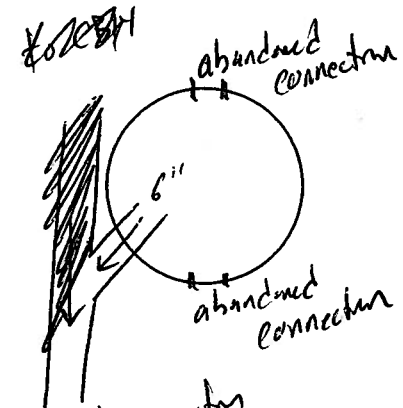
ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (SE)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:

NA



to blind connection between MH5 and MH6

COMMENTS:

7253-7257

Some Debris on bench.
Roots growing into abandoned connections.

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB14 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☑ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☑ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☑ Open Grate

Fit: ☑ Tight ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☑ Good ☐ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☑ Good ☐ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☑ Good ☐ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☑ Good ☐ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

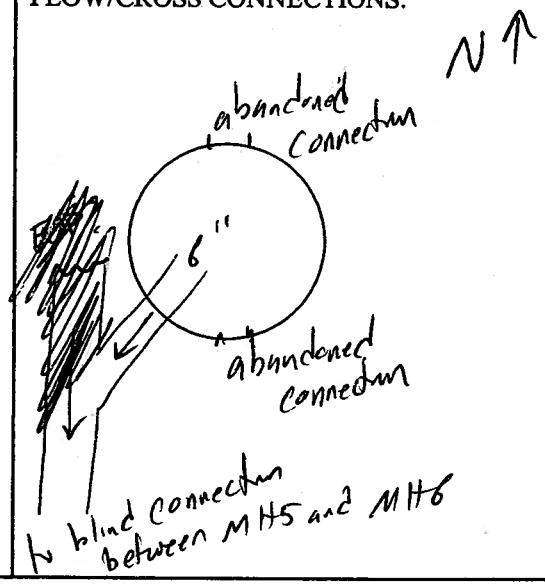
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (SE)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS:

7242 - 7246

Some debris on bench

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB15 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☒ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Could not open cover

Construction: ☒ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☒ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☒ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☒ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☒ Open Grate

Fit: ☒ Tight Stuck ☐ Loose ☐ Rocking

Condition: ☒ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☒	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☒ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☒ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☒ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☒ Stuck	☐	☐	☐	☐	☐ _____
Offset	☐	☒	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☒	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

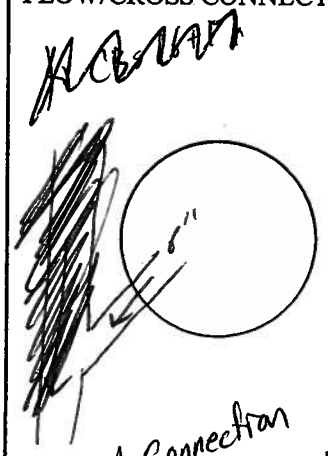
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (SE)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



to blind Connection between MH5 and MH6

COMMENTS:

7264-7265

Could not open cover, stuck to frame.

MANHOLE INSPECTION REPORT

Manhole Number: CB16 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☒ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☒ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☒ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Could not open cover

Surface Description: ☒ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☒ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☒ Open Grate

Fit: ☒ Tight Stuck ☐ Loose ☐ Rocking

Condition: ☒ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☒	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☒ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☒ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☒ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☒	☐ Stuck	☐	☐	☐	☐ _____
Offset	☐	☒	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☒	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

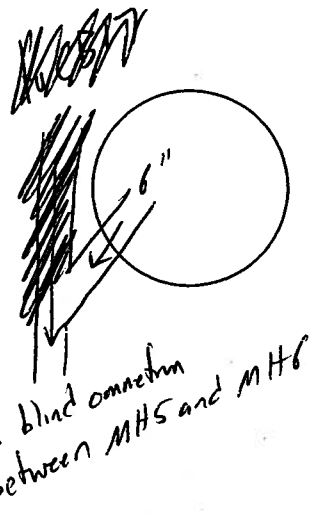
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (SE)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS:

7251-7252

Could not open cover, stuck to frame.

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB17 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☒ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☒ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☒ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Could not open Cover

Surface Description: ☒ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☒ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☒ Open Grate

Fit: ☒ Tight Stuck ☐ Loose ☐ Rocking

Condition: ☒ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☒	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☒ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☒ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☒ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☒ Stuck	☐	☐	☐	☐	☐ _____
Offset	☐	☒	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☒	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☑ Precast ☐ Block ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

CONNECTIONS

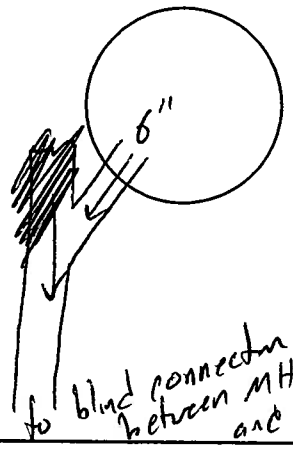
ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (SE)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:

NA



COMMENTS:

7240-7241

Could not open, cover stuck to frame.

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB18 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☒ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Could not open cover

Construction: ☒ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☒ Good ☐ Poor/ Deteriorated

☐ Surcharge? Height _____

Surface Description: ☒ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☒ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☒ Open Grate

Fit: ☒ Tight Stuck ☐ Loose ☐ Rocking

Condition: ☒ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☒	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☒ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☒ Fair Stuck ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☒ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☒ Stuck	☐	☐	☐	☐	☐ _____
Offset	☐	☒	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☒	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

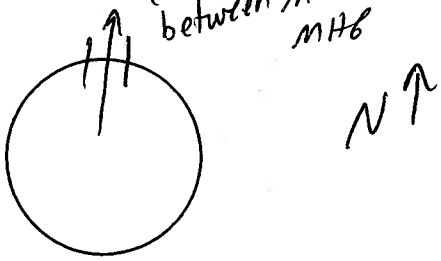
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (N)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS:

7270 - 7271

Could not open cover, stuck to frame.

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB19 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☒ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Could not open cover

Construction: ☒ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☒ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Surface Description: ☒ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☒ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☒ Open Grate

Fit: ☒ Tight Stuck ☐ Loose ☐ Rocking

Condition: ☒ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☒	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☒ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☐ Good ☒ Fair Stuck ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☒ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☒ Stuck	☐	☐	☐	☐	☐ _____
Offset	☐	☒	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☒	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

CONNECTIONS

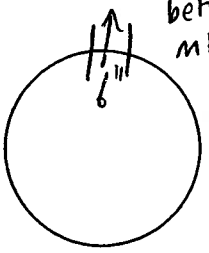
ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (N)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:

No blind connection between MH5 and MH6 N



COMMENTS:

7268-7269

Could not open cover, Stuck to frame.

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB20 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem: Storm

GENERAL

Status: ☒ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☒ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☐ Excellent ☐ Good ☒ Poor/ Deteriorated ☐ Surcharge? Height _____

Could not open Cover

Surface Description: ☒ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☐ Dry ☒ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☒ Open Grate

Fit: ☒ Tight Stuck ☐ Loose ☐ Rocking

Condition: ☒ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☒	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☒	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☒ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☒ Good ☐ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☒ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☒ Stuck	☐	☐	☐	☐	☐ _____
Offset	☒	☐	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☒	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☒	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☐ Good ☐ Fair ☐ Poor ☑ Deteriorated

Materials: ☑ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☑	☐	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☑	☐	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other Collapsed	☑	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☐ Good ☑ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

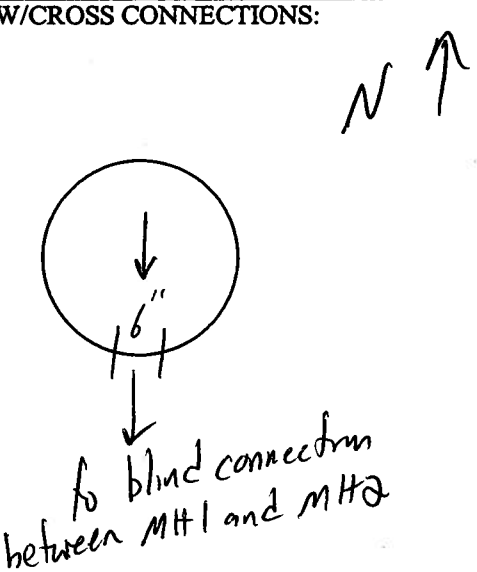
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" (S)	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS: 7266-7267

- Could not open cover, stuck to frame.
- Area around CB20 is collapsed and in very poor condition. Pitch of cover is ~15-20° from horizontal.

MWH MONTGOMERY WATSON HARZA

MANHOLE INSPECTION REPORT

Manhole Number: CB21 Project: 2091049

Inspection Crew: C. Swan / NPR, Inc. Inspection Date/Time: 5/20/08

Location/Street Address: IL027 (Forest Park) – 7402 Roosevelt Road, Forest Park, IL 60130-2524

Subsystem:

GENERAL

Status: ☑ Surface Inspected ☐ Internal Inspected ☐ Not Inspected ☐ Not Found ☐ Buried

Construction: ☑ Pre-Cast ☐ Cast-in-Place ☐ Brick ☐ Other _____

Condition: ☑ Excellent ☐ Good ☐ Poor/ Deteriorated ☐ Surcharge? Height _____

Could not open Cover

Surface Description: ☑ Asphalt ☐ Concrete ☐ Grass/Soil

Flow Description: ☐ Dry ☐ Wet

COVER

Type: ☐ Open Pick Hole ☐ Concealed Pick Hole ☐ Gasketed ☐ Bolted # _____ ☐ Vent ☑ Open Grate

Fit: ☑ Tight Stuck to Cover ☐ Loose ☐ Rocking

Condition: ☑ Good ☐ Corroded ☐ Cracked ☐ Bolts Missing

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Ponding (Temporary)	☐	☑	☐	☐	☐	☐	☐ _____
Ponding (Permanent)	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/No Gasket	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

FRAME AND FRAME SEAL

Frame Condition: ☐ Good ☑ Fair ☐ Corroded ☐ Cracked ☐ Offset

Seal Condition: ☑ Good ☐ Fair ☐ Poor ☐ Missing/None ☐ Internal ☐ External

Adjustment Rings: ☑ None ☐ Precast ☐ Brick

Adjustment Ring Condition: ☐ Good ☐ Poor ☐ Cracked ☐ Deteriorated

Defects	Yes	No	ESTIMATED INTENSITY OF I/I FLOW: Deposits	Low	Med	High	Visible (gpm)
Seal	☐	☑	☐	☐	☐	☐	☐ _____
Offset	☐	☑	☐	☐	☐	☐	☐ _____
Cracked Frame	☐	☑	☐	☐	☐	☐	☐ _____
Cracked/Adj. Ring/Joint	☐	☑	☐	☐	☐	☐	☐ _____

CORBEL/RISER

Condition: ☑ Good ☐ Fair ☐ Poor ☐ Deteriorated

Materials: ☐ Brick ☐ Block ☑ Precast ☐ Poured ☐ Other _____

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Cracked	☐	☑	☐	☐	☐	☐	☐ _____
Defective Precast Joints	☐	☑	☐	☐	☐	☐	☐ _____
Defective Brick/Mortar	☐	☑	☐	☐	☐	☐	☐ _____
Steps/Ladder	☐	☑	☐	☐	☐	☐	☐ _____
Roots	☐	☑	☐	☐	☐	☐	☐ _____
Other _____	☐	☐	☐	☐	☐	☐	☐ _____

BENCH

Material: ☐ None ☑ Precast ☐ Brick ☐ Block ☐ Poured ☐ Other: _____

Condition: ☑ Good ☐ Fair ☐ Poor ☐ Deteriorated ☐ Roots

Infiltration: ☑ None ☐ Low ☐ Medium ☐ High

Infiltration Observed (gpm): _____

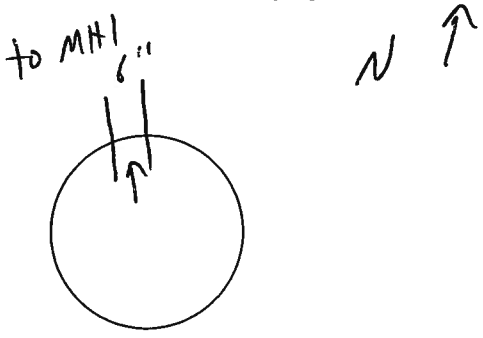
CONNECTIONS

ESTIMATED INTENSITY OF I/I FLOW

Defects	Yes	No	Deposits	Low	Med	High	Visible (gpm)
Size: 6" South	☐	☑	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____
Size: _____	☐	☐	☐	☐	☐	☐	☐ _____

OTHER

FLOW/CROSS CONNECTIONS:



COMMENTS:

MWH MONTGOMERY WATSON HARZA

APPENDIX D
PHOTO DOCUMENTATION

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 1

Date: May 21, 2008

Location:
Building 100

Direction:
South

Comments:
The front of Building 100.

Photograph ID: 2

Date: May 21, 2008

Location:
Building 100

Direction:
Southeast

Comments:
A view of Building 100 taken from the Northwest portion of the POV parking area.

Photograph ID: 3

Date: May 21, 2008

Location:
POV Parking Area

Direction:
South

Comments:
A view of the POV parking area taken from the northwest area of the facility.

Photograph ID: 4

Date: May 21, 2008

Location:
POV Parking Area

Direction:
East

Comments:
A view of the POV parking area taken from the northwest area of the facility.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 5

Date: May 21, 2008

Location:
Building 100

Direction:
West

Comments:
A view of the restricted POV area outside of Building 100. Note that manhole MH4 is in the forefront of the photograph.

Photograph ID: 6

Date: May 21, 2008

Location:
Building 100

Direction:
North

Comments:
A view of the access point to the center courtyard in Building 100. Note that catch basin CB3 is located in the courtyard (not visible in this photograph).

Photograph ID: 7

Date: May 21, 2008

Location:
Building 100

Direction:
North

Comments:
A view from the east side of Building 100. Note that catch basin CB5 is in the forefront of the photograph.

Photograph ID: 8

Date: May 21, 2008

Location:
MEP Parking Lot

Direction:
West

Comments:
A view of the MEP parking area. Note that Building 110 and Building 100 are visible on the left and right, respectively.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 9

Date: May 21, 2008

Location:
Building 100

Direction:
East

Comments:
The MEP area and the rear of Building 100.

Photograph ID: 10

Date: May 21, 2008

Location:
Building 110

Direction:
South

Comments:
A view of Building 110 and the location of the former Oil-Water Separator.

Photograph ID: 11

Date: May 21, 2008

Location:
MEP Parking Area

Direction:
West

Comments:
A view of the former grease rack located northwest of Building 110.

Photograph ID: 12

Date: May 21, 2008

Location:
Building 102

Direction:
Southwest

Comments:
A view of Building 102 which is owned and operated by the Navy.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 13

Date: May 19, 2008

Location:
Manhole MH1 (Sanitary)

Direction:
North

Comments:
An exterior view of manhole MH1.

Photograph ID: 14

Date: May 19, 2008

Location:
Manhole MH1 (Sanitary)

Direction:
North (Top)

Comments:
An interior view of manhole MH1.

Photograph ID: 15

Date: May 21, 2008

Location:
Manhole MH2 (Sanitary)

Direction:
North

Comments:
An exterior view of manhole MH2.

Photograph ID: 16

Date: May 21, 2008

Location:
Manhole MH2 (Sanitary)

Direction:
North (Top)

Comments:
An interior view of manhole MH2.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 17

Date: May 20, 2008

Location:
Manhole MH3 (Storm)

Direction:
North

Comments:
An exterior view of manhole MH3.

Photograph ID: 18

Date: May 20, 2008

Location:
Manhole MH3 (Storm)

Direction:
North (Top)

Comments:
An interior view of manhole MH3.

Photograph ID: 19

Date: May 20, 2008

Location:
Manhole MH4 (Sanitary)

Direction:
North

Comments:
An exterior view of manhole MH4.

Photograph ID: 20

Date: May 20, 2008

Location:
Manhole MH4 (Sanitary)

Direction:
North (Top)

Comments:
An interior view of manhole MH4.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 21

Date: May 20, 2008

Location:
Manhole MH4 (Sanitary)

Direction:
South (Top)

Comments:
An interior view of manhole MH4.

Photograph ID: 22

Date: May 20, 2008

Location:
Manhole MH5 (Sanitary)

Direction:
North

Comments:
An exterior view of manhole MH5.

Photograph ID: 23

Date: May 20, 2008

Location:
Manhole MH5 (Sanitary)

Direction:
North (Top)

Comments:
An interior view of manhole MH5. Note the offset riser.

Photograph ID: 24

Date: May 20, 2008

Location:
Manhole MH5 (Sanitary)

Direction:
North (Top)

Comments:
An interior view of manhole MH5.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 25

Date: May 21, 2008

Location:
Manhole MH6 (Sanitary)

Direction:
North

Comments:
An exterior view of manhole MH6.

Photograph ID: 26

Date: May 21, 2008

Location:
Manhole MH6 (Sanitary)

Direction:
North (Top)

Comments:
An interior view of manhole MH6.

Photograph ID: 27

Date: May 19, 2008

Location:
Catch Basin CB1

Direction:
North

Comments:
An exterior view of catch basin CB1.

Photograph ID: 28

Date: May 19, 2008

Location:
Catch Basin CB1

Direction:
North (Top)

Comments:
An interior view of catch basin CB1.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 29

Date: May 20, 2008

Location:
Catch Basin CB2

Direction:
North

Comments:
An exterior view of catch basin CB2.

Photograph ID: 30

Date: May 20, 2008

Location:
Catch Basin CB2

Direction:
North (Top)

Comments:
An interior view of catch basin CB2.

Photograph ID: 31

Date: May 21, 2008

Location:
Catch Basin CB3

Direction:
North

Comments:
An exterior view of catch basin CB3 (before cover was broken in for access).

Photograph ID: 32

Date: May 21, 2008

Location:
Catch Basin CB3

Direction:
North

Comments:
An exterior view of catch basin CB3 (after cover was broken in for access).

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 33

Date: May 21, 2008

Location:
Catch Basin CB3

Direction:
North (Top)

Comments:
An interior view of catch basin CB3.

Photograph ID: 34

Date: May 21, 2008

Location:
Catch Basin CB4

Direction:
North

Comments:
An exterior view of catch basin CB4.

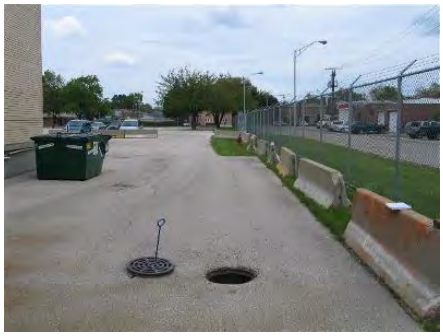
Photograph ID: 35

Date: May 21, 2008

Location:
Catch Basin CB4

Direction:
North (Top)

Comments:
View of catch basin CB4. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.



Photograph ID: 36

Date: May 20, 2008

Location:
Catch Basin CB5

Direction:
North

Comments:
An exterior view of catch basin CB5.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 37

Date: May 20, 2008

Location:
Catch Basin CB5

Direction:
North (Top)

Comments:
An interior view of catch basin CB5.

Photograph ID: 38

Date: May 21, 2008

Location:
Catch Basin CB6

Direction:
North

Comments:
An exterior view of catch basin CB6.

Photograph ID: 39

Date: May 21, 2008

Location:
Catch Basin CB6

Direction:
North (Top)

Comments:
View of catch basin CB6. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.

Photograph ID: 40

Date: May 21, 2008

Location:
Catch Basin CB7

Direction:
North

Comments:
An exterior view of catch basin CB7.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 41

Date: May 21, 2008

Location:
Catch Basin CB7

Direction:
North (Top)

Comments:
View of catch basin CB7. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.

Photograph ID: 42

Date: May 21, 2008

Location:
Catch Basin CB8

Direction:
North

Comments:
An exterior view of catch basin CB8.

Photograph ID: 43

Date: May 21, 2008

Location:
Catch Basin CB8

Direction:
North (Top)

Comments:
View of catch basin CB8. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.

Photograph ID: 44

Date: May 21, 2008

Location:
Catch Basin CB9

Direction:
North

Comments:
An exterior view of catch basin CB9.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 45

Date: May 21, 2008

Location:
Catch Basin CB9

Direction:
North (Top)

Comments:
View of catch basin CB9. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.

Photograph ID: 46

Date: May 21, 2008

Location:
Catch Basin CB10

Direction:
North

Comments:
An exterior view of catch basin CB10.

Photograph ID: 47

Date: May 21, 2008

Location:
Catch Basin CB10

Direction:
North (Top)

Comments:
View of catch basin CB10. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.

Photograph ID: 48

Date: May 21, 2008

Location:
Catch Basin CB11

Direction:
North

Comments:
An exterior view of catch basin CB11.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 49

Date: May 21, 2008

Location:
Catch Basin CB11

Direction:
North (Top)

Comments:
View of catch basin CB11. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.

Photograph ID: 50

Date: May 21, 2008

Location:
Catch Basin CB12

Direction:
North

Comments:
An exterior view of catch basin CB12.

Photograph ID: 51

Date: May 21, 2008

Location:
Catch Basin CB12

Direction:
North (Top)

Comments:
View of catch basin CB12. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.

Photograph ID: 52

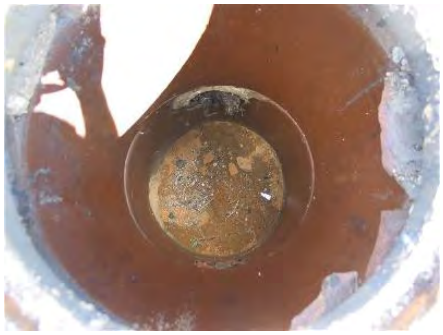
Date: May 21, 2008

Location:
Catch Basin CB13

Direction:
North

Comments:
An exterior view of catch basin CB13.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**



Photograph ID: 53

Date: May 21, 2008

Location:
Catch Basin CB13

Direction:
North (Top)

Comments:
An interior view of catch basin CB13. Note that the abandoned connections (at 12 and 6 o'clock from top, midway down) have tree roots growing within. The active connection is on the bottom of the catch basin (at 8 o'clock from top).

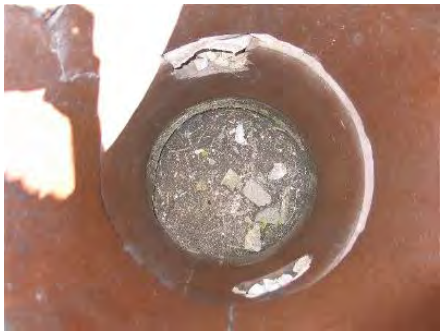
Photograph ID: 54

Date: May 21, 2008

Location:
Catch Basin CB14

Direction:
North

Comments:
An exterior view of catch basin CB14.



Photograph ID: 55

Date: May 21, 2008

Location:
Catch Basin CB14

Direction:
North (Top)

Comments:
An interior view of catch basin CB14. Note that the abandoned connections (at 11 and 5 o'clock from top, midway down). The active connection is on the bottom of the catch basin (at 7 o'clock from top).

Photograph ID: 56

Date: May 21, 2008

Location:
Catch Basin CB15

Direction:
North

Comments:
An exterior view of catch basin CB15.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

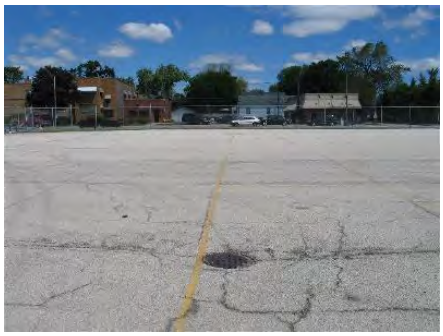
Photograph ID: 57

Date: May 21, 2008

Location:
Catch Basin CB15

Direction:
North (Top)

Comments:
View of catch basin CB15. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.



Photograph ID: 58

Date: May 21, 2008

Location:
Catch Basin CB16

Direction:
North

Comments:
An exterior view of catch basin CB16.

Photograph ID: 59

Date: May 21, 2008

Location:
Catch Basin CB16

Direction:
North (Top)

Comments:
View of catch basin CB16. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.

Photograph ID: 60

Date: May 21, 2008

Location:
Catch Basin CB17

Direction:
North

Comments:
An exterior view of catch basin CB17.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 61

Date: May 21, 2008

Location:
Catch Basin CB17

Direction:
North (Top)

Comments:
View of catch basin CB17. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.

Photograph ID: 62

Date: May 21, 2008

Location:
Catch Basin CB18

Direction:
North

Comments:
An exterior view of catch basin CB18.

Photograph ID: 63

Date: May 21, 2008

Location:
Catch Basin CB18

Direction:
North (Top)

Comments:
View of catch basin CB18. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.

Photograph ID: 64

Date: May 21, 2008

Location:
Catch Basin CB19

Direction:
North

Comments:
An exterior view of catch basin CB19.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 65

Date: May 21, 2008

Location:
Catch Basin CB19

Direction:
North (Top)

Comments:
View of catch basin CB19. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.

Photograph ID: 66

Date: May 21, 2008

Location:
Catch Basin CB20

Direction:
North

Comments:
An exterior view of catch basin CB20. Note that the southwest portion of the catch basin has collapsed significantly and the area around CB20 is very distorted and damaged.

Photograph ID: 67

Date: May 21, 2008

Location:
Catch Basin CB20

Direction:
North (Top)

Comments:
View of catch basin CB20. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.

Photograph ID: 68

Date: May 21, 2008

Location:
Former OWS/Catch Basin CB21

Direction:
East

Comments:
A view of the location of the former OWS. Catch Basin CB21 is located underneath the vehicle.

Customer:	**88th RRC**	**Project Number:**	**2091049**
Site Name:	**IL027 Forest Park AFRC**	**Site Location:**	**Forest Park, Illinois**

Photograph ID: 69

Date: May 21, 2008

Location:
Catch Basin CB21

Direction:
South

Comments:
An external view of catch basin CB21. The cover was stuck to the frame (possibly paved) and could not be opened after several attempts.

Photograph ID: 70

Date: May 21, 2008

Location:
Possible former Catch Basin CB22

Direction:
North

Comments:
A possible location of a former catch basin, CB22, located approximately 12 feet north of Building 100.

Photograph ID: 71

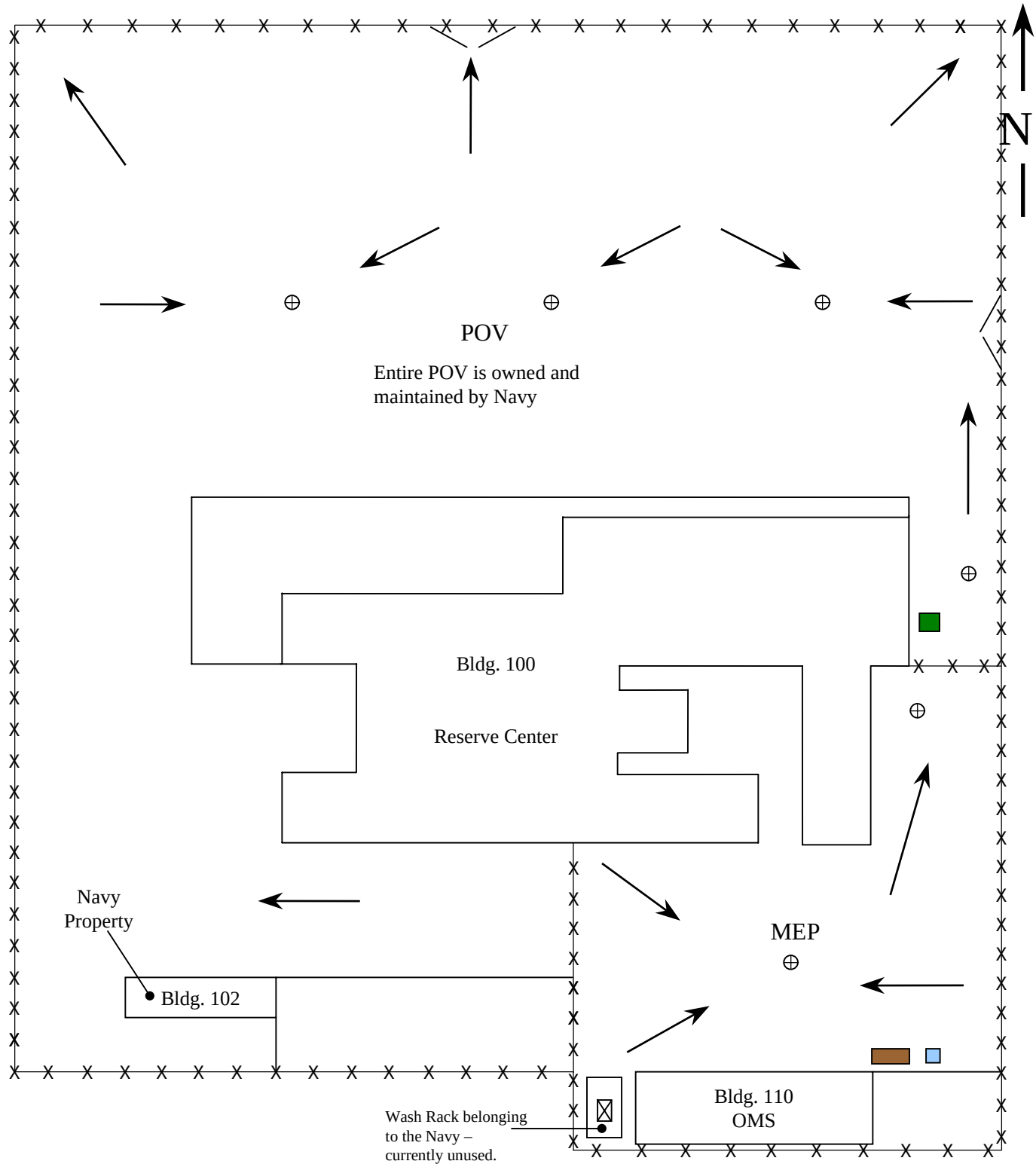
Date: May 21, 2008

Location:
Possible former Catch Basin CB22

Direction:
North

Comments:
A possible location of a former catch basin, CB22, located approximately 12 feet north of Building 100.

APPENDIX E
HISTORICAL DRAWINGS



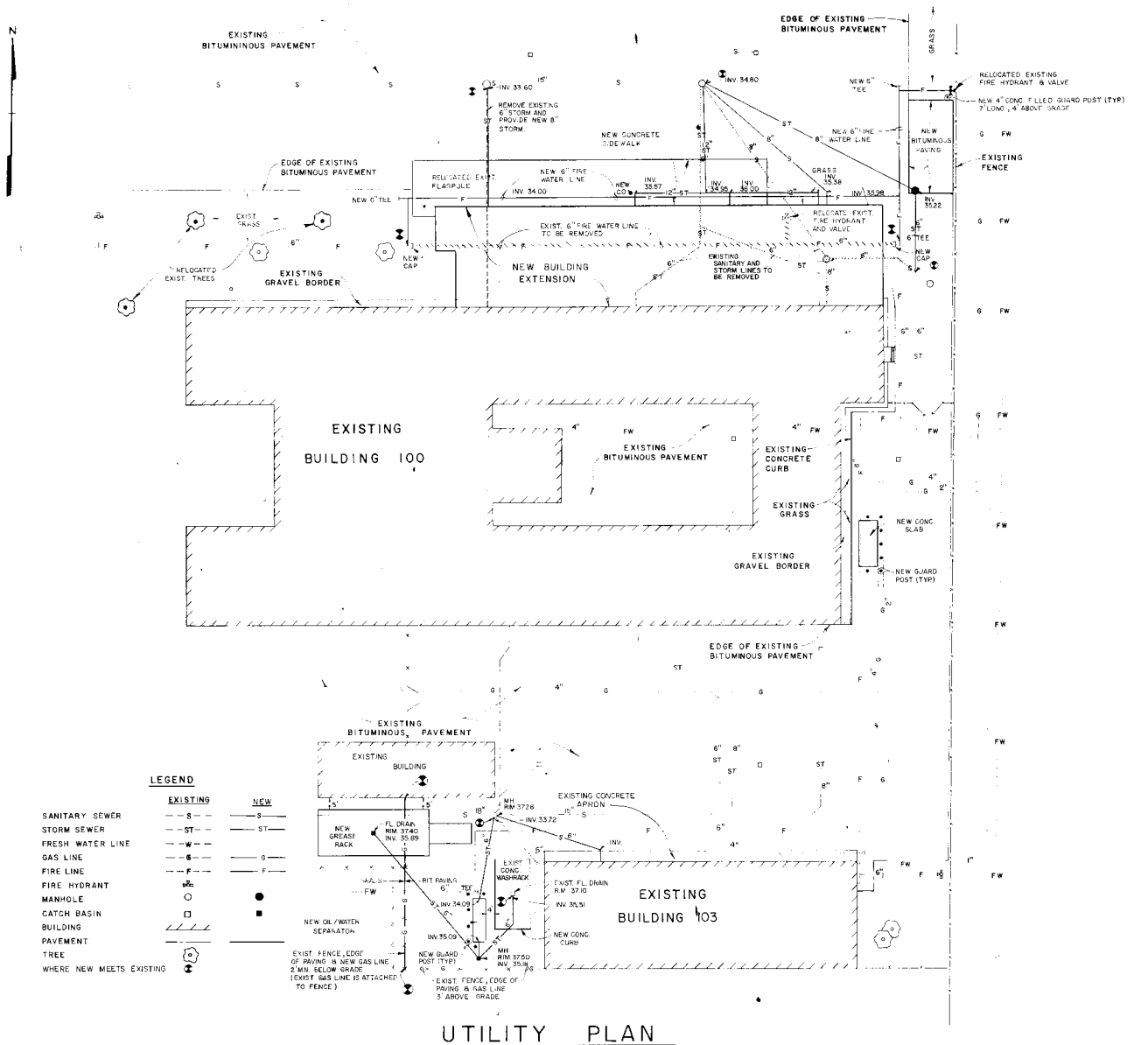
Legend

Dumpster
Conex container
Direction of storm water flow
Fence
Pallets
Storm Drain

FIGURE 1
SITE LAYOUT MAP
NO EXPOSURE CERTIFICATION
IL027 FOREST PARK USARC
Forest Park, Illinois

MWH

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



LEGEND

	EXISTING	NEW
SANITARY SEWER	--S--	—S—
STORM SEWER	--ST--	—ST—
FRESH WATER LINE	--W--	
GAS LINE	--G--	—G—
FIRE LINE	--F--	—F—
FIRE HYDRANT		
MANHOLE	○	●
CATCH BASIN	□	■
BUILDING		
PAVEMENT		
TREE		
WHERE NEW MEETS EXISTING		

UTILITY PLAN

SCALE: 1" = 20'-0"

GRAPHIC SCALE

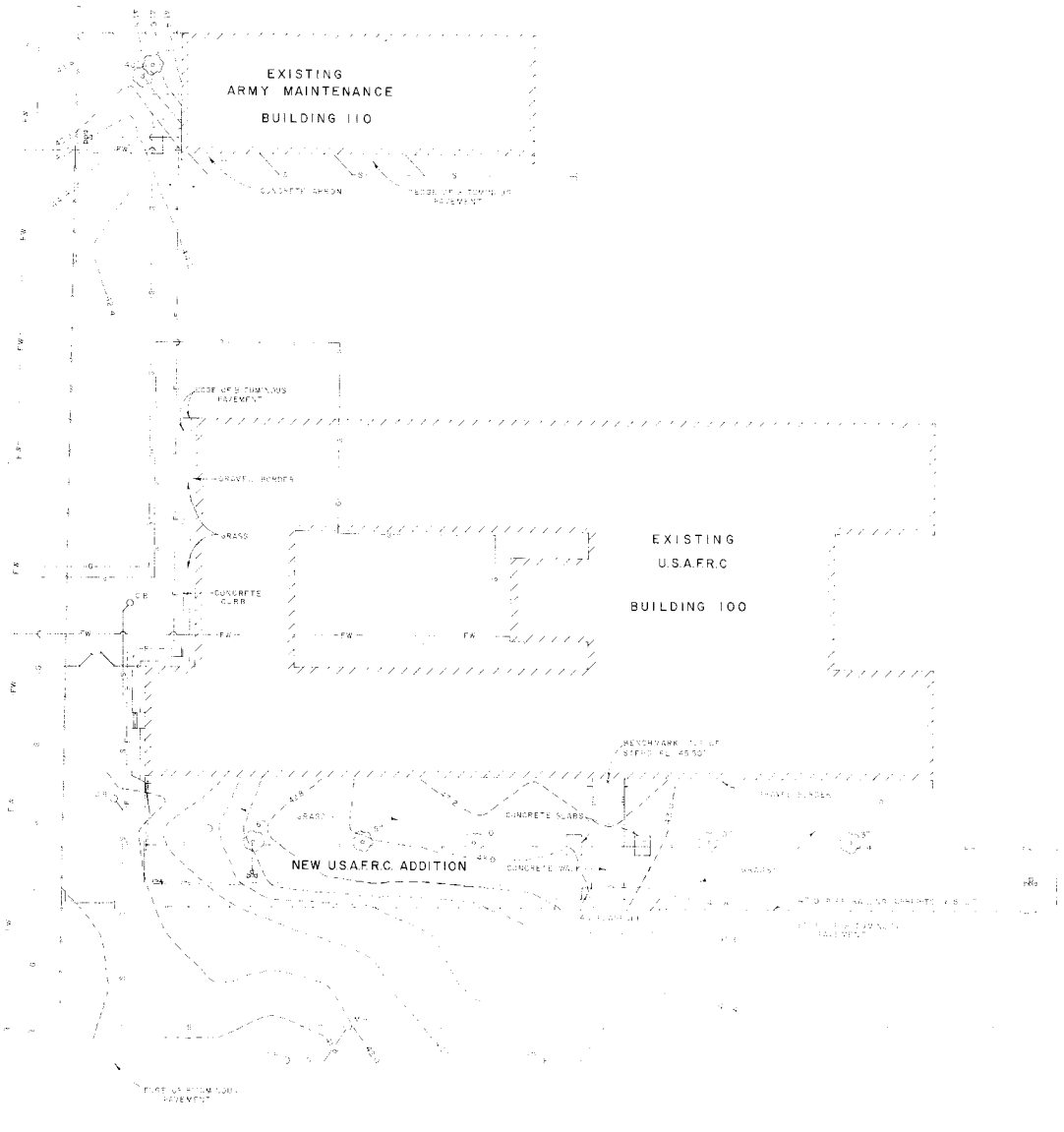
1" = 20'-0" 20' 0 20' 30' 40' 50' 60'

-0044-760306-COG DWG

CHECK GRAPHIC SCALES BEFORE USING

NORTHDIV. DWG. NO.	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
DES. C. SCHIAVINO	NORTHERN DIVISION
DR. A. JOHNSON CHK. R. FITZER	NAVAL BASE PHILADELPHIA, PA.
E.I.C. C. GREENLAND	USAFRC FOREST PARK, IL
HEAD (CIVIL)	
HEAD	ADDITIONS AND REHAB
DIRECTOR	UTILITY PLAN
APPROVED DATE	SIZE F / CODE IDENT NO. 80091 / NAVFAC DRAWING NO.
FOR COMMANDER, NAVFAC	CONSTR. CONTR. NO. N62472-76-C-0306
SATISFACTORY TO DATE	SCALE AS SHOWN / SPEC. 04-76-0306 / SHEET OF

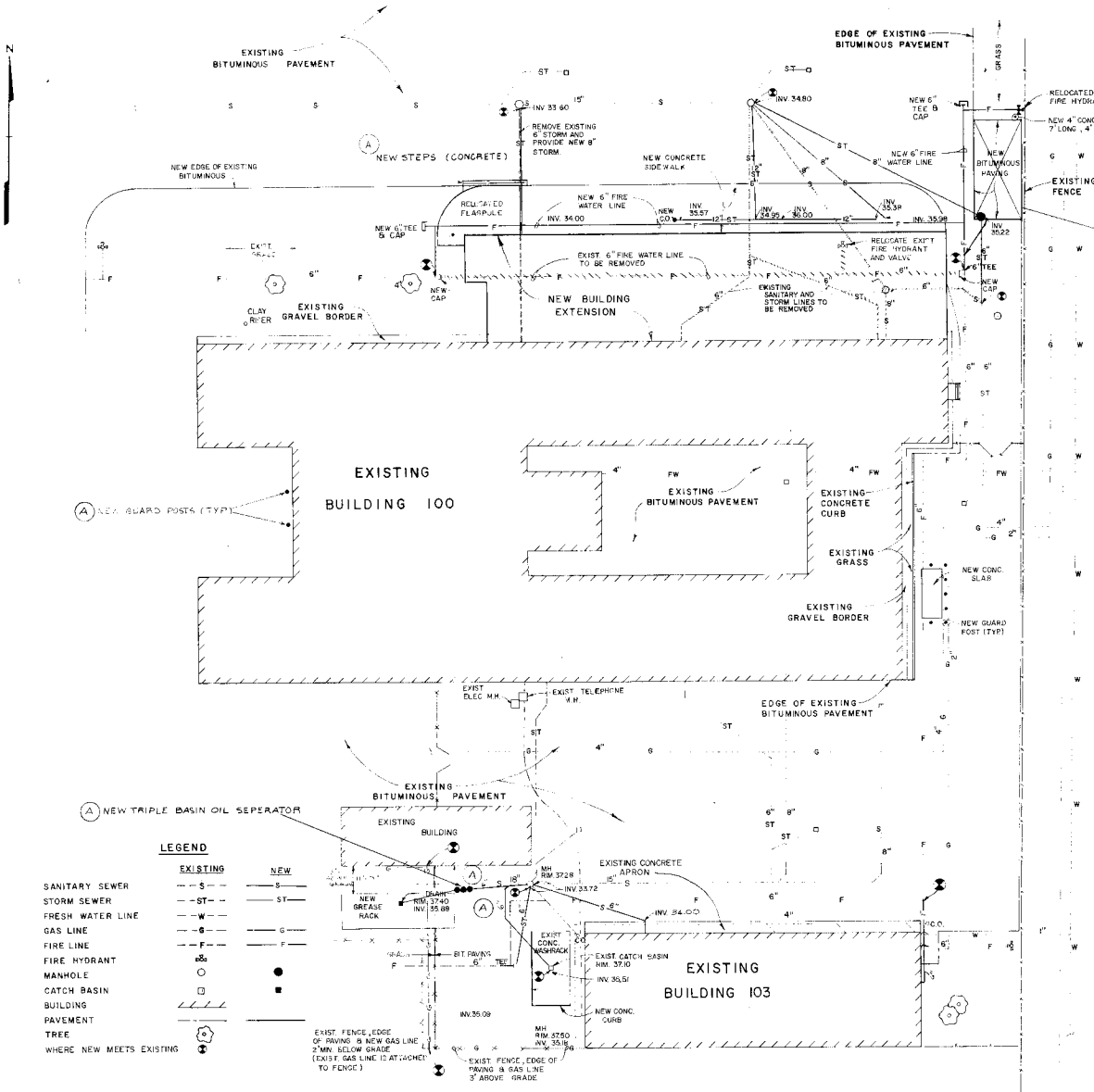
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



CHECK GRAPHIC SCALES BEFORE USING

NORTHDIV DWG. NO.	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
DES.	NORTHERN DIVISION
DR. CHK.	NAVAL BASE PHILADELPHIA, PA.
E.I.C.	USARC FORT DIX, N.J.
HEAD	U.S. ARMED FORCES RESERVE
HEAD	CTR. ADDITION & REHAB
HEAD	CIV. SITE & UTILITY PLAN
DIRECTOR	
APPROVED DATE	SIZE F / CODE IDENT NO. 80091 / NAVFAC DRAWING NO.
FOR COMMANDER, NAVFAC	
SATISFACTORY TO DATE	CONSTR. CONTR. NO.
	SCALE 1"=20'-0" / SPEC. / SHEET C-1 OF

REVISIONS				
LTR.	DESCRIPTION	PREPD BY	DATE	APPROVED
A	REVISED AS BUILT	D.B.	3-1880	D.B.

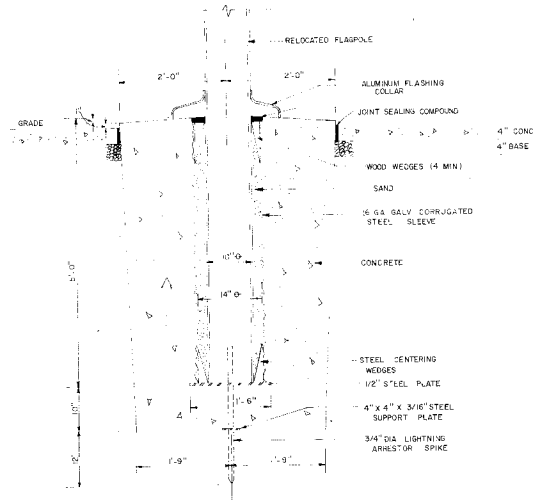


LEGEND

	EXISTING	NEW
SANITARY SEWER	--S--	—S—
STORM SEWER	--ST--	—ST—
FRESH WATER LINE	--W--	—W—
GAS LINE	--G--	—G—
FIRE LINE	--F--	—F—
FIRE HYDRANT		
MANHOLE	○	●
CATCH BASIN	⊡	■
BUILDING		
PAVEMENT		
TREE		
WHERE NEW MEETS EXISTING		

UTILITY PLAN

SCALE: 1" = 20'-0"



FLAGPOLE FOUNDATION DETAIL

NTS

GRAPHIC SCALE

1" = 20'-0" 20' 0 20' 30' 40' 50' 60'

CHECK GRAPHIC SCALES BEFORE USING

NORTHDIV DWG. NO.	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
DES.	NORTHERN DIVISION
DR. A. JOHNSON CHK. R. FITZER	NAVAL BASE PHILADELPHIA, PA.
E.I.C. C. GREENLAND	USAFRC FOREST PARK, IL.
HEAD (CIVIL)	UTILITY PLAN
HEAD	
HEAD	
DIRECTOR	
APPROVED DATE	SIZE F; CODE IDENT NO. 80091; NAVFAC DRAWING NO. 2026503
FOR COMMANDER, NAVFAC	CONSTR. CONTR. NO. N62472-76-C-0306
SATISFACTORY TO DATE	SCALE AS SHOWN; SPEC. 04-76-0306; SHEET C2 OF 3

ASBESTOS, POLYCHLORINATED BIPHENYL, LEAD-BASED PAINT, AND RADON SURVEY REPORT

For

IL027 FOREST PARK ARMED FORCES RESERVE CENTER
SITE CODE 17666

7402 W. Roosevelt Road
Forest Park, Illinois 60130-2587

Prepared for

88TH REGIONAL SUPPORT COMMAND
60 South O Street
Ft. Mc Coy, Wisconsin 54656

and

U.S. Army Corps of Engineers, Louisville District
600 Dr. Martin Luther King Jr. Place
Louisville, Kentucky 40202-2232

December 4, 2009

Prepared by:

CH2MHILL

135 S. 84th Street, Suite 325
Milwaukee, Wisconsin 53214

Contract No. W912QR-04-D-0020
Delivery Order No. 0048

Executive Summary

CH2M HILL conducted a survey for asbestos containing material (ACM) and lead-based paint (LBP) at the Armed Forces Reserve Center (AFRC) (IL027), Site Code 17666, in Forest Park, Illinois on June 15 and 16, 2009. Radon surveys were completed at the facility between June 15, 2009 and September 15, 2009. These surveys were conducted for the U.S. Army Reserve 88th Regional Support Command (88th RSC) under U.S. Army Corps of Engineers contract W912QR-04-D-0020.

Asbestos-Containing Materials

Based on survey observations conducted and on the sample analytical results, the CH2M HILL team identified the following areas as ACM. Figures are included in Appendix B. Photographs of confirmed ACM are included in Appendix C.

AFRC Building

Confirmed ACM

- Black mastic for 12" x 12" green vinyl floor tile (approximately 20,000 square feet [sf]) confirmed in the 1st floor hallways and several rooms on both the first and second floors, as depicted by the hatch-marked area on Figures 2 and 4. This material is shown in Photograph 1. The floor tile is non-ACM, however, the mastic contains 4% asbestos. Samples were collected in the hallways on the first floor and from room 239B on the second floor of the building.

- Black mastic for 12" x 12" black vinyl floor tile (approximately 14,000 sf) confirmed in the 1st floor hallways and in several rooms on both the first and second floors, as depicted by the hatch-marked areas on Figures 2 and 4. This material is shown in Photograph 2. The floor tile is non-ACM, however, the mastic contains 4% asbestos. Samples were collected in the hallways on the first floor and from room 239B on the second floor of the building.

- Mastic for bottom layer of green floor tile under 12" x 12" gray vinyl floor tile (approximately 7,000 sf) confirmed in rooms 121 and 122, as depicted by the shaded area on Figure 2. This material is shown in Photograph 5. There are 2 layers of floor tile present in these rooms. Only the black mastic on the bottom layer of green vinyl floor tile contains 4% asbestos. The two layers of floor tile and mastic for the top layer of floor tile are non-ACM. Samples were collected from rooms 121 and 122.

- Black mastic for 12" x 12" multi-colored off-white vinyl floor tile (approximately 2,000 sf) confirmed in rooms 114 and 119, as depicted by the shaded area on Figure 2. This material is shown in Photograph 11. The floor tile is non-ACM, however, the mastic contains 4% asbestos. Samples were collected from rooms 114 and 119.

- 2″ pipe elbow insulation (approximately 160 pipe elbows) confirmed throughout the building (above ceilings, in the hallway and mechanical rooms), as depicted by the cross-hatched areas on Figure 3. This material is shown in Photograph 18. Samples were collected from room 124.
- 12″ drain pipe elbow insulation (approximately 25 pipe elbows) confirmed in a 2nd floor room, as depicted by the shaded area on Figure 4. This material is shown in Photograph 19. Samples were collected from the un-numbered room on the 2nd floor of the building.
- 12″ x 12″ black vinyl floor tile and mastic over 12″ x 12″ off-white vinyl floor tile and black mastic (approximately 800 sf) confirmed in room 120, as depicted by the shaded area on Figure 2. This material is shown in Photograph 20. Both layers of floor tile and mastic contain asbestos. Samples were collected from room 120.
- Black mastic for 9″ x 9″ black vinyl floor tile (approximately 1,000 sf) confirmed in the 2nd floor notheast hallway, as depicted by the shaded area on Figure 4. This material is shown in Photograph 21. The floor tile is non-ACM. Samples were collected from the 2nd floor northeast hallway.

Presumed ACM

- The transite sink in Room 261 was not sampled, but is presumed ACM. This material is shown in Photograph 23.
- The fire doors in the building stairwells were not sampled, but are presumed ACM.

The weapons vault was inaccessible at the time of the survey, therefore, it was not inspected to determine if it contains suspect ACM.

Organizational Maintenance Shop (OMS)

There was no confirmed or presumed ACM in the OMS.

Organizational Maintenance Building (OMB)

Confirmed ACM

- Window caulking (approximately 600 linear feet [lf]) confirmed on the interior windows of the garage, as depicted by the cross-hatched areas on Figure 7. This material is shown in Photograph 15. Samples of the caulk were collected from the interior windows of the garage.

Presumed ACM

There were no areas of suspect ACM that could not be sampled. Therefore, there is no material that is presumed ACM in the OMB.

Polychlorinated Biphenyls

PCB surveys were not conducted as part of this survey.

Lead-Based Paint

Based on survey observations and the sample analytical results, the following areas were identified as containing LBP:

AFRC Building

Based on survey observations and the sample analytical results, the CH2M HILL team did not identify any areas containing LBP on the interior or exterior of the AFRC Building.

OMS

- Gray paint on beam in the OMS.
- Black paint on the door and door frame in the OMS.

OMB

- Red paint on the exterior of the OMB.
- Yellow paint on the exterior concrete parking blocks.

Radon

Based on the sample analytical results, there are no areas tested at the facility that exceed the U.S. Environmental Protection Agency (USEPA)'s recommended action level of 4 picoCuries per liter (pCi/L).

Contents

Appendices

SECTION 1

Introduction

CH2M HILL was tasked by the USACE to complete ACM, LBP and radon surveys at the three buildings at the U.S. Armed Forces Reserve Center (AFRC) located at 7402 West Roosevelt Road in Forest Park, Illinois (IL027), Site Code 17666. These surveys were conducted for the 88th RSC under USACE contract W912QR-04-D-0020. This report was prepared in accordance with the report template provided by the 88th RSC. CH2M HILL's project manager for the surveys was Colleen Reilly. The ACM and LBP assessment activities were completed by Professional Services Industries, Inc. (PSI), including Edward Wagner, Illinois Department of Public Health (IDPH) licensed asbestos and lead inspector and by Cosmos Ugbebor, IDPH-licensed asbestos inspector. The radon assessment was completed by RDS Environmental (RDS), including Stephen Miller, Illinois Emergency Management Agency licensed radon measurement professional. Copies of the inspector certifications are included in the respective survey reports contained in Appendix E.

Surveys were performed in accordance with the *Final Work Plan, Asbestos, Lead-Based Paint, PCB, & Radon Surveys for USAR Facilities within the 88th RSC* (Work Plan) (CH2M HILL, 2009). The surveys included the collection and laboratory analysis of suspected ACM; field screening and laboratory analysis of painted surfaces for the presence of lead; and laboratory analysis to determine average radon concentrations over an approximately 90-day period.

The CH2M HILL team conducted the ACM and LBP surveys at the AFRC on June 15 and June 16, 2009. Radon surveys were performed between June 15, 2009 and September 15, 2009. The surveys were performed to assess potential site hazards on the interior and exterior of each building. The ACM and LBP surveys are also intended to provide information in preparation for any proposed renovation and/or demolition activities of the structures. The ACM survey evaluated the structures for the presence, quantity, locations, and characterization of ACM. This information is required to determine if there are areas of the facility that may require pre-renovation/demolition asbestos abatement in accordance with local, state, and federal regulations to protect the public and workers by minimizing the release of asbestos fibers during activities involving processing, handling, and disposal of ACM. It should be noted that destructive sampling, such as behind finished surfaces (drywall, above hard ceilings, inside mechanical chases, etc.) was not performed during this survey. In addition, the weapons vault in the AFRC Building was inaccessible at the time of the survey, and, therefore, could not be inspected for ACM or LBP.

The LBP survey evaluated the structures for the presence, quantity, and locations of LBP, as defined by the U.S. Department of Housing and Urban Development (HUD) guidelines and the IDPH. The survey results can be used to assess if there are areas of the facility that will require Occupational Safety and Health Administration (OSHA) worker safety precautions during renovation or demolition activities. The LBP testing was performed using a Radiation Monitoring Devices (RMD) LPA-1 X-Ray Fluorescence (XRF) lead paint spectrum analyzer to identify the presence of LBP.

The radon survey evaluated the structures for the presence and quantity of radon to determine if radon levels are present at the facility in concentrations exceeding USEPA's recommended action level of 4 pCi/L. The radon testing was performed using Alpha Track long-term radon testing devices for a period of 92 days.

This survey report is organized as follows: Section 2.0 discusses the site structures; Section 3.0 discusses survey findings; Section 4.0 discusses field survey and analytical protocols; and Section 5.0 contains references for works cited in this report. Appendix A contains summary tables of ACM, LBP, and radon survey results; Appendix B contains figures that illustrate the buildings' floor plans, ACM sample locations, and analytical results; Appendix C contains a survey photo log; Appendix D contains complete copies of the laboratory reports and chain-of-custody forms for asbestos, LBP, and radon samples; and Appendix E contains a copy of PSI's and RDS' survey reports, including inspector certifications.

SECTION 2

Site Structures

The AFRC consists of three structures and is located at 7402 West Roosevelt Road in Forest Park, Illinois. These structures are described below. Figure 1, Appendix B, presents a site layout of the Forest Park AFRC.

AFRC Building

The AFRC Building is a 76,201 square foot two story structure. The structure consists of offices, meeting rooms, drill areas, storage areas, and a weapons vault. The building exterior is concrete and brick, and has a flat, ballasted membraned, built-up roof. The interior floors are vinyl floor tile over a concrete subfloor. The interior walls are concrete block and drywall. The ceilings are 2 feet by 2 feet lay-in ceiling tiles. Figures 2 through 6, Appendix B presents the floor plan of the AFRC Building.

OMS Building

The OMS Building is a 6,528 square foot one story structure. The building was constructed as a maintenance shop. The building's exterior is brick with a flat, built-up roof. The interior floors are concrete, and the interior walls are concrete block. The ceiling is an exposed deck. Figure 7 presents a floor plan of the OMS Building.

OMB Building

The OMB Building is a 1,846 square foot one story structure. The building's exterior is brick with a flat, built-up roof. The interior floors are concrete, and the interior walls are brick. The ceiling is an exposed deck. Figure 7 presents a floor plan of the OMB Building.

SECTION 3

Survey Findings

Survey field and analytical findings for the ACM, LBP, and radon surveys are summarized below.

3.1 ACM Findings

This section includes the analytical results and field observations from suspect ACM samples at the Forest Park AFRC. The USEPA considers a material to be ACM if a single sample from a homogeneous material group contains greater than one percent (>1%) asbestos. Therefore, samples in each material group (or "homogenous area") were analyzed until the first positive (i.e. asbestos-containing) result is determined. In material groups that contain more than one layer, the samples were read until all layers were determined for their asbestos content.

Confirmed ACM includes suspect materials that were sampled and contained >1% asbestos. Presumed ACM includes suspect materials that could not be sampled but are presumed to contain asbestos. The presumed materials could not be sampled because sampling activities would have resulted in significant irreparable damage to the materials. Non-ACM includes those sampled suspect materials for which asbestos was either not detected or was detected at concentrations <1%.

3.1.1 AFRC Building

At the AFRC Building, the CH2M HILL team's asbestos inspector identified 19 homogeneous suspect ACM. 57 samples were collected and analyzed by polarized light microscopy (PLM) for asbestos content. PLM analytical results are presented in Table 1, Appendix A. Sample locations are illustrated on Figures 2 through 6, Appendix B. Photographs of sampled material are included in Appendix C. A complete copy of the laboratory analytical report is presented in Appendix D.

Confirmed ACM

- Black mastic for 12" x 12" green vinyl floor tile observed throughout the AFRC building 1st floor hallways and in rooms 125, 126, 127, 128, 129, 133, 137, 139, 152, 153, 157, 168, 204, 207, 213, 214, 216, 217, 218, 227, 228, 238, and 239. This material is shown in Photograph 1.
- Black mastic for 12" x 12" black vinyl floor tile observed throughout the AFRC building 1st floor hallways and in several rooms 125, 126, 127, 128, 129, 133, 137, 139, 152, 153, 157, 168, 204, 207, 213, 214, 216, 217,218, 227, 228, 238, and 239. This material is shown in Photograph 2.
- Black mastic for the bottom layer of green floor tile under 12" x 12" gray vinyl floor tile observed in rooms 121 and 122. This material is shown in Photograph 5.

- Black mastic for 12"x12" multi-colored off-white vinyl floor tile observed in rooms 114 and 119. This material is shown in Photograph 11.
- Pipe elbow insulation throughout the building. 2-inch pipe elbow insulation was observed above ceilings, in the hallways, and in the mechanical room. This material is shown in Photograph 18. 12-inch drain pipe elbow insulation was observed in a 2nd floor room (un-numbered room). This material is shown in Photograph 19.
- 12" x 12" black vinyl floor tile and black mastic over 12" x 12" off-white floor tile and black mastic observed in room 120. This material is shown in Photograph 20.
- Black mastic for 9" x 9" black vinyl floor tile observed in the 2nd floor northeast hallway. This material is shown in Photograph 21.

Presumed ACM

Also observed within the building were suspect materials that could not be sampled and are presumed ACM. The presumed materials could not be sampled because sampling activities would have resulted in significant irreparable damage to the materials.

- Sink in room 261. This sink is believed to be made of transite, which, until the mid-1980's, contained asbestos. This material is shown in Photograph 23.
- Fire doors in the stairwells. Asbestos was commonly used in the past in the making of fire doors. There is no photograph of this material.

Non-ACM

The PLM results for the following sampled homogeneous suspect ACM were non-detect, therefore, these materials are considered to be non-ACM:

- Black vinyl non-asbestos baseboard and brown mastic observed throughout the AFRC building. This material is shown in Photograph 3.
- Yellow carpet non-asbestos mastic observed on the first and second floors. This material is shown in Photograph 4.
- 12" x 12" gray vinyl non-asbestos floor tile and yellow mastic observed in rooms 179, 180, and 187. All three layers of this floor tile and mastic are non-ACM. This material is shown in Photograph 6.
- 2' x 2' white non-asbestos lay-in ceiling tile observed throughout the building. This material is shown in Photograph 7.
- Gray vinyl non-asbestos baseboard and yellow mastic observed on the east side of the first floor. This material is shown in Photograph 8.
- Blue vinyl non-asbestos baseboard and tan mastic observed in the vestibule. This material is shown in Photograph 9.
- Brown vinyl non-asbestos baseboard and tan mastic observed in rooms 182, 183, 184, and 185. This material is shown in Photograph 10.

- Non-asbestos plaster observed in the west hallway of the building and in the vestibules. This material is shown in Photograph 12.
- Non-asbestos drywall and joint compound throughout the building. This material is shown in Photograph 13.
- Non-asbestos roofing material and roof caulk on the building's exterior. This material is shown in Photographs 16 and 17.

3.1.2 OMS

At the OMS, the CH2M HILL team's asbestos inspector identified two homogeneous suspect ACM. Six samples were collected and analyzed by PLM for asbestos content. PLM analytical results are presented in Table 2, Appendix A. A complete copy of the laboratory analytical report is presented in Appendix D. Sample locations are illustrated on Figure 7, Appendix B.

Confirmed ACM

- There was no confirmed ACM in the OMS.

Presumed ACM

- There was no presumed ACM in the OMS.

Non-ACM

The PLM results for the following sampled homogeneous suspect ACM were non-detect, therefore, these materials are considered to be non-ACM:

- Non-asbestos paper on fiberglass insulation observed on the garage ceiling. This material is shown in Photograph 14.
- Non-asbestos roofing material on the roof. This material is shown in Photograph 22.

3.1.3 OMB

At the OMB, the CH2M HILL team's asbestos inspector identified one homogeneous suspect ACM. Three samples were collected and analyzed by PLM for asbestos content. PLM analytical results are presented in Table 3, Appendix A. A complete copy of the laboratory analytical report is presented in Appendix D. Sample locations are illustrated on Figure 7, Appendix B.

Confirmed ACM

- Window caulking observed on the interior windows. There are three layers of window caulking, all of which are ACM. This material is shown in Photograph 15.

Presumed ACM

- There was no presumed ACM in the OMB.

Non-ACM

There were no other suspect ACM at the OMB.

3.2 PCB Findings

No PCB surveys were performed as part of this survey.

3.3 LBP Findings

The CH2M HILL survey team visually inspected and tested representative painted, stained or varnished structural building components accessible at the facility. LBP was detected on several surfaces at the OMS and the OMB and on concrete parking blocks outside of the OMB. Painted surfaces were tested using an XRF instrument operated in "Quick Mode". XRF test readings of 0.9 mg / cm^2 or below are negative for lead-based paint. XRF test readings of 1.0 mg / cm^2 or above are positive for lead-based paint. Three (3) confirmation paint chip samples were also collected and analyzed. Painted surfaces testing greater than 1 mg / cm^2 (or 0.5% by weight) are considered to be lead-based by USEPA, HUD, and by IDPH. XRF test results are included in Tables 4 through 6, Appendix A. Confirmation paint chip sample results are presented in Table 7, Appendix A. A complete copy of the laboratory analytical report is presented in Appendix D.

Confirmed LBP at the Forest Park AFRC include the following:

- Gray paint on a beam in the OMS.
- Black paint on the door and door frame in the OMS.
- Red paint on the exterior of the OMB.
- Yellow paint on the exterior concrete parking blocks outside of the OMB.

3.4 Radon Findings

Radon is a naturally occurring colorless, odorless gas that is a byproduct of the decay of radioactive materials potentially present in bedrock and soil. Radon gas may enter the lowest level of a building through floor cracks, structural joints, or plumbing conduits. The concentration of radon gas in a building depends on subsurface soil conditions, the integrity of the building's foundation, and the building's ventilation system. The potential adverse health effects associated with radon gas depend on various factors, such as the concentration of the gas and duration of exposure. The USEPA recommended action level for annual residential exposure to radon is 4 picoCuries per liter (pCi/L) of air. The guidance action level is not a regulatory requirement for private owners of real property, but is commonly used for comparison purposes to suggest whether further action at a building may be prudent.

A total of forty-six (46) radon detectors were placed on June 15, 2009 in the lowest level of frequently occupied rooms throughout the facility as follows:

- AFRC Building: 42 detectors placed (including five duplicates and two blank detectors)
- OMS: 1 detector placed

- OMB: 3 detectors placed (including one duplicate detector)

The detectors were retrieved on September 15, 2009, for a total deployment of 92 days. Access to all rooms, except for the weapons vault, was granted at the time of device deployment and device retrieval. One detector (#2007584), placed in room 174, was missing upon retrieval. Devices were analyzed at the laboratory. None of the devices detected radon levels above USEPA's recommendation action level of 4.0 pCi/L. A summary of radon results is presented in Table 8, Appendix A. A complete copy of the laboratory analytical report is presented in Appendix D.

SECTION 4

Field Survey and Analytical Protocols

Surveys were conducted in accordance with the project Work Plan (CH2M HILL, 2009). The field survey and analytical protocols for the ACM, LBP, and radon surveys are discussed below.

4.1 ACM Field Survey and Analytical Protocols

Asbestos inspection and sampling procedures were performed in accordance with the National Emissions Standards for Hazardous Air Pollutants (NESHAP), as adopted by USEPA and the Asbestos Hazard and Emergency Response Act of 1986 (AHERA) protocols published in 40 CFR Part 763 Subpart E, October 30, 1987. Sampling procedures include collection of at least three (3) samples of each suspect asbestos homogeneous material as recommended by USEPA guidance document 700/B-92/001, February 1992, and the Work Plan (CH2M HILL, 2009). Homogeneous materials were determined by conducting an initial building walkthrough to assess materials that were visually similar in color, texture, general appearance, and date of installation. If the inspector decided that a material (for example, wall texturing) was not similar in appearance and texture to other materials in the building, the inspector distinguished the material as unique and collected samples of each unique material accordingly.

Following the USEPA inspection protocols, the inspector placed each identified suspect homogeneous material into one of the following USEPA classifications:

- **Friable ACM**. NESHAP defines a friable ACM as any material containing >1% asbestos, which, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.
- **Category I Non-friable ACM**. NESHAP defines a Category I non-friable ACM as packing, gaskets, resilient floor covering (except vinyl sheet flooring products where are considered friable), and asphalt roofing products, which contain >1% asbestos.
- **Category II Non-friable ACM**. NESHAP defines a Category II non-friable ACM as any material, except for a Category I non-friable ACM, which contains >1% asbestos and cannot be reduced to a powder by hand pressure when dry.

Additionally, suspect ACM were assessed for their general condition, using the terms "good", "fair," or "poor." Good is defined as a material that is not damaged and/or largely intact. Fair is defined as materials that are less than 25% or evenly damaged over its entirety. Poor is defined as any material that is >25% damaged.

The inspector estimated the quantity of suspect ACM using visual estimation. This visual estimation was conducted using facility drawings (provided by the 88th RSC), pacing,

counting tiles, and panels, rather than measured take-offs. As a result, actual quantities may differ between visually estimated values and physical measurements. Estimated quantities for each building are included in the ACM tables in Appendix A.

Bulk samples of suspect homogeneous ACM were collected to ensure that each distinct layer of material, if multiple layers were present, was represented in the sample. The inspector applied a wetting agent to friable surfaces prior to sample collection to reduce the potential for a fiber release. All samples collected were placed in individual plastic bags, labeled with a unique sample identification number assigned to each sample, and sealed immediately upon collection. The sampling instruments were wiped clean using a wet, lint-free cloth after collection of each sample to prevent cross-contamination between samples.

Suspect ACM samples were identified on the roof of the AFRC Building and the OMS. The inspector cored through all layers of roofing materials to the roof substrate in order to collect each sample, and then applied a temporary patch to all core locations. Due to the nature of roof systems however, this temporary patch may not guarantee a water tight condition following sample extraction.

All samples remained in the inspector's custody until sent to the laboratory. Upon completion of sampling activities, the bulk samples were sent, along with chain-of-custody documentation, to PSI's laboratory in Pittsburgh, Pennsylvania, for analysis. Suspect ACM samples were analyzed per USEPA Method 600/R-93/116 by PSI using Polarized Light Microscopy (PLM) analysis with dispersion staining. PSI's laboratory is a member of the American Industrial Hygienist Association, and is a National Voluntary Laboratory Accreditation Program (NVLAP) certified laboratory, certification number 101350-0.

Appendix A of this report presents summary tables of the asbestos analytical results and Appendix D contains complete copies of the laboratory analytical results and chain-of-custody forms for the bulk samples collected at the facility. Sections 3.1.1 through 3.1.3 of this report provide summaries of the suspected ACM samples collected at each of the three buildings at the Forest Park AFRC.

4.2 PCB Field Survey Protocols

No PCB surveys were performed as part of this survey.

4.3 LBP Field Survey and Analytical Protocols

The CH2M HILL survey team inspected all accessible areas of the three buildings at the Forest Park AFRC. The survey was conducted in accordance with HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* (HUD, 1995). The CH2M HILL team inspector utilized an LPA-1 XRF Spectrum Analyzer manufactured by RMD to perform the LBP testing. The LPA-1 is an XRF spectral analyzing system for quantitative measurement of lead in paint on various substrates. In each area of each building (interior and exterior), XRF testing was performed on representative components with painted, stained, or varnished surfaces. Representative components are considered those in the same room, type of component, substrate, and visible color of paint. The inspector also assessed the general condition of the painted surfaces, according to the following guidelines:

- "Good" indicates there is no damage to the paint
- "Fair" indicates that there is come cracking, however, no peeling paint
- "Poor" indicates that the paint is cracked and peeling

Paint containing greater than or equal to 1.0 mg/cm^2 (or 0.5% percent by weight) lead by XRF testing or by laboratory analysis is considered LBP. The CH2M HILL team inspector operated the XRF device in "Quick Mode" for testing (standardized per the equipment instruction manual) and programmed the unit with an action level of 1.0 milligram per square centimeter (mg/cm^2). In "Quick Mode", the XRF device seeks the shortest period of time to assure a definitive measurement with 95% confidence (2 sigma). The LPA-1 analyzer concludes a measurement once the 2 sigma confidence level is achieved, typically between 2 to 4 seconds, depending on the lead content.

XRF calibration checks against known lead-based paint standards were performed on the LPA-1 according to the instrument's operating guidelines. These quality control readings were used to monitor the performance of the LPA-1. The calibration-check readings were taken before testing began and after the testing was completed using a Standard Reference Material paint film, developed by the National Institute of Standards and Technology. All calibration check readings were within acceptable limits.

XRF testing values were collected by placing the LPA-1 scanner on the surface to be tested and exposing the paint film to gamma radiation. XRF analyzers are usually capable of penetrating up to 3/8 inches of paint to determine lead content. At the conclusion of each test, the shutter closes and the display on the control console shows the lead concentration in mg/cm^2 for manual tabulation. Test readings of 0.9 mg/cm^2 or below are negative for lead-based paint. Test readings of 1.0 mg/cm^2 or above are positive for lead-based paint.

In areas where XRF readings were inconclusive, or a flat surface on which to test could not be accomplished, paint chip samples were collected for analysis. To collect the paint chip sample, an area was extracted from painted components down to but not including the substrate. Lead paint chip samples were shipped to PSI's laboratory in Pittsburgh, PA and were subjected to acid digestion and analyzed by Flame Atomic Absorption Spectroscopy by USEPA Method SW-846-7420. Laboratory test results of 0.5% by weight or greater are considered by HUD guidelines and IDPH to be LBP. Three (3) paint chip samples were collected and analyzed, one from a gray metal cabinet in the OMS, one from a gray metal cage in the OMB, and one from the yellow parking post outside of the OMB.

Section 3.3 of this report provides a summary of the LBP survey results for the facility.

4.4 Radon Field Survey and Analytical Protocols

Radon surveys were performed over a 92-day period in accordance with USEPA guidance "*Protocols for Radon and Radon Decay Product Measurements in Homes*" (USEPA, 1993a) and with "*Radon Measurements in Schools*" (USEPA, 1993b). The CH2M HILL team placed 46 long-term REM AT-100 alpha track radon devices in the lowest levels of frequently occupied rooms throughout the facility. The detectors were placed based on an estimated square footage of the occupied space in each building in accordance with USEPA's radon testing protocols of one detector per 2,000 square feet. In addition, quality assurance and quality

control (QA/QC) detectors were placed; including 10% duplicate devices and 5% blank devices.

The REM AT-100 radon devices were analyzed by AccuStar Laboratories in Medway, Massachusetts using electrochemical etching (USEPA Method 402-R-92-004).

Section 3.4 of this report provides a summary of the radon survey results for the facility.

SECTION 5

References

CH2M HILL. 2009. Final Work Plan. Asbestos, Lead Based Paint, PCB, & Radon Surveys for USAR Facilities within the 88th RSC. June.

HUD. 1995, with 1997 Chapter 7 Update. Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing. June.

USEPA. 1993a. Protocols for Radon and Radon Decay Product Measurements in Homes. Document No. 402-R-93-003. May.

USEPA, 1993b. Radon Measurements in Schools. Document No. 402-R-92-014. July.

Appendix A
Analytical Summary Tables

TABLE 1
ACM Sample Summary
AFRC Building
IL027 Forest Park AFRC

Sample No.	Sample Location	Material Description	Other Locations of Material	Condition[1]	Friable / Non-Friable[2]	Area[3]	Analytical Result (% ACM)
01-01	1st floor hallway	12" x 12" green vinyl floor tile/ black mastic	Throughout AFRC building 1st floor hallways; rooms 125, 126, 127, 128, 129, 133, 137, 139, 152, 153, 157, 168, 204, 207, 213, 214, 216, 217,218, 227, 228, 238, and 239	Good	Non-friable	20,000 sf	ND tile 4% mastic
01-02	1st floor hallway	12" x 12" green vinyl floor tile/ black mastic		Good	Non-friable		ND tile 4% mastic
01-03	Room 239B	12" x 12" green vinyl floor tile/ black mastic		Good	Non-friable		ND tile 4% mastic
02-04	1st floor hallway	12" x 12" black vinyl floor tile/ black mastic	Throughout AFRC building 1st floor hallways; rooms 125, 126, 127, 128, 129, 133, 137, 139, 152, 153, 157, 168, 204, 207, 213, 214, 216, 217,218, 227, 228, 238, and 239	Good	Non-friable	14,000 sf	ND tile 4% mastic
02-05	1st floor hallway	12" x 12" black vinyl floor tile/ black mastic		Good	Non-friable		ND tile 4% mastic
02-06	Room 239B	12" x 12" black vinyl floor tile/ black mastic		Good	Non-friable		ND tile 4% mastic
03-07	Room 131	Black vinyl baseboard/ brown mastic	Throughout AFRC building	Good	Non-friable	16,000 sf	ND baseboard/ ND mastic
03-08	Room 158	Black vinyl baseboard/ brown mastic		Good	Non-friable		ND baseboard/ ND mastic
03-09	2nd floor hallway	Black vinyl baseboard/ brown mastic		Good	Non-friable		ND baseboard/ ND mastic
04-10	1st floor hallway	Yellow carpet mastic	AFRC Building; first and second	Good	Non-friable	8,500 sf	ND
04-11	Room 146	Yellow carpet mastic		Good	Non-friable		ND

Sample No.	Sample Location	Material Description	Other Locations of Material	Condition[1]	Friable / Non-Friable[2]	Area[3]	Analytical Result (% ACM)
04-12	Room 238B	Yellow carpet mastic	floors	Good	Non-friable		ND
05-13	Room 121	12” x 12” green vinyl floor tile/ black mastic under layer of gray tile/ black mastic	Rooms 121 and 122	Good	Non-friable	7,000 sf	ND green tile 4% black mastic
05-14	Room 122	12” x 12” gray vinyl floor tile/ black mastic over second layer of green tile/black mastic		Good	Non-friable		ND gray tile ND black mastic ND green tile 4% black mastic
05-15	Room 121	12” x 12” gray vinyl floor tile/ black mastic (over second layer of green tile/ black mastic)		Good	Non-friable		ND gray tile ND black mastic
06-16	Room 187	12” x 12” gray vinyl floor tile/ yellow mastic (3 layers)	Rooms 179, 180,187	Good	Non-friable	2,200 sf	ND tile ND mastic ND tile ND mastic ND tile ND mastic
06-17	Room 180	12” x 12” gray vinyl floor tile/ yellow mastic (3 layers)		Good	Non-friable		ND tile ND mastic ND tile ND mastic ND tile ND mastic
06-18	Room 179	12” x 12” gray vinyl floor tile/ yellow mastic (3 layers)		Good	Non-friable		ND tile ND mastic ND tile ND mastic ND tile ND mastic
07-19	Room 146	2’ x 2’ white lay-in ceiling tile	Throughout AFRC building	Good	Friable	30,000 sf	ND
07-20	Room 239	2’ x 2’ white lay-in ceiling tile		Good	Friable		ND
07-21	Room 131	2’ x 2’ white lay-in ceiling tile		Good	Friable		ND
08-22	Room 179	Gray vinyl baseboard/ yellow mastic	First floor, east side of building	Good	Non-friable	2,200 lf	ND baseboard ND mastic
08-23	1st floor hall way	Gray vinyl baseboard/ yellow mastic		Good	Non-friable		ND baseboard ND mastic
08-24	1st floor hallway	Gray vinyl baseboard/ yellow mastic		Good	Non-friable		ND baseboard ND mastic
09-25	1st floor vestibule	Blue vinyl baseboard/ tan mastic	Vestibule	Good	Non-friable	1,000 lf	ND baseboard ND mastic

Sample No.	Sample Location	Material Description	Other Locations of Material	Condition[1]	Friable / Non-Friable[2]	Area[3]	Analytical Result (% ACM)
09-26	1st floor vestibule	Blue vinyl baseboard/ yellow mastic		Good	Non-friable		ND baseboard ND mastic
09-27	1st floor vestibule	Blue vinyl baseboard (no mastic present)		Good	Non-friable		ND baseboard
10-28	Room 185	Brown vinyl baseboard/ tan mastic[4]	AFRC Building; rooms 182, 183, 184, and 185	Good	Non-friable	1,200 lf	ND baseboard ND mastic
10-29	Room 184	Brown vinyl baseboard/ tan mastic		Good	Non-friable		ND baseboard ND mastic
10-30	Room 183	Brown vinyl baseboard/ tan mastic		Good	Non-friable		ND baseboard ND mastic
11-31	Room 119	12" x 12" multi colored off-white vinyl floor tile/ black mastic	AFRC Building; Room 114 and 119	Fair	Non-friable	2,000 sf	ND tile 4% mastic
11-32	Room 114	12" x 12" multi colored off-white vinyl floor tile/ black mastic		Fair	Non-friable		ND tile 4% mastic
11-33	Room 114	12" x 12" multi colored off-white vinyl floor tile/ black mastic		Fair	Non-friable		ND tile 4% mastic
12-34	1st floor, west side hallway	Plaster (2 layers; white and gray)	AFRC Building; West hallway, vestibules	Fair	Non-friable	1,000 sf	ND white plaster ND gray plaster
12-35	1st floor, west side hallway	Plaster (2 layers; white and gray)		Fair	Non-friable		ND white plaster ND gray plaster
12-36	1st floor, west side hallway	Plaster (2 layers; white and gray)		Fair	Non-friable		ND white plaster ND gray plaster
13-37	2nd floor hallway	Drywall/ joint compound (2 layers)	Interior walls	Good	Non-friable	8,000 sf	ND drywall ND off-white joint compound ND white joint compound
13-38	2nd floor hallway	Drywall/ joint compound (2 layers)		Good	Non-friable		ND drywall ND off-white joint compound ND white joint compound
13-39	Room	Drywall (no joint compound)		Good	Non-friable		ND drywall

Sample No.	Sample Location	Material Description	Other Locations of Material	Condition[1]	Friable / Non-Friable[2]	Area[3]	Analytical Result (% ACM)
	239G						
16-46	Roof	Brown roofing material	AFRC building roof (exterior)	Good	Non-friable	76,201 sf	ND
16-47	Roof	Brown roofing material		Good	Non-friable		ND
16-48	Roof	Brown roofing material		Good	Non-friable		ND
17-49	Roof	Roof caulk (2 types: gray and black)	AFRC building roof (exterior)	Good	Non-friable	7,000 lf	ND gray caulk ND black caulk
17-50	Roof	Roof caulk (2 types: gray and black)		Good	Non-friable		ND gray caulk ND black caulk
17-51	Roof	Roof caulk (2 types: gray and black)		Good	Non-friable		ND gray caulk ND black caulk
18-52	Room 124	2" pipe elbow insulation	Above ceilings, hallway, mechanical rooms	Poor	Friable	160 each	35%
18-53	Room 124	2" pipe elbow insulation		Poor	Friable		NA
18-54	Room 124	2" pipe elbow insulation		Poor	Friable		NA
19-55	2nd floor room (un-numbered room)	12" beige drain pipe elbow insulation	AFRC Building; second floor	Fair	Friable	25 each	45%
19-56	2nd floor room (un-numbered room)	12" beige drain pipe elbow insulation		Fair	Friable		NA
19-57	2nd floor room (un-numbered room)	12" beige drain pipe elbow insulation		Fair	Friable		NA
20-58	Room 120	12" x 12" vinyl floor tile/ black mastic (2 layers, black floor tile and off-white floor tile)	Room 120	Fair	Non-friable	800 sf	2% black floor tile 5% black mastic 2% off-white floor tile 5% black mastic
20-59	Room 120	12" x 12" vinyl floor tile/ black mastic (2 layers, black floor tile and off-white floor tile)		Fair	Non-friable		NA
20-60	Room 120	12" x 12" vinyl floor tile/ black mastic (2 layers, black floor tile and off-white floor tile)		Fair	Non-friable		NA

Sample No.	Sample Location	Material Description	Other Locations of Material	Condition[1]	Friable / Non-Friable[2]	Area[3]	Analytical Result (% ACM)
21-61	2nd floor northeast hallway	9” x 9” black vinyl floor tile/ black mastic	2nd floor northeast hallway	Fair	Non-friable	1,000 sf	ND tile 5% mastic
21-62	2nd floor northeast hallway	9” x 9” black vinyl floor tile/ black mastic		Fair	Non-friable		ND tile 5% mastic
21-63	2nd floor northeast hallway	9” x 9” black vinyl floor tile/ black mastic		Fair	Non-friable		ND tile 2% mastic

Notes:
[1] Condition is either good, fair or poor, as defined in Section 4.1
[2] Friability is defined in Section 4.1
[3] Visual estimate only
[4] Lab report incorrectly identifies this as blue baseboard.
ND: None detected
sf: square feet
lf: linear feet
Shaded cells: indicates that at least one sample per sample group contained >1% asbestos
NA: Not analyzed, samples in each material group were analyzed until the first positive result.

TABLE 2
ACM Sample Summary
OMS
IL027 Forest Park AFRC

Sample No.	Sample Location	Material Description	Other Locations of Material	Condition[1]	Friable / Non-Friable[2]	Area[3]	Analytical Result (% ACM)
14-40	Roof	Paper on fiberglass insulation	Garage ceiling	Fair	Friable	2,000 lf	ND
14-41	Roof	Paper on fiberglass insulation		Fair	Friable		ND
14-42	Roof	Paper on fiberglass insulation		Fair	Friable		ND
22-64	Roof	Black roofing material	Roof exterior	Good	Non-friable	1,846 sf	ND
22-65	Roof	Black roofing material		Good	Non-friable		ND
22-66	Roof	Black roofing material		Good	Non-friable		ND

Notes:
[1] Condition is either good, fair or poor, as defined in Section 4.1.
[2] Friability is defined in Section 4.1.
[3] Visual estimate only.
ND: None detected.
sf: square feet
lf: linear feet
Shaded cells: indicates that at least one sample per sample group contained >1% asbestos

TABLE 3
ACM Sample Summary
OMB
IL027 Forest Park AFRC

Sample No.	Sample Location	Material Description	Other Locations of Material	Condition[1]	Friable / Non-Friable[2]	Area	Analytical Result (% ACM)
15-44	Interior windows	Window caulk (three types within each sample, gray, beige and off-white)	Interior windows	Fair	Non-friable	600 lf	3% gray caulk 2% beige caulk 2% off-white caulk
15-45	Interior windows	Window caulk (three types within each sample, gray, beige and off-white)		Fair	Non-friable		NA
15-46	Interior windows	Window caulk (three types within each sample, gray, beige and off-white)		Fair	Non-friable		NA

Notes:
[1] Condition is either good, fair or poor, as defined in Section 4.1
[2] Friability is defined in Section 4.1
[3] Visual estimate only
ND: None detected
sf: square feet
lf: linear feet
Shaded cells: indicates that at least one sample per sample group contained >1% asbestos
NA: Not analyzed, samples in each material group were analyzed until the first positive result

Table 4

Work Order #: 47411-AFRC Building
Facility Address: 7402 W. Roosevelt Road
Forest Park, IL

XRF Device #: 2597
Type of XRF: LPA-1
Inspector's Name: Ed Wagner

Date of Inspection: 6/15/2009
Start Time of Inspection:
End Time of Inspection:

XRF Testing Data Table

Paint Condition = Good (No Damage), Fair (Some Cracking, but no Peeling), or Poor (Cracked and Peelin
Wall = A (entrance wall), B (left of wall A), C (opposite wall of A), D (right of Wall A)

Read No	IntExt	Room	Room #	Wall	Structure	Paint Cond	Substrate	Paint Color	Pbc	Result
1	Int.	Calibration - Paint							**1.0**	Positive
2	Int.	Calibration - Wood							**0.0**	Negative
3	Int.	Vestibule		A	Door	Good	Metal	Black	**-0.4**	Negative
4	Int.	Vestibule		B	Wall	Good	Plaster	Crème	**-0.4**	Negative
5	Int.	Room 158		A	Window Frame	Good	Metal	Black	**-0.8**	Negative
6	Int.	Stairwell			Door Frame	Fair	Metal	Black	**-0.5**	Negative
7	Int.	Mail Room			Radiator	Fair	Metal	Gray	**-0.5**	Negative
8	Int.	First Floor Hallway			Wall	Good	Drywall	Tan	**-0.4**	Negative
9	Int.	First Floor			Radiator	Fair	Metal	Gray	**-0.5**	Negative
10	Int.	Boiler Room			Boiler	Fair	Metal	Gray	**-0.4**	Negative
11	Int.	Boiler Room			Door Frame	Fair	Metal	Black	**-0.5**	Negative
12	Int.	Boiler Room			Metal Panel	Good	Metal	Gray	**-0.6**	Negative
13	Int.	Second Floor Hallway			Wall		Drywall	Tan	**0.0**	Negative
14		Calibration - Paint							**1.1**	Positive
15		Calibration - Wood							**0.1**	Negative
16										
17										
18										
19										
20										
21										
22										

Table 5

Work Order #: 47411-OMS Building
Facility Address: 7402 W. Roosevelt Road
Forest Park, IL

XRF Device #: 2597
Type of XRF: LPA-1
Inspector's Name: Ed Wagner

Date of Inspection: 6/16/2009
Start Time of Inspection:
End Time of Inspection:

XRF Testing Data Table

Paint Condition = Good (No Damage), Fair (Some Cracking, but no Peeling), or Poor (Cracked and Peelin
Wall = A (entrance wall), B (left of wall A), C (opposite wall of A), D (right of Wall A)

Read No	IntExt	Room	Room #	Wall	Structure	Paint Cond	Substrate	Paint Color	Pbc	Result
1		Calibration - Paint							**0.9**	Negative
2		Calibration - Wood							**0.0**	Negative
3	Int	OMS Building			Beam	Good	Metal	Gray	**8.5**	Positive
4	Int	OMS Building			Door frame	Good	Metal	Black	**6.9**	Positive
5	Int	OMS Building			Door	Good	Metal	Black	**4.5**	Positive
6	Int	OMS Building			Cabinet	Good	Metal	Gray	**-0.8**	Negative
7		Calibration - Paint							**1.1**	Positive
8		Calibration - Wood							**-0.1**	Positive
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										

Table 6

Work Order #: 47411-OMB Building
Facility Address: 7402 W. Roosevelt Road, Forest Park, IL
XRF Device #: 2597
Type of XRF: LPA-1
Inspector's Name: Ed Wagner
Date of Inspection: 6/16/2009
Start Time of Inspection:
End Time of Inspection:

XRF Testing Data Table

Page _1__ of _1_

Paint Condition = Good (No Damage), Fair (Some Cracking, but no Peeling), or Poor (Cracked and Peelin
Wall = A (entrance wall), B (left of wall A), C (opposite wall of A), D (right of Wall A)

Read No	IntExt	Room	Room #	Wall	Structure	Paint Cond	Substrate	Paint Color	Pbc	Result
1		Calibration - Paint							**1.0**	Positive
2		Calibration - Wood							**-0.1**	Negative
3	Int.	OMB Building			Cabinet	Good	Metal	Gray	**-0.8**	Negative
4	Int.	OMB Building			Electrical Panel	Good	Metal	Gray	**-0.3**	Negative
5	Int.	OMB Building			Metal Cage	Good	Metal	Gray	**-0.4**	Negative
6	Ext.	OMB Building			Exterior Building	Good	Metal	Red	**9.9**	Positive
7	Ext.	OMB Building			Parking Block	Good	Concrete	Yellow	**1.1**	Positive
8	Ext.	OMB Building			Door	Good	Metal	Gray	**-0.2**	Negative
9		Calibration - Paint							**1.1**	Positive
10		Calibration - Wood							**0.0**	Negative
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										

TABLE 7
LBP Chip Sample Summary
IL027 Forest Park AFRC

Sample No.	Sample Location	Material Description	Substrate	Color	Condition[1]	Analytical Result (% by weight)
001A	OMS Building	Paint on Cabinet	Metal	Gray	Good	<0.0071
002A	OMB Building	Paint on cage	Metal	Gray	Good	<0.053
003A	Parking Block outside OMB	Paint on parking block	Concrete	Yellow	Good	1.0

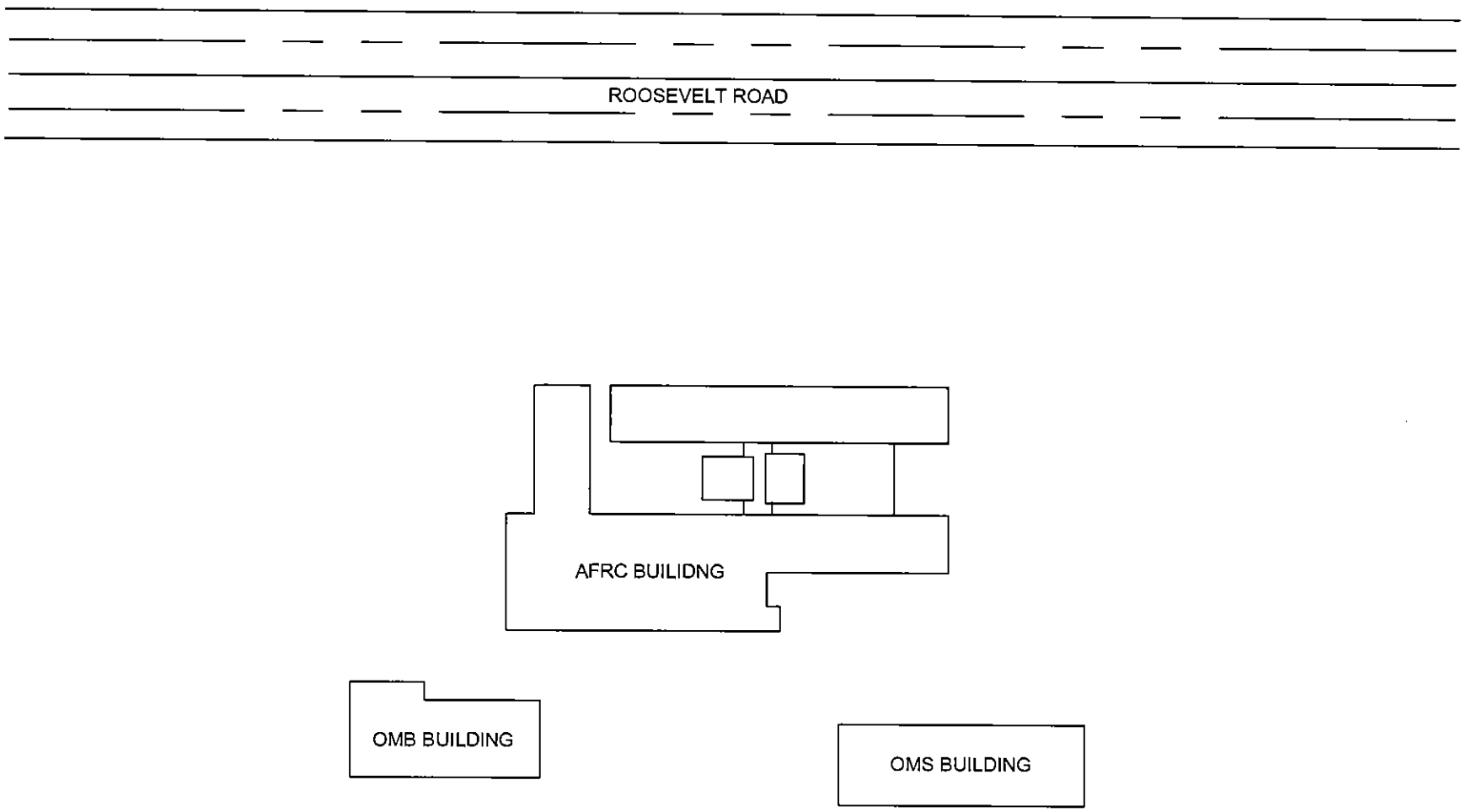
Notes:
[1] Condition is either good, fair or poor.
Good = no damage
Fair = some cracking, but no peeling
Poor = cracked and peeling
Shaded cells: indicates that the material contains >0.5% lead by weight
XRF test results are included in Appendix D.

TABLE 8
Radon Sample Summary
IL027 Forest Park AFRC

Device No.	Device Building / Room	Location	Start Date	Stop Date	Analytical Result (pCi/L)
2007557	AFRC/Rm 136	Conference room by East Wall	06/15/09	09/15/09	<0.4
2007551	AFRC/Rm 125	Mail Room General Area	06/15/09	09/15/09	<0.4
2007555	AFRC/Rm 149	Office- South side	06/15/09	09/15/09	1.9
2007556	AFRC/Rm 146	General Office North side	06/15/09	09/15/09	1.0
2007554	AFRC/Rm 147	Office South side	06/15/09	09/15/09	0.8
2007552	AFRC/Rm 148	Office East side	06/15/09	09/15/09	1.5
2007590	AFRC/Rm 158	General Office area Center	06/15/09	09/15/09	1.5
2007588	AFRC/Rm 179	Lounge- South side	06/15/09	09/15/09	0.7
2007589	AFRC/Rm 179	Lounge- South side	06/15/09	09/15/09	0.8 (duplicate)
2007587	AFRC/Rm 183	Navy recruiting office-South side	06/15/09	09/15/09	0.9
2007583	AFRC/Rm 190/194	Office North-194 bookcase	06/15/09	09/15/09	0.8
2007586	AFRC/Rm 174	Drill Deck East Side Bulletin Board	06/15/09	09/15/09	0.9 (duplicate)
2007584	AFRC/Rm 174	Drill Deck East Side Bulletin Board	06/15/09	09/15/09	(missing upon pickup)
2007614	AFRC/Rm 105	Office/classroom	06/15/09	09/15/09	1.5
2007585	AFRC/Rm 105	Office/Classroom	06/15/09	09/15/09	<0.4 (blank)
2007613	AFRC/Rm 108	Workout room	06/15/09	09/15/09	<0.4
2007553	AFRC/Rm 116	Office	06/15/09	09/15/09	<0.4
2007607	AFRC/Rm 119	Office	06/15/09	09/15/09	0.6
2007608	AFRC/Rm 119	Office	06/15/09	09/15/09	<0.4 (duplicate)
2007609	AFRC/Rm 121/122	Offices	06/15/09	09/15/09	<0.4
2007612	AFRC/Rm 155	Office- Southwest Corner	06/15/09	09/15/09	0.7
2007610	AFRC/Rm 156	Office-West side	06/15/09	09/15/09	0.6
2007558	AFRC/Rm 157	Offices- Center column	06/15/09	09/15/09	0.8
2007575	AFRC/Rm 157	Offices- Center column	06/15/09	09/15/09	0.9 (duplicate)
2007582	AFRC/Rm 101	Training Center-cage	06/15/09	09/15/09	1.2
2007580	AFRC/Rm 102	Office- Northwest cabinet	06/15/09	09/15/09	1.3
2007581	AFRC/Rm 115	Office- South side shelving	06/15/09	09/15/09	0.6
2007577	AFRC/Rm 187	Office-west side	06/15/09	09/15/09	<0.4 (blank)

2007576	AFRC/Rm 187	Office-west side	06/15/09	09/15/09	1.0
2007578	AFRC/Rm 189	Office-west side	06/15/09	09/15/09	1
2007579	AFRC/Rm 192	Office-west side	06/15/09	09/15/09	1.5
2007591	AFRC/Rm 163	Office- south side	06/15/09	09/15/09	1.3
2007611	AFRC/Rm 198/199	Office-south 198 center	06/15/09	09/15/09	1.4
2007592	AFRC/Rm 162	Office-south side	06/15/09	09/15/09	1.3
2007593	AFRC/Rm 164	Office-south side	06/15/09	09/15/09	1.3
2007594	AFRC/Rm 159	Office- South side	06/15/09	09/15/09	1.9
2007596	AFRC/Rm 139	Offices	06/15/09	09/15/09	1.2
2007597	AFRC/Rm 138	Office- south west side	06/15/09	09/15/09	0.7
2007595	AFRC/Rm 137	Office- North side	06/15/09	09/15/09	0.6
2007606	AFRC/Rm 127	Office-East Side	06/15/09	09/15/09	0.6 (duplicate)
2007599	AFRC/ Rm 126	Office- West side Locker	06/15/09	09/15/09	0.5
2007598	AFRC/Rm 151	Office North Wall	06/15/09	09/15/09	0.9
2007571	OMS/Garage	West Bay-Cage	06/15/09	09/15/09	<0.4
2007572	OMB/Garage	West Bay-Cage	06/15/09	09/15/09	<0.4
2007573	OMB/Garage	West Bay-Cage	06/15/09	09/15/09	<0.4 (duplicate)
2007574	OMB/Garage	East Bay-Cage	06/15/09	09/15/09	<0.4

Appendix B
Figures



SITE PLAN

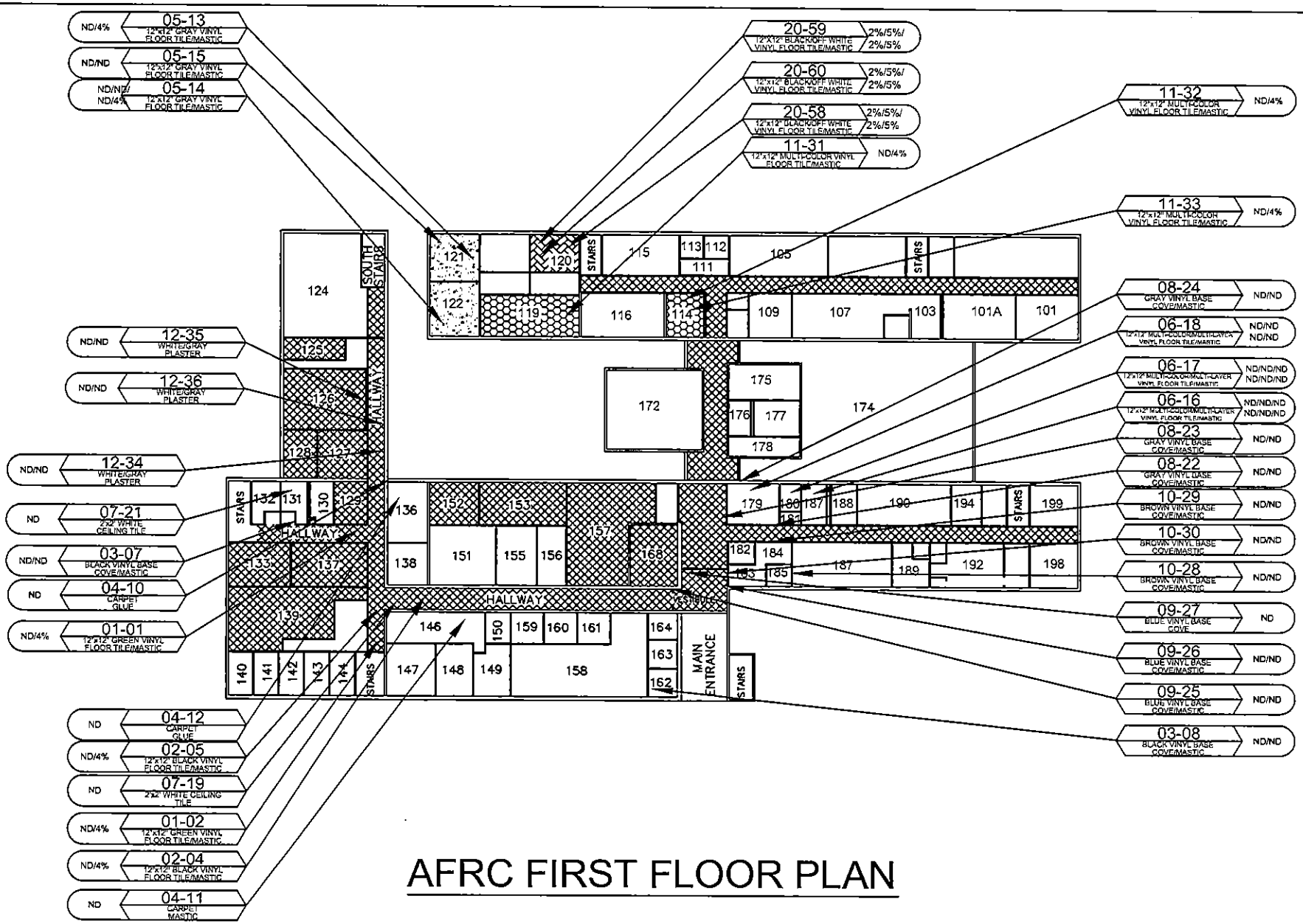
psi Environmental Geotechnical Construction
Consulting · Engineering · Testing
4421 W. Harrison St.
Hillside, Illinois 60162
(708) 236-0720

FACILITY ID IL027
7402 W. ROOSEVELT ROAD
FOREST PARK, ILLINOIS

88TH REGIONAL SUPPORT COMMAND
60 SOUTH O STREET
FORT McCOY, WISCONSIN 54656

DRAWN:	CHECKED:	DATE:	FIGURE:
EPW	RT	06-30-09	1

PROJECT NO: 0047411
SCALE: NTS



AFRC FIRST FLOOR PLAN

SAMPLE LEGEND

ASBESTOS SAMPLE GROUP – 01-53AV – SAMPLE NUMBER – N/TR * – SAMPLE RESULT
Floor Tile/Mastic – MATERIAL DESCRIPTION

= NA = NOT ANALYZED
N or ND = NONE DETECTED
P or POS = POSITIVE
TR = TRACE
* = POINT COUNT ANALYSIS

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7402 W. ROOSEVELT ROAD
FOREST PARK, ILLINOIS
88TH REGIONAL SUPPORT COMMAND
60 SOUTH O STREET
FORT McCOY, WISCONSIN 54656

DRAWN:	CHECKED:	DATE:	FIGURE:
EPW	RT	06-30-09	2

PROJECT NO:	SCALE:
0047411	NTS

AFRC FIRST FLOOR PLAN

GROUP 18 MUDDED PIPE JOINT INSULATION

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Hillside, Illinois 60162
(708) 236-0720

ASBESTOS SAMPLE GROUP — SAMPLE NUMBER — 01-53AV — Floor Tile/Mastic — N/TR* — MATERIAL DESCRIPTION — SAMPLE RESULT

SAMPLE LEGEND

NA = NOT ANALYZED
N or ND = NONE DETECTED
P or POS = POSITIVE
TR = TRACE
* = POINT COUNT ANALYSIS

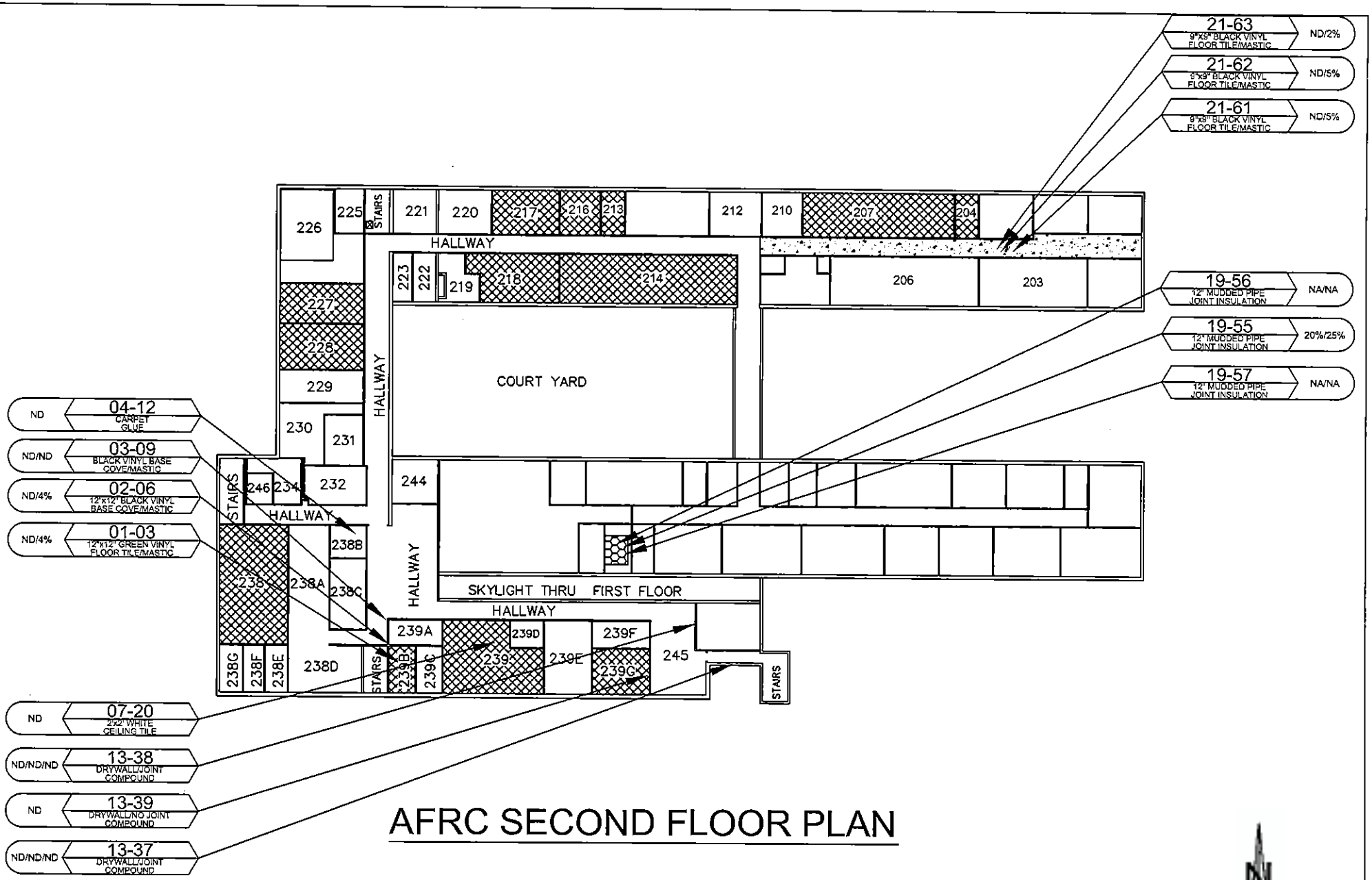
FACILITY ID IL027 (BUILDING AFRC)
7402 W. ROOSEVELT ROAD
FOREST PARK, ILLINOIS

88TH REGIONAL SUPPORT COMMAND
60 SOUTH O STREET
FORT McCOY, WISCONSIN 54656

DRAWN:	CHECKED:	DATE:	FIGURE:
EPW	RT	06-30-09	3

PROJECT NO: 0047411

SCALE: NTS



AFRC SECOND FLOOR PLAN

	GROUP 1 12"x12" GREEN FLOOR TILE MASTIC		GROUP 21 9"x9" BLACK FLOOR TILE MASTIC
	GROUP 2 12"x12" BLACK FLOOR TILE MASTIC		GROUP 19 12" MUDDED PIPE JOINT INSULATION

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ASBESTOS SAMPLE GROUP — SAMPLE NUMBER — 01-53AV — N/TR * — MATERIAL DESCRIPTION: Floor Tile/Mastic — SAMPLE RESULT

SAMPLE LEGEND

NA = NOT ANALYZED
N or ND = NONE DETECTED
P or POS = POSITIVE
TR = TRACE
* = POINT COUNT ANALYSIS

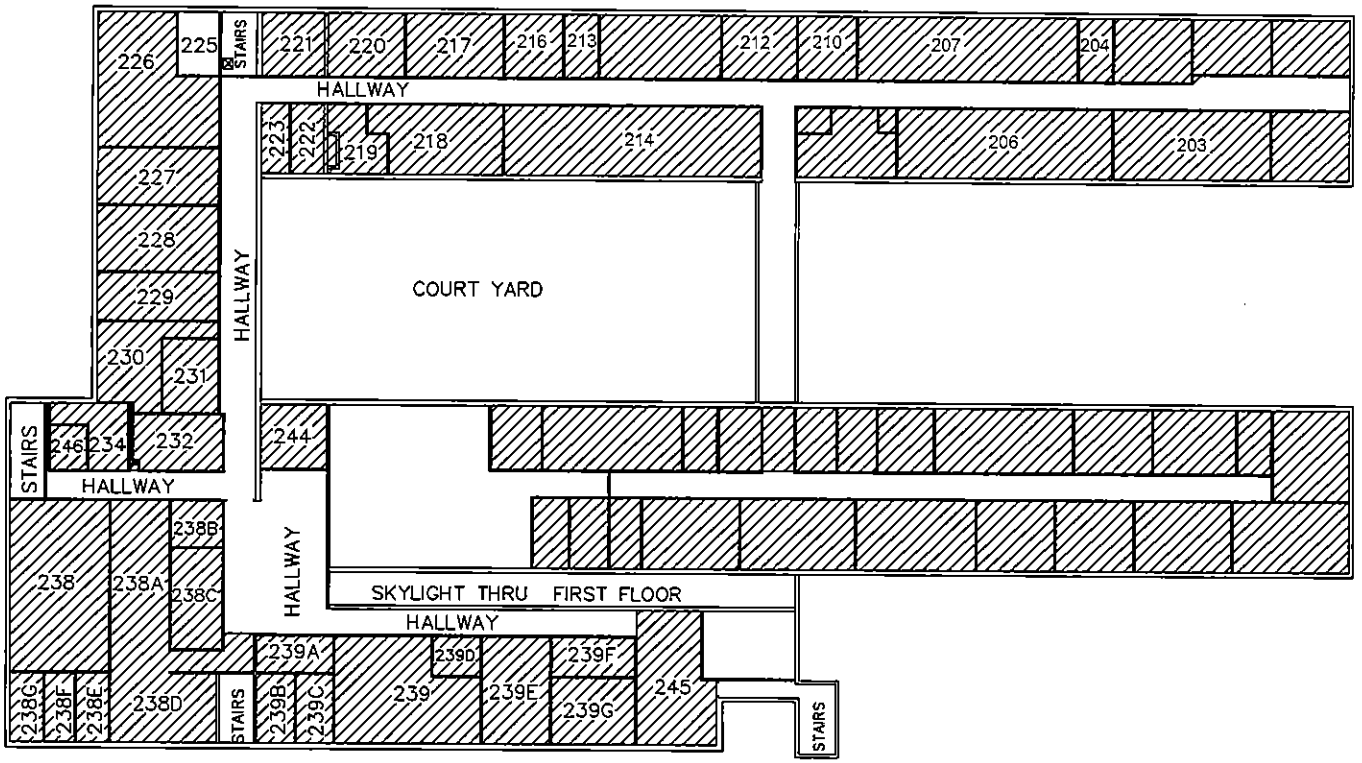
FACILITY ID IL027 (BUILDING AFRC)
7402 WEST ROOSEVELT ROAD
FOREST PARK, ILLINOIS

88th REGIONAL SUPPORT COMMAND
60 SOUTH O STREET
FORT McCOY, WISCONSIN 54656

DRAWN:	CHECKED:	DATE:	FIGURE:
EPW	RT	06-30-09	4

PROJECT NO: 0047411

SCALE: NTS



AFRC SECOND FLOOR PLAN

GROUP 16 MUDDED PIPE JOINT INSULATION

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Consulting · Engineering · Testing
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Hillside, Illinois 60162
(708) 236-0720

ASBESTOS SAMPLE GROUP — SAMPLE NUMBER — 01-53AV — N/TR* — Floor Tile/Mastic — MATERIAL DESCRIPTION — SAMPLE RESULT

SAMPLE LEGEND

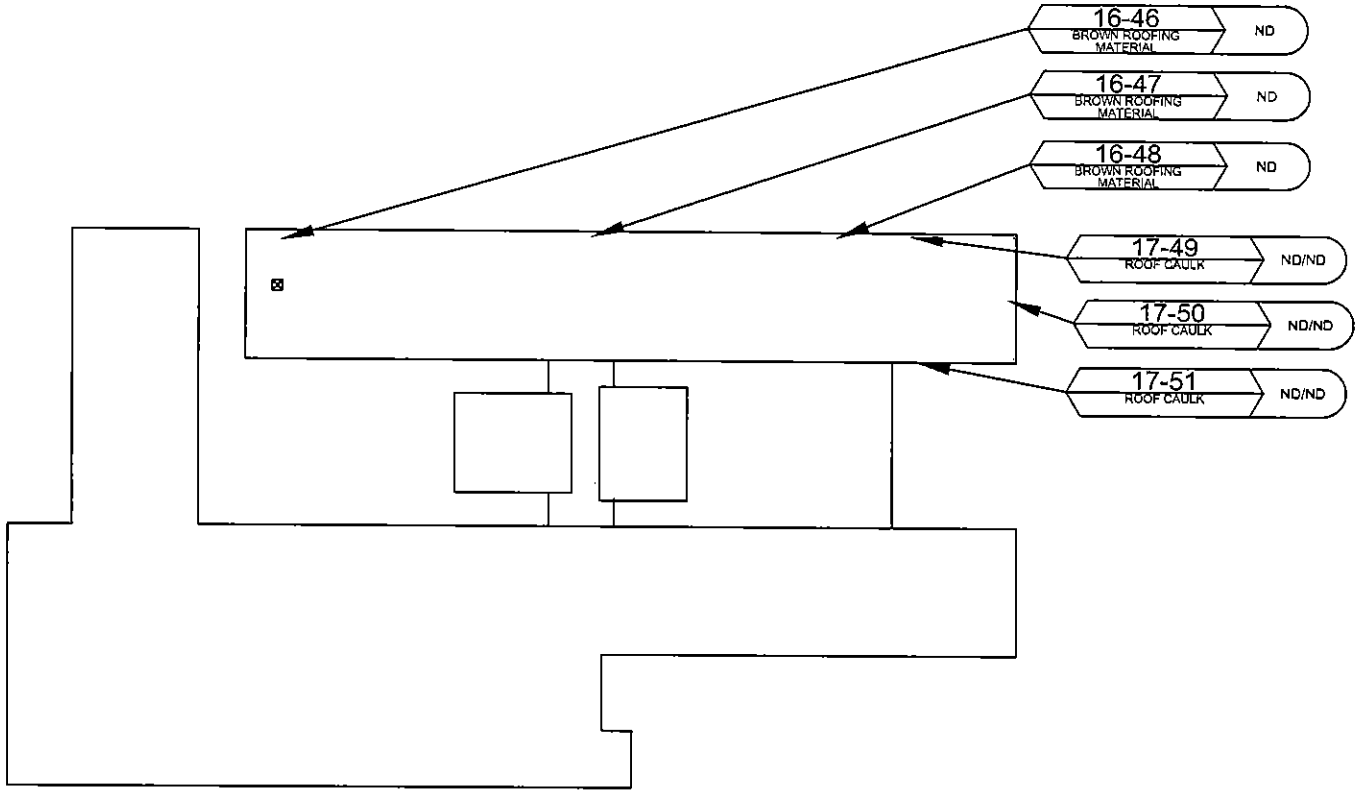
NA = NOT ANALYZED
N or ND = NONE DETECTED
P or POS = POSITIVE
TR = TRACE
* = POINT COUNT ANALYSIS

FACILITY ID IL027 (BUILDING AFRC)
7402 WEST ROOSEVELT ROAD
FOREST PARK, ILLINOIS

88th REGIONAL SUPPORT COMMAND
60 SOUTH O STREET
FORT McCOY, WISCONSIN 54656

DRAWN:	CHECKED:	DATE:	FIGURE:
EPW	RT	06-30-09	5

PROJECT NO:	SCALE:
0047411	NTS



AFRC OFFICE ROOF PLAN

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4421 W. Harrison St.
Hillside, Illinois 60162
(708) 236-0720

ASBESTOS SAMPLE GROUP — SAMPLE NUMBER: 01-53AV — MATERIAL DESCRIPTION: Floor Tile/Mastic — SAMPLE RESULT: N/TR

SAMPLE LEGEND

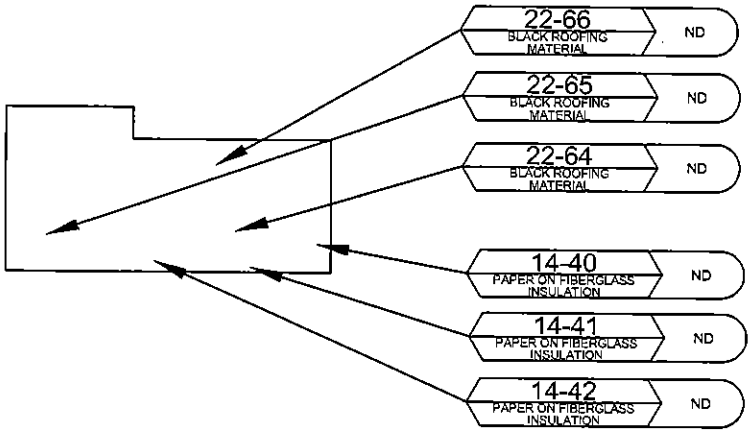
NA = NOT ANALYZED
N or ND = NONE DETECTED
P or POS = POSITIVE
TR = TRACE
" = POINT COUNT ANALYSIS

FACILITY ID IL027 (BUILDING AFRC)
7402 WEST ROOSEVELT ROAD
FOREST PARK, ILLINOIS

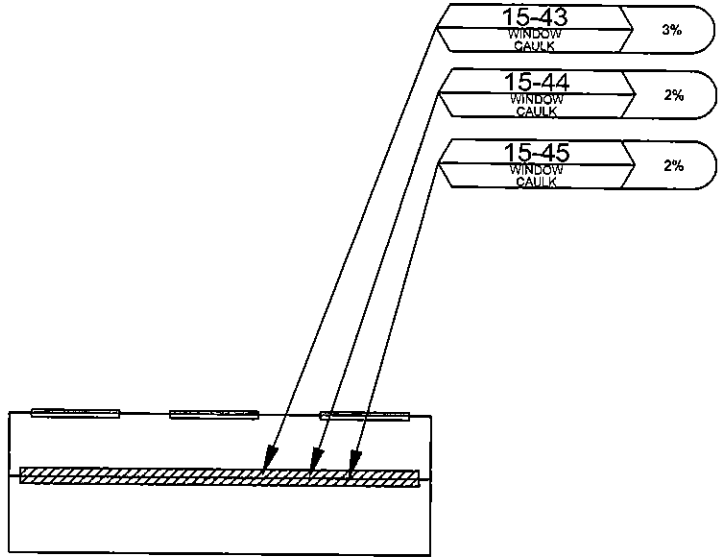
88th REGIONAL SUPPORT COMMAND
60 SOUTH O STREET
FORT McCOY, WISCONSIN 54656

DRAWN:	CHECKED:	DATE:	FIGURE:
EPW	RT	06-30-09	6

PROJECT NO:	SCALE:
0047411	NTS



OMS BUILDING ROOF PLAN



OMB BUILDING PLAN

OMS BUILDING PLANS

GROUP 15 - WINDOW CAULK

N

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Hillside, Illinois 60162
(708) 236-0720

ASBESTOS SAMPLE GROUP — SAMPLE NUMBER — 01-53AV — Floor Tile/Mastic — N/TR* — MATERIAL DESCRIPTION — SAMPLE RESULT

SAMPLE LEGEND

NA = NOT ANALYZED
N or ND = NONE DETECTED
P or POS = POSITIVE
TR = TRACE
* = POINT COUNT ANALYSIS

FACILITY ID IL027
7402 WEST ROOSEVELT ROAD
FOREST PARK, ILLINOIS
88th REGIONAL SUPPORT COMMAND
60 SOUTH O STREET
FORT McCOY, WISCONSIN 54656

DRAWN:	CHECKED:	DATE:	FIGURE:
EPW	RT	06-30-09	7

PROJECT NO: 0047411
SCALE: NTS

Appendix C
Photo Log

Photo 1: 12” x 12” green vinyl floor tile/ mastic – AFRC Building
(Tile is Non-ACM, Mastic is positive for Asbestos)

Photo 2: 12” x 12” black vinyl floor tile/ mastic– AFRC Building
(Tile is Non-ACM, Mastic is positive for Asbestos)

Photo 3: black vinyl baseboard/ mastic– AFRC Building (Non-ACM)

Photo 4: Carpet mastic – AFRC Building (Non-ACM)

Photo 5: 12” x 12” gray vinyl floor tile/ mastic - AFRC Building Rooms 121 and 122
(Top Layer Tile and Mastic, Bottom Layer Tile is Non-ACM, Bottom Layer Mastic is positive for Asbestos)

Photo 6: 12” x 12” gray vinyl floor tile/ mastic– AFRC Building Rooms 179, 180, 187 (Non-ACM)

Photo 7: 2’ x 2’ white lay-in ceiling tile– AFRC Building (Non-ACM)

Photo 8: Gray vinyl baseboard/ mastic– AFRC Building (Non-ACM)

Photo 9: Blue vinyl baseboard/ mastic – AFRC Building (Non-ACM)

Photo 10: Brown vinyl baseboard/ mastic– AFRC Building (Non-ACM)

Photo 11: 12” x 12” off-white vinyl floor tile/ mastic– AFRC Building
(Tile is Non-ACM, Mastic is positive for Asbestos)

Photo 12: Plaster – AFRC Building (Non-ACM)

Photo 13: Drywall/ joint compound – AFRC Building (Non-ACM)

Photo 14: Paper on fiberglass insulation - OMS Building (Non-ACM)

Photo 15: Window caulk-OMB Building **(Caulk is positive for Asbestos)**

Photo 16: Roofing material- AFRC Building (Non-ACM)

Photo 17: Roof caulk- AFRC Building (Non-ACM)

Photo 18: 2” pipe elbow insulation- AFRC Building **(Insulation Positive for ACM)**

Photo 19: 12” drain pipe insulation- AFRC Building **(Insulation Positive for ACM)**

Photo 20: 12” x 12” black vinyl floor tile/ mastic– AFRC Building Room 120
(2 Layers of Tile is positive for Asbestos, 2 Layers of Mastic is positive for Asbestos)

Photo 21: 9” x 9” black vinyl floor tile/ mastic– AFRC Building
(Tile is Non-ACM, Mastic is positive for Asbestos)

Photo 22: Roofing material - OMS Building (Non-ACM)

Photo 23: Transite sink- AFRC Building Room 261 (Presumed ACM)

Appendix D
Laboratory Reports and Chain-of-Custody Forms

PSI Information To Build On
Engineering • Consulting • Testing

REPORT OF BULK SAMPLE ANALYSIS FOR ASBESTOS

TESTED FOR: PSI, Inc
4421 Harrison St., Ste. 510
Hillside, IL 60162
Attn: Ron Tulke

Project ID: 0047411
CH2MHILL
7402 Roosevelt Rd.

Date Received: 6/17/2009 Date Completed: 6/19/2009 Date Reported: 6/22/2009

Analyst: SB Work Order: 0906383 Page: 1 of 6

Client ID	Lab ID (Layer)	Sample Description (Color, Texture, Etc.) *Analyst's Comment*	Asbestos Content (Percent and Type)	Non-asbestos Fibers (Percent and Type)
01-01	001A	(1) Green, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Black, Mastic, Homogeneous	4% Chrysotile	None Reported
01-02	002A	(1) Green, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Black, Mastic, Homogeneous	4% Chrysotile	None Reported
01-03	003A	(1) Green, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Black, Mastic, Homogeneous	4% Chrysotile	None Reported
02-04	004A	(1) Black, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Black, Mastic, Homogeneous	4% Chrysotile	None Reported
02-05	005A	(1) Black, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Black, Mastic, Homogeneous	4% Chrysotile	None Reported
		Minimal Mastic		
02-06	006A	(1) Black, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Black, Mastic, Homogeneous	4% Chrysotile	None Reported
03-07	007A	(1) Black, Baseboard, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Brown, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported
03-08	008A	(1) Black, Baseboard, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Brown, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported
03-09	009A	(1) Black, Baseboard, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Brown, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported
04-10	010A	(1) Yellow, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported

Quantitation is based on a visual estimation of the relative area of bulk sample components, unless otherwise noted in the "Comments" section of this report. The results are valid only for the item tested. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Method used: E.P.A. Method for the Determination of Asbestos In Bulk Building Materials (EPA / 600/R-93/116 July 1993). Polarized Light Microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative Transmission Electron Microscopy is currently the only method that can be used to determine if the material can be considered or treated as non-asbestos containing. Samples will be disposed of within 30 days unless notified in writing by the client. No part of this report may reproduced, except in full, without written permission of the laboratory. The reporting limit is 1% by weight. NVLAP Lab Code 101350-0.

Respectfully submitted,
PSI, Inc.

Cathy McNamee

Approved Signatory
Cathy McNamee

Client ID	Lab ID (Layer)	Sample Description (Color, Texture, Etc.) *Analyst's Comment*	Asbestos Content (Percent and Type)	Non-asbestos Fibers (Percent and Type)
04-11	011A	(1) Yellow, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported
04-12	012A	(1) Yellow, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported
05-13	013A	(1) Green, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Black, Mastic, Homogeneous	4% Chrysotile	None Reported
05-14	014A	(1) Gray, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Yellow, Mastic, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(3) Green, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(4) Black, Mastic, Homogeneous	4% Chrysotile	None Reported
05-15	015A	(1) Gray, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Yellow, Mastic, Homogeneous	NO ASBESTOS DETECTED	None Reported
06-16	016A	(1) Gray, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Yellow, Mastic, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(3) Blue, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(4) Tan, Mastic, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(5) Green, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(6) Tan, Mastic, Homogeneous	NO ASBESTOS DETECTED	None Reported
06-17	017A	(1) Gray, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Yellow, Mastic, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(3) Blue, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(4) Yellow, Mastic, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(5) White, Leveling Compound, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(6) Tan, Mastic, Homogeneous	NO ASBESTOS DETECTED	None Reported
06-18	018A	(1) Gray, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Yellow, Mastic, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(3) Blue, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(4) Yellow, Mastic, Homogeneous	NO ASBESTOS DETECTED	None Reported
07-19	019A	(1) White, Ceiling Tile, Homogeneous	NO ASBESTOS DETECTED	30% Cellulose Fiber 30% Fibrous Glass
07-20	020A	(1) White, Ceiling Tile, Homogeneous	NO ASBESTOS DETECTED	30% Cellulose Fiber 30% Fibrous Glass

Quantitation is based on a visual estimation of the relative area of bulk sample components, unless otherwise noted in the "Comments" section of this report. The results are valid only for the item tested. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Method used: E.P.A. Method for the Determination of Asbestos in Bulk Building Materials (EPA / 600/R-93/116 July 1993). Polarized Light Microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative Transmission Electron Microscopy is currently the only method that can be used to determine if the material can be considered or treated as non-asbestos containing. Samples will be disposed of within 30 days unless notified in writing by the client. No part of this report may reproduced, except in full, without written permission of the laboratory. The reporting limit is 1% by weight. NVLAP Lab Code 101350-0.

Respectfully submitted,
PSI, Inc.

Cathy McNamee

Approved Signatory
Cathy McNamee

Client ID	Lab ID (Layer)	Sample Description (Color, Texture, Etc.) *Analyst's Comment*	Asbestos Content (Percent and Type)	Non-asbestos Fibers (Percent and Type)
07-21	021A	(1) White, Ceiling Tile, Homogeneous	NO ASBESTOS DETECTED	30% Cellulose Fiber 30% Fibrous Glass
08-22	022A	(1) Gray, Baseboard, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Yellow, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported
08-23	023A	(1) Gray, Baseboard, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Yellow, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported
08-24	024A	(1) Gray, Baseboard, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Yellow, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported
09-25	025A	(1) Blue, Baseboard, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Tan, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported
09-26	026A	(1) Blue, Baseboard, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Yellow, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported
09-27	027A	(1) Blue, Baseboard, Homogeneous *No Glue*	NO ASBESTOS DETECTED	None Reported
10-28	028A	(1) Blue, Baseboard, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Yellow, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported
10-29	029A	(1) Brown, Baseboard, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Tan, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported
10-30	030A	(1) Brown, Baseboard, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Tan, Glue, Homogeneous	NO ASBESTOS DETECTED	None Reported
11-31	031A	(1) Off-White, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Black, Mastic, Homogeneous	4% Chrysotile	None Reported
11-32	032A	(1) Off-White, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Black, Mastic, Homogeneous *Minimal Mastic; Consumed During Analysis*	4% Chrysotile	None Reported
11-33	033A	(1) Off-White, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Black, Mastic, Homogeneous	4% Chrysotile	None Reported
12-34	034A	(1) White, Plaster, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Gray, Plaster, Homogeneous	NO ASBESTOS DETECTED	None Reported

Respectfully submitted,
PSI, Inc.

Cathy McNamee

Approved Signatory
Cathy McNamee

Client ID	Lab ID (Layer)	Sample Description (Color, Texture, Etc.) *Analyst's Comment*	Asbestos Content (Percent and Type)	Non-asbestos Fibers (Percent and Type)
12-35	035A	(1) White, Plaster, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Gray, Plaster, Homogeneous	NO ASBESTOS DETECTED	None Reported
12-36	036A	(1) White, Plaster, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Gray, Plaster, Homogeneous	NO ASBESTOS DETECTED	None Reported
13-37	037A	(1) Off-White, Drywall, Homogeneous	NO ASBESTOS DETECTED	3% Cellulose Fiber 3% Fibrous Glass
		(2) Off-White, Joint Compound, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(3) White, Joint Compound, Homogeneous	NO ASBESTOS DETECTED	None Reported
13-38	038A	(1) Off-White, Drywall, Homogeneous	NO ASBESTOS DETECTED	3% Fibrous Glass 7% Cellulose Fiber
		(2) Off-White, Joint Compound, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(3) White, Joint Compound, Homogeneous	NO ASBESTOS DETECTED	None Reported
13-39	039A	(1) Off-White, Drywall, Homogeneous	NO ASBESTOS DETECTED	3% Fibrous Glass 7% Cellulose Fiber
		No Joint Compound		
14-40	040A	(1) Beige, Pipe Insulation, Homogeneous	NO ASBESTOS DETECTED	60% Cellulose Fiber
14-41	041A	(1) Beige, Pipe Insulation, Homogeneous	NO ASBESTOS DETECTED	60% Cellulose Fiber
14-42	042A	(1) Beige, Pipe Insulation, Homogeneous	NO ASBESTOS DETECTED	60% Cellulose Fiber
15-43	043A	(1) Gray, Caulking, Homogeneous	3% Chrysotile	None Reported
		(2) Beige, Caulking, Homogeneous	2% Chrysotile	None Reported
		(3) Off-White, Caulking, Homogeneous	2% Chrysotile	None Reported
15-44	044A	**Sample Not Tested**		
15-45	045A	**Sample Not Tested**		
16-46	046A	(1) Brown, Roofing, Homogeneous	NO ASBESTOS DETECTED	5% Fibrous Glass 25% Cellulose Fiber

Quantitation is based on a visual estimation of the relative area of bulk sample components, unless otherwise noted in the "Comments" section of this report. The results are valid only for the item tested. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Method used: E.P.A. Method for the Determination of Asbestos in Bulk Building Materials (EPA / 600/R-93/116 July 1993). Polarized Light Microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative Transmission Electron Microscopy is currently the only method that can be used to determine if the material can be considered or treated as non-asbestos containing. Samples will be disposed of within 30 days unless notified in writing by the client. No part of this report may reproduced, except in full, without written permission of the laboratory. The reporting limit is 1% by weight. NVLAP Lab Code 101350-0.

Respectfully submitted,
PSI, Inc.

Cathy McNamee

Approved Signatory
Cathy McNamee

Client ID	Lab ID (Layer)	Sample Description (Color, Texture, Etc.) *Analyst's Comment*	Asbestos Content (Percent and Type)		Non-asbestos Fibers (Percent and Type)
16-47	047A	(1) Brown, Roofing, Homogeneous	NO ASBESTOS DETECTED		5% Fibrous Glass 25% Cellulose Fiber
16-48	048A	(1) Brown, Roofing, Homogeneous	NO ASBESTOS DETECTED		5% Fibrous Glass 25% Cellulose Fiber
17-49	049A	(1) Gray, Caulking, Homogeneous	NO ASBESTOS DETECTED		None Reported
		(2) Black, Caulking, Homogeneous	NO ASBESTOS DETECTED		None Reported
17-50	050A	(1) Gray, Caulking, Homogeneous	NO ASBESTOS DETECTED		None Reported
		(2) Black, Caulking, Homogeneous	NO ASBESTOS DETECTED		None Reported
17-51	051A	(1) Gray, Caulking, Homogeneous	NO ASBESTOS DETECTED		None Reported
		(2) Black, Caulking, Homogeneous	NO ASBESTOS DETECTED		None Reported
18-52	052A	(1) Beige, Pipe Elbow, Homogeneous	35%	Chrysotile	65% Cellulose Fiber
18-53	053A	**Sample Not Tested**			
18-54	054A	**Sample Not Tested**			
19-55	055A	(1) Beige, Pipe Elbow, Homogeneous	20% 25%	Amosite Chrysotile	40% Fibrous Glass
19-56	056A	**Sample Not Tested**			
19-57	057A	**Sample Not Tested**			
20-58	058A	(1) Black, Floor Tile, Homogeneous	2%	Chrysotile	None Reported
		(2) Black, Mastic, Homogeneous	5%	Chrysotile	None Reported
		(3) Off-White, Floor Tile, Homogeneous	2%	Chrysotile	None Reported
		(4) Black, Mastic, Homogeneous	5%	Chrysotile	None Reported
20-59	059A	**Sample Not Tested**			
20-60	060A	**Sample Not Tested**			
21-61	061A	(1) Black, Floor Tile, Homogeneous	NO ASBESTOS DETECTED		None Reported
		(2) Black, Mastic, Homogeneous	5%	Chrysotile	None Reported

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Respectfully submitted,
PSI, Inc.

Cathy McNamee

Approved Signatory
Cathy McNamee

Client ID	Lab ID (Layer)	Sample Description (Color, Texture, Etc.) *Analyst's Comment*	Asbestos Content (Percent and Type)	Non-asbestos Fibers (Percent and Type)
21-62	062A	(1) Black, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Black, Mastic, Homogeneous	5% Chrysotile	None Reported
21-63	063A	(1) Black, Floor Tile, Homogeneous	NO ASBESTOS DETECTED	None Reported
		(2) Black, Mastic, Homogeneous	2% Chrysotile	None Reported
22-64	064A	(1) Black, Roofing, Homogeneous	NO ASBESTOS DETECTED	10% Cellulose Fiber 10% Fibrous Glass
22-65	065A	(1) Black, Roofing, Homogeneous	NO ASBESTOS DETECTED	10% Cellulose Fiber 10% Fibrous Glass
22-66	066A	(1) Black, Roofing, Homogeneous	NO ASBESTOS DETECTED	10% Cellulose Fiber 10% Fibrous Glass

Report Notes: **(PT) Point Count Results**

Quantitation is based on a visual estimation of the relative area of bulk sample components, unless otherwise noted in the "Comments" section of this report. The results are valid only for the item tested. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Method used: E.P.A. Method for the Determination of Asbestos in Bulk Building Materials (EPA / 600/R-93/116 July 1993). Polarized Light Microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative Transmission Electron Microscopy is currently the only method that can be used to determine if the material can be considered or treated as non-asbestos containing. Samples will be disposed of within 30 days unless notified in writing by the client. No part of this report may reproduced, except in full, without written permission of the laboratory. The reporting limit is 1% by weight. NVLAP Lab Code 101350-0.

Respectfully submitted,
PSI, Inc.

Cathy McNamee

Approved Signatory
Cathy McNamee

7402 ROOSEVELT RD.

0906393

CHAIN OF CUSTODY RECORD

psi Information To Build On
Engineering • Consulting • Testing

PROJECT NAME: CHEM HILL	REPORT TO: JEFF CHAPMAN	INVOICE TO: SAME
PROJECT NUMBER: 007411	PROJECT MANAGER: 4421 HARRISON ST.	ADDRESS:
P.O. NUMBER:	ADDRESS: HILLSIDE, IL. 60162	CITY / STATE / ZIP:
REQUIRED DUE DATE (MM-DD-YY): STANDARD TAT	CITY / STATE / ZIP: 1-708-236-0720	ATTENTION:
SAMPLES TO LAB VIA: FEDEX	TELEPHONE: FAX 1-708-236-0721	TELEPHONE:
NUMBER OF COOLERS/PACKAGES: 1 cooler	REPORT DATA VIA: ☐ VERBAL ☐ OVERNIGHT ☐ FAX ☐ U.S. MAIL	

LABORATORY SUBMITTED TO:

☐ 850 Poplar Street
Pittsburgh, PA 15220
412/922-4000

☐ OTHER _____

RELINQUISHED BY	DATE / TIME	ACCEPTED BY	DATE / TIME	SEAL NUMBER
Edward F. Hagan	1000 6/16/09		10:04 6/17/09	

LABORATORY USE ONLY

FIELD SERVICES Y/N $	ANALYTICAL DUE DATE
SHIPPING Y/N $	REPORT DUE DATE
	PSI PROJECT NAME
	PSI PROJECT NUMBER
	PSI BATCH NUMBER

LABORATORY USE ONLY

SAMPLE CUSTODIAN: DATE / TIME:

SAMPLE IDENTIFICATION	DATE / TIME	AIR-A, BULK-B, DUST-D, NOB-N, PAINT-P, SOIL-S, VACUUM-V, WASTE-X, WATER-W, WIPE-WP	LAB USE ONLY LAB NUMBER	NUMBER OF CONTAINERS	PARAMETER LIST: PLM
SAMPLE GRAVES	6/16/09 1000	B		1	X
1-22 (WASHINGS)		B		1	X

ADDITIONAL REMARKS: ANALYZE UNTIL FIRST POSITIVE
FAX 8652 6900 7697

SAMPLER'S SIGNATURE: Edward F. Hagan

Your signature denotes agreement with the PSI General Conditions which are printed on the back side of this document.

PSI A-600-10 (5)

PSI Information To Build On
Engineering • Consulting • Testing

Analytical Report
Analysis of Paint for Lead Determination

TESTED FOR: PSI, Inc
4421 Harrison St., Ste. 510
Hillside, IL 60162
Attn: Ron Tulke

Project ID: 0047411
CH2MHILL

Date Received: 6/17/2009 **Date Analyzed:** 6/18/2009 **Date of Issue:** 6/18/2009

Analyst: LM **Work Order:** 0906382 **Page:** 1 of 1

Lab Sample #	Client Sample #	% Lead by Weight	Reporting Limit % Lead by Weight
001A	1	< 0.0071	0.0071
002A	2	< 0.053	0.053
003A	3	1.0	0.0060

Analytical Method: PSI WI-503-815 modified from EPA SW846 7420, 3rd Edition, Nov. 1986

Analysis was performed by flame AA using a PE AAnalyst 400.

Reporting limit = 30µg Pb per representative subsample.

Results are based on a representative subsample of the total sample submitted by the client.

AIHA #100373; NY#10930; CA #2377.

Unless otherwise noted, all samples were acceptable upon receipt.

Sample results are not corrected for blanks.

All quality control sample results are within the acceptance range, unless noted.

All results are based on 2 significant figures. Results relate only to items tested.

Client submitted data is the determining factor in the accuracy of calculated results.

The attached Chain of Custody is incorporated into and becomes a part of the final report.

Respectfully submitted,
PSI, Inc.

Maureen L. Sammons

Approved Signatory
Maureen Sammons

0906382

CHAIN OF CUSTODY RECORD

PSI Information To Build On
Engineering • Consulting • Testing

PROJECT NAME: CH2M HILL	REPORT TO: JEFF CHAPMAN	INVOICE TO: SAME
PROJECT NUMBER: CC17411	PROJECT MANAGER:	ADDRESS:
P.O. NUMBER:	ADDRESS: 4421 HARRISON St. HILLSIDE IL. 60162	CITY / STATE / ZIP
REQUIRED DUE DATE (MM-DD-YY): STANDARD TAT	CITY / STATE / ZIP: 1-708-240-0720	ATTENTION
SAMPLES TO LAB VIA: FED EX	TELEPHONE / FAX: 1-708-240-0721	TELEPHONE
NUMBER OF COOLERS/PACKAGES: 3	REPORT DATA VIA: ❑ VERBAL ❑ FAX ❑ OVERNIGHT ❑ U.S. MAIL	

LABORATORY SUBMITTED TO:

❑ 850 Poplar Street
Pittsburgh, PA 15220
412/922-4000

❑ OTHER ______

RELINQUISHED BY DATE / TIME	ACCEPTED BY DATE / TIME	SEAL NUMBER
[signature] 6/16/00 1600	[signature] 9:56 6/17/01	

LABORATORY USE ONLY
FIELD SERVICES Y/N $
SHIPPING Y/N $

LABORATORY USE ONLY
ANALYTICAL DUE DATE
REPORT DUE DATE
PSI PROJECT NAME
PSI PROJECT NUMBER
PSI BATCH NUMBER

LABORATORY USE ONLY
SAMPLE CUSTODIAN | DATE / TIME

PARAMETER LIST

SAMPLE IDENTIFICATION	DATE / TIME	AIR-A BULK-B DUST-D NOB-N PAINT-P SOIL-S VACUUM-V WASTE-X WATER-W WIPE-WP	LAB USE ONLY LAB NUMBER	NUMBER OF CONTAINERS	% Pb by weight
1	6/16/00 1600	P		1	X
2	" "	P		1	X
3	" "	P		1	X

ADDITIONAL REMARKS
Fed Ex 8672 6900 7697

SAMPLER'S SIGNATURE [signature]

Your signature denotes agreement with the PSI General Conditions which are printed on the back side of this document.

PSI A-600-10 (8)

AccuStar Labs

Radon in Air

NEHA NRPP 101193 AL
NRSB ARL0017
RNL2002200

EPA Method #402-R-92-004
Alpha Track
NEHA Device Code 8205
NRSB Device Code 12001

Laboratory Report For

RDS Environmental-T. Smith
11603 Teller Street Suite A
Broomfield CO 80020

Property Tested

Project # 505324

USAR Center
7402 West Roosevelt Road
Forest Park IL 60130

Log Number	Device Number	Exposure Period		Area Tested	Result (pCi/L)
1104108	2007557	6/15/2009	9/15/2009	100 Main Bldg. Room 136 First Floor Slab Conference	< 0.4
1104109	2007551	6/15/2009	9/15/2009	100 Main Bldg. Room 125 First Floor Slab Mail Room	< 0.4
1104110	2007555	6/15/2009	9/15/2009	100 Main Bldg. Room 149 First Floor Slab Office	1.9
1104111	2007556	6/15/2009	9/15/2009	100 Main Bldg. Room 146 First Floor Slab General Offi	1.0
1104112	2007554	6/15/2009	9/15/2009	100 Main Bldg. Room 147 First Floor Slab Office South	0.8
1104113	2007552	6/15/2009	9/15/2009	100 Main Bldg. Room 148 First Floor Slab Office East	1.5
1104114	2007590	6/15/2009	9/15/2009	100 Main Bldg. Room 158 First Floor Slab General Offi	1.5
1104115	2007588	6/15/2009	9/15/2009	100 Main Bldg. SD Room 179 First Floor Slab Lounge	0.7
1104116	2007589	6/15/2009	9/15/2009	100 Main Bldg. SD Room 179 First Floor Slab Lounge	0.8
1104117	2007587	6/15/2009	9/15/2009	100 Main Bldg. Room 183 First Floor Slab Navy Recrui	0.9

Comment: RDS Environmental was e-mailed a copy of this report. A copy of this report was emailed to tony@rdsenvironmental.com.

Distributed By: RDS Environmental

Test Performed By: Stephen Miller Certification Number: RNI 2006205

Date Received: 9/17/2009 Date Analyzed: 9/24/2009 Date Reported: 9/24/2009

Report Reviewed By: _____ Report Approved By: Carolyn K. Allen

Carolyn K. Allen President, AccuStar Labs

Disclaimer:

The uncertainty of this radon measurement is ~+/- 10 %. Factors contributing to uncertainty include, statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques, and operation of the dwelling. Interference with test conditions may influence the test results.

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.

NEHA NRPP 101193 AL
NRSB ARL0017
RNL2002200

EPA Method #402-R-92-004
Alpha Track
NEHA Device Code 8205
NRSB Device Code 12001

Laboratory Report For

RDS Environmental-T. Smith
11603 Teller Street Suite A
Broomfield CO 80020

Property Tested

Project # 505324

USAR Center
7402 West Roosevelt Road
Forest Park IL 60130

Log Number	Device Number	Exposure Period		Area Tested	Result (pCi/L)
1104118	2007583	6/15/2009	9/15/2009	100 Main Bldg. Room 190 & 194 First Floor Slab Office	0.8
1104119	2007586	6/15/2009	9/15/2009	100 Main Bldg. SD Room [illegible] First Floor Slab Drill Dec	0.9
1104120	2007614	6/15/2009	9/15/2009	100 Main Bldg. Room 105 First Floor Slab Office/Class	1.5
1104121	2007585	6/15/2009	9/15/2009	100 Main Bldg. B Room 105 First Floor Slab Office/Cla	< 0.4
1104122	2007613	6/15/2009	9/15/2009	100 Main Bldg. Room 108 First Floor Slab Workout Ro	< 0.4
1104123	2007553	6/15/2009	9/15/2009	100 Main Bldg. Room 116 First Floor Slab Office	< 0.4
1104124	2007607	6/15/2009	9/15/2009	100 Main Bldg. SD Room 119 First Floor Slab Office	0.6
1104125	2007608	6/15/2009	9/15/2009	100 Main Bldg. SD Room 119 First Floor Slab Office	< 0.4
1104126	2007609	6/15/2009	9/15/2009	100 Main Bldg. Room 121/122 First Floor Slab Offices	< 0.4
1104127	2007612	6/15/2009	9/15/2009	100 Main Bldg. Room 155 First Floor Office SW	0.7

Comment: RDS Environmental was e-mailed a copy of this report. A copy of this report was emailed to tonv@rdsenvironmental.com.

Distributed By: RDS Environmental

Test Performed By: Stephen Miller Certification Number: RNI 2006205

Date Received: 9/17/2009 Date Analyzed: 9/24/2009 Date Reported: 9/24/2009

Report Reviewed By: _____ Report Approved By: Carolyn K. Allen

Carolyn K. Allen President, AccuStar Labs

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NEHA NRPP 101193 AL
NRSB ARL0017
RNL2002200

EPA Method #402-R-92-004
Alpha Track
NEHA Device Code 8205
NRSB Device Code 12001

Laboratory Report For

RDS Environmental-T. Smith
11603 Teller Street Suite A
Broomfield CO 80020

Property Tested

Project # 505324

USAR Center
7402 West Roosevelt Road
Forest Park IL 60130

Log Number	Device Number	Exposure Period		Area Tested	Result (pCi/L)
1104128	2007610	6/15/2009	9/15/2009	100 Main Bldg. Room 156 First Floor Office West	0.6
1104129	2007558	6/15/2009	9/15/2009	100 Main Bldg. SD Room 157 First Floor Office Central	0.8
1104130	2007575	6/15/2009	9/15/2009	100 Main Bldg. SD Room 157 First Floor Office Central	0.9
1104131	2007582	6/15/2009	9/15/2009	100 Main Bldg. Room 101 First Floor Training Room	1.2
1104132	2007580	6/15/2009	9/15/2009	100 Main Bldg. Room 102 First Floor Office Northwest	1.3
1104133	2007581	6/15/2009	9/15/2009	100 Main Bldg. Room 115 First Floor Office South	0.6
1104134	2007577	6/15/2009	9/15/2009	100 Main Bldg. B Room 187 First Floor Office West	< 0.4
1104135	2007576	6/15/2009	9/15/2009	100 Main Bldg. Room 187 First Floor Office West	1.0
1104136	2007578	6/15/2009	9/15/2009	100 Main Bldg. Room 189 First Floor Office	1.0
1104137	2007579	6/15/2009	9/15/2009	100 Main Bldg. Room 192 First Floor Office West	1.5

Comment: RDS Environmental was e-mailed a copy of this report. A copy of this report was emailed to tony@rdsenvironmental.com.

Distributed By: RDS Environmental

Test Performed By: Stephen Miller Certification Number: RNI 2006205

Date Received: 9/17/2009 Date Analyzed: 9/24/2009 Date Reported: 9/24/2009

Report Reviewed By: _____ Report Approved By: Carolyn K. Allen

Carolyn K. Allen President, AccuStar Labs

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NEHA NRPP 101193 AL
NRSB ARL0017
RNL2002200

EPA Method #402-R-92-004
Alpha Track
NEHA Device Code 8205
NRSB Device Code 12001

Laboratory Report For

RDS Environmental-T. Smith
11603 Teller Street Suite A
Broomfield CO 80020

Property Tested

Project # 505324

USAR Center
7402 West Roosevelt Road
Forest Park IL 60130

Log Number	Device Number	Exposure Period		Area Tested	Result (pCi/L)
1104138	2007591	6/15/2009	9/15/2009	100 Main Bldg. Room 163 First Floor Office South	1.3
1104139	2007611	6/15/2009	9/15/2009	100 Main Bldg. Room 198/99 First Floor Office South	1.4
1104140	2007592	6/15/2009	9/15/2009	100 Main Bldg. Room 162 First Floor Office South	1.3
1104141	2007593	6/15/2009	9/15/2009	100 Main Bldg. Room 164 First Floor Office South	1.3
1104142	2007594	6/15/2009	9/15/2009	100 Main Bldg. Room 159 First Floor Office East	1.9
1104143	2007596	6/15/2009	9/15/2009	100 Main Bldg. Room 139 First Floor Offices	1.2
1104144	2007597	6/15/2009	9/15/2009	100 Main Bldg. Room 138 First Floor Office Southwest	0.7
1104145	2007595	6/15/2009	9/15/2009	100 Main Bldg. Room 137 First Floor Office North	0.6
1104146	2007606	6/15/2009	9/15/2009	100 Main Bldg. Room 127 First Floor Office East	0.6
1104147	2007599	6/15/2009	9/15/2009	150 Main Bldg. Room 126 First Floor Office West	0.5

Comment: RDS Environmental was e-mailed a copy of this report. A copy of this report was emailed to tony@rdsenvironmental.com.

Distributed By: RDS Environmental

Test Performed By: Stephen Miller Certification Number: RNI 2006205

Date Received: 9/17/2009 Date Analyzed: 9/24/2009 Date Reported: 9/24/2009

Report Reviewed By: _____ Report Approved By: Carolyn K. Allen

Carolyn K. Allen President, AccuStar Labs

Disclaimer:

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AccuStar Labs

Radon in Air

NEHA NRPP 101193 AL
NRSB ARL0017
RNL2002200

EPA Method #402-R-92-004
Alpha Track
NEHA Device Code 8205
NRSB Device Code 12001

Laboratory Report For

RDS Environmental-T. Smith
11603 Teller Street Suite A
Broomfield CO 80020

Property Tested

Project # 505324

USAR Center
7402 West Roosevelt Road
Forest Park IL 60130

Log Number	Device Number	Exposure Period		Area Tested	Result (pCi/L)
1104148	2007598	6/15/2009	9/15/2009	150 Main Bldg. Room 151 First Floor Office North	0.9
1104149	2007571	6/15/2009	9/15/2009	102 Garage-Navy First Floor West Bay	< 0.4
1104150	2007572	6/15/2009	9/15/2009	101 Garage Army Tenants SD First Floor West Bay	< 0.4
1104151	2007573	6/15/2009	9/15/2009	101 Garage Army Tenants SD First Floor West Bay	< 0.4
1104152	2007574	6/15/2009	9/15/2009	101 Garage Army Tenants First Floor East Bay	< 0.4
1104153	999872			Not Indicated	
1104154	999871			Not Indicated	Devices left by last inspection company (NO Results)
1104155	999875			Not Indicated	

Comment: RDS Environmental was e-mailed a copy of this report. A copy of this report was emailed to tony@rdsenvironmental.com.

Distributed By: RDS Environmental

Test Performed By: Stephen Miller Certification Number: RNI 2006205

Date Received: 9/17/2009 Date Analyzed: 9/24/2009 Date Reported: 9/24/2009

Report Reviewed By: _____ Report Approved By: Carolyn K. Allen

Carolyn K. Allen President, AccuStar Labs

Disclaimer:

The uncertainty of this radon measurement is ~+/- 10 %. Factors contributing to uncertainty include, statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques, and operation of the dwelling. Interference with test conditions may influence the test results.

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AccuStar Labs
11 Awl Street
Medway MA 02053
888-480-8812 fax 508-533-8831

Alpha Track Test Data Sheet

Send Written Report To:

RJS, INC.
11605 TELLER ST.
BROOMFIELD CO 80020

Contact: TONY SMITH Tel:

E-Mail Address: TONY@RJSRAD.COM, RONMENTAL.COM

Project Number: SC5324

Site Name USAR CENTER

Address 7402 W. ROOSEVELT RD

City State Zip FOREST PARK IL 60130-2587

Person Conducting Test: STEPHEN MILLER RN120061205

SD = SIMULTANEOUS DUPLICATE B = BLANK

Lab Use Only	Device Number	Building #	Unit #	Floor	Location	Start Date	Stop Date	Lab Use
	2007557	100 = MAIN BUILDING	RM 134	1ST FL SLAB	CONFERENCE BY EAST WALL	JUN 15 2009	SEP 15 2009	
	2007551	100 " "	125	"	MAIL RM GENERAL AREA - NORTH	JUN 15 2009	SEP 15 2009	
	2007555	" " "	149	"	OFFICE - SOUTH	JUN 15 2009	SEP 15 2009	
	2007556	" " "	146	"	GENERAL OFFICE NORTH	JUN 15 2009	SEP 15 2009	
	2007554	" " "	147	"	OFFICE SOUTH	JUN 15 2009	SEP 15 2009	
	2007552	" " "	148	"	OFFICE EAST	JUN 15 2009	SEP 15 2009	
	2007590	" " "	155	"	GENERAL OFFICE AREA CENTER WEST	JUN 15 2009	SEP 15 2009	
	2007588	" " " SD	179	"	LOUNGE SOUTH	JUN 15 2009	SEP 15 2009	
	2007589	" " " SD	179	"	LOUNGE SOUTH	JUN 15 2009	SEP 15 2009	
	587	" " "	183	"	NAVY RECRUITING OFF. SOUTH - CENTER	JUN 15 2009	SEP 15 2009	

AccuStar Labs
11 Awl Street
Medway MA 02053
888-480-8812 fax 508-533-8831

Alpha Track Test Data Sheet

Send Written Report To:

RSS, INC.
1100 Technology Dr.
Brookfield Co 80020

Contact: Tony Smith Tel:

E-Mail Address: Tsmith@RSSEnvironmental.com

Project Number: 505324

Site Name USAR CENTER

Address 2402 W. Roosevelt Rd

City State Zip Forest Park IL 60130-2587

Person Conducting Test: Stephen Miller RN120062655

Lab Use Only	Device Number	Building #	Unit #	Floor	Location	Start Date	Stop Date	Lab Use
	2007 583	100 - MAIN BLDG	190 & 194	1st Fl Slab	OFFICE North - 194 - Exterior	JUN 15 2009	SEP 15 2009	
	2007 586	100 " " SD	174	"	Drill Deck East - Bulletin Bd	JUN 15 2009	SEP 15 2009	
	2007 584	" " " SD	174	"	Drill Deck East - Bulletin Bd	JUN 15 2009	SEP 15 2009	
	2007 614	" " "	105	"	OFFICE/CLASS	JUN 15 2009	SEP 15 2009	
	2007 585	" " " B	105	"	"	JUN 15 2009	SEP 15 2009	
	2007 613	" " "	105	"	Workout Rm	JUN 15 2009	SEP 15 2009	
	2007 553	" " "	114	"	OFFICE	JUN 15 2009	SEP 15 2009	
	2007 609	" " " SD	119	"	Office	JUN 15 2009	SEP 15 2009	
	2007 608	" " " SD	119	"	Office	JUN 15 2009	SEP 15 2009	
	2007 609	" " "	121 / 122	"	OFFICES	JUN 15 2009	SEP 15 2009	

AccuStar AccuStar Labs
11 Awl Street
Medway MA 02053
888-480-8812 fax 508-533-8831

Alpha Track Test Data Sheet

3 of 5

Send Written Report To:

RDS, INC.
11603 TELLER ST.
BROOMFIELD CO 80020

Contact: TONY SMITH Tel:

E-Mail Address: TONY@RDSENVIRONMENTAL.COM

Project Number: 505324

Site Name: USAR CENTER

Address: 7402 W. ROOSEVELT RD

City State Zip: FOREST PARK IL 60130 2587

Person Conducting Test: STEPHEN MILLER RN12000205

Lab Use Only	Device Number	Building #	Unit #	Floor	Location	Start Date	Stop Date	Lab Use
	2007 612	100 - MAIN BLDG.	155	1ST FL SLAB	OFFICE - SW-COL.	JUN 1 5 2009	SEP 1 5 2009	
	2007 610	100 - " "	156	1ST FL SLAB	OFFICE - WEST	JUN 1 5 2009	SEP 1 5 2009	
	2007 558	" " " SD	157	1ST FL SLAB	OFFICE CENTER COL.	JUN 1 5 2009	SEP 1 5 2009	
	2007 575	" " " SD	157	1ST FL SLAB	OFFICE CENTER COL.	JUN 1 5 2009	SEP 1 5 2009	
	2007 582	" " "	101	SLAB 1ST FL	Training Rm CENTER - CAGE	JUN 1 5 2009	SEP 1 5 2009	
	2007 580	" " "	102	"	OFFICE NW - CABINET	JUN 1 5 2009	SEP 1 5 2009	
	2007 581	" " "	115	"	OFFICE S - SHELVING	JUN 1 5 2009	SEP 1 5 2009	
	2007 577	" " " B	187	"	OFFICE WEST	JUN 1 5 2009	SEP 1 5 2009	
	2007 576	" " "	187	"	"	JUN 1 5 2009	SEP 1 5 2009	
	2007578	" " "	189	"	OFFICE	JUN 1 5 2009	SEP 1 5 2009	

AccuStar Labs
11 Awl Street
Medway MA 02053
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Alpha Track Test Data Sheet

Send Written Report To:

RDS, INC.
11605 Teller St
Brighton CO 80601

Contact: Tony Smith Tel:

E-Mail Address: Tony@RDSEnvironmental.com

Project Number: 505324

Site Name USAR CENTER

Address 7402 W. Roosevelt Rd

City State Zip Forest Park IL 60130 2351

Person Conducting Test: Stephen Miller RN120062205

Lab Use Only	Device Number	Building #	Unit #	Floor	Location	Start Date	Stop Date	Lab Use
	2007579	100 - MAIN BLDG	192	1ST FL SLAB	OFFICE WEST	JUN 15 2009	SEP 15 2009	
	2007591	100 - " "	163	"	OFFICE SOUTH - DOOR	JUN 15 2009	SEP 15 2009	
	2007611	" " "	198/199	"	OFFICE SOUTH 198 - CENTER	JUN 15 2009	SEP 15 2009	
	2007592	" " "	162 ~~169~~	"	OFFICE SOUTH - DOOR	JUN 15 2009	SEP 15 2009	
	2007593	" " "	141	"	OFFICE SOUTH @ DOOR	JUN 15 2009	SEP 15 2009	
	2007594	" " "	159	"	OFFICE EAST	JUN 15 2009	SEP 15 2009	
	2007596	" " "	119	"	OFFICE OPEN PLAN	JUN 15 2009	SEP 15 2009	
	2007597	" " "	138	"	OFFICE SW	JUN 15 2009	SEP 15 2009	
	2007595	" " "	137	"	OFFICE NORTH	JUN 15 2009	SEP 15 2009	
	2007606	" " "	127	"	OFFICE EAST	JUN 15 2009	SEP 15 2009	

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Alpha Track Test Data Sheet

5 of 5

Send Written Report To:

RDS, INC.
11605 Teller St.
Broomfield Co 80020

Contact: Tony Smith Tel:

E-Mail Address: Tsmith@rosenvironmental.com

Project Number: 5053274

Site Name USAR CENTER

Address 7402 W. Roosevelt Rd

City State Zip Forest Park IL 60130-2587

Person Conducting Test: Stephen Miller RN12006205

Lab Use Only	Device Number	Building #	Unit #	Floor	Location	Start Date	Stop Date	Lab Use
	2007 599	150 - MAIN BLDG	126	1ST FL SLAB	OFFICE WEST - LOCKER	JUN 15 2009	SEP 15 2009	
	2007 598	"	151	"	OFFICE - NORTH-WALL	JUN 15 2009	SEP 15 2009	
	2007 571	102 - GARAGE - NAVY		1ST FL SLAB	WEST BAY - CAGE	JUN 16 2009	SEP 15 2009	
	2007 572	UNDERGATE 101 - ARMY TENANTS	SD	"	WEST BAY - CAGE	JUN 16 2009	SEP 15 2009	
	2007 573	101 - "	SD	"	WEST BAY - CAGE	JUN 16 2009	SEP 15 2009	
	2007 574	101 - "	—	"	EAST BAY - WEST CAGE	JUN 16 2009	SEP 15 2009	

R 01/08

Appendix E
Survey Reports with Inspector Certifications

ASBESTOS AND LEAD-BASED PAINT SURVEY REPORT

Lead-based Paint and Asbestos Survey
TSCA, Compliance Survey - Facility # IL027
7402 West Roosevelt Road
Forest Park, Illinois 60130-2587

PREPARED FOR

CH2M Hill

PREPARED BY

Professional Service Industries, Inc.
4421 W. Harrison Street
Hillside, IL 60162
Phone: (708) 236-0720
Fax: (708) 236-0721

PSI Project No. 0047411

October 2, 2009

psi Information To Build On
Engineering • Consulting • Testing

ASBESTOS AND LEAD-BASED PAINT SURVEY REPORT

Lead-based Paint and Asbestos Survey
TSCA, Compliance Survey - Facility # IL027
7402 West Roosevelt Road
Forest Park, Illinois 60130-2587

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PSI Project No. 0047411

October 2, 2009

Jeff Chapman
Project Manager

Michael Tjaden
Principal Consultant

TABLE OF CONTENTS

SECTION

EXECUTIVE SUMMARY

Professional Service Industries, Inc. was retained by CH2M Hill to conduct a survey for suspect asbestos-containing materials (ACM) and lead-based paint of Facility ID IL027, located at 7402 West Roosevelt Road, Forest Park, Illinois.

PSI understands that CH2M Hill requested a survey of the site for asbestos-containing materials and lead-based paint for the purpose of assessing potential site hazards on the interior and exterior of each building. The asbestos survey is intended to satisfy requirements for renovation as provided in the National Emission Standard for Asbestos (40 CFR 61). However, it should be noted that destructive sampling, such as behind finished surfaces (drywall walls, above hard ceilings, etc.), inside mechanical chases, etc. was not performed during the survey. If suspect asbestos-containing materials other than those addressed in this report are identified, those materials should be assumed to contain asbestos until sampling and analysis of the materials prove otherwise.

Authorization to perform the assessment was given by a signed copy of PSI proposal No. 2849 between CH2M Hill and PSI, dated April 30, 2009.

FINDINGS

ASBESTOS SURVEY

This survey was performed from June 15, 2009 through June 16, 2009 by asbestos inspectors Edward Wagner, Illinois Department of Public Health (IDPH) License No. 100-01778 and Cosmos Ugbebor, IDPH License No. 100-02518. The survey encompassed the interior and exterior of Facility ID IL027, which was a total of three (3) buildings. Twenty-two (22) homogenous materials were determined to be suspect for asbestos. Suspect materials were assessed for their physical condition and friability. Quantification of suspect asbestos-containing materials was conducted using visual estimation. Sixty-six (66) samples were collected and analyzed by Polarized Light Microscopy (PLM) for asbestos content. Based on laboratory analysis, asbestos containing materials were in three buildings. Please refer to the summary table in Section 1 for complete details on each homogeneous material.

The following asbestos-containing materials were identified:

Armed Forces Reserve Center (ARFC Building)

- Black mastic for 12” x 12” green vinyl floor tile
- Black mastic for 12” x 12” black vinyl floor tile
- Mastic for bottom layer of floor tile under 12” x 12” gray vinyl floor tile
- Black mastic for 12”x12” multi-colored off-white vinyl floor tile
- Pipe and elbow insulation throughout
- 12” x 12” black vinyl floor tile, mastic, and bottom layer of vinyl floor tile and mastic
- Black mastic for 9” x 9” black vinyl floor tile

Organizational Maintenance Building (OMB)
- Window caulking

Two (2) homogeneous materials were assumed to be asbestos containing materials (ACM). These materials could not be sampled without compromising the integrity of the material. These materials have a history of being manufactured with asbestos and therefore are assumed to contain asbestos until proven otherwise by analytical testing.

The following materials assumed to be asbestos-containing were identified:
- Transite Sink in Room 261 of the ARFC Building
- Fire Doors in the ARFC Building

Please refer to the summary table in Section 1 for complete details on each identified and/or assumed homogeneous material.

The following area was inaccessible during the survey:

- Weapons Vault

If suspect asbestos-containing materials are identified within the Weapons Vault, those materials should be assumed to contain asbestos until sampling and analysis of the materials prove otherwise.

It should be noted that some ACM might not be accurately identified and/or quantified by PLM. As an example, the original fabrication of vinyl floor tiles routinely involved milling of asbestos fibers to extremely small sizes. As a result, these fibers may go undetected under the standard polarized light microscopy methods. Transmission Electron Microscopy (TEM) is required for a more definitive analysis of these materials. This survey revealed the presence of floor tile with less than 1% asbestos via PLM analysis. PSI recommends additional analysis by TEM as described above and recommended by the Illinois Department of Public Health.

LEAD-BASED PAINT SURVEY
The lead-based paint survey conducted at Facility ID IL027 consisted of a visual inspection of painted surfaces by Edward Wagner, an IDPH-licensed Lead Inspector (License No. L-3652). Testing of the surfaces was conducted with an x-ray fluorescence (XRF) device. In addition, an assessment of the general condition of the painted surfaces and confirmation paint chip samples were performed where applicable. Painted surfaces testing greater than 1 mg/cm³ or 0.5% for lead are considered lead-based paint.

As a result of the survey, the following lead-based paints were identified:
- Gray paint on beam in the Organization Maintenance Shop (OMS)
- Black paint on the door and door frame in the OMS Building
- Red paint on the exterior of the OMB
- Yellow paint on the exterior concrete parking blocks

When lead-based paint deteriorates or is disturbed, the dust or fumes (if heated) can potentially become an airborne health hazard and/or an ingestion health hazard through physical contact. Proper abatement and cleaning procedures (for either repair or removal), environmental controls and personal protective equipment should be utilized whenever lead-based paint is encountered. Paint-chip dust/debris should be thoroughly cleaned utilizing proper cleaning procedures, environmental controls and personal protective equipment, from all surfaces whenever it occurs.

According to state and federal guidelines, a paint is considered to be “lead-based” if its lead concentration is 0.5% by weight or higher. However, any painted surface where lead was detected above the laboratory-reporting limit contains lead. This includes those paints that also meet the definition of lead-based paint. The Occupational Safety & Health Administration (OSHA) regulates workers exposure to lead concentrations based on the permissible exposure limit of 50 μg/m3. Therefore, in order to satisfy OSHA requirements, worker protection and monitoring may be required for work activities that disturb paints that contain lead in any amount. In accordance with the OSHA Construction Standard for Lead (29 CFR 1926.62), it is the contractors’ responsibility to protect their workers when an employee may be occupationally exposed to lead.

ACM SURVEY RESULTS - Facility IL027
7402 West Roosevelt Road
Forest Park, Illinois 60130-2587

The following homogeneous building material types were sampled as part of this survey and their results are summarized in the table below:

MTL #	MATERIAL DESCRIPTION	LOCATION	F/NF[1]	COND.[2]	% ACM[3]	# SAMPLES	QUANTITY
1	**12" x 12" green vinyl floor tile/ black mastic**	**Throughout AFRC building hallways**	**NF**	**Good**	**ND tile 4% mastic**	**3**	**20,000 sf**
2	**12" x 12" black vinyl floor tile/ black mastic**	**Throughout AFRC building hallways**	**NF**	**Good**	**ND tile 4% mastic**	**3**	**14,000 sf**
3	Black vinyl baseboard/ brown mastic	Throughout AFRC building	NF	Good	ND baseboard ND mastic	3	16,000 lf
4	Yellow carpet mastic	AFRC Building; first and second floors	NF	Good	ND	3	8,500 sf
5	**12" x 12" gray vinyl floor tile/ black mastic over second layer of tile/mastic**	**AFRC Building; north and east rooms**	**NF**	**Good**	**ND tile ND mastic ND tile 4% mastic**	**3**	**7,000 sf**
6	12" x 12" gray vinyl floor tile/ yellow mastic (3 layers)	AFRC Building; Room 179-180, 187	NF	Good	ND tile ND mastic ND tile ND mastic ND tile ND mastic	3	2,200 sf
7	2' x 2' white lay-in ceiling tile	Throughout AFRC building	F	Good	ND	3	30,000 sf
8	Gray vinyl baseboard/ yellow mastic	AFRC Building; first floor, east side	NF	Good	ND baseboard ND mastic	3	2,200 lf
9	Blue vinyl baseboard/ tan mastic	AFRC Building; vestibule	NF	Good	ND baseboard ND mastic	3	1,000 lf
10	Brown vinyl baseboard/ tan mastic	AFRC Building; rooms 182, 183, 184, and 185	NF	Good	ND baseboard ND mastic	3	1,200 lf
11	**12" x 12" multi off-white vinyl floor tile/ black mastic**	**AFRC Building; Room 114 and 119**	**NF**	**Fair**	**ND tile 4% mastic**	**3**	**2,000 sf**
12	Plaster	AFRC Building; West hallway, vestibules	NF	Fair	ND layer 1 ND layer 2	3	1,000 sf
13	Drywall/ joint compound	AFRC Building; interior walls	NF	Good	ND drywall ND joint comp.	3	8,000 sf
14	Paper on fiberglass insulation	OMS Building; Garage ceiling	F	Fair	ND	3	2,000 lf
15	**Window caulk (three types within each sample)**	**OMB Building; Garage (interior)**	**NF**	**Fair**	**3% layer 1 2% layer 2 2% layer 3**	**3**	**600 lf**
16	Roofing material	AFRC building roof (exterior)	NF	Good	ND	3	76,201 sf
17	Roof caulk	AFRC building roof (exterior)	NF	Good	ND layer 1 ND layer 2	3	7,000 lf
18	**2" pipe elbow insulation**	**AFRC Building; above ceilings, hallway, mechanical rooms**	**F**	**Poor**	**35%**	**3**	**160 each**
19	**12" drain pipe elbow insulation**	**AFRC Building; second floor**	**F**	**Fair**	**45%**	**3**	**25 each**

[1] F = Friable; NF = Nonfriable Friability is further defined in section 4.
[2] Cond. = Condition Of Materials Either good, fair or poor. These are further defined is section 4.
[3] ND = None Detected
Bold = indicates that the material tested positive for asbestos

ACM SURVEY RESULTS - Facility IL027 (Continued)

MTL #	MATERIAL DESCRIPTION	LOCATION	F/NF[1]	COND.[2]	% ACM[3]	# SAMPLES	QUANTITY
20	**12" x 12" black vinyl floor tile/ black mastic (2 layers)**	**AFRC Building; Room 120**	**NF**	**Fair**	**2% tile layer 1 5% mastic layer 1 2% tile layer 2 5% mastic layer 2**	**3**	**800 sf**
21	**9" x 9" black vinyl floor tile/ black mastic**	**AFRC Building; Second floor; northeast hallway**	**NF**	**Fair**	**ND tile 5% mastic**	**3**	**1,000 sf**
22	Roofing material	OMS Building; Garage roof (exterior)	NF	Good	ND	3	1,846 sf

[1] F = Friable; NF = Nonfriable Friability is further defined in section 4.
[2] Cond. = Condition Of Materials Either good, fair or poor. These are further defined is section 4.
[3] ND = None Detected
Bold = indicates that the material tested positive for asbestos

ASSUMED ACM - Facility IL027
7402 West Roosevelt Road
Forest Park, Illinois 60130-2587

One (1) homogeneous material was assumed to be asbestos containing materials (ACM). This material could not be sampled without compromising the integrity of the material. These materials have a history of being manufactured with asbestos and therefore are assumed to contain asbestos until proven otherwise by analytical testing.

MTL #	MATERIAL DESCRIPTION	LOCATION	F/NF[1]	COND.[2]	# SAMPLES	QUANTITY
1	**Transite Sink**	**AFRC Building; Room 261**	**NF**	**Good**	**NA**	**1**
2	**Fire Doors**	**AFRC Building; Stairwells**	**NF**	**Good**	**NA**	**8**

[1] F = Friable; NF = Nonfriable Friability is further defined in section 4.
[2] Cond. = Condition Of Materials Either good, fair or poor. These are further defined is section 4.
Materials assumed to contain asbestos are highlighted in **bold** text

LBP CHIP SAMPLE RESULTS - Facility IL027 7402 West Roosevelt Road Forest Park, Illinois 60130-2587

The following paint chip samples were taken to confirm XRF readings as part of this survey and their results are summarized in the table below. XRF data can be found in the Appendix.

TEST #	COMPONENT	LOCATION	SUBSTRATE	COLOR	WALL	COND.[1]	RESULT[2]
01	Cabinet	OMS Building	Metal	Gray	NA	Good	<0.0071
02	Cage	OMB Building	Metal	Gray	NA	Good	<0.053
03	**Parking Block**	**Exterior parking areas**	**Concrete**	**Yellow**	**NA**	**Good**	**1.0**

[1] Cond. = Condition Of Materials Either good, fair or poor. These are further defined is section 4.
[2] Result is expressed in percent by weight.
* Chip sample was collected for confirmation analysis
Materials determined to contain lead are highlighted in **bold** text

PURPOSE

The purpose of this study was to identify those building materials that contain asbestos and lead-based paint.

ESCORT

The inspectors were escorted through the facility by personnel from Facility IL027. Jim Mallison of CH2M Hill was on-site June 15, 2009.

AUTHORIZATION

Authorization to perform the assessment was given by a signed copy of PSI proposal No. 2849 between CH2M Hill and PSI, dated April 30, 2009. Access to the site was provided by personnel of Facility IL027.

BUILDING OBSERVATIONS

Facility ID IL027 is located at 7402 West Roosevelt Road in Forest Park, IL. The suspect asbestos and lead-based paint survey was conducted from June 15, 2009 through June 17, 2009. Surveys were conducted on 3 permanent structures using predetermined square footage provided. These quantities were field verified. The buildings on-site are as follows:

76,201 square feet AFRC Building

The AFRC Building is a cinder block and brick building with a flat, ballasted membraned, built-up roof. The floors are vinyl floor tile over a concrete subfloor. The interior walls are concrete block and drywall. The ceilings are 2’ x 2’ lay-in ceiling tiles.

6,528 square feet OMS Building

The OMS Building is a brick building with a flat, built-up roof. The floors are concrete. The interior walls are concrete block. The ceiling is an exposed deck.

1,846 square feet OMB Building

The OMB Building is a brick building with a flat, built-up roof. The floors are concrete. The interior walls are brick. The ceiling is an exposed deck.

SECTION 3
Warranty

PSI warrants that the findings contained herein have been prepared with the level of care and skill exercised by experienced and knowledgeable environmental consultants who are appropriately licensed or otherwise trained to perform asbestos assessments pursuant to OSHA as well as state and local requirements as applicable.

The survey included inspection of accessible materials such as above or behind suspended ceilings or other non-permanent structures. PSI did not inspect or sample inaccessible areas such as behind walls or within ductwork and did not dismantle any part of the structure to survey inaccessible areas.

Inaccessible is defined as areas of the building that could not be tested (sampled) without destruction of the structure or a portion of the structure. In the event that access to a portion of the building was not obtained (which otherwise would have been tested), such limitations are specifically identified in Section 1 of this report.

As directed by the client, PSI did not provide any service to investigate or detect the presence of moisture, mold or other biological contaminates in or around any structure, or any service that was designed or intended to prevent or lower the risk of the occurrence of the amplification of the same. Client acknowledges that mold is ubiquitous to the environment with mold amplification occurring when building materials are impacted by moisture. Client further acknowledges that site conditions are outside of PSI's control, and that mold amplification will likely occur, or continue to occur, in the presence of moisture. As such, PSI cannot and shall not be held responsible for the occurrence or recurrence of mold amplification.

SECTION 4
Methods

Asbestos inspection and sampling procedures were performed in accordance with the guidelines published by the Environmental Protection Agency (EPA) in 40 CFR Part 763 Subpart E, October 30, 1987. Sampling procedures include collection of at least three (3) samples of all suspect materials as recommended by EPA Guidance document 700/B-92/001, February 1992 and PSI's scope of work. The inspection and survey described below was performed by an EPA accredited inspector.

The lead-based paint survey was conducted on representative interior and exterior building components which have been painted, stained, or varnished in general accordance with the U.S. Department of Housing and Urban Development Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing Chapter 7: Lead-Based Paint Inspection 1997 Revision.

GENERAL ORGANIZATION

Before commencing the survey, the inspectors spoke with the Client to discuss the survey approach, the need for unrestricted access and construction related information.

The survey consisted of three major activities: visual inspection, sampling, and quantification of building materials. Although these activities are listed separately, they are integrated tasks.

VISUAL INSPECTION (ASBESTOS)

An initial building walkthrough was conducted to determine the presence and condition of suspect materials that were accessible and/or exposed. Materials that were similar in general appearance were grouped into homogeneous sampling areas.

- Homogeneous Material Classifications

  A preliminary walkthrough of the building was conducted to determine areas of materials that were visually similar in color; texture, general appearance, and which appeared to have been installed at the same time. Such materials are termed "homogeneous materials" by the EPA. During this walkthrough, the approximate locations of these homogeneous materials were also noted.

  Following the EPA inspection protocol, each identified suspect homogeneous material was placed in one of the following EPA classifications:

  1. **Surfacing Materials** (spray or trowel applied to building members)

2. **Thermal System Insulation** (materials generally applied to various mechanical systems)

3. **Miscellaneous Materials** (any materials which do not fit either of the above categories)

- Friability Classifications

  A regulated asbestos-containing material (RACM) as defined by National Emissions Standard for Hazardous Air Pollutants (NESHAP) is any (a) Friable asbestos material, (b) Category I non-friable ACM that has becomes friable, (c) Category I non- friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

  Following the EPA inspection protocol, each identified suspect homogeneous material was placed in one of the following EPA classifications:

  - **Friable ACM Materials** NESHAP defines a friable ACM as any material containing more than one percent asbestos, which, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

  - **Category I Non-friable ACM** NESHAP defines a Category I non-friable ACM as packing, gaskets, resilient floor covering (except vinyl sheet flooring products which are considered friable), and asphalt roofing products, which contain more than one percent asbestos.

  - **Category II Non-friable ACM** NESHAP defines a Category II non-friable ACM as any material, except for a Category I non-friable ACM, which contains more than one- percent asbestos and cannot be reduced to a powder by hand pressure when dry.

SAMPLING PROCEDURES (ASBESTOS)

Following the walkthrough, the inspector collected selected samples of accessible materials identified as suspect asbestos-containing materials (ACM).

EPA guidelines were used to determine the sampling protocol. Sampling locations were chosen to be representative of the homogeneous material.

Samples of surfacing material were collected in accordance with the EPA random sampling protocol outlined in the EPA publication, "Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials" (EPA 560/5-85-030a, October, 1985). The homogeneous sampling area was divided into a grid of nine (9) sub-areas.

If nine samples were taken, one sample was taken from each sub-area. If less than nine samples were taken, the EPA random numbering diagram was used to determine which sub-areas would be sampled. While an effort was made to extract the samples from approximately the middle of the sub-area, representative samples were taken preferentially from already damaged areas or areas which were the least visible.

Samples of thermal system insulation and miscellaneous materials were taken as randomly as possible while again attempting to sample already damaged areas so as to minimize disturbance of the material.

SAMPLING PROCEDURES (LEAD PAINT)

The XRF testing was performed with the LPA-1, manufactured by Radiation Monitoring Devices (RMD), operated in the quick mode. In Quick Mode, the XRF Device seeks the shortest period of time to assure a definitive measurement with 95% confidence (2 sigma). The LPA-1 analyzer concludes a measurement once the 2 sigma confidence level is achieved, typically between 2 to 4 seconds depending on the lead content. Validation checks against known lead-based paint standards were performed before testing began and after the testing was completed to ensure proper operation of the XRF testing device in accordance with instrument operating guidelines.

XRF testing values were collected by placing the LPA-1 scanner on the surface to be tested and exposing the paint film to gamma radiation. XRF analyzers are usually capable of penetrating up to 3/8" of paint to determine lead content. At the conclusion of each test, the shutter closes and the display on the control console shows the lead concentration in mg/cm² for manual tabulation.

The accuracy and precision of any measurement is determined by the length of each test, instrument validation checks against known standards or control blocks, measurement conditions, and mathematical laws of random error. Even when XRF equipment is properly operated within the manufacturer's specification, unusual substrates, paint additives, uneven paint applications, electrical fields, lead components in wall cavities, and many other variables may cause significant fluctuations in apparent test values. Due to the limitations and inherent problems associated with XRF field-testing, confirmation sampling and assessment of XRF data is recommended before major abatement activities are started.

A representative survey was conducted throughout the facility. In each area, XRF testing was performed on representative components with painted, stained or varnished surfaces.

QUANTIFICATION

Quantities of accessible and/or exposed materials that were suspected of containing asbestos were estimated using visual estimation by an IDPH licensed asbestos inspector. This visual estimation was performed using existing facility drawings,

pacing, counting tiles, panels, etc. to determine approximate quantities. These values are sufficiently accurate for the purpose of documenting the presence of asbestos within its space for the purpose of identifying abatement control conditions or for general policy considerations. Actual quantities may differ between visually estimated values and physical measurements. If a licensed asbestos abatement contractor is engaged to remove asbestos containing materials, the abatement contractor is responsible for verifying reported quantities of ACM.

LABORATORY PROCEDURES

Method of Analysis (Asbestos)

Analysis was performed at PSI's NVLAP accredited Laboratory in Pittsburgh, PA. A chain-of-custody, documenting the possession of the samples from the time they were collected until they have been analyzed and stored, was submitted with the bulk samples. The original chain-of-custody accompanied the materials at all times. Custody documentation began at the time the sample was collected and a copy of the chain-of-custody record was retained by each transferor.

Analysis was performed by using the bulk sample for visual observation and slide preparation(s) for microscopic examination and identification. The samples were mounted on slides and then analyzed for asbestos (chrysotile, amosite, crocidolite, anthophyllite, and actinolite/tremolite), fibrous non-asbestos constituents (mineral wool, paper, etc.) and non-fibrous constituents. Asbestos was identified by refractive indices, morphology, color, pleochroism, birefringence, extinction characteristics, and signs of elongation. The same characteristics were used to identify the non-asbestos constituents.

The microscopist visually estimated relative amounts of each constituent by determining the volume of each constituent in proportion to the total volume of the sample, using a stereoscope.

All bulk samples were analyzed by Polarized Light Microscopy (PLM) with dispersion staining as described by Method for the Determination of Asbestos in Bulk Building Materials, EPA/600/R-93/116, July 1993. This is a standard method of analysis in optical mineralogy and the currently accepted method for the determination of asbestos in bulk samples. A suspect material is immersed in a solution of known refractive index and subjected to illumination by polarized light. The characteristic color displays which result enable mineral identification.

The EPA considers a material to be ACM if a single sample from a homogenous material group contains greater than one percent (>1%) asbestos. Therefore, samples in each material group (homogeneous area) were analyzed until the first positive (asbestos-containing) result is determined. In material groups that contain more than one layer, the samples will be read until all layers are determined for their asbestos content.

It should be noted that some ACM may not be accurately identified and/or quantified by PLM. As an example, the original fabrication of vinyl floor tiles routinely involved milling of asbestos fibers to extremely small sizes. As a result, these fibers may go undetected under the standard polarized light microscopy method. Transmission Electron Microscopy (TEM) is required for a more definitive analysis of these materials.

For bulk samples which are found to contain <10% asbestos, Point Count Analysis as described by the method for the determination of asbestos in accordance with Environmental Protection Agency's (EPA) "Interim Method for Identification of Asbestos in Bulk Insulation Samples" (40 CFR 763, Appendix A, Subpart F), is often utilized. As part of this method, a bulk sample is reduced, in an effort to dissolve any non-asbestos constituents, such as calcite. As a result of this reduction process, a concentrated sample is then obtained and analyzed. A minimum number of counts for each sample are 400. The number of identified asbestos points is divided by 400, and then multiplied by 100 in order to calculate the percentage. Each asbestos type is quantified individually. For this survey, no samples were point counted.

INTERPRETATION OF XRF RESULTS

XRF testing results are based upon the published Performance Characteristic Sheet (PCS) for the RMD LPA-1 device. The PCS lists the performance parameters as determined by a joint EPA/HUD evaluation.

1. Test readings of 0.9 mg/cm^2 or below are **negative** for lead-based paint.
2. Test readings of 1.0 mg/cm^2 or above are **positive** for lead-based paint.

According to state and federal guidelines, a paint is considered to be "lead-based" if its lead concentration is 0.5% or 1.0 mg/cm^2 or higher. However, any painted surface where lead was detected above the laboratory-reporting limit contains lead. This includes those paints that also meet the definition of lead-based paint. The Occupational Safety & Health Administration (OSHA) regulates workers exposure to lead concentrations based on the permissible exposure limit of 50 μg/m3. Therefore, in order to satisfy OSHA requirements, worker protection and monitoring may be required for work activities that disturb paints that contain lead in any amount. In accordance with the OSHA Construction Standard for Lead (29 CFR 1926.62), it is the contractors' responsibility to protect their workers when an employee may be occupationally exposed to lead.

In areas where XRF readings were inconclusive, or a flat surface on which to test could not be accomplished, paint chip samples were collected for analysis. Where technically feasible, paint films with pre-existing damage or visually obscured surfaces were selected for paint-chip sample collection. An area was extracted from painted components down to but not including the substrate.

Lead paint chip samples were shipped to Professional Service Industries, Inc. in Pittsburgh, Pennsylvania and were subjected to acid digestion in the laboratory and

analyzed by Flame Atomic Absorption Spectroscopy (AAS) by Method EPA SW-846-7420. Laboratory test results of 0.5% (5,000 ppm) by weight or greater are considered to be lead-based paint by HUD guidelines and IDPH.

Laboratory Quality Control Program

PSI laboratories maintain an in-house quality control program. This program involves blind reanalysis of ten percent of all samples, precision and accuracy controls, and use of standard bulk reference materials.

Prior to the initiation of a project that would involve abatement of asbestos containing materials, a detailed engineering cost estimate and project design is recommended. The engineering cost estimate will incorporate such variables as scheduling and phasing of the project, the size and extent of the project, seasonal factors, operational factors and other restrictions, respiratory protection, alternate abatement options, and type of replacement material. These are considerations that were not included in this scope of work or were unknown at the time of development of budgetary estimate. An engineering cost estimate would also include professional fees, such as for project design, project management, air monitoring and other expenses such as construction supervision.

The following notices, permits and licenses are necessary for abatement work as of the date of this report. The contractor is cautioned to verify these requirements as applicable to the final project scope and confirm that no new requirements exist.

Local Air Quality Board
Written notification is required by the Illinois Environmental Protection Agency at least 10 working days prior to beginning any asbestos abatement project activities on regulated asbestos-containing materials where the quantities are at least 160 square feet, 260 linear feet, or 35 cubic feet. IEPA is the state contact for the federal EPA (NESHAP) on these matters.

IDPH
Written notification is required by the Illinois Department of Public Health (IDPH) at least two (2) working days prior to beginning any asbestos abatement project activities on friable or non-friable asbestos-containing materials whose quantities exceed 3 square feet or 3 linear feet, but do not exceed 160 square feet or 260 linear feet.

Permits
Contractor must obtain all county and/or local municipal permits or licenses required for asbestos abatement work.

Licenses
Contractor must maintain current licenses as required by the Illinois Department of Public Health (IDPH) and Illinois Department of Transportation (IDOT) for the removal, transporting, disposal, or other regulated activity.

Federal regulations which govern asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:

U.S. Department of Labor, Occupational Safety and Health Administration:

Asbestos Regulations
Title 29, Part 1910, Section 1001 of the Code of Federal Regulations

Final Rule
Title 29, Part 1926, Section 1101 of the Code of Federal Regulations

Respiratory Protection
Title 29, Part 1910, Section 134 of the Code of Federal Regulations

Construction Industry
Title 29, Part 1926, of the Code of Federal Regulations

Access to Employee Exposure & Medical Records
Title 29, Part 1910, Section 20 of the Code of Federal Regulations

Hazard Communication
Title 29, Part 1910, Section 1200 of the Code of Federal Regulations

Specifications for Accident Prevention Signs and Tags
Title 29, Part 1910, Section 145 of the Code of Federal Regulations

Environmental Protection Agency (EPA) including but not limited to:

Worker Protection Rule
40 CFR Part 763, Subpart G
CPTS 62044, FLR 2843-9
Federal Register, Vol. 50, No. 134, 7/12/85
P28530-28540

Regulation for Asbestos
Title 40, Part 61, Subpart A of the
Code of Federal Regulations

National Emission Standard for Asbestos
Title 40, Part 61, Subpart M of the Code of Federal Regulations including NESHAP Revision; Final Rule, Federal Register; Tuesday, November 20, 1990.

Asbestos Hazard Emergency Response Act (AHERA)
Regulations 40 CFR 763 Subpart E

U.S. Department of Transportation (DOT) including but not limited to:

Hazardous Substances: Final Rule
Regulation 49 CFR, Parts 171 and 172

State of Illinois

Asbestos Abatement Act
(105 ILCS 105)

Commercial and Public Building Asbestos Abatement Act
(225 ILCS 207)

Rules for Asbestos Abatement for Public and Private Schools
And Commercial and Public Buildings in Illinois
(77 Ill. Adm.Code 855)

Standards which govern asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:

American National Standards Institute (ANSI)

Fundamentals Governing the Design and
Operation of Local Exhaust Systems
Publication Z9.2-79

Practices for Respiratory Protection
Publication Z88.2-80

CODES AND REGULATIONS - LEAD-BASED PAINT

Federal and state regulations which govern lead-based paint work or hauling and disposal of lead-based paint waste materials include but are not limited to the following:

FEDERAL

Housing and Urban Development (HUD) Interim Guidelines

OSHA

Lead In Construction
29 CFR 1926.62

NESHAP

Emissions Standards
40 CFR 50.12

Lead-Based Paint Poisoning Prevention Act (LBPPPA), 1970.

Title 10 - Residential LBP Hazard Reduction Act, 1992, (amendment for LBPPPA, 1970)

Resource Conservation Recovery Act (RCRA)

STATE

Poisoning Prevention Code
77 Ill. Adm. Code 845

ASBESTOS SURVEY

This survey was performed from June 15, 2009 through June 16, 2009 by asbestos inspectors Edward Wagner, Illinois Department of Public Health (IDPH) License No. 100-01778 and Cosmos Ugbebor, IDPH License No. 100-02518. The survey encompassed the interior and exterior of Facility ID IL027, which was a total of three (3) buildings. Twenty-two (22) homogenous materials were determined to be suspect for asbestos. Suspect materials were assessed for their physical condition and friability. Quantification of suspect asbestos-containing materials was conducted using visual estimation. Sixty-six (66) samples were collected and analyzed by Polarized Light Microscopy (PLM) for asbestos content. Based on laboratory analysis, asbestos containing materials were in three buildings. Please refer to the summary table in Section 1 for complete details on each homogeneous material.

The following asbestos-containing materials were identified:

Armed Forces Reserve Center (ARFC Building)

- Black mastic for 12” x 12” green vinyl floor tile
- Black mastic for 12” x 12” black vinyl floor tile
- Mastic for bottom layer of floor tile under 12” x 12” gray vinyl floor tile
- Black mastic for 12”x12” multi-colored off-white vinyl floor tile
- Pipe and elbow insulation throughout
- 12” x 12” black vinyl floor tile, mastic, and bottom layer of vinyl floor tile and mastic
- Black mastic for 9” x 9” black vinyl floor tile

Organizational Maintenance Building (OMB)

- Window caulking

One (1) homogeneous material was assumed to be asbestos containing materials (ACM). This material could not be sampled without compromising the integrity of the material. These materials have a history of being manufactured with asbestos and therefore are assumed to contain asbestos until proven otherwise by analytical testing.

The following materials assumed to be asbestos-containing were identified:

- Transite Sink in Room 261 of the ARFC Building
- Fire Doors in the ARFC Building

Please refer to the summary table in Section 1 for complete details on each identified and/or assumed homogeneous material.

The following area was inaccessible during the survey:

- Weapons Vault

If suspect asbestos-containing materials are identified within the Weapons Vault, those materials should be assumed to contain asbestos until sampling and analysis of the materials prove otherwise.

It should be noted that some ACM might not be accurately identified and/or quantified by PLM. As an example, the original fabrication of vinyl floor tiles routinely involved milling of asbestos fibers to extremely small sizes. As a result, these fibers may go undetected under the standard polarized light microscopy methods. Transmission Electron Microscopy (TEM) is required for a more definitive analysis of these materials. This survey revealed the presence of floor tile with less than 1% asbestos via PLM analysis. PSI recommends additional analysis by TEM as described above and recommended by the Illinois Department of Public Health.

LEAD-BASED PAINT SURVEY

The lead-based paint survey conducted at Facility ID IL027 consisted of a visual inspection of painted surfaces by Edward Wagner, an IDPH-licensed Lead Inspector (License No. L-3652). Testing of the surfaces was conducted with an x-ray fluorescence (XRF) device. In addition, an assessment of the general condition of the painted surfaces and confirmation paint chip samples were performed where applicable. Painted surfaces testing greater than 1 mg/cm³ or 0.5% for lead are considered lead-based paint.

As a result of the survey, the following lead-based paints were identified:

- Gray paint on beam in the OMS
- Black paint on the door and door frame in the OMS
- Red paint on the exterior of the OMB
- Yellow paint on the exterior concrete parking blocks

When lead-based paint deteriorates or is disturbed, the dust or fumes (if heated) can potentially become an airborne health hazard and/or an ingestion health hazard through physical contact. Proper abatement and cleaning procedures (for either repair or removal), environmental controls and personal protective equipment should be utilized whenever lead-based paint is encountered. Paint-chip dust/debris should be thoroughly cleaned utilizing proper cleaning procedures, environmental controls and personal protective equipment, from all surfaces whenever it occurs.

According to state and federal guidelines, a paint is considered to be “lead-based” if its lead concentration is 0.5% by weight or higher. However, any painted surface where lead was detected above the laboratory-reporting limit contains lead. This includes those paints that also meet the definition of lead-based paint. The Occupational Safety & Health Administration (OSHA) regulates workers exposure to lead concentrations based on the permissible exposure limit of 50 μg/m3. Therefore, in order to satisfy OSHA requirements, worker protection and monitoring may be required for work activities that disturb paints that contain lead in any amount. In accordance with the OSHA Construction Standard for Lead (29 CFR 1926.62), it is the contractors’ responsibility to protect their workers when an employee may be occupationally exposed to lead.

SECTION 7
Appendices