

DEFENSE ENVIRONMENTAL
RESTORATION PROGRAM

CAMP HERO

PROJECT NO. CO2NY002400

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DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
CAMP HERO, MONTAUK POINT, NEW YORK
PROJECT NO. C02NY002400

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DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FINDINGS OF FACT AND DETERMINATION OF
DEPARTMENT OF DEFENSE RESPONSIBILITY
CAMP HERO, MONTAUK POINT, NEW YORK
PROJECT NO. C02NY002400

FINDINGS OF FACT

1. This project involves the demolition and removal of unwanted improvements located on land formerly used by the Department of Defense (DOD) for the establishment of Camp Hero. The project will encompass the following:

PROPERTY OWNED BY TOWN OF EAST HAMPTON

- A. BUILDING DEMOLITION - Completely demolish and remove three buildings and foundations (828 square feet total). Include capping of utilities, backfill and compaction.
- B. TRAILER FOUNDATION REMOVAL - Remove twenty trailer foundations (2,700 square feet total). Also remove twenty water utility hook-ups located adjacent to trailer foundations. Include backfill and compaction.
- C. UTILITY POST REMOVAL - Remove twenty short utility posts located adjacent to trailer foundations.
- D. PAVEMENT REMOVAL - Remove 290 square yards of rigid pavement (parking areas).
- E. SITE GRADING AND SEEDING - Site grade and seed 25,000 square yards of area disturbed by demolition.

PROPERTY OWNED BY STATE OF NEW YORK

- A. BUILDING DEMOLITION - Completely demolish and remove 31 buildings and six towers including foundations (77,788 square feet total). Approximately 17 of these buildings contain hot water storage tanks covered with asbestos insulation that will also be removed. Include removal of massive equipment and machinery located in Building #P-203. Some of this equipment is packed with asbestos insulation. Tower #P-201 is a five story building in which the first floor ceiling is coated with sprayed on asbestos insulation. Include capping of utilities, backfill and compaction, and removal of asbestos from 22 buildings. Prior to demolition and selection of disposal method, sampling of insulation used in buildings is necessary to determine the presence of asbestos.
- B. BUNKER DEMOLITION - Reduce reinforced concrete shell of four bunkers (22,168 cubic yards total) to rubble size by implosion. The earth mounds surrounding and topping the bunkers will be used to provide a contoured landscape over the bunker remains.

C. TRAILER REMOVAL - Remove one trailer and foundation located behind Building #P-104-R.

D. DIESEL TANK REMOVAL - Remove one 200,000 gallon diesel tank (Building #2037) and foundation. Include backfill and compaction. Prior to removal and selection of disposal method, vicinity and diesel tank contents will be analyzed for contamination and disposed of in an appropriate manner.

E. RETAINING WALL REMOVAL - Remove retaining wall from around Building #2037 (Diesel Tank). Include backfill and compaction.

F. HYDRANT HOUSE REMOVAL - Remove 6 Hydrant Houses (384 square feet total). Interior hydrant will remain intact.

G. FOUNDATION REMOVAL - Completely remove 18 foundations (14,550 square feet total). Include backfill and compaction.

H. BASKETBALL COURT REMOVAL - Completely remove one Basketball Court (3,000 square feet total). Include backfill and compaction.

I. SEWAGE TREATMENT PLANT DEMOLITION - Pump out system and completely remove the following structures, including foundations:

1. Primary Tank
2. Trickling Filter located under roofed structure
3. Chlorine Contact Chamber
4. Lift Station
5. Control Panel

Backfill and compact disturbed areas.

J. FUEL STORAGE TANK REMOVAL - Remove one 1,000 gallon fuel tank (located above grade), two 25,000 gallon fuel tanks (located below grade), and two 1,000 gallon fuel tanks (located below grade). Backfill and compact. Prior to removal and selection of disposal method, vicinity and fuel tank contents will be analyzed for contamination and disposed of in an appropriate manner.

K. GASOLINE PUMP AND FUEL TANK REMOVAL - Remove one gasoline pump and one 300 gallon fuel tank (located below grade). Backfill and compact. Prior to removal and selection of disposal method, vicinity and fuel tank contents will be analyzed for contamination and disposed of in an appropriate manner.

L. TRANSFORMER REMOVAL - Remove 53 transformers and 2 switches (all ground-mounted). Prior to removal and selection of disposal method, sampling of vicinity and transformer contents for PCB contamination is necessary.

M. TRANSFORMER CAGE REMOVAL - Remove six transformer cages and foundations. Prior to removal and selection of disposal method, vicinity will be analyzed for PCB contents and disposed of in an appropriate method. Backfill and compact.

N. HEATING PIPE AND PIPE SUPPORT REMOVAL - Remove 4,000 linear feet of heating pipe and the pipe support system (support every fifteen feet). Backfill and compact. Prior to demolition and selection of disposal method, sampling of insulation used on all pipes is necessary to determine the presence of asbestos.

O. CHAIN-LINK FENCE REMOVAL - Remove 3,000 linear feet of chain-link fence (located in interior of site) including all posts and concrete footings.

P. ANTENNA REMOVAL - Remove three antennas supported with guy wires located around Building #P-104.

Q. PAVEMENT REMOVAL - Remove 1,600 square yards of rigid pavement (walkways).

R. DRUM REMOVAL - Remove four drums located in Tower #P-201. Prior to removal and selection of disposal method, sampling of drum contents is necessary to determine the presence of contamination.

S. SITE GRADING AND SEEDING - Site grade and seed 350,000 square yards of area disturbed by demolition.

The structures proposed for demolition are considered to be unsightly and a hazard to the safety of the general public within the context of the property's designated use. The State of New York has plans to convert their portion of the site into a park. The Town of East Hampton has plans to build low income housing on their portion of the site.

2. Camp Hero is located in Block Island Sound, Town of Montauk Point, County of Suffolk, State of New York. Montauk Point is approximately 25 miles south of New London, Connecticut and 17 miles east of East Hampton, New York. Audited records of the New York District indicate that by various condemnations proceedings between 29 August 1941 and 9 May 1944, 468.69 acres fee were obtained by the Department of the Army for the establishment of Camp Hero. The subject installation was part of the Long Island Harbor Defense System.

3. By General Order No. 1 dated 3 January 1950, Camp Hero was declared excess to the needs of the Department of the Army.

4. Approximately 307.65 acres fee were transferred by the Department of the Army to the Department of the Air Force for the Montauk Air Force Station. The dates and acreage transferred are as follows: 6 April 1951 - 96.94 acres, 21 October 1955 - 4.11 acres, 12 July 1957 - 8.10 acres, 31 March 1964 - 192.25 acres, and 26 December 1972 - 6.25 acres. The remaining 161.04 acres of Camp Hero were disposed of or transferred pursuant to Report of Excess to the General Services Administration (GSA) or by Secretarial Transfer. On 18 July 1974, 119.26 acres were conveyed to the State of New York for park use. On 23 April 1983, an additional 18.09 acres were conveyed to the State of New York for use as a park. In addition, 17.44 acres were transferred to the Department of the Navy for military purposes and 6.25 acres were transferred to the U.S. Coast Guard for station use. On 15 March 1982, the 307.65 acres transferred to the Air Force for the Montauk Air Force Station were excessed by GSA. GSA conveyed 29.84 acres (housing area) to the Town of East Hampton and 277.71 acres to the State of New York for park use. The

three quitclaim deeds that conveyed subject property to the State of New York contained a recapture clause and a clause stating that the subject property can be used only for park purposes. Also, the quitclaim deed which conveyed 29.84 acres fee to the Town of East Hampton restricts the use of the subject property to low or middle income housing.

5. Portions of the site have been beneficially used in the intervening years since DOD ownership. The Department of the Navy currently utilizes 17.44 acres of the site for military purposes and the U.S. Coast Guard utilizes 6.25 acres for station use. The Town of East Hampton currently owns 29.84 acres of the site and is restricted to use the subject property for low or middle income housing. The majority of East Hampton's property is used for this purpose, however there is a portion of the property that has not been beneficially used since DOD ownership. The portion of the site was formerly used as a trailer park by the DOD. The Town of East Hampton desires that two buildings be completely demolished. Building #P-119 (formerly used as a laundromat) and Building #MAF-30 (formerly used as a sewage pump house) are proposed for demolition. Also a hydrant house (Building #2066) exists on the site and is proposed for demolition, however, the Town has requested that the hydrant remain intact. In addition, the remains of concrete trailer pads and parking spaces as well as utility facilities for each trailer are to be completely removed. The Town of East Hampton desires that all the fire hydrants and roads be retained as well as the bathroom facilities and an 82 gallon water heater located in the laundry room. All of the structures and facilities proposed for demolition and removal are considered unsightly and hazardous. The Town of East Hampton is presently considering developing low income housing on this site.

The State of New York currently owns 415.06 acres of the site and is restricted to use the subject property for park purposes. Buildings #3001, #P-33 and the A,T&T Building are the only buildings currently utilized by the State of New York. Building #3001 and the A,T&T Building are currently being used as an administration and maintenance building for the site. Building #P-33 is currently being used as a garage. None of the remaining buildings existing on the State of New York's property have been beneficially used since DOD ownership. The following buildings are considered unsightly and hazardous to the condition of the site and thus are proposed for demolition: #T-1 (dormitory), #T-3 (gymnasium), #P-6 (library), #P-7 (dormitory), #P-8 (dormitory), #P-11 (dormitory), #P-12 (police headquarters), #P-13 (office - post office), #P-14 (dormitory), #P-15 (dormitory), #P-16 (NCO Club), #P-17 (dispensary), #P-18 (dormitory), #P-19 (dormitory), #P-98, #P-99 (warehouse), #P-101 (operations center), #P-104 (weather station), #P-104-R and trailer behind building, #P-105 (heating plant), #P-106 (guard house), #P-107 (electric switching station), #P-108 (engineer's office), #P-201 (radar tower structure), #P-203 (power plant), #P-204, #P-205 (tower), metal shed located adjacent to #P-205, #P-205T (concrete tower), #P-208 (BCE maintenance shop), #P-209 (tower), #MAF-1 (pump house), #MAF-9 (pump house), #P-210 (tower) and #P-116 (restroom). Four bunkers will also be demolished: one large bunker (#P-100), another large bunker (no building number), one small bunker (#P-115) and another small bunker (no building number). In addition, demolition of six hose houses: #2004, #2005, #2006, #2007, #2009, and #2016 (hydrants to be utilized), a sewage treatment plant, and two guard houses (with no building numbers) is proposed. Also removal of two 1,000 gallon and two 25,000 gallon underground fuel storage tanks, as well as one 1,000 gallon fuel storage tank and one 200,000 gallon diesel tank (Building #2037) located

above ground is proposed. Fifty-three ground-mounted transformers and two switches, as well as six transformer cages are to be removed from the site. In addition, removal of concrete slabs and the piping from the central steam building, as well as the removal of a gas pump and interior fence is proposed.

The following buildings are to be utilized for development of a state park and are to be retained: #P-4 (dormitory), #P-5 (dormitory), #P-9 (post exchange), #P-20 (pump station - filter plant), #P-21 (water treatment plant), #P-22 (mess hall), #P-109 (dormitory), #P-111 (material control-base supply), #P-206 (bowling alley), #MAF-10 (well house), #MAF-12 (well house), and #MAF-31 (reservoir), #3001, #P-33 (garage), and the A,T&T Building.

No significant environmental impact is anticipated by project implementation. This will be determined through the preparation of an Environmental Assessment prior to commencement of work. Camp Hero does not possess attributes which normally would make it eligible to the National Register of Historic Places for a property less than fifty years old. However, the New York State Historic Preservation Office (SHPO) believes that the site may be eligible due to a report that Camp Hero was camouflaged as a New England fishing village. Studies now underway by the Defense Department to categorize World War II facilities as to National Register eligibility should clarify this issue but results are not expected for a few years. No formal site specific studies have been made. No archaeological studies have been undertaken in the project area. Based on settlement patterns found elsewhere it is likely that prehistoric sites are located within this 415 acre property. Construction of structures and facilities in the camp has likely damaged or destroyed any archaeological sites which might be effected by demolition as to preclude National Register eligibility.

The State of New York desires that their portion of the site be developed into a park. Any such development is less likely to damage archaeological resources than private development. Responsibility for cultural resources is adequately handled by State statutes and does not require cultural studies by the Corps of Engineers to prevent secondary effects. The portion of the property owned by the Town of East Hampton has been heavily developed and little development potential exists outside the area slated for demolition where any cultural resources that may have existed have already been damaged or destroyed. Cultural Resource efforts are necessary in order to make a preliminary evaluation of the Camp's eligibility to the National Register and to prepare a presumptive determination of no (adverse) effect.

DETERMINATION

Based on the foregoing findings of fact, the present condition of the site as described above has been determined to be the result of a prior DOD utilization in connection therewith. Moreover, it is determined that an environmental restoration project, to the extent set out herein, is an appropriate undertaking within the purview of Public Law 98-473, Continuing Appropriation, 1985 (Conference Report (HR 98-1159)), for the reasons stated above.

Date

LLOYD A. DUSCHA, P.E.
Deputy Director
Directorate of Engineering
and Construction

APPENDIX A

DD 1391

1. COMPONENT ARMY		FY 19 MILITARY CONSTRUCTION PROJECT DATA		2. DATE 24 May 85	
3. INSTALLATION AND LOCATION CAMP HERO, MONTAUK POINT, NY			4. PROJECT TITLE CAMP HERO		
5. PROGRAM ELEMENT		6. CATEGORY CODE	7. PROJECT NUMBER CO2NY002400		8. PROJECT COST (\$000) \$6,017
9. COST ESTIMATES					
ITEM		U/M	QUANTITY	UNIT COST	COST (\$000)
Construction Cost					\$4,858
Contingencies (10%)					486
Supervision & Administration (5.5%)					294
Total Construction CWE					\$5,638
Design (6%)					321
FEASIBILITY STUDY COST (R)					\$ 58
Support Activities					
Real Estate				\$2,000	
Public Participation/Local Cooperation				\$1,000	
Laboratory Support					
Asbestos Tests (bldgs, pipes)				\$6,600	
PCB Tests (Transf., Tanks)				12,200	
Chemical Testing for Sewage Treat. Plant				\$1,270	
Chemical Testing for Fuel Storage Tanks				960	
Chemical Testing for Unknown Storage Drums				\$4,000	
Labor & Report for Chemical Testing				\$3,000	
Cultural Resources Investigations				17,000	
Environmental/Regulatory Compliance				3,500	
Health, Safety & AQ/AC Plan				1,000	
Project Management				5,300	
Total Feasibility Cost (R)				58,000	
Total Implementation Cost					\$6,017
10. Description of Proposed Construction					
1. Completely demolish buildings, foundations, and above ground appurtenances. All utilities will be terminated and capped.					
2. Completely remove towers and foundations.					
3. Backfill, site grade, and seed any area disturbed by demolition.					
4. Cost estimates do not include costs for removal of any toxic waste, hazardous materials or other pollutants that may be found on site other than asbestos removal from buildings, removal of barrels (unknown content), PCB removal from transformers and removal of the contaminated content of the fuel storage tanks.					
5. All costs are December 1984 price level.					

APPENDIX B

SITE REPORT

SITE SURVEY SUMMARY SHEET
FOR
CAMP HERO, MONTAUK POINT, NEW YORK
PROJECT NO. C02NY002400

SITE NAME: Camp Hero, Project No. C02NY002400

LOCATION: Suffolk County, Montauk Point, New York

SITE HISTORY: By various condemnation proceedings between 29 August 1941 and 9 May 1944, 468.69 acres fee were obtained by the Department of the Army for the establishment of Camp Hero. The subject installation was part of the Long Island Harbor Defense System. By General Order No. 1 dated 3 January 1950, Camp Hero was declared excess to the needs of the Department of the Army. Approximately 307.65 acres fee were transferred by the Department of the Army to the Department of the Air Force for the Montauk Air Force Station. The dates and acreage transferred are as follows: 6 April 1951 - 96.94 acres, 21 October 1955 - 4.11 acres, 12 July 1957 - 8.10 acres, 31 March 1964 - 192.25 acres, and 26 December 1972 - 6.25 acres. The remaining 161.04 acres of Camp Hero were disposed of or transferred pursuant to Report of Excess to GSA or by Secretarial Transfer. On 18 July 1974, 119.26 acres were conveyed to the State of New York for park use. On 23 April 1983, an additional 18.09 acres were conveyed to the State of New York again for use as a park. In addition, 17.44 acres were transferred to the Department of the Navy for military purposes and 6.25 acres were transferred to the U.S. Coast Guard for station use. On 15 March 1982, the 307.65 acres transferred to the Air Force for the Montauk Air Force Station were excessed by GSA. GSA conveyed 29.84 acres (housing area) to the Town of East Hampton and 277.71 acres to the State of New York for park use. The three quitclaim deeds that conveyed subject property to the State of New York contained a recapture clause and a clause stating that the subject property can be used only for park purposes. Also, the quitclaim deed which conveyed 29.84 acres fee to the Town of East Hampton restricts the use of the subject property to low or middle income housing.

DESCRIPTION OF THE PROBLEM: As a result of prior DOD activity, the condition of the site exists such that it creates a hazard. The structures that exist on the site are unsightly and are in a deteriorated condition.

BASIS FOR DETERMINATION OF DOD RESPONSIBILITY: Facilities were constructed by the Department of the Army and vacated thereafter. Currently, the DOD owns 17.44 acres of this site. Items recommended for removal were used by the Department of Defense and have not been of beneficial use to subsequent owners.

POC/DISTRICT: John E. Tunnell, PE, NAPEN-P, FTS 597-5953/Philadelphia

STATUS: On 22 April 1985, the following Philadelphia District personnel performed an on-site investigation of the subject property: Paula Nohrstedt, NAPEN-P and Jane Jablonski, NAPEN-P.

The Department of the Navy currently utilizes 17.44 acres of the site for military purposes and the U.S. Coast Guard utilizes 6.25 acres for station use. The Town of East Hampton currently owns 29.84 acres of the site and is

restricted to use the subject property for low or middle income housing. The majority of East Hampton's property is used for this purpose, however there is a portion of the property that has not been beneficially used since DOD ownership. The portion of the site was formerly used as a trailer park by the DOD. The Town of East Hampton desires that two buildings be completely demolished. Building #P-119 (formerly used as a laundromat) and Building #MAF-30 (formerly used as a sewage pump house) are proposed for demolition. Also a hydrant house (Building #2066) exists on the site and is proposed for demolition, however, the Town has requested the hydrant remain intact. In addition, the remains of concrete trailer pads and parking spaces, as well as utility facilities for each trailer are to be completely removed. The Town of East Hampton desires that all the fire hydrants and roads be retained as well as the bathroom facilities and an 82 gallon water heater located in the laundry room. All of the structures and facilities proposed for demolition and removal are considered unsightly and hazardous. The Town of East Hampton is presently considering developing low income housing on this site.

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Piping, which originates from the central heating plant, is located throughout the site and was formally used to heat the buildings. It is likely that the insulation on these pipes contains asbestos. Tower #P-201 (radar tower) also contains more asbestos than is predicted in the residence type building. The building contains an entire ceiling on the first floor covered with sprayed on asbestos insulation in addition to a possible hot water storage heater and pipes covered with insulation containing asbestos. Also, approximately 22 of

the buildings to be demolished contain hot water storage tanks and it is likely that these tanks are insulated with a material which contains asbestos. Building #P-203 (power plant) is of particular concern since it contains massive equipment and machinery (e.g. lubrication pumps, air breeders, etc.). The exhaust manifolds of four diesel generators are insulated with a large amount of packed insulation that contains potential asbestos. In addition, some power is run off from live batteries in the plant. There is a house circuit which recharges the batteries. This power is necessary for warning lights located on top of Tower #P-201. There are also metal walkways located throughout the site which cover the utilities. The State of New York desires that these be removed. Demolition of five hose houses: #2004, #2005, #2006, #2007, #2009 and #2016 (hydrants to be retained), a sewage treatment plant, and two guard houses (with no building numbers) is proposed. Also, two 1,000 gallon and two 25,000 gallon underground fuel storage tanks, as well as one 1,000 gallon fuel storage tank and one 200,000 gallon diesel tank (Building #2037) located above ground are proposed for removal. If encountered, any liquid or residue within the tanks should be sampled and tested to determine the proper disposal method. These fuel storage tanks are located at the following: Building #P-104 - One underground 1,000 gallon tank, Building #P-105 - One above ground 1,000 gallon tank, Building #P-203 - One underground 1,000 gallon tank, and two underground 25,000 gallon tanks. Fifty-three ground mounted transformers and two switches exist on the site. Fifteen of the transformers and two switches have been collected from various locations throughout the site and stored outside adjacent to the Diesel Tank. However, these transformers are currently being tested for PCB contamination. Thirty-eight transformers still exist throughout the park. Also, there are six transformer cages located throughout the site. In addition, there are 14 concrete slabs and a basketball court to be removed as well as the debris surrounding them. The removal of a gas pump and tank, as well as the removal of a fence surrounding Building #P-104 (weather station) and a retaining wall around the Diesel Tank (#2037) is desired by the State of New York.

The following buildings are to be utilized for the development of a state park and are to be retained: #P-4 (dormitory), #P-5 (dormitory), #P-9 (post exchange), #P-20 (pump station - filter plant), #P-21 (water treatment plant), #P-22 (mess hall), #P-109 (dormitory), #P-111 (material control-base supply), #P-206 (bowling alley), #MAF-10 (well house), #MAF-12 (well house), #MAF-31 (reservoir), #3001, #P-33 (garage), and the A,T&T Building. The State of New York currently has plans to utilize Building #P-5 as an American Youth Hostile Operation and Building #P-9 as a Nature and Interpretive Center. Buildings #P-20 and #P-21 are to be retained for the park water supply. Utilization of Building #P-22 as a campers service building and kitchen for employees is planned. Building #P-109 is to be retained for use as seasonal employee and maintenance force housing and Building #P-111 is to be used for maintenance (other than vehicles) and storage. In addition, the roads and utility poles throughout the site are to be retained for future use.

RIGHT-OF-ENTRY: For the purpose of this site survey, verbal approval to enter the site was granted by Mr. Francis Hyland, Chief Engineer of Long Island State Park and Recreation Commission, and Mr. Tony Bullock, Councilman for the Town of East Hampton. Formal right-of-entry agreements are being prepared for this project and will be executed prior to initiating any further field investigation.

AVAILABLE STUDIES AND REPORTS: As-built site plans are on file at the Philadelphia District.

CATEGORY OF HAZARDS: There is a possibility of Polychlorinated Biphenyl (PCB) contaminated oil existing inside the transformers. There is also a possibility that the material used as an insulation throughout the exterior piping existing on the site, the hot water storage tanks located within many of the buildings and other miscellaneous uses of the insulation may contain asbestos. Four sealed barrels containing an unknown content were discovered in Tower #P-201. It is possible that the contents are contaminated and hazardous. However, the presence of such contaminants cannot be confirmed without appropriate testing measures. Contaminated materials, depending on the nature and magnitude of the problem, will require consideration of appropriate procedures for handling and disposal. Other hazards existing at the site are dilapidated structures.

DESCRIPTION OF REMEDIAL ACTION: The remedial actions to be taken, based on available information, are described in the paragraphs below.

PROPERTY OWNED BY TOWN OF EAST HAMPTON

- A. BUILDING DEMOLITION - Completely demolish and remove three buildings and foundations (828 square feet total). Include capping of utilities, backfill and compaction.
- B. TRAILER FOUNDATION REMOVAL - Remove twenty trailer foundations (2,700 square feet total). Also remove twenty water utility hook-ups located adjacent to trailer foundations. Include backfill and compaction.
- C. UTILITY POSTS REMOVAL - Remove twenty short utility posts located adjacent to trailer foundations.
- D. PAVEMENT REMOVAL - Remove 290 square yards of rigid pavement (parking areas).
- E. SITE GRADING AND SEEDING - Site grade and seed 25,000 square yards of area disturbed by demolition.

PROPERTY OWNED BY STATE OF NEW YORK

- A. BUILDING DEMOLITION - Completely demolish and remove 31 buildings and six towers including foundations (77,788 square feet total). Approximately 17 of these buildings contain hot water storage tanks covered with asbestos insulation that will also be removed. Include removal of massive equipment and machinery located in Building #P-203. Some of this equipment is packed with asbestos insulation. Tower #P-201 is a five story building that contains a ceiling coated with sprayed on asbestos insulation. Include capping of utilities, backfill and compaction, and removal of asbestos from 22 buildings. Prior to demolition and selection of disposal method, sampling of insulation used in buildings is necessary to determine the presence of asbestos.
- B. BUNKER DEMOLITION - Reduce reinforced concrete shell of four bunkers

(22,168 cubic yards total) to rubble size by implosion. The earth mounds surrounding and topping the bunkers will be used to provide a contoured landscape over the bunker remains.

C. TRAILER REMOVAL - Remove one trailer and foundation located behind Building #P-104-R.

D. DIESEL TANK REMOVAL - Remove one 200,000 gallon diesel tank (Building #2037) and foundation. Include backfill and compaction. Prior to removal and selection of disposal method, vicinity and diesel tank contents will be analyzed for contamination and disposed of in an appropriate manner.

E. RETAINING WALL REMOVAL - Remove retaining wall from around Building #2037 (Diesel Tank). Include backfill and compaction.

F. HYDRANT HOUSE REMOVAL - Remove 6 Hydrant Houses (384 square feet total). Interior hydrant will remain intact.

G. FOUNDATION REMOVAL - Completely remove 18 foundations (14,550 square feet total). Include backfill and compaction.

H. BASKETBALL COURT REMOVAL - Completely remove one Basketball Court (3,000 square feet total). Include backfill and compaction.

I. SEWAGE TREATMENT PLANT DEMOLITION - Pump out system and completely remove the following structures, including foundations:

1. Primary Tank
2. Trickling Filter located under roofed structure
3. Chlorine Contact Chamber
4. Lift Station
5. Control Panel

Backfill and compact disturbed areas.

J. FUEL STORAGE TANK REMOVAL - Remove one 1,000 gallon fuel tank (located above grade), two 25,000 gallon fuel tanks (located below grade), and two 1,000 gallon fuel tanks (located below grade). Backfill and compact. Prior to removal and selection of disposal method, vicinity and fuel tank contents will be analyzed for contamination and disposed of in an appropriate manner.

K. GASOLINE PUMP AND FUEL TANK REMOVAL - Remove one gasoline pump and one 300 gallon fuel tank (located below grade). Backfill and compact. Prior to removal and selection of disposal method, vicinity and fuel tank contents will be analyzed for contamination and disposed of in an appropriate manner.

L. TRANSFORMER REMOVAL - Remove 53 transformers and 2 switches (all ground mounted). Prior to removal and selection of disposal method, sampling of vicinity and transformer contents for PCB contamination is necessary.

M. TRANSFORMER CAGE REMOVAL - Remove six transformer cages and foundation. Prior to removal and selection of disposal method, vicinity will be analyzed for PCB contents and disposed of in an appropriate method. Backfill and compact.

N. HEATING PIPE AND PIPE SUPPORT REMOVAL - Remove 4,000 linear feet of heating pipe and the pipe support system (support every fifteen feet). Backfill and compact. Prior to demolition and selection of disposal method, sampling of insulation used on all pipes is necessary to determine the presence of asbestos.

O. CHAIN-LINK FENCE REMOVAL - Remove 3,000 linear feet of chain-link fence (located in interior of site) including all posts and concrete footings.

P. ANTENNA REMOVAL - Remove three antennas supported with guy wires located around Building #P-104.

Q. PAVEMENT REMOVAL - Remove 1,600 square yards of rigid pavement (walkways).

R. DRUM REMOVAL - Remove four drums located in Tower #P-201. Prior to removal and selection of disposal method, sampling of drum contents is necessary to determine the presence of contamination.

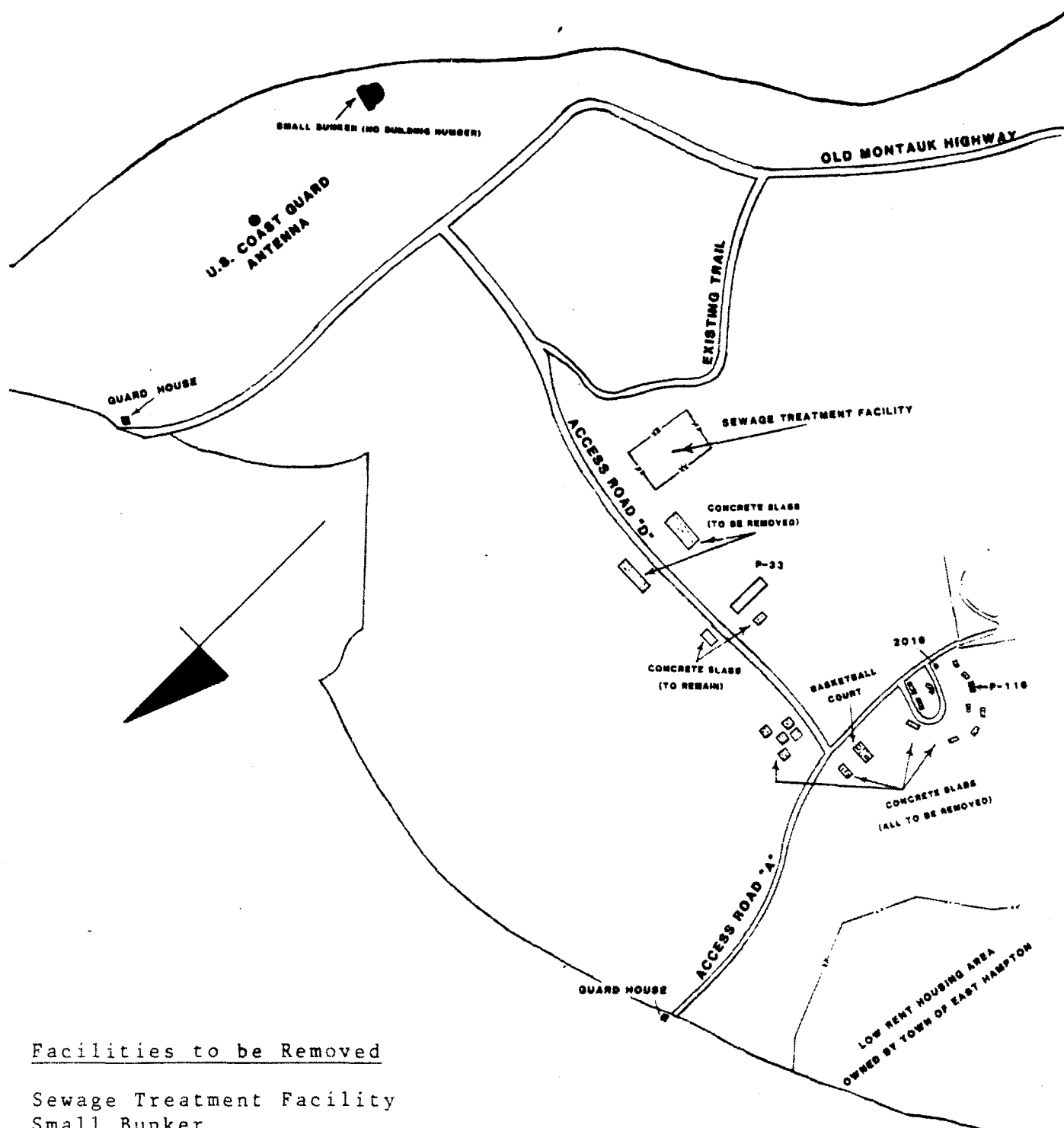
S. SITE GRADING AND SEEDING - Site grade and seed 350,000 square yards of area disturbed by demolition.

ESTIMATED COST: Total estimated cost of the proposed remedial action, Camp Hero = \$ 6,017,000

REASONABLE CONTRACT ESTIMATE					SHEET 1 OF 3
PROJECT CAMP HERO, MONTAUK POINT, NEW YORK					INVITATION NO.
ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
A	Property owned by Town of East Hampton				
1	DEMOLITION				
	Bldg P-119 (700 SF)		LS		\$ 3,540
	Bldg 2066, leave hydrant (64 SF)		LS		320
	Bldg MAF-30 (64 SF)		LS		320
	20 Trailer Foundations	2,700	SF	\$2.80	7,560
	Rigid Pavement (Parking Areas)	290	SY	4.50	1,310
	Utility Posts (Short)	20	EA	100	2,000
2	NEW WORK				
	Site Grading and Seeding	25,000	SY	0.75	18,750
				SUBTOTAL	\$ 33,800
B	Property owned by State of New York				
	Asbestos Removal	22	Bldg	\$4,300	94,600
	Bldg T-1 w/Tank (1450 SF)		LS		7,500
	Bldg T-3 w/Tank (4560 SF)		LS		23,000
	Bldg P-6 w/Tank (3300 SF)		LS		17,000
	Bldg P-7 w/Tank (2550 SF)		LS		13,000
	Bldg P-8 w/Tank (1450 SF)		LS		7,500
	Bldg P-11 w/Tank (1450 SF)		LS		7,500
	Bldg P-12 w/Tank (1020 SF)		LS		5,200
	Bldg P-13 w/Tank (2500 SF)		LS		20,000
	Bldg P-14 w/Tank (1450 SF)		LS		7,500
	Bldg P-15 w/Tank (1450 SF)		LS		7,500
	Bldg P-16 w/Tank (3540 SF)		LS		18,000
	Bldg P-17 w/Tank (1450 SF)		LS		7,500
	Bldg P-18 w/Tank (1450 SF)		LS		7,500
	Bldg P-19 w/Tank (1450 SF)		LS		7,500
	Bldg P-98 (1450 SF)		LS		7,500
	Bldg P-99 (1450 SF)		LS		7,500
	Bldg P-101 w/Tank (11,250 SF)		LS		57,000
	Bldg P-104 (1450 SF)		LS		7,500
	Bldg P-104-R (700 SF)		LS		3,600
	Trailer (behind Bldg P-104-R)	1	EA		3,000
	Bldg P-105 w/Tank (1340 SF)		LS		7,000
	Bldg P-106 (230 SF)		LS		1,200
	Bldg P-107 (partial Bunker) (800 SF)		LS		16,200
	Bldg P-108 w/Tank (1450 SF)		LS		7,500
	Bldg P-203 - Power Plant (9100 SF)		LS		140,000
	(consists of massive machinery insulated with asbestos)				
	Bldg P-204 (1450 SF)		LS		7,500
	Metal Shed (230 SF)		LS		1,200
	Bldg P-116 (1450 SF)		LS		7,500
	Bldg 2004, leave hydrant (64 SF)		LS		320
	Bldg 2005, leave hydrant (64 SF)		LS		320
	Bldg 2006, leave hydrant (64 SF)		LS		320

REASONABLE CONTRACT ESTIMATE					SHEET 2 OF 3
PROJECT CAMP HERO, MONTAUK POINT, NEW YORK					INVITATION NO.
ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
	Bldg 2007, leave hydrant (64 SF)		LS		\$ 320
	Bldg 2009, leave hydrant (64 SF)		LS		320
	Bldg 2016, leave hydrant (64 SF)		LS		320
	Bldg MAF-1 (64 SF)		LS		320
	Bldg MAF-9 (64 SF)		LS		320
	Tower P-201 (ceilings blown w/ asbestos insulation)(4000 SF)		LS		60,000
	Tower P-205 (2920 SF)		LS		16,400
	Tower P-205-T (100 SF)		LS		600
	Tower P-208 (2920 SF)		LS		16,400
	Tower P-209 (2920 SF)		LS		16,400
	Tower P-210 (2920 SF)		LS		16,400
	Bunker P-100 (10,400 CY)		LS		1,040,000
	Larger Bunker (10,400 CY)		LS		1,040,000
	Bunker P-115 (684 CY)		LS		68,400
	Small Bunker (684 CY)		LS		68,400
	Guard Station (230 SF)		LS		1,200
	Guard Station (230 SF)		LS		1,200
	Diesel Tank #2037 - above ground (200,000 gal) (assume contents contaminated)	1	EA	3,000	3,000
	Liquid Material Disposal PCB contamination (between 50 and 500 ppm PCB)	200,000	GAL	3.50	700,000
	Retaining Wall (around Diesel Tank)		LS		500
	Fuel Storage Tank-above ground (1,000 gal) (assume contents contaminated)	1	EA	900	900
	Fuel Storage Tank-underground (25,000 gal) (assume contents contaminated)	2	EA	26,000	52,000
	Fuel Storage Tank-underground (1,000 gal) (assume contents contaminated)	2	EA	1,500	3,000
	Gasoline Pump and underground fuel tank (300 gal) (assume contents contaminated)	1	EA	1,000	1,000
	Liquid Material Disposal PCB contamination (between 50 and 500 ppm PCB)	53,300	GAL	3.50	186,550
	Foundations (18)	14,550	SF	2.80	40,740
	Basketball Court	3,000	SF	1.75	5,250
	Sewage Treatment Plant (includes dewatering)		LS		20,000
	Offsite Treatment of Highly Toxic Water	20,000	GAL	0.16	3,200
	Transformer Cages	6	EA	500	3,000
	Transformers - ground mounted (assume PCB contamination)	53	EA	1,000	53,000
	Switches - ground mounted (assume PCB contamination)	2	EA	1,000	2,000

REASONABLE CONTRACT ESTIMATE					SHEET 3 OF 3
PROJECT CAMP HERO, MONTAUK POINT, NEW YORK					INVITATION NO.
ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
	Exterior Heating Pipes and Supports (covered with asbestos insulation)	4,000	LF	\$150	\$600,000
	Interior Chain-Link Fence	3,000	LF	1.50	4,500
	Rigid Pavement (Walkways)	1,600	SY	4.50	7,200
	Antenna (with Guy Wires)	3	EA	100	300
	Metal Walkways (outside)	1,500	SF	1.00	1,500
	4 Drums (assume contaminated)		LS		400
	Liquid Material Disposal PCB contamination (between 50 and 500 ppm PCB)	200	GAL	3.50	700
2	NEW WORK				
	Site Grading and Seeding	350,000	SY	0.75	262,500
				SUBTOTAL	4,824,200
	SUMMARY				
A	Town of East Hampton Owned				33,800
B	State of New York Owned				4,824,200
	Construction Cost				4,858,000
	Contingencies (10%) (R)				486,000
	S&A (5.5%) (R)				294,000
	TOTAL CONSTRUCTION CWE				5,638,000
	Design (6%) (R)				321,000
	FEASIBILITY STUDY COST (R)				58,000
	Support Activities				
	Real Estate			2,000	
	Public Participation/Local Cooperation			1,000	
	Laboratory Support				
	Asbestos Tests (Bldgs, Pipes)			6,600	
	PCB Tests (Transf., Tanks)			12,200	
	Chemical Testing for Sewage Treatment Plant			1,270	
	Chemical Testing for Fuel Storage Tanks			960	
	Chemical Testing for Unknown Storage Drums			4,000	
	Labor & Report for Chemical Testing			3,000	
	Cultural Resources Investigations			17,000	
	Environmental/Regulatory Compliance			3,500	
	Health, Safety & QA/QC Plan			1,000	
	Project Management			5,300	
	TOTAL FEASIBILITY COST (R)			58,000	
	TOTAL IMPLEMENTATION COST				\$ 6,017,000



Facilities to be Removed

Sewage Treatment Facility
 Small Bunker
 2 Guard Houses
 Basketball court
 Building #2016
 Building #P-116
 18 Foundations

**CAMP HERO
 MONTAUK POINT, NEW YORK**

**EAST SITE PLAN
 (ENLARGED)**

APPENDIX C

PHOTOGRAPHS

Camp Hero

Montauk Point, NY.
(Town of East Hampton Property)



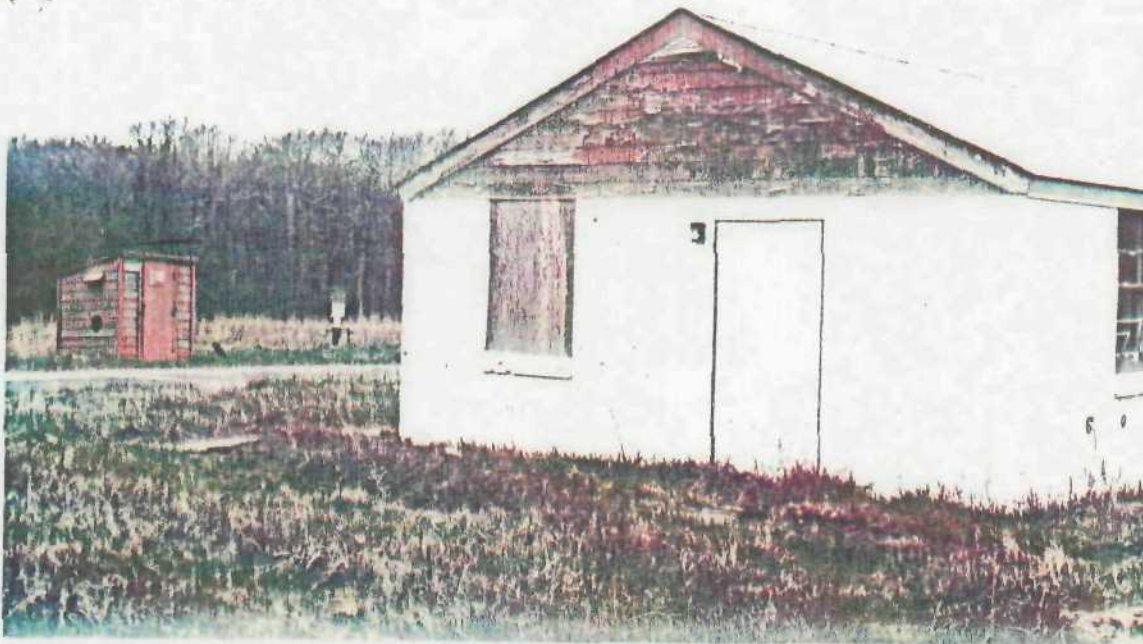
Building owned by the Town of East Hampton which was formerly used as a laundromat (Bldg. #P-119).



Side and back view of building formerly used as a laundromat (Bldg. #P-119).

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Montauk Point, NY.
(Town of East Hampton Property)



Side view of building formerly used as a laundromat (Bldg. #P-119) in foreground and view of hose house (Bldg. #2066) in background.



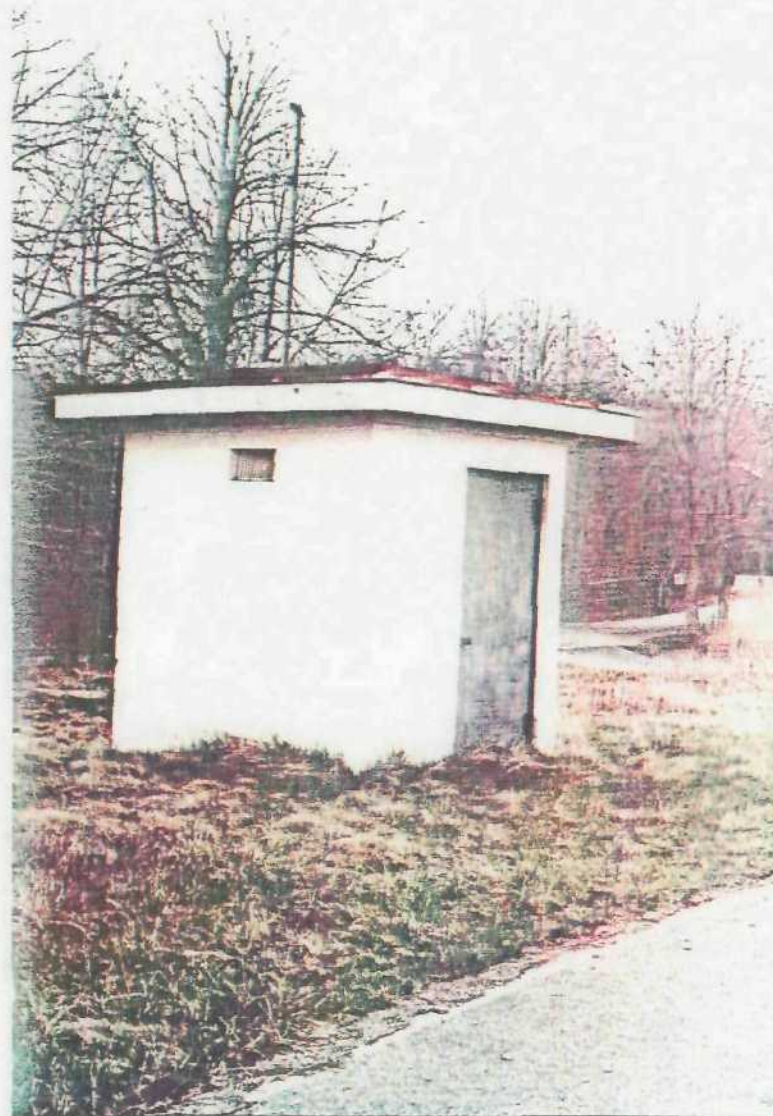
Hose house (Bldg. #2066).

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Montauk Point, NY.
(Town of East Hampton Property)



Fire hydrant inside of hose house (Bldg. #2066).
Hydrant will not be removed.



Sewage Pump House (Bldg. #MAF-30).

Camp Hero

Montauk Point, NY.
(Town of East Hampton Property)

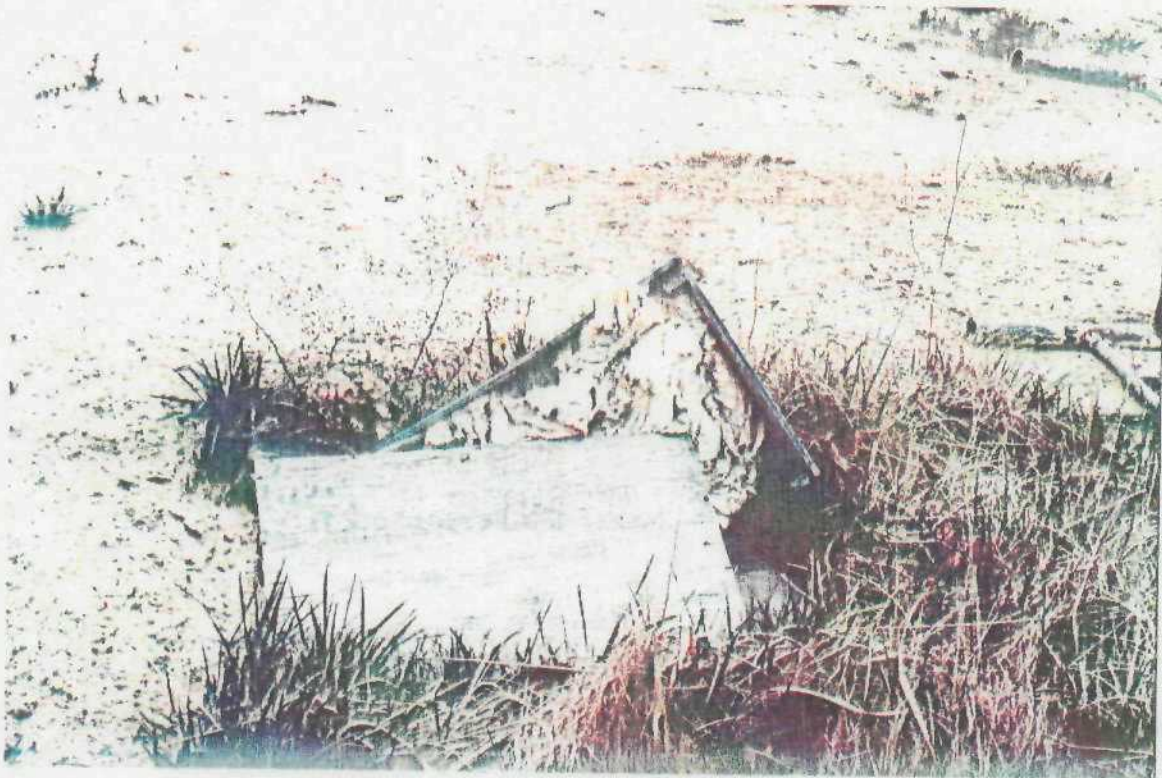


Utility facilities used for each trailer.



Utility facilities used for each trailer.

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Montauk Point, NY.
(Town of East Hampton Property)



Insulation surrounding water utility.



Concrete trailer pads with utility facilities.

Camp Hero

Montauk Point, NY.
(Town of East Hampton Property)



Concrete trailer pads and utility facilities.



Community across from the property formerly used as a trailer park.

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Montauk Point, NY.
(State of New York Property)



Building #P-106 (Guard House) and Front Entrance Gate.



Building #P-106 (Guard House).

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Montauk Point, NY.
(State of New York Property)



Building #P-104-R.



Trailer behind Building #P-104-R.

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Montauk Point, NY.
(State of New York Property)



Left to right: Bldg. #P-15, Bldg. #P-14, Bldg. #P-13, and Bldg. #P-20 (currently utilized).



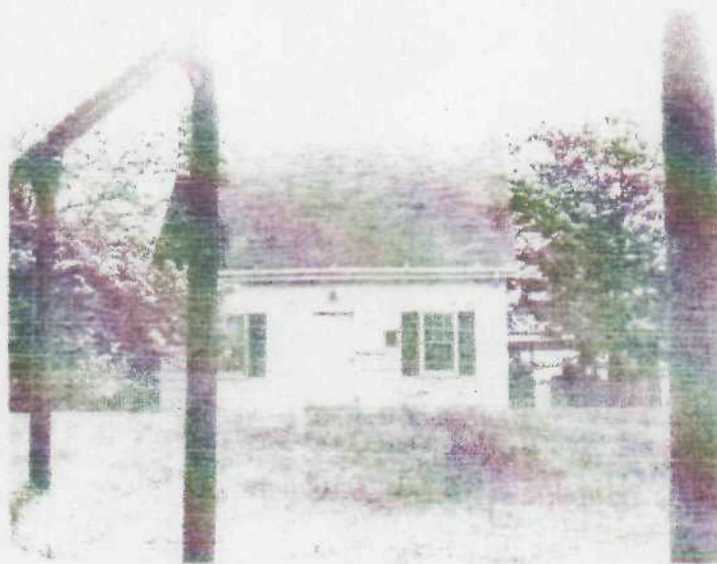
Bunker (Bldg. #100) in background on left and diesel storage tank (Bldg. #2037) in foreground.

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Montauk Point, NY.
(State of New York Property)



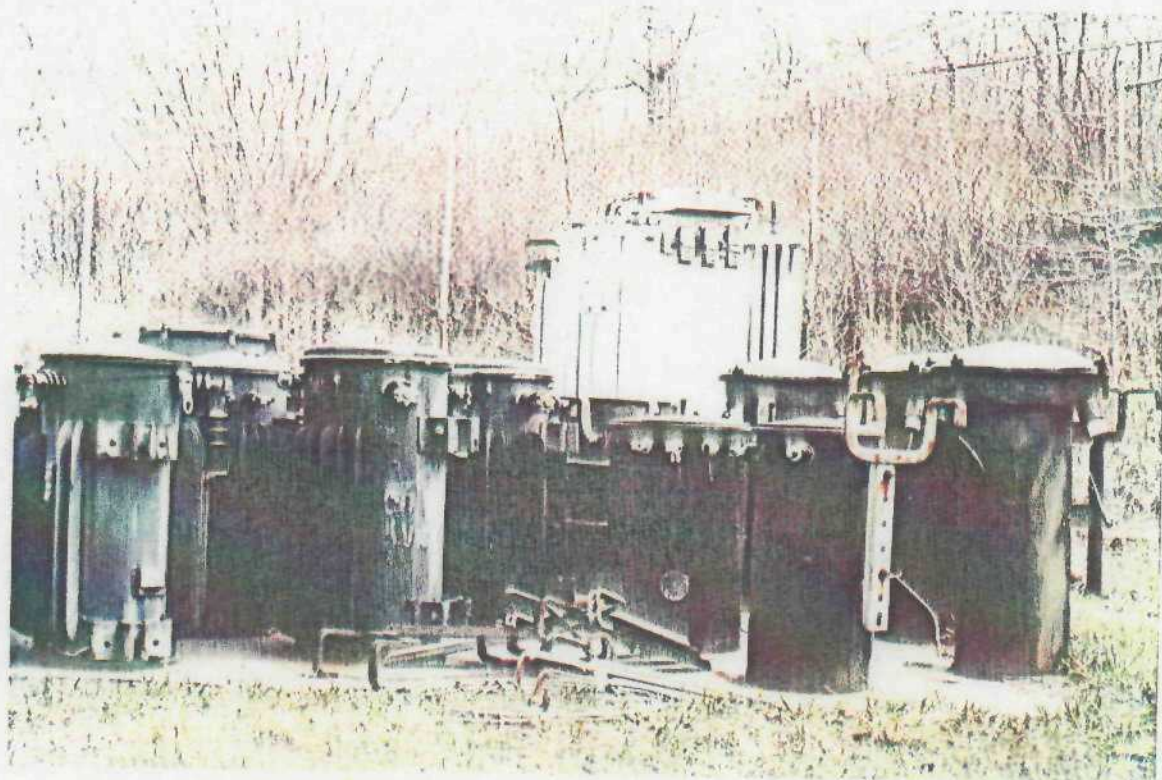
Left to right: Building #P-203(Power Plant), Building #P-2037
(Diesel Storage Tank), and Building #P-204.



Building #P-107 (Electric Switching Station) and adjacent
Transformer Cage.

Camp Hero

Montauk Point, NY.
(State of New York Property)



Transformers and switches removed.



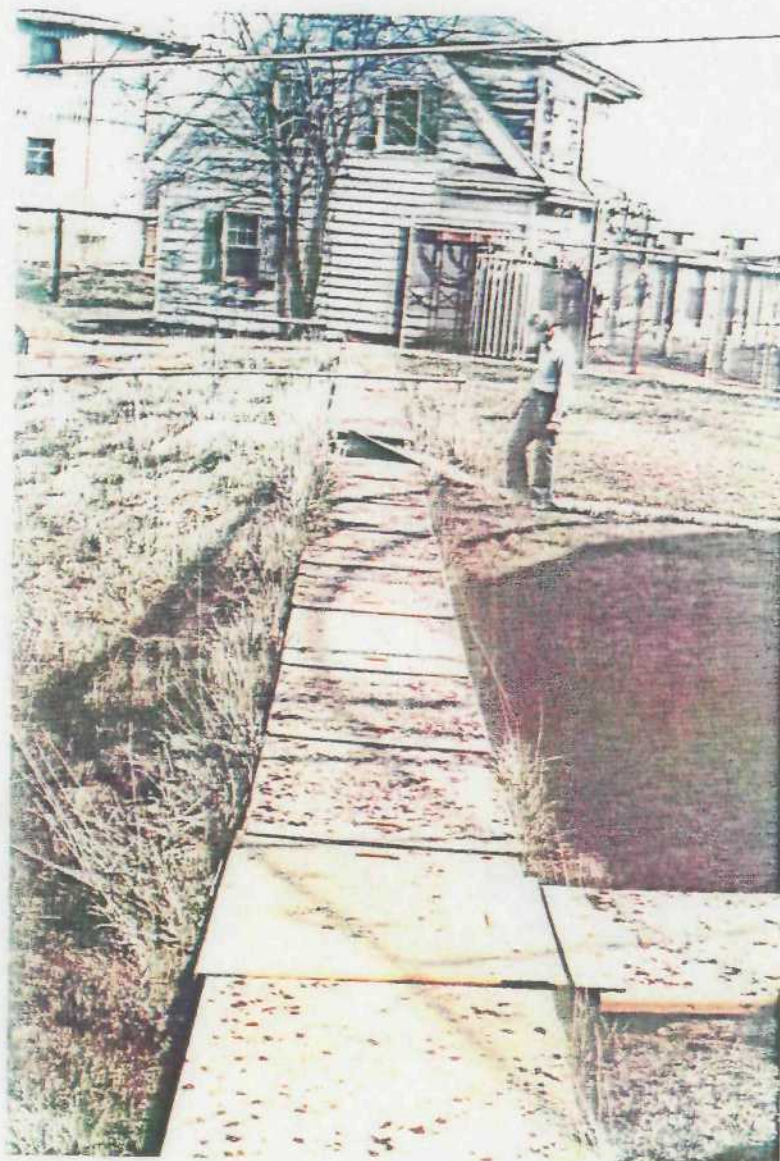
Transformers and switches removed.

Camp ro

Montauk Point, NY.
(State of New York Property)



Transformers and switches removed.



Metal walkway covering utilities in foreground
and radar tower #209 (left) and bunker #100 (right)
in background.

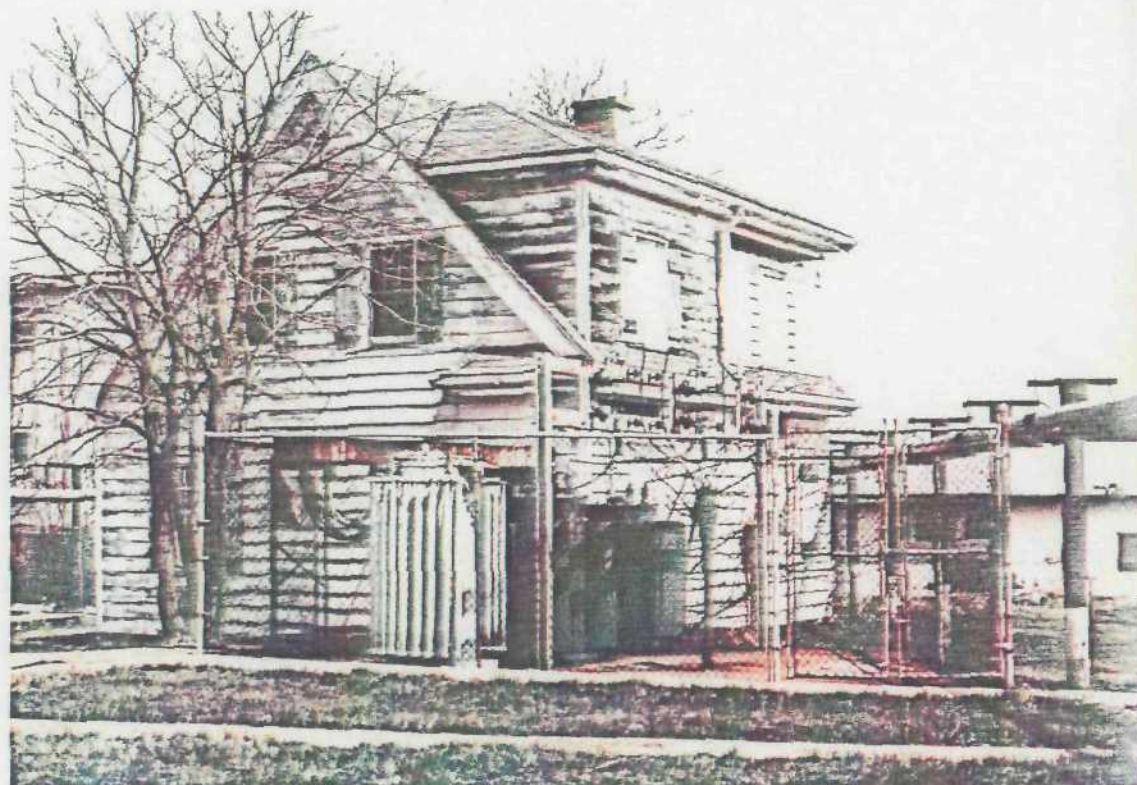
Camp Hero

Montauk Point, NY.

(State of New York Property)



Metal walkway covering utilities.



Building #P-107 formerly used as a bunker (part wood and part concrete); transformers and transformer cage in foreground; note hot water pipe extending to building.

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Montauk Point, NY.
(State of New York Property)



Building #P-8 (Dormitory).



Front view of Building #P-11 (Dormitory).

Camp Hero

Montauk Point, NY.
(State of New York Property)



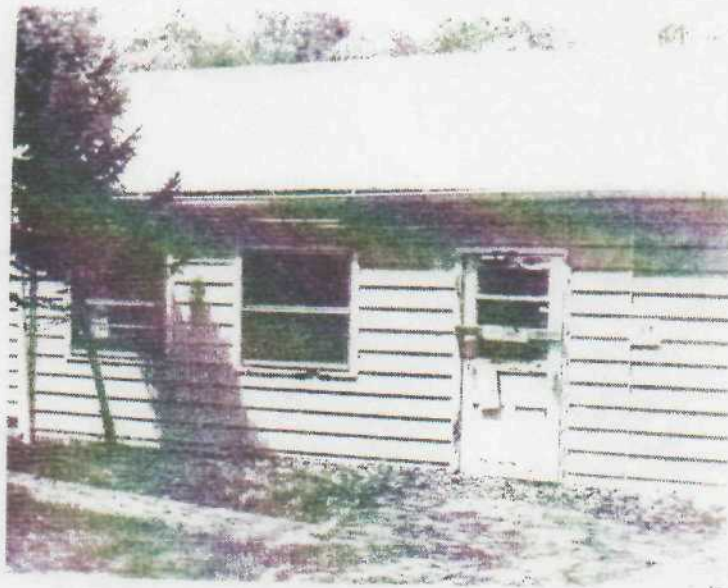
Back view of Building #P-11 (Dormitory).



Building #P-12 (Police Headquarters).

Camp Hero

Montauk Point, NY.
(State of New York Property)



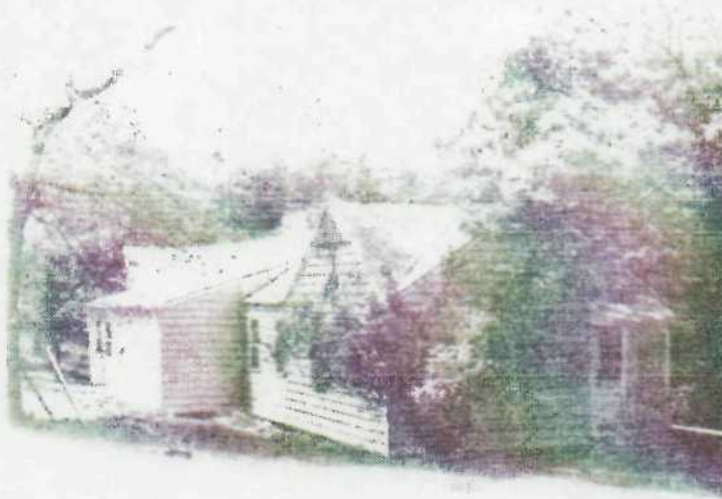
Front view of Building #P-13 (Office-Post Office).



Back view of Building #P-13 (Office-Post Office).

Camp Hero

Montauk Point, NY.
(State of New York Property)



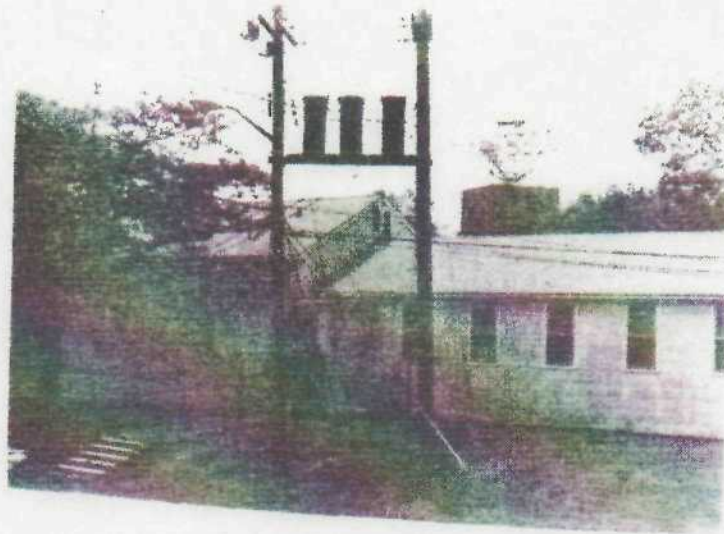
Front and side view of Building #P-13 (Office-Post Office).



Front view of Building #P-14 (Dormitory).

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Montauk Point, NY.
(State of New York Property)



Front view of Building #P-6 (Library), Building #P-201
(Radar Tower Structure) in background.



Front view of Building #P-6 (Library), Building #P-201
(Radar Tower Structure) in background.

Camp Hero

Montauk Point, NY
(State of New York Property)



Steam heating piping located in back of Building # P-6 (Library).



Building #P-7 (Dormitory).

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Montauk Point, NY.
(State of New York Property)



Building #P-15 (Dormitory).



Front view of Building #P-16 (NCO Club).

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Montauk Point, NY.
(State of New York Property)



Front view of Building #P-16 (NCO Club).



Front and side view of Building #P-17 (Dispensary).

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Montauk Point, NY.
(State of New York Property)



Side and back view of Building #P-17 (Dispensary).



Building #P-18 (Dormitory).

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Montauk Point, NY.
(State of New York Property)



Building #P-19 (Dormitory).



Front view of Building #T-3 (Gymnasium).

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Montauk Point, NY.
(State of New York Property



Front and side view of Building #T-3 (Gymnasium).



Front view of Building #T-1 (Dormitory).

Camp Hero

Montauk Point, NY.
(State of New York Property)

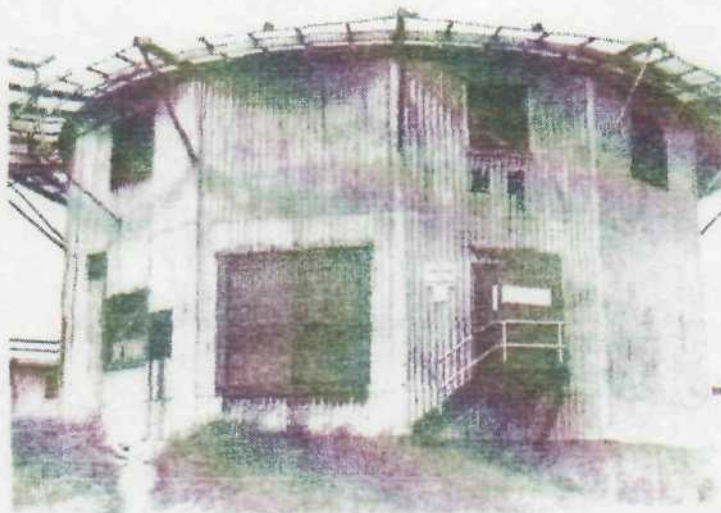


Front view of Building #T-1 (Dormitory).



Front view of Building #T-1 (Dormitory).

Camp Hero
Montauk Point, NY.
(State of New York Property)



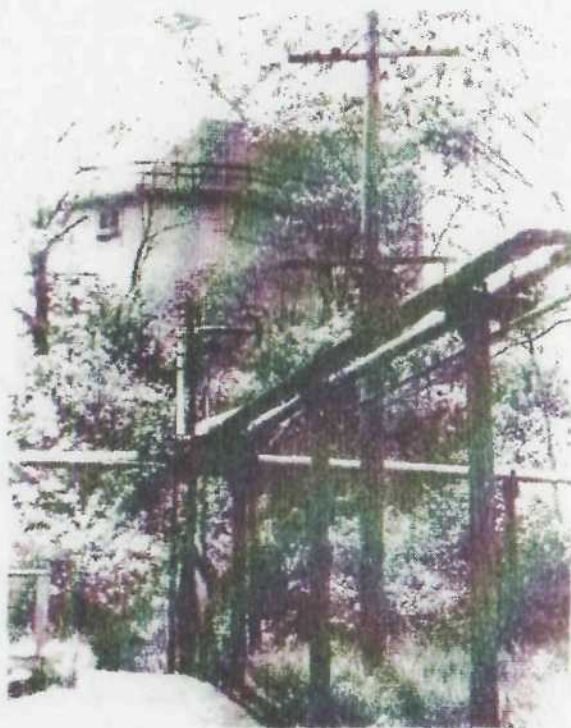
Building #P-208 (BCE Maintenance Shop).



Building #F-108 (Engineers Office).

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Montauk Point, NY.
(State of New York Property)



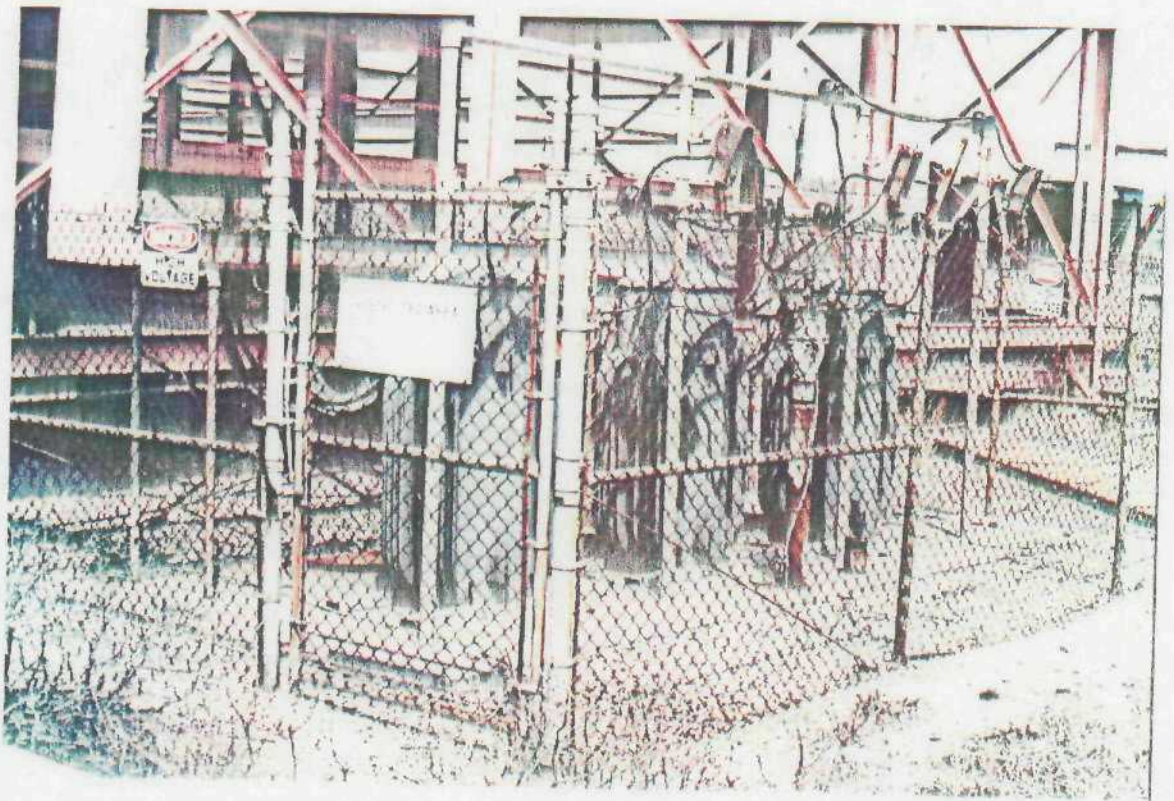
Steam heating piping located in front of
Building #P-210 (Tower). Building #P-203
(Radar Tower Structure) in background.



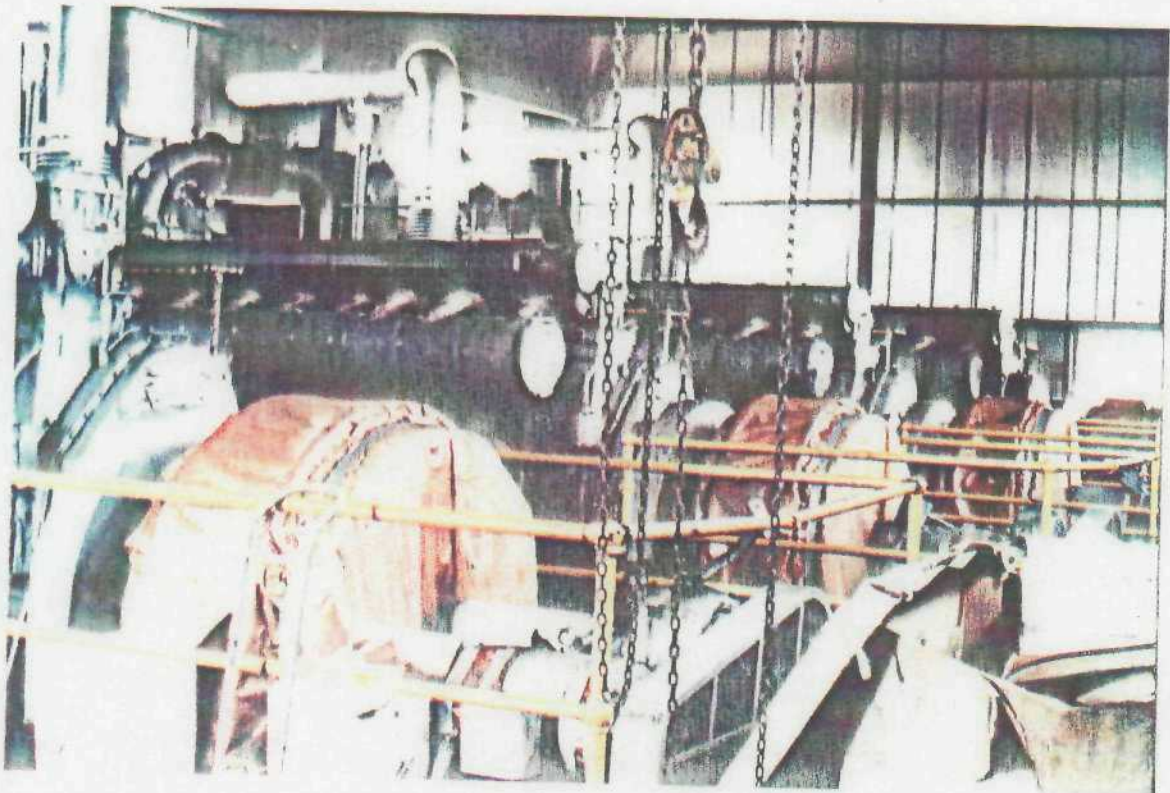
Left to right: Building #P-205 (Tower) and Building
#205T (Concrete Tower).

Camp Hero

Montauk Point, NY.
(State of New York Property)



View of transformers and transformer cage in back of tower (Bldg. #P-205).



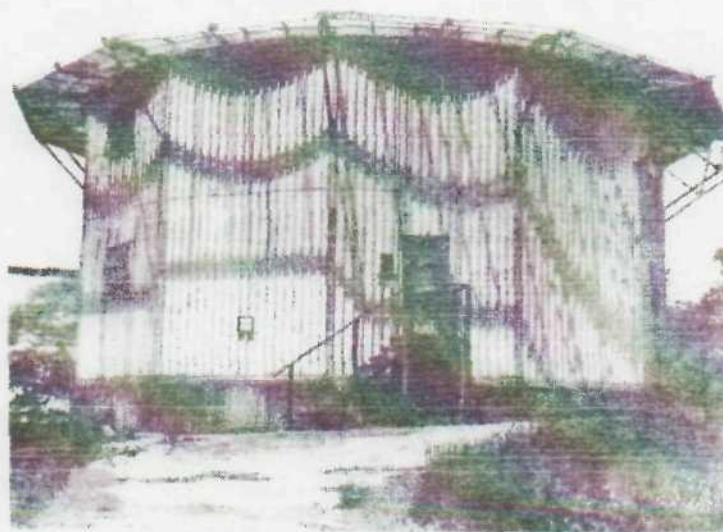
Interior of power plant (Bldg. #P-203).

Camp Hero

Montauk Point, NY.
(State of New York Property)



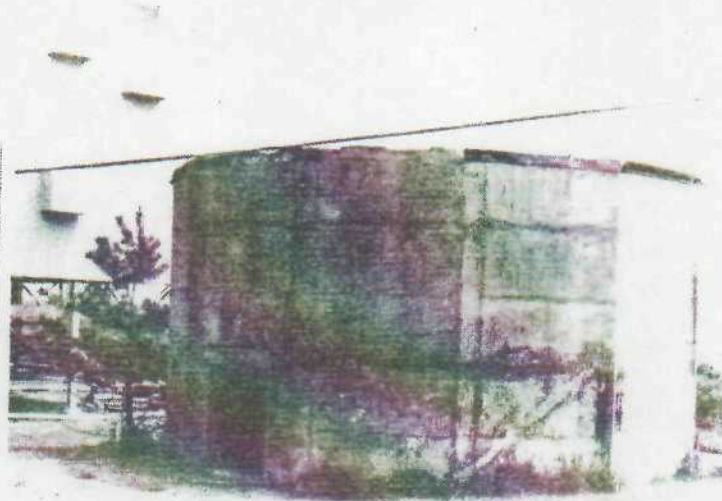
Left to right: Building #P-205 (Tower), Building #P-101 (Operations Center), Building #P-111 (Material Control-Base Supply), and Building #P-201 (Radar Tower Structure).



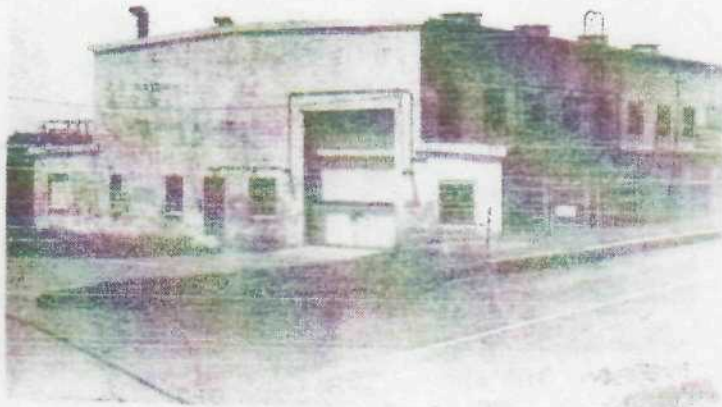
Building #P-209 (Tower).

Camp Hero

Montauk Point, NY.
(State of New York Property)



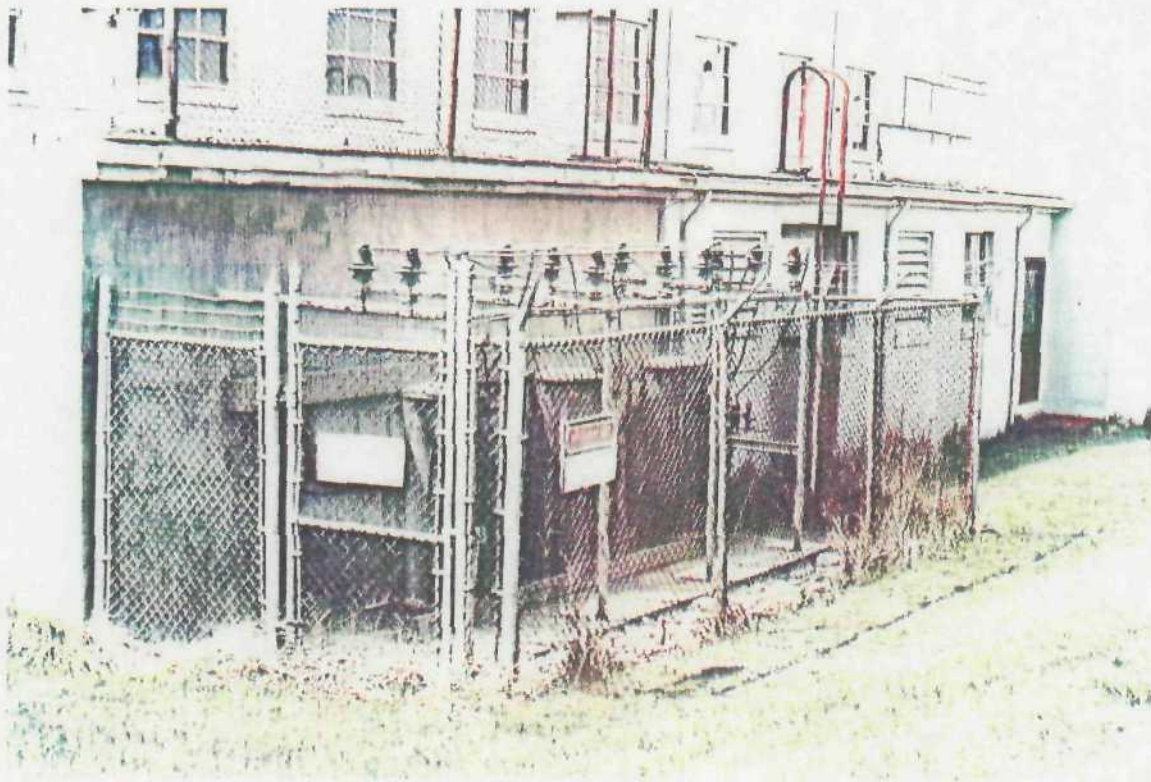
Left to right: Building #P-205 (Tower) and Building #205T
(Concrete Tower).



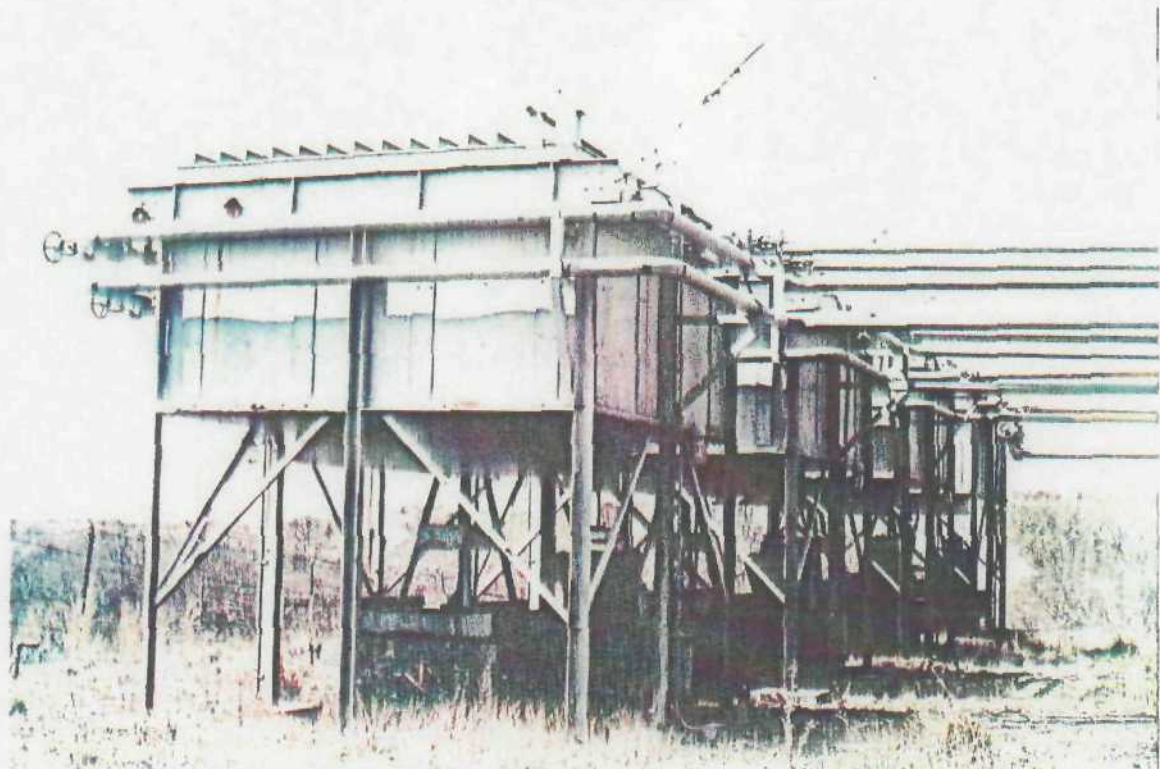
Building #P-203 (Power Plant).

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Montauk Point, NY.
(State of New York Property)

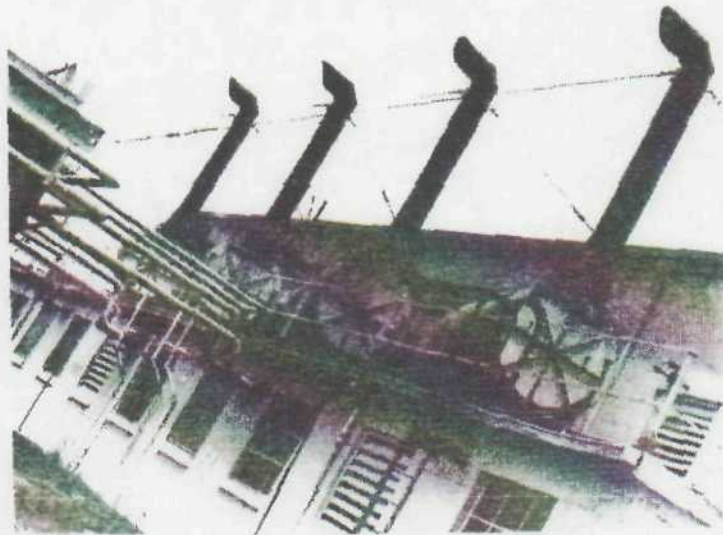


Transformers in transformer cage located adjacent to power plant (Bldg. #P-203).



Steam heating facility adjacent to power plant (Bldg. #P-203), one of two large bunkers located in background.

Camp Hero
Montauk Point, NY.
(State of New York Property)



Back view of Building #P-203 (Power Plant).



Gas Pump and Gas Tank in foreground, and Buildings #P-99 (Warehouse) and #P-98 respectively in background.

Camp Hero
Montauk Point, NY
(State of New York Property)



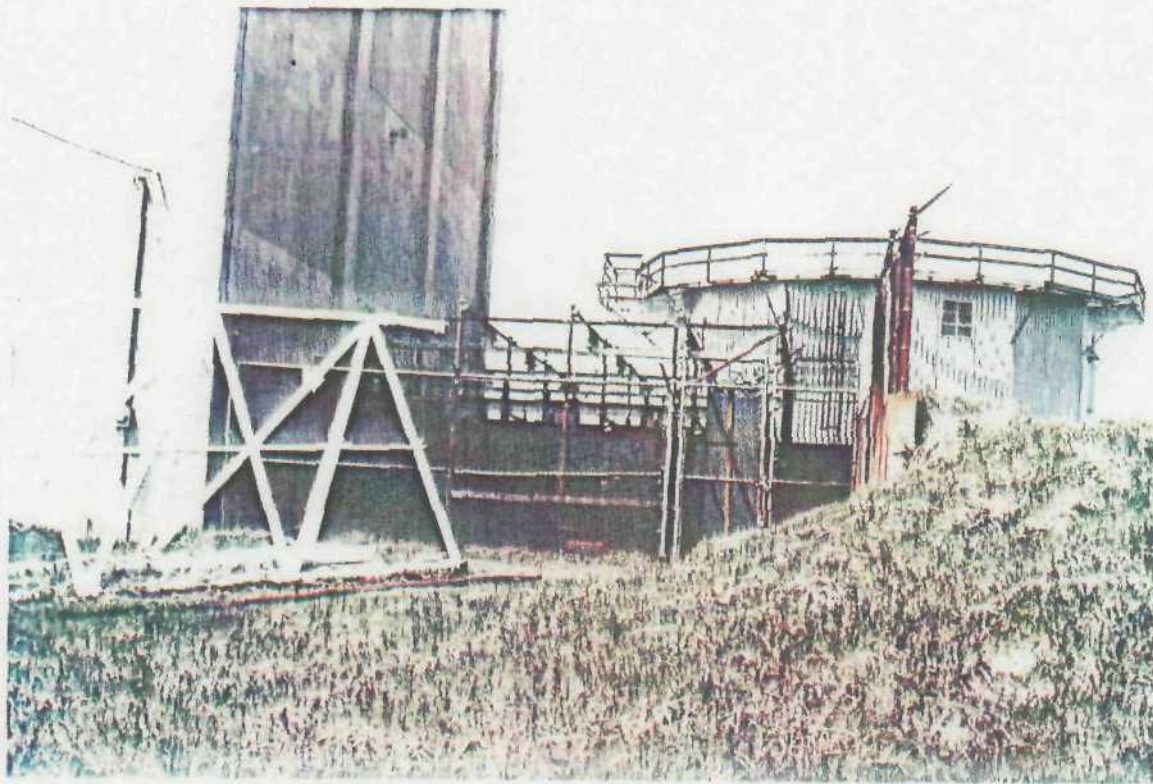
Underground fuel tank, field located adjacent to power plant (Bldg. #P-203).



Underground fuel tank, field located adjacent to power plant (Bldg. #P-203), and one of two large bunkers in background.

Camp Hero

Montauk Point, NY.
(State of New York Property)



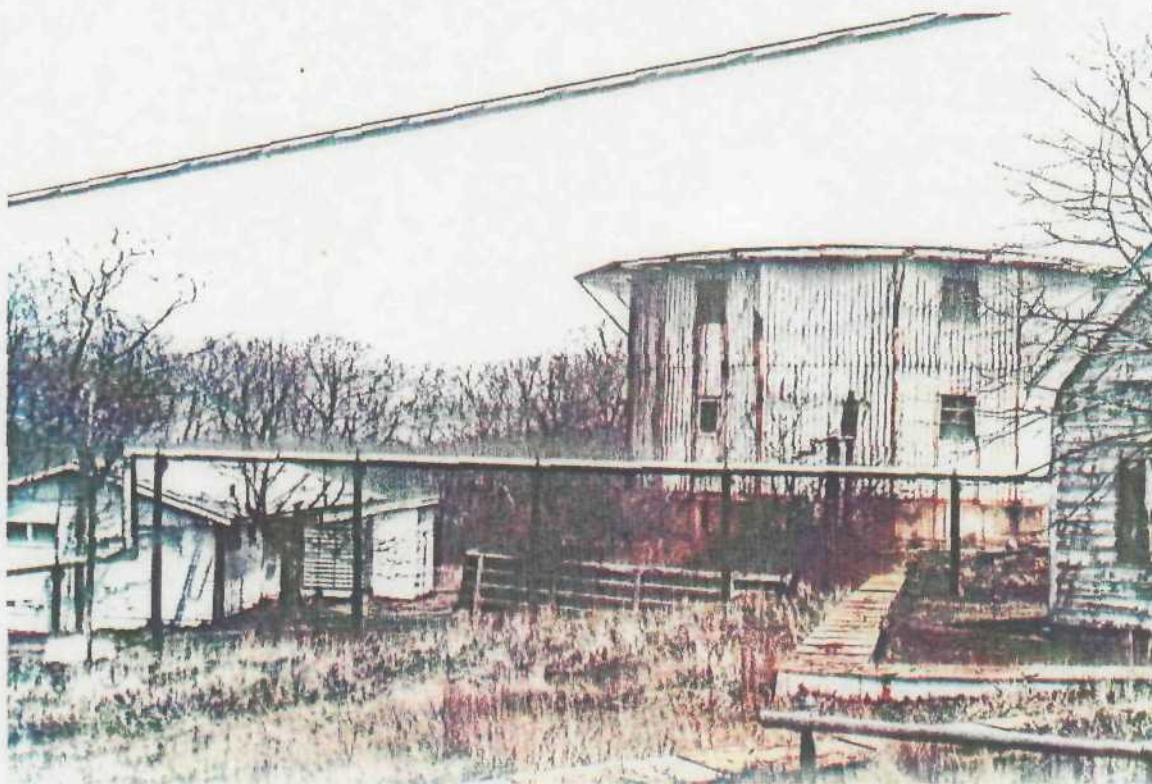
Left to right: radar tower structure (Bldg. #P-201), transformer cage (contains 15 transformers), and tower (Bldg. #P-210).



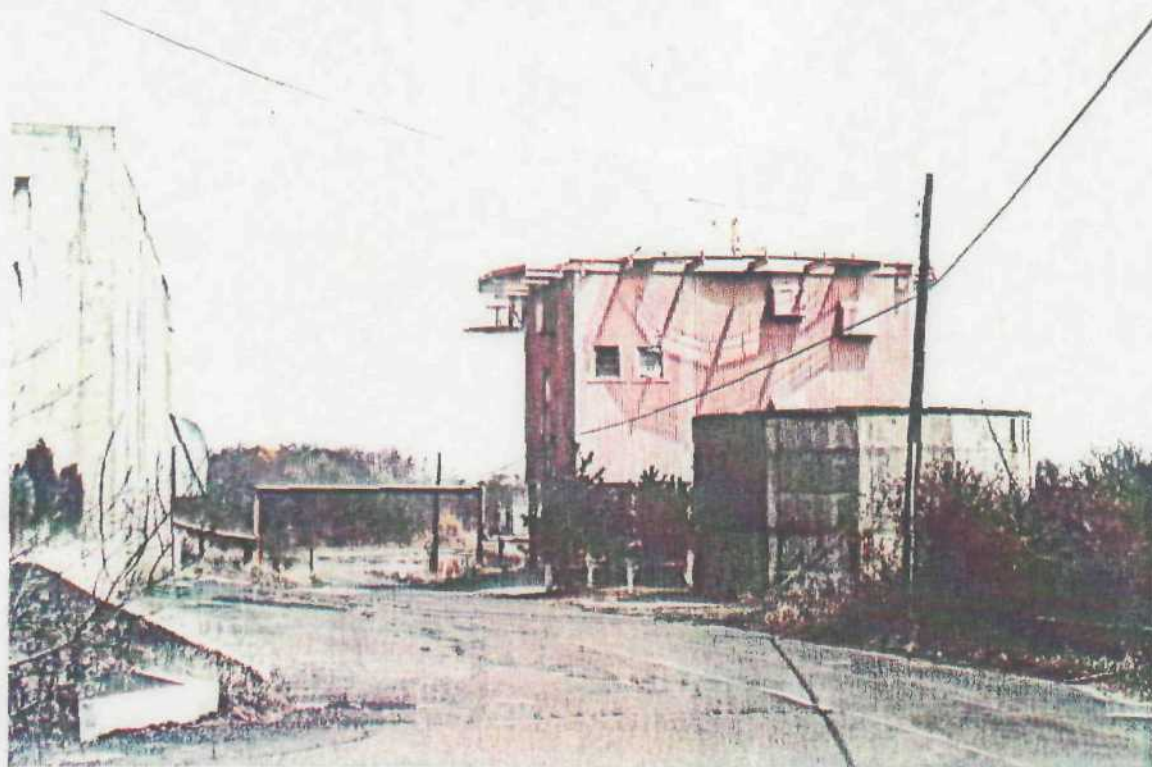
View of well house (Bldg. #MAF-12) in foreground and radar tower structure (Bldg. #P-201) in background.

Camp Hero

Montauk Point, NY.
(State of New York Property)



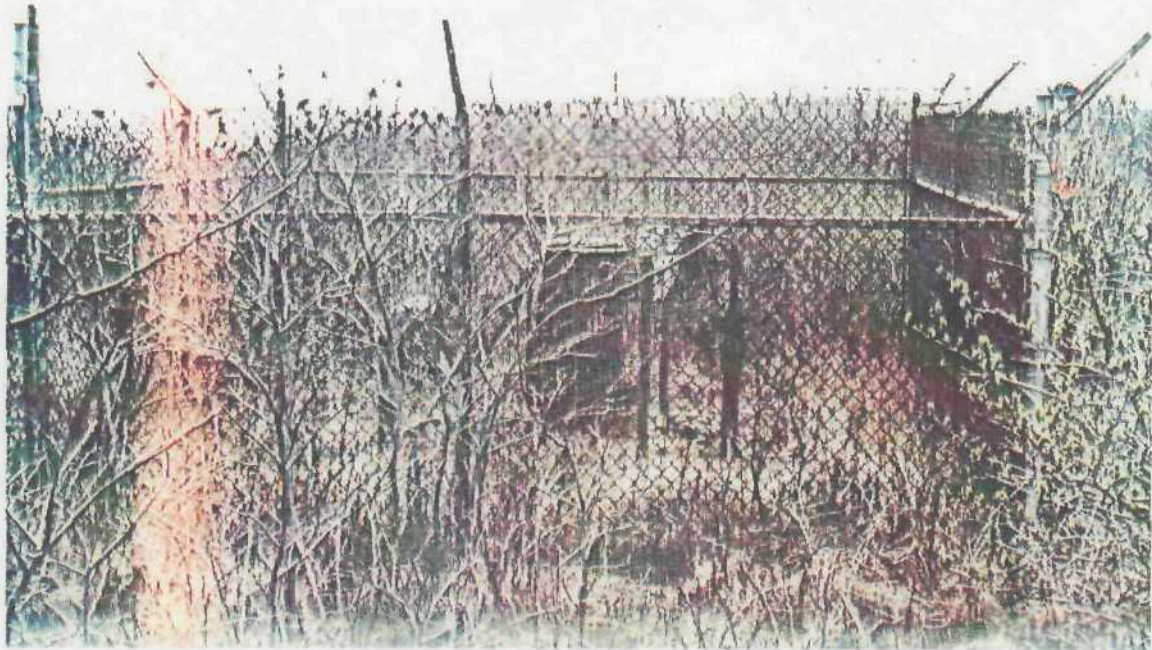
Left to right: engineer's office (Bldg. #P-108), radar tower structure (Bldg. #201), and corner of bunker (Bldg. #107); Note hot water pipes extending from each building.



Left to right: edge of radar tower structure (Bldg. #P-201), tower (Bldg. #P-205) and concrete tower (Bldg. #P-205T); Note hot water pipe extended across road.

Camp Hero

Montauk Point, NY.
(State of New York Property)



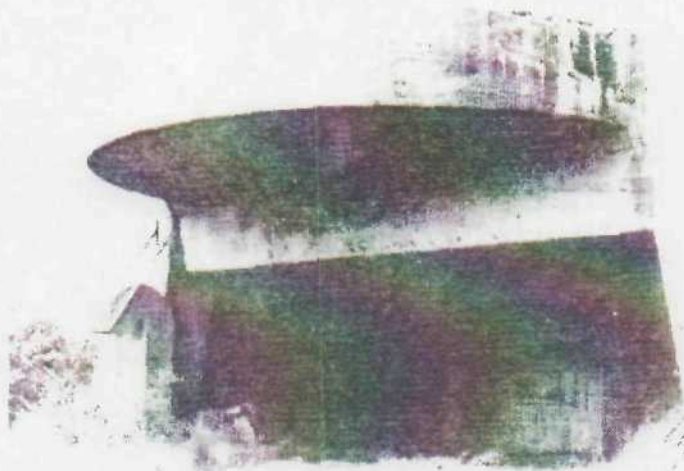
View of transformer and cage behind weather station (Bldg. #P-104).



One of several gates leading to State of New York property. Note missing fence in gate indicating easy access to property.

Camp Hero

Montauk Point, NY.
(State of New York Property)



Building #P-100 (Bunker).



Left to right: Building #P-101 (Operations Center), Building #P-111 (Materials Control-Base Supply), Building #P-201 (Radar Tower Structure), Building #P-210 (Tower) and Building #P-209 (Tower).

Camp Hero

Montauk Point, NY.
(State of New York Property)



Left to right: Building #P-99 (Warehouse), Building #P-98,
and Building #P-205 (Tower).



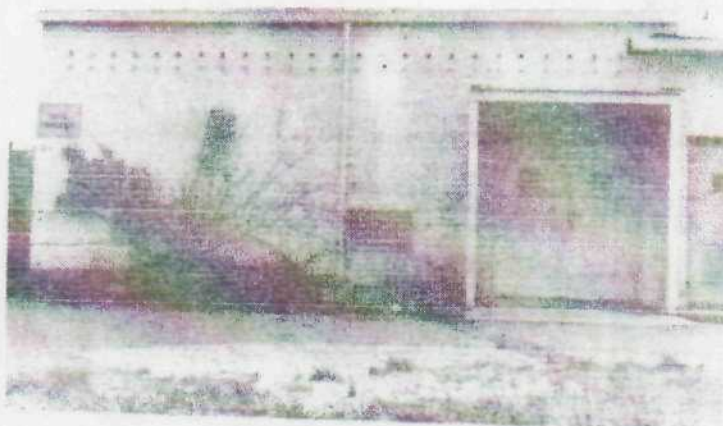
Building #P-99 (Warehouse).

Camp Hero

Montauk Point, NY.
(State of New York Property)



Building # P-105 (Heating Plant).



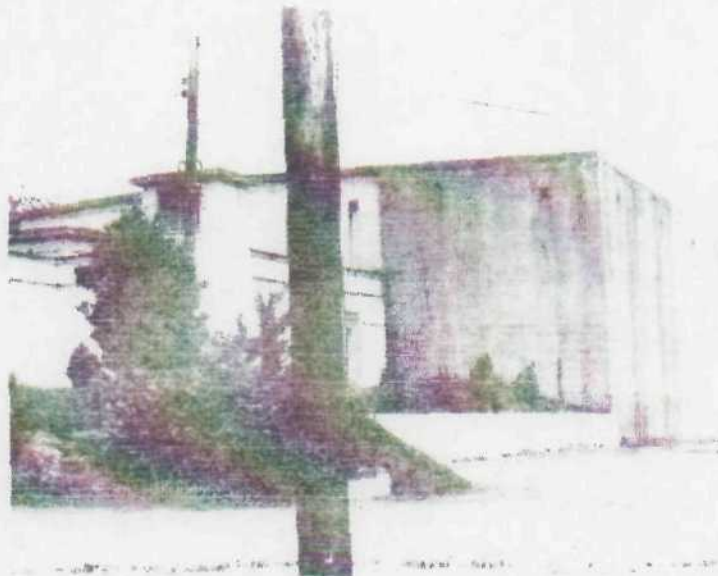
Building #P-104 (Weather Station).

Camp Hero

Montauk Point, NY.
(State of New York Property)



Background (top to bottom): Building #P-201(Radar Tower Structure), Building #P-210(Tower), and Building #P-13 (Office-Post Office). Foreground (left to right): Typical Hose House (retain Hydrant inside), and Building # P-15 (Dormitory).



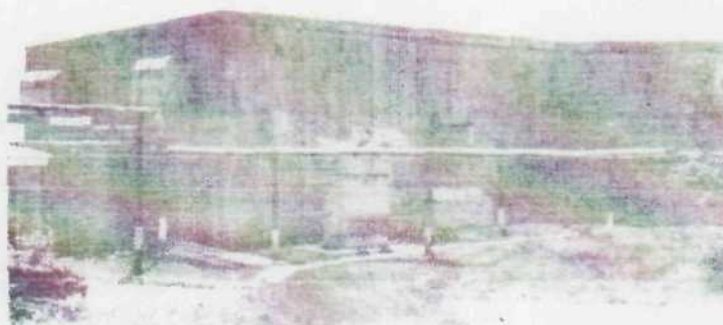
Front and side view of Building #P-101 (Operations Center).

Camp Hero

Montauk Point, NY.
(State of New York Property)



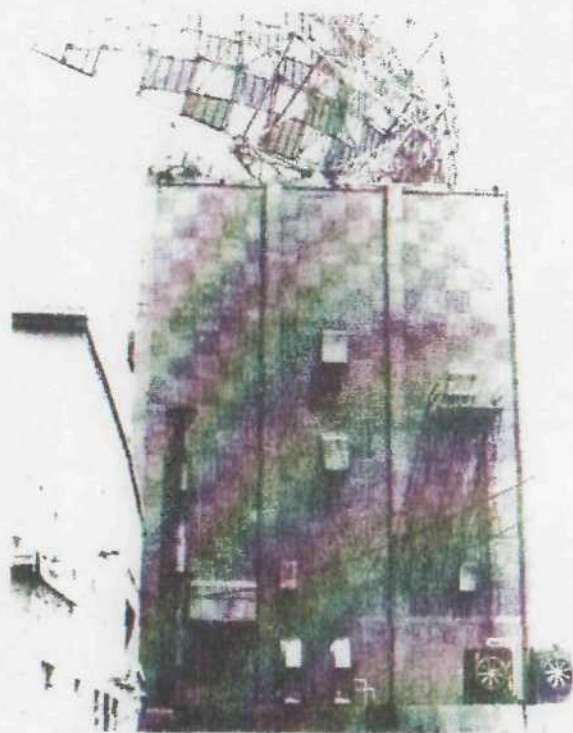
Front and side view of Building #P-101 (Operations Center).



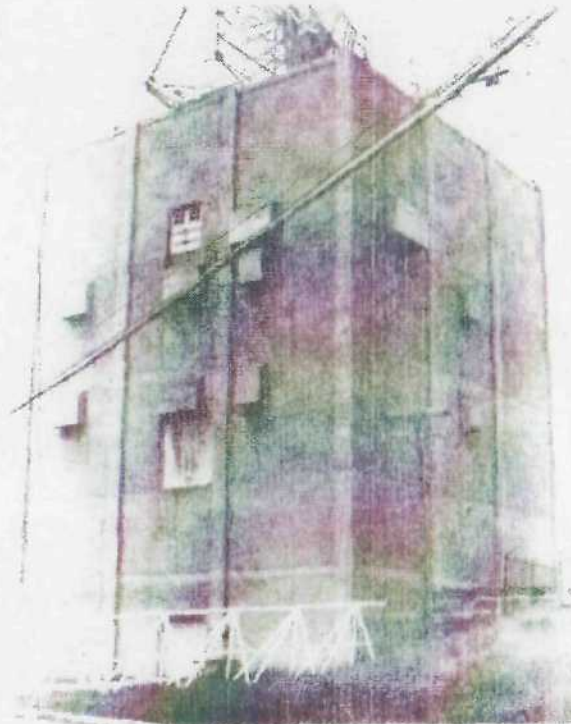
Back view of Building #P-101 (Operations Center).

Camp Hero

Montauk Point, NY.
(State of New York Property)



Left to right: Building #P-203 (Power Plant)
and Building #P-201 (Radar Tower Structure).



Building #201 (Radar Tower Structure) with
Transformer Cage (contains 15 transformers)
adjacent to it.

Camp Hero

Montauk Point, NY.
(State of New York Property)



Building #P-201 (Radar Tower Structure).



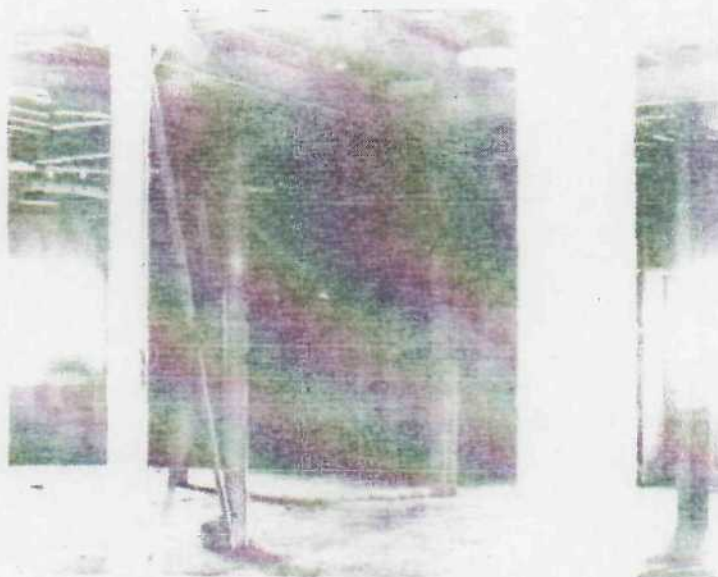
Left to right: Building #P-201 (Radar Tower Structure), Building #P-208 (BCE Maintenance Shop), and Building #205T (Concrete Tower).

Camp Hero

Montauk Point, NY.
(State of New York Property)



Building #P-210 (Tower).



Interior view of Building #P-210 (Tower).

Camp Hero

Montauk Point, NY.
(State of New York Property)



Building #3001 (Administration and
Maintenance Building)-to be retained.



Building #P-20 (Pump Station-Filter Plant)-to be
retained.

Camp Hero

Montauk Point, NY
(State of New York Property)



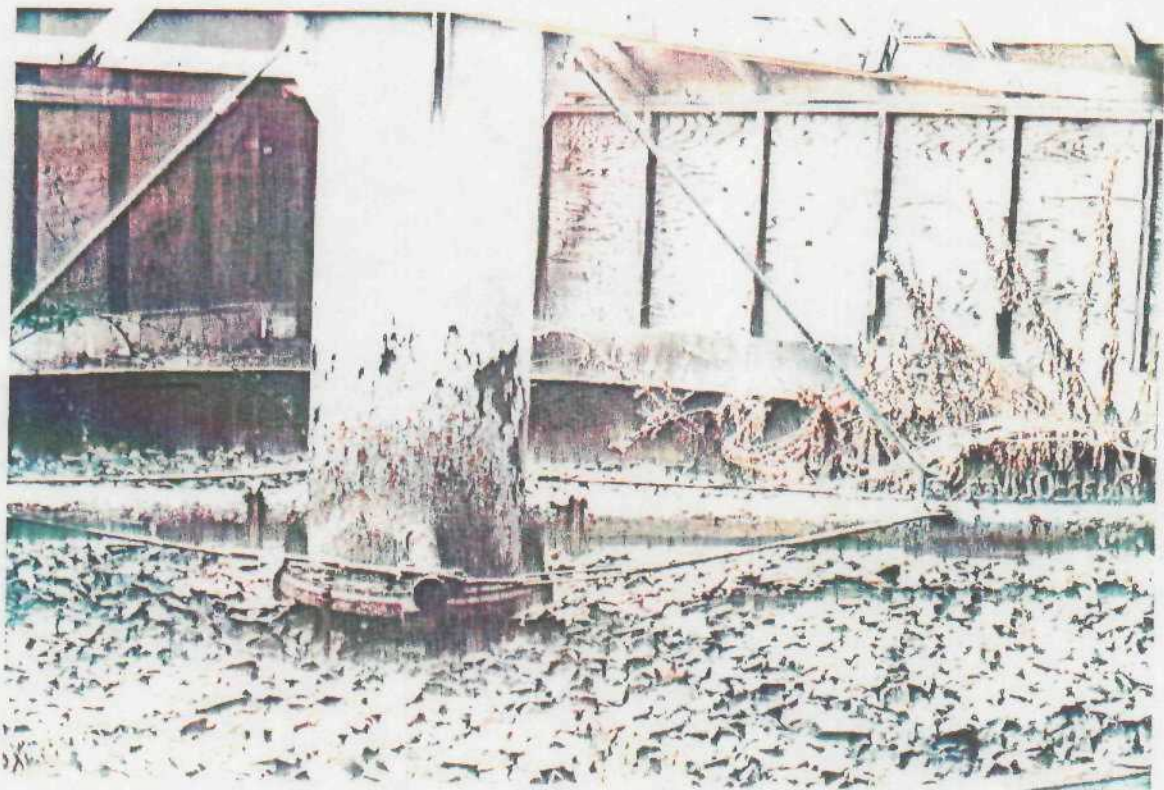
Front of former guard station located at southern
portion of site.



Portion of sewage treatment plant.

Camp Hero

Montauk Point, NY.
(State of New York Property)



Portion of sewage treatment facilities.



Portion of sewage treatment facilities.

Camp Hero

Montauk Point, NY.
(State of New York Property)



Portion of sewage treatment facilities.



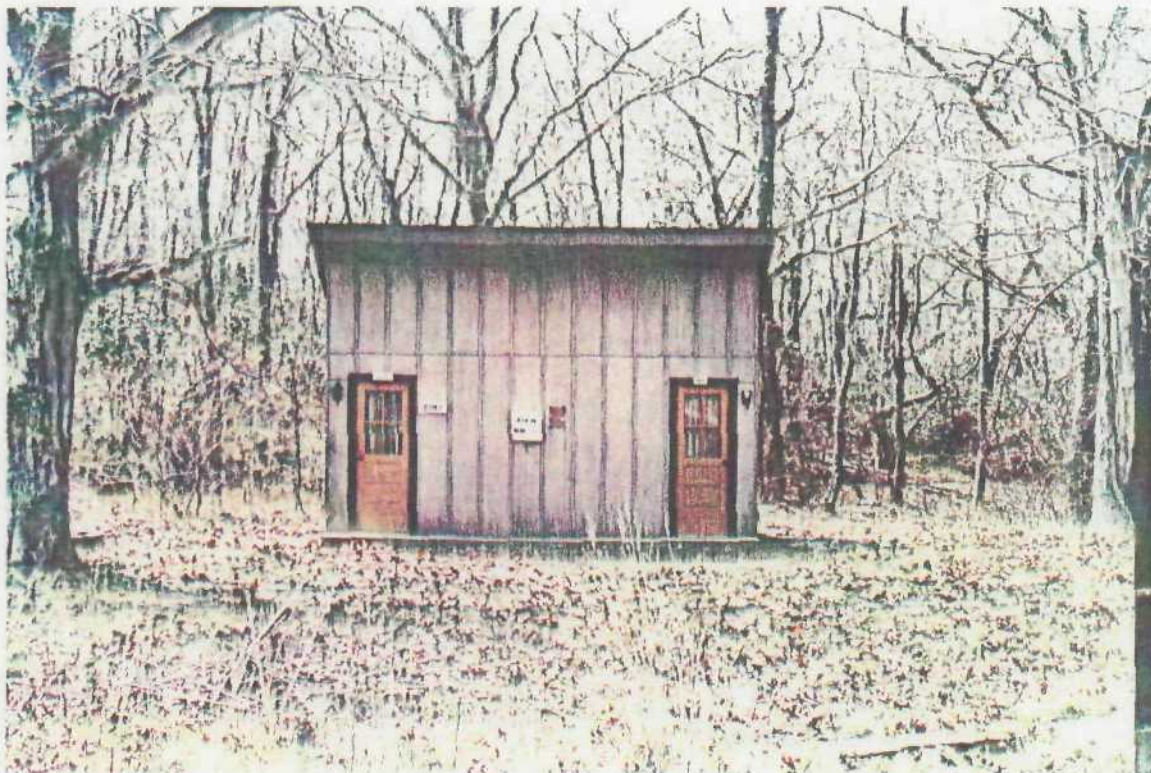
View of maintenance garage currently utilized.

Camp Hero

Montauk Point, NY.
(State of New York Property)



Concrete slab surrounded by debris located adjacent to sewage treatment plant.



View of restroom facilities(Bldg. #P-116) located in eastern portion of site.

Camp Hero

Montauk Point, NY.
(State of New York Property)



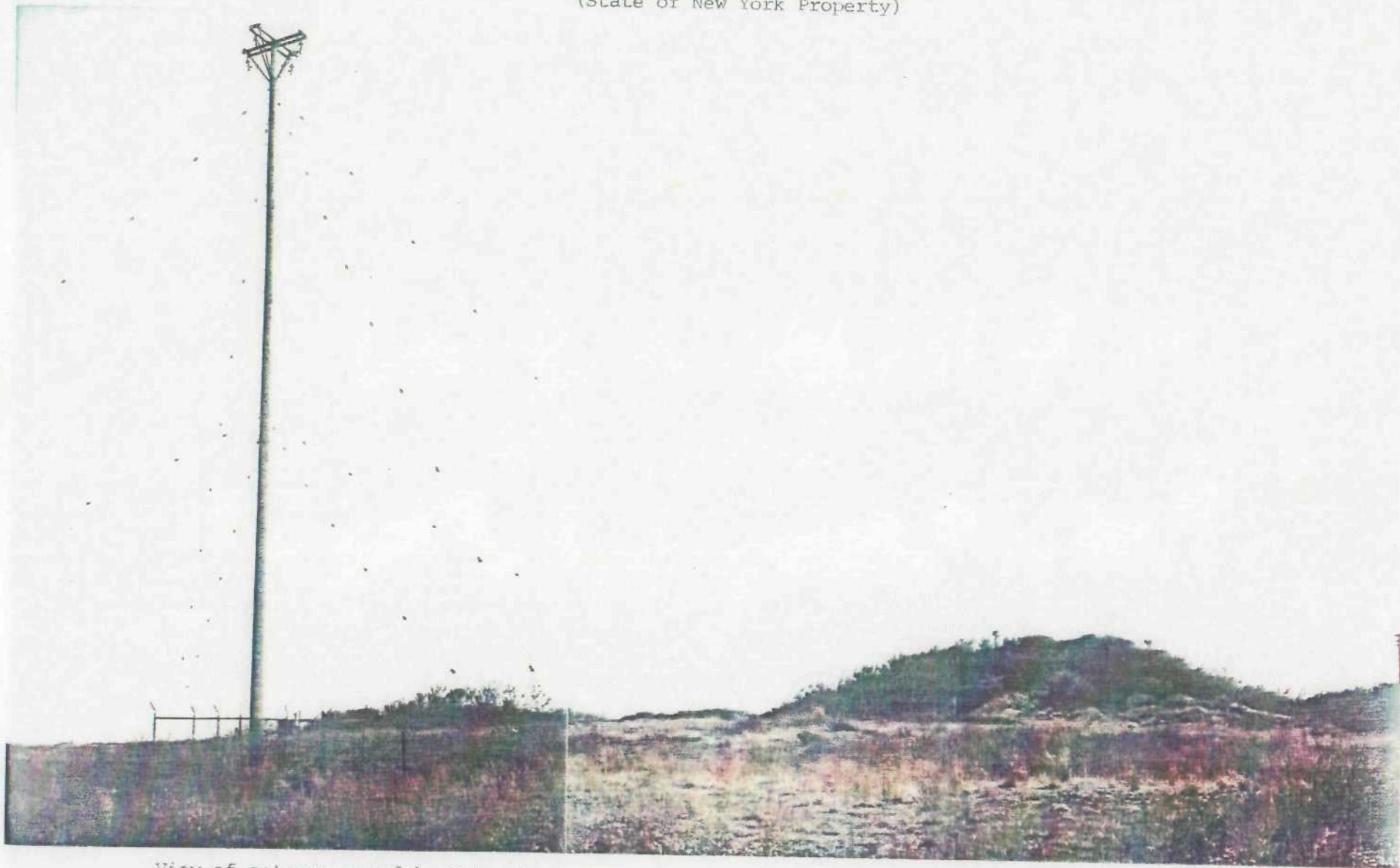
View of hose house (Bldg. #2061) located in eastern portion of site.



View of concrete slabs and utility post located in eastern portion of site.

Camp Hero

Montauk Point, NY.
(State of New York Property)



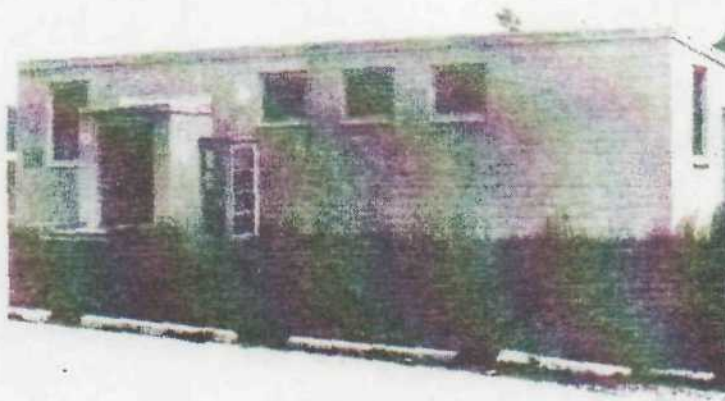
View of antenna owned by U.S. Coast Guard located in southern portion of site with a small bunker adjacent to it.

Camp Hero

Montauk Point, NY.
(State of New York Property)



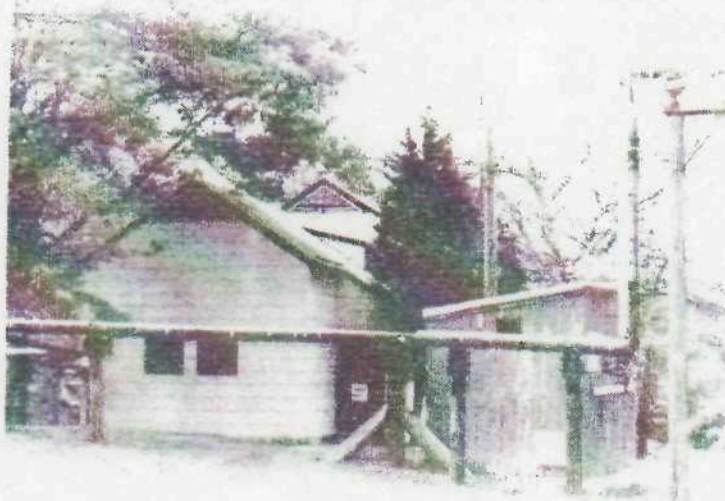
Building #P-21 (Water Treatment Plant)-to be retained.



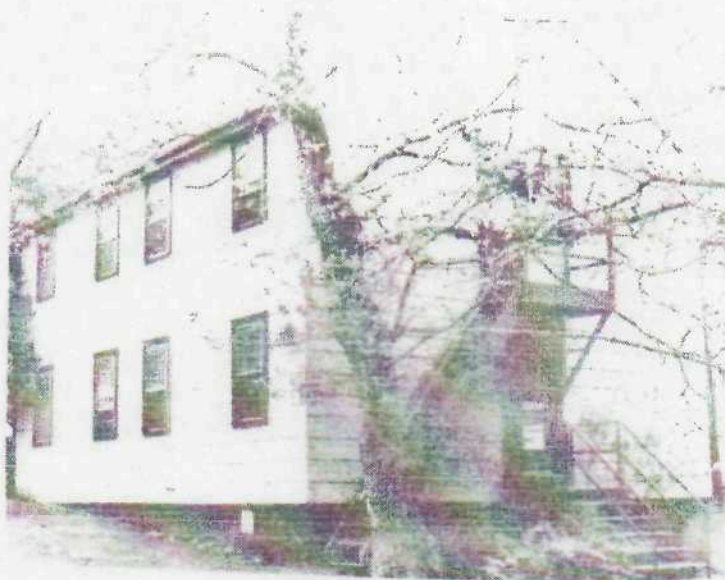
Building #P-9 (Post Exchange)-to be retained.

Camp Hero

Montauk Point, NY.
(State of New York Property)



Left to right: Building #P-5 (Dormitory)-to be retained,
and Hose House (retain hydrant).



Front view of Building #P-5 (Dormitory)-to be retained.

Camp Hero

Montauk Point, NY.
(State of New York Property)



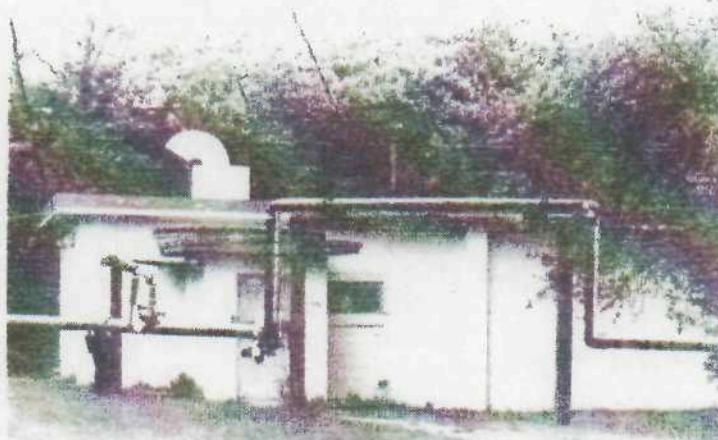
Building # P-104 (Weather Station).



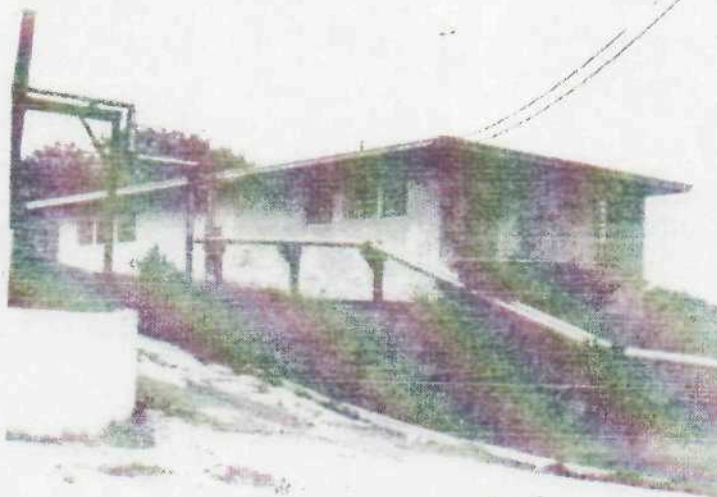
Building # I-33 (Garage) - to be retained.

Camp Hero

Montauk Point, NY.
(State of New York Property)



Building #P-205 (Bowling Alley) - to be retained.



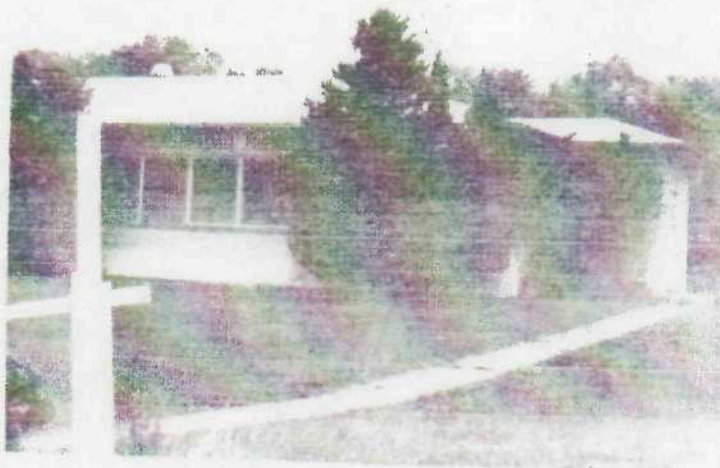
Building #P-111 (Material Control-Supply Base)-to be retained.

Camp Hero

Montauk Point, NY.
(State of New York, Property)



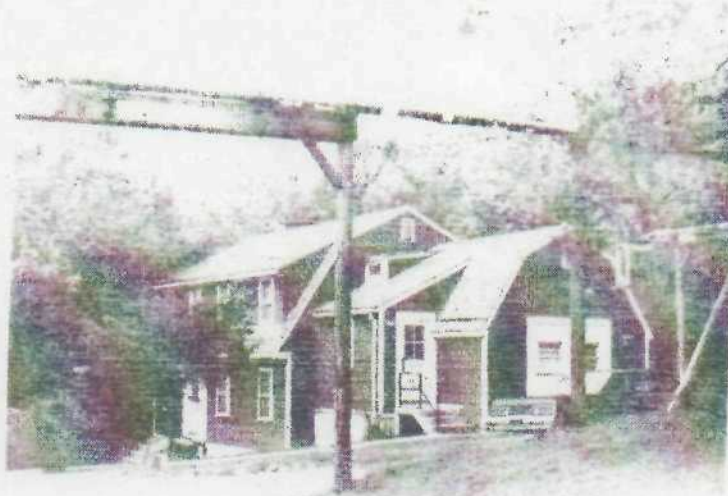
Building #P-109 (Dormitory)-to be retained.



Building #P-12 (Mess Hall)-to be retained.

Camp Hero

Montauk Point, NY.
(State of New York Property)



Building #P-4 (Dormitory)-to be retained.

APPENDIX D

INVENTORY REPORT AND HAZARDOUS RANKING SYSTEM EVALUATION

DERP

INVENTORY REPORT AND HAZARDOUS RANKING SYSTEM EVALUATION

Preliminary General Information

1. DERP Code Number. (11) C.O.2.N.Y.0.0.240.0
2. Site Name (current). (35) C.A.M.P. H.E.R.O., MONTAUK P.O.
POINT
3. Site Name when used by DOD. (35) C.A.M.P. H.E.R.O.
4. Street/Route Number. (25) STATE HIGHWAY NO. 27
5. City. (16) MONTAUK POINT
6. County. (15) SUFFOLK
7. State. (2) N.Y.
8. Zip Code. (9) 11954
9. Congressional District Code Number. (2) 2
10. Latitude: degrees, minutes, seconds. (6) 41°07'00"N
11. Longitude: degrees, minutes, seconds. (7) 71°53'00"W
12. Is a large scale, greater than 1 inch equals 200 feet, topographic map of the site area available to attach to this inventory report? (1) N
Y = YES N = NO
13. Are site maps or sketches on file with the inventory? (1) Y
Y = YES N = NO
14. Are there photographs on file with the inventory? (1) Y
Y = YES N = NO
15. Current Owners Name(s). (45) (1) N.Y. STATE (2) TOWN OF
E. HAMPTON (3) N.A.V.Y. (4) COAST GUARD
16. Owner's Street Address. (25) (1) P.O. BOX 247 (2) 159 P.
ANTIGO RD.
17. Owner's City. (16) (1) BABYLON (2) E. HAMPTON

18. Owner's State. (2) N.Y.
19. Owner's Zip Code. (9) (1) 11702 (2) 11937
20. Number of Years Owned. (2) (1) 11 (2) 3
21. What is the current owner's use of the site? (50) (1) NONE N.Y.
STATE HAS PLANS TO DEVELOP AS A STATE
PARK (2) E HAMPTON DEVELOPED LOW TO MIDDLE INCOME
HOUSING ON SITE

REAL ESTATE SEARCH INFORMATION

22. Give chronological list of owners or lessees since termination of DOD ownership or lease; include dates of ownership and brief description of use. (240)

N.Y. STATE 1974, 1982, 1983 TO PRESENT .
PLANS TO DEVELOP AS A STATE PARK . . .
TOWN OF EAST HAMPTON 1982 TO PRES. L
OW OR MIDDLE INCOME HOUSING
NAVY 1978 TO PRES. MILITARY PURPOSES
COAST GUARD 1974 TO PRES. STATION U.S.
E

23. Was property leased out to others by DOD? (Y or N), describe and match owner/lessee with use(s). (51)

N
.

24. Was property leased-out to others by subsequent owners? (Y or N)
 Describe. (51)

N
.

25. Type of problem(s) listed in claim documents, check as many as applicable: (3) H.D.

Hazardous and Toxic = H (if listed complete questions 100 to 399).

Ordnance and Explosive = O (if listed complete questions 400-499).

Debris/Structures = D (if listed complete questions 500 to 599).

26. Has Right of Entry Permit been obtained? (Y or N). (1) N.

27. Are copies of lease agreements or deeds or other instruments conveying title on file? (Y or N). (1) .Y.
28. Does deed(s) or lease agreement(s) contain any disclaimers or restoration requirements? (Y or N). If yes, describe. (161)
.Y. N.Y. PROPERTY MUST BE USED ONLY FOR .
PARK PURPOSES. TOWN OF EAST HAMPTON .
PROPERTY MUST BE USED FOR LOW OR M.
DENSE INCOME HOUSING
29. Date field inspection completed. (6) .04.22.85.
30. Agency performing inspection. (25)
.U.S.A.E.D.P. PHILADELPHIA PA . . .
31. Inspection team leader's name. (20) .PAULA NOHRSTEDT .
. . . .
32. Title. (25) .C.I.V.I.L. ENGINEER
33. Organization (office symbol). (10) .N.A.P.E.N.-P. . . .
34. Telephone number(s): Commercial. (10) .215.597.5953.
35. Telephone number(s): FTS. (7) .597.5953.
36. Telephone number(s): AUTOVON. (7)
37. Site Status: A = Active I = Inactive (1) .A.
38. Years of operation in current status. (2) .1.1.
39. Type(s) of problems found by inspection team. (3) .H.D. .
- USE:
H = H&T
O = OEW
D = Debris
40. Enter the number of buildings on the site. (3) .64.
41. Describe. (80)
.26. WOOD FRAME, 26 CONC. BLOCK, 6 STEEL,
1 CONC. BLOCK WOOD FRAME, 1 CONC. BLDG, 4
4 BUNKERS .

42. What is the major land use for a one mile radius around the site? (20)
(e.g., agriculture, industry, residential).

RESIDENTIAL

43. What is the estimated population within a one mile radius around the site? (use 3.8 persons/house). (6)

200 . . .

44. Describe the security of the site. (120)

NY PROP ENCLOSED BY DILAPIDATED SIX
FOOT CHAIN LINK FENCE WITH LOCKED G
ATE AT ENTRANCE, E HAMPTON PROP HAS
NO SECURITY

45. Describe the best access to the site from the nearest public road.
(120)

ENTER THROUGH MAIN ENTRANCE JUST SO
UTH OF STATE HIGHWAY NO 27
.
.

LIST CURRENT AND/OR PAST POLLUTION ABATEMENT PERMITS

PERMIT INFORMATION		NONE AVAILABLE			
TYPE OF PERMIT ISSUED					
PAST AND/OR PRESENT	PRESENT NO.	DATE ISSUED	EXPIRATION DATE	COMMENTS	

46. NPDES. (72) (PERMIT #, DATE ISSUED, EXPIRATION DATE, COMMENTS)

.
.
. . .

47. UIC. (72) (SAME AS 46)

.
.
. . .

48. AIR. (72) (SAME AS 46)

.
.
. . .

49. RCRA. (72) (SAME AS 46)

.....
.....
.....

50. Describe any pertinent environmental protection response actions previously taken at the site. (240)

M.A.N.Y. T.R.A.N.S.F.O.R.M.E.R.S. O.N. T.H.E. S.I.T.E. W.E.R.E. .
B.E.I.N.G. T.E.S.T.E.D. F.O.R. P.C.B.'S.
.....
.....
.....
.....

51. Describe any environmental protection remediation actions previously taken at the site. (240)

T.R.A.N.S.F.O.R.M.E.R.S. W.E.R.E. B.E.I.N.G. C.O.L.L.E.C.T.E.D. . .
A.N.D. S.T.O.R.E.D. T.O.G.E.T.H.E.R. I.N. A.N. O.U.T.S.I.D.E. . .
A.R.E.A. M.A.N.Y. O.F. T.H.E. T.R.A.N.S.F.O.R.M.E.R.S. A.P.E. .
B.E.I.N.G. T.E.S.T.E.D. F.O.R. P.C.B. B.Y. T.H.E. S.T.A.T.E.
O.F. N.E.W. Y.O.R.K.
.....
.....

52. List any court orders, lawsuits, fines or other legal actions that have been taken against any owners/operators of the site since DOD ownership/lease. (160)

N.O.N.E K.N.O.W.N.
.....
.....
.....
.....

53. Determination of Responsible Party for restoration: (1)

D

DOD Other Not yet determined

54. Contract 1. (13)

55. Contract 2. (13)

56. Contract 3. (13)

57. Contract 4. (13)
58. Contract 5. (13)
59-98. (Reserved)
99. Preliminary Information remarks. (80)
.....
.....
.....

DESCRIPTION OF WASTE AREAS WITH HRS OF WASTE STORAGE AT THE SITE

CONTAINMENT

100. Types of containment found in the individual waste areas:
(4)C.
- Surface impoundment ☐ (I) Waste piles, including
contaminated surface soils ☐ (P)
- Containers ☒ (C) Landfill, including
contaminated subsoils ☐ (L)
101. Present integrity of containment: (25) (Use TABLES 1, 2 or 3 phrases)
.....
102. Evaluation of the integrity of containment versus potential groundwater release, before any remedial actions (see TABLE 1 for evaluation considerations). HRS Value - (Groundwater Containment). (1) .1.
103. Evaluation of the integrity of containment versus potential surface water release, before any remedial actions (see TABLE 2 for evaluation considerations). HRS Value - (Surface Water Containment). (1) .1.

QUANTITY

104. Total quantity of hazardous waste, as deposited and capable of migrating. (Having a non-zero containment value (TABLE 3). The air pathway quantity is to include only those quantities that can be transported by the air: (10) 4 DRUMS, 5.3. T.R.A.N.S.F.O.R.M.E.R.S
7 FUEL TANKS
105. Total quantity of waste now present: CY, drums and gallons (use only one common unit). (10) 4 DRUMS, 5.3. T.R.A.N.S.F.O.R.M.E.R.S
7 FUEL TANKS
106. Quantity with the potential to migrate by groundwater. (10) 4 DRUMS, 5.3. T.R.A.N.S.F.O.R.M.E.R.S
7 FUEL TANKS
107. HRS Value (groundwater quantity). (1) (TABLE 3) .6.
108. Quantity with the potential to migrate by surface water. (10) 4 DRUMS, 5.3. T.R.A.N.S.F.O.R.M.E.R.S
7 FUEL TANKS
109. HRS Value (Surface Water Quantity). (1) (TABLE 3) .6.

110. Quantity with the potential to migrate by air. (10)

UNKNOWN . . .

111. HRS Value (Air Quantity). (1) (TABLE 3)

. .

HAZARDOUS SUBSTANCES

112. Hazardous substances in this area. (360)

Name(s) Chemical Abstract System (CAS) Number

UNKNOWN

T.R.A.N.S.F.O.R.M.E.R.S. A.N.D. F.U.E.L. S.T.O.R.A.G.E. T.A.N.K.S.
MAY BE CONTAMINATED WITH PCB'S AND INS.
ULAT ION IN BUIL DINGS AND ON EXTERI O
R. HEAT ING P I P E S MAY CONTAIN ASBESTO
S. ALSO POSSIB I L I T Y OF CONTAMINAT I ON
IN LOCAL STREAMS DUE TO DISCHARGE
OF POTENTIAL TOXIC WATER THROUGH TH
E SEWAGE TREATMENT FAC I L I T Y. A DRUM
C L E R E F O U N D I N T O W E R # P 2 0 1 - C O A T E
M T S A R E U N K N O W N

113. Highest scoring substance for Groundwater Migration Route. (25)

.

114.* Toxicity ranking number. (1)

. .

115.* Persistence ranking number. (1)

. .

116.** HRS Matrix Value. (2)

. . .

117. Highest scoring substance for Surface Water Migration Route. (25)

.

118.* Toxicity (ranking number). (1)

. .

119.* Persistence (ranking number). (1)

. .

120.** HRS Matrix Value. (2)

. . .

* Use TABLES 4, 5, or 6

**Use TABLE 7

121. Highest scoring substance for Air Migration Route. (25)

.....

122.* Toxicity (ranking number). (1)

..

123.** HRS Value. (2)

...

PHYSICAL STATE

124. Physical state of waste as deposited: (1)

	HRS Value		HRS Value
Solid consolidated or stabilized:	0	Powder or fine material:	2
Solid, unconsolidated or unstabilized:	1	Liquid, sludge or gas:	3
HRS value from item 124.			<u>.3</u>

125. Description of current physical state of waste. (15)

.....

GROUNDWATER MIGRATION ROUTE

HYDROGEOLOGY TO BE DETERMINED BY CONFIRMATION STUDY (TBD)

126. Description of strata from surface to the deepest aquifer or conderm
(names, thickness, type of material). (Refer to TABLE 8) (200)

.....
.....
.....
.....
.....
.....

127. Direction of regional groundwater flow. (3)

.....

128. Are there barriers to horizontal migration of groundwater within 3
miles downgradient of the site (e.g., rivers). These barriers should
be identified on a map of the site. (1) Y/N

..

* Use TABLES 4, 5, or 6
**Use TABLE 7

129. Are there discharge and/or recharge areas within 3 miles of the site?
(These areas should be identified on a map of the site). (1) Y/N ..

COMPARATIVE DOCUMENTATION OF AQUIFERS **TBD**

(All questions on this page refer to surficial aquifer).

130. Name of aquifer. (25)

.....

131. Designation of aquifer use. (10)

.....

132. Depth to highest seasonal level. (3)

.....

Circle the HRS value corresponding to the use of groundwater drawn from within 3 miles from the source of contamination:

	<u>VALUE</u>
Unusable	0
Commercial, irrigation, or not used but usable	1
Drinking water with alternate source available	2
Sole source, drinking water supply	3

133. The HRS Value circled. (1)

..

134. Location of nearest drinking or irrigation well within 3 miles downgradient of the source of contamination, give direction. (20)

.....

135. Depth of the nearest well (ft). (3)

.....

136. Distance to the well from nearest point of contamination (critical distances that require careful measurement for HRS purposes of 2000', 1 mile, 2 miles and 3 miles). (5)

.....

137. Population served by groundwater drawn from aquifer within 3 miles of contamination. (6)

.....

138. Basis of population figure (e.g., census, house count): (10)
139. HRS value from Distance/Population Matrix (TABLE 9). (2)
140. Acres of cropland/pastureland irrigated by water drawn from the aquifer within 3 miles of contamination. (4)

COMPARATIVE DOCUMENTATION OF AQUIFERS **TBD**

(All questions on this page refer to Deeper Aquifer)

141. Name of aquifer. (25)
142. Designation of aquifer use. (10)
143. Distance from ground surface (elevation) to highest seasonal water level. (3)

Circle the HRS value corresponding to the use of groundwater drawn from within 3 miles from the source of contamination:

	<u>VALUE</u>
Unusable	0
Commercial, irrigation, or not used but usable	1
Drinking water with alternate source available	2
Sole source, drinking water supply	3

144. HRS value circled. (1) ..
145. Location of nearest drinking or irrigation well within 3 miles downgradient of the source of contamination, give direction. (20)
146. Depth of the nearest well (ft). (3)
147. Distance to the well from nearest point of contamination (critical distance that require careful measurement for HRS purposes are 2000', 1 mile, 2 miles and 3 miles). (5)

148. Population served by groundwater drawn from aquifer within 3 miles of contamination. (6)
149. Basis of population figure (e.g., census, house count). (10)

150. HRS value from Distance/Population Matrix (TABLE 9). (2) . . .
151. Acres of cropland/pastureland irrigated by water drawn from the aquifer within 3 miles of contamination. (4)

RELEASE TO AQUIFER OF CONCERN **TBD**

Select from the comparative documentation of aquifers, the aquifer that yields the highest HRS groundwater score. Document and evaluate this aquifer.

152. Name of aquifer. (25)

153. Is it the surficial (S) or deeper (D) of the aquifers? (1) . .
154. Is there an observed release of contaminants to this aquifer: (1) . .
 Y (YES), Value = 45
 N (NO), Value = 0
155. HRS Value. (2) . . .
156. Are there any analytical findings that document observed release to groundwater above background? (1) Y = YES N = NO . .
157. Date of Analysis. (6)
158. Reference. (60)

159. Identification of background well(s). (25)

160. Identification of contaminated well(s). (25)

161. Contaminants detected. (150)

.....
.....
.....
.....
.....

162. Depth of contamination. (3)

163. Distance from ground surface to highest seasonal water level in this
aquifer. (3)

164. Depth below ground surface of deepest documented waste or of intake of
of a contaminated well. (3)

165. Depth from deepest point of documented contamination to the aquifer
of concern. (3) (Question 164 minus 165)

HRS Value. (1)	<u>DEPTH</u>	<u>VALUE</u>	. .
	0 - 20	3	
	21 - 75	2	
	76 -150	1	
	150	0	

167. Inches of normal annual total precipitation (Figure 1). (2) + . . .

168. Inches of mean annual lake evaporation (Figure 2). (2) - . . .

169. Net precipitation, in inches (if seasonal data is used, show month(s)
represented). (2)

-10 inches = 0 15 inches = 3
-10 to + 5 = 1
+ 5 to +15 = 2

170. HRS Value (Precipitation). (1) . .

171. Permeability of the least permeable layer between documented contamina-
tion and the highest seasonal water level of this aquifer of concern
(TABLE 10). (6)

172. HRS Value (Permeability) (1) . .

GROUNDWATER USE

TBD

173. Write the number for the highest-valued actual use of this aquifer within a 3-mile radius as shown on the comparative evaluation. (1) . . .

<u>USE</u>	<u>VALUE</u>	<u>USE</u>	<u>VALUE</u>
Unusable	0	Drinking water with with alternate source	2
Commercial or irrigation	1	Without alternate source	3

DISTANCE TO NEAREST WELL

TBD

174. Distance to the nearest drinking water or irrigation well in this aquifer (comparative evaluation between surficial and deeper). (3)

.

POPULATION SERVED

TBD

175. Total population served by groundwater drawn from the aquifer within 3 miles of contamination (comparative evaluation between surficial and deeper).

Population (3.8 persons/house) (5) +

176. Acres irrigated times 1.5 (4) +
persons/acre

177. Total Population (5)

178. Determine the worst case from distance/population Matrix (TABLE 9) and enter HRS value. (2)

SURFACE WATER MIGRATION

A topographical map is to be attached showing the migration path that run-off would follow from the areas of waste storage to surface waters and thence to targets within 5 miles downstream. All distances are to be measured along the migration path rather than by a straight line.

Indicate sampling points, the most downstream point (or point along migration path) of documented contamination, all water intakes by use, and sensitive environments and critical habitats that lie contiguous to the migration path. Show names of water bodies.

OBSERVED RELEASE

179. Is there analytical evidence of contamination of surface waters above background? (1) N, Go to Item 185 .N.
Y, Go to Item 180
180. Date of Evidence: (6)
181. Reference: (60)
.....
.....
182. Background sampling points (list well identification): (80)
.....
.....
.....
183. Downstream sampling points (list well identification): (80)
.....
.....
.....
184. Contaminants detected (5 maximum): (100)
.....
.....
.....
185. HRS Value. Direct evidence of release of surface water (evidence must be quantitative) - HRS value = 45; no evidence - HRS value = 0 (2) .0.

186. Check if drinking water intakes have been contaminated. (1) 0 = NO
 1 = YES, Public
 2 = YES, Private
 3 = BOTH
-

..

Questions 187 to 193 MUST BE COMPLETED ONLY IF EVIDENCE OF AN OBSERVED RELEASE TO SURFACE WATER IS LACKING:

ROUTE CHARACTERISTICS

187. Does this facility lie in a topographical depression with no surface water migration route? If YES, assign a surface water migration score of zero. If NO, continue with Item 188. (1)

..

SLOPE

TBD

188. Slope of the facility. (2)
189. Slope of intervening terrain from nearest point of documented contamination to surface water (Use TABLE 11): (2)
190. HRS Value (Slope Matrix). (1)
191. 1 year 24 hour rainfall as indicated for the site on Figure 3 (inches). (2)
192. HRS Value (Rainfall). (1)
193. Distance along migration path from most downstream point of documented contamination to surface waters. (7)
 Distances of 2 miles and less are classifiable.

...

...

..

...

..

.....

*DISTANCE - Assign a value as follows:

<u>Distance</u>	<u>Assigned Value</u>
2 miles	0
1 to 2 miles	1
1000 feet to 1 mile	2
1000 feet	3

194. HRS Value (Distance of Surface Water). (1)

..

TGD

- HRS Value

Drinking water: ---- 3

• •

TBD

- • • • •

199. HRS Value (Distance to Sensitive Environment). (1) Use TABLE 12 . .

T B D

- 17

POPULATION SERVED **TBD**

Total Population served by water drawn from surface water within the 3 mile limit:

201. Population (assume 3.8 persons/house). (5)
202. Acres irrigated times 1.5 persons/acre. (4)
203. Total HRS population: (5)
204. HRS, Value (Dist/Pop Matrix). (2) ...
 (The distance (question 200) and population
 (question 203) are used in TABLE 9 to
 determine HRS value.

AIR MIGRATION ROUTE

OBSERVED RELEASE - AIR

TBD

205. Is there any reason to suggest that air sampling should be done? (80)

NO YES

Narrative Summary:

.....
.....
.....

206. Is there analytical evidence confirming an observed released air above
background? (1) ..

NO Go to Item 212 YES Continue with Item 207

207. Date: (6)

208. Reference: (60)

.....
.....

209. Location of upwind and downwind sampling points: (80)

.....
.....
.....

210. Method and equipment: (80)

.....
.....
.....

211. Contaminants detected above background: (150)

.....
.....
.....
.....
.....

212. Analytical evidence of contaminants. (2)

...

HRS value - 45 if yes NO evidence - HRS value = 0

REACTIVITY & INCOMPATABILITY

See TABLE 13 and TABLE 14

Most reactive materials onsite are: (List)

213. (25)
214. (25)
215. (25)
216. (25)
217. (25)
218. (25)

Most incompatible pairs of material onsite are: (List)

219. (25)
220. (25)
221. (25)
222. (25)
223. (25)

224. (25)

INCOMPATIBILITY	VALUE and TABLE 13
No incompatible materials are present	0
Present but do not pose a hazard	1
Present & may pose a future hazard	2
Present & posing an immediate hazard	3

225. HRS Value (R/I). (1) . . .

POPULATION EXPOSED

Population exposed to risk of air release, (fill in population information for all distances from the volatilizing source):

Indicate in each box (a, b, c and d) the total population for the given radius.

		Total Population
226.	0 - 1/4 mile (7)
227.	0 - 1/2 mile (7)
228.	0 - 1 mile (7)
229.	0 - 4 miles (8)
230.	Use insert *** to determine HRS value. (2)	. . .

***Select the highest value for this rating factor as follows: Distance to Population from Hazardous Substance

Population	0-4 Mile	0-1 Mile	0-1/2 Mile	0-1/4 Mile
0	0	0	0	0
1-100	9	12	15	18
101-1000	12	15	18	21
1001-3000	15	18	21	24

DISTANCE TO A SENSITIVE ENVIRONMENT

	Coastal wetland	Freshwater wetland	Critical habitat
231.	Location and description of wetlands (5 acre minimum): (200)		
	<div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div> <div>.....</div>		
	Location of critical habitat of endangered species, including notation of whether the species is on the Federal list.		
232.	Distance from volatile substance to the sensitive environment. (6)	
233.	HRS Value - See TABLE 12. (1)		..
	LAND USE within 2 miles - See TABLE 14		
			<u>DISTANCE/VALUE</u>
234.	Commercial/industrial area. (5)	 / .
235.	Residential area. (5)	 / .
236.	National/State park, forest, wildlife reserves. (5)	 / .
237.	Prime agricultural land. (5)	 / .
238.	Agricultural land in production within the past 5 years. (5)	 / .
239.	Is a historic landmark site within view of the facility or like to be subject to significant impacts from air release? YES/NO (80)		
	If so, identify, locate and describe expected impacts:		
	<div>.....</div> <div>.....</div> <div>.....</div>		
240.	HRS Value (use TABLE 14, Land Use). (1)		..

FIRE AND EXPLOSION FROM HAZARDOUS OR TOXIC MATERIALS

FIRE AND EXPLOSION POTENTIAL:

TBD

241. Based on field observation and measurement, is there a demonstrated fire and explosion threat at this site? (41) NO/YES Describe:

Narrative summary:

.....
.....

242. Has state or local fire marshal certified that site presents a significant hazard of fire or explosion: (41)

Narrative summary:

.....
.....

IF ANY QUESTIONS IN ITEMS 241 and 242 HAVE BEEN CHECKED "YES" FOR FIRE AND EXPLOSION POTENTIAL, COMPLETE ITEMS (243 TO 284)

CONTAINMENT

Substances found onsite that are individually ignitable.

243. (25)
244. (25)
245. (25)
246. (25)
247. (25)

Substances found onsite that are incompatible.

248. (25)
249. (25)
250. (25)
251. (25)
252. (25)

253. Are any of the substances that are onsite hazardous in combination and are not segregated or isolated so as to prevent the formation of incompatible mixtures: Y OR N (1) ..

ISOLATED/SEGREGATED	VALUE
YES	1
NO	3

254. HRS Value (Containment). (1) ..

WASTE CHARACTERISTICS:

255. Direct evidence of ignitability or explosion potential, as measured:
Y = YES N = NO (1) ..

256. HRS Value (Direct Evidence). VALUE: YES 3 NO 0 (1) ..

257. Ignitability: List the most ignitable substance onsite and indicate the National Fire Protection Agency (NFPA) level assigned this substance (TABLE 15): (25)

.....

258. HRS Value (Ignitable). (1) ..

259. Most reactive materials onsite are: See TABLE 16 (25)

.....

260. HRS Value (Reactive): (1) ..

261. Most incompatible pairs of material onsite are: See TABLE 13 (40)

.....
.....

262. HRS Value (Incompatible). (1) ..

263. Quantity of materials onsite that are flammable or explosive, including hazardous materials that are flammable or explosive alone or in combination: (9)

264. HRS (Quantity) - See TABLE 3. (1) ..

DISTANCE TO TARGETS:

265. Distance to nearest persons like to be at risk to fire or explosion (critical distances that require careful measurement for HRS purposes are 0 feet, 200 feet, 1/2 mile, 1 mile and 2 miles): (6)
266. HRS Value (Population) - See TABLE 15A. (1) . .
267. Distance to the nearest building from the hazardous substance (critical distances that require careful measurement for HRS purposes are 50 feet, 200 feet and 1/2 mile): (6)
- | <u>DISTANCE</u> | <u>VALUE</u> |
|-----------------|--------------|
| 1/2 mile | 0 |
| 201'-1/2 mile | 1 |
| 51'-200' | 2 |
| 0-50' | 3 |
-
268. HRS Value (Buildings). (1) . .
269. Distance to nearest wetland from the hazardous substance? (6)
-
- | <u>DISTANCE</u> | <u>VALUE</u> |
|-----------------|--------------|
| 100' | 0 |
| 100' | 3 |
270. HRS Value (Wetlands). (1) . .
271. Distance to a critical habitat from the hazardous substance (critical distances that require careful management of HRS purposes are 100 feet, 1000 feet and 1/2 mile): (6)
-
- | <u>DISTANCE</u> | <u>VALUE</u> |
|-----------------|--------------|
| 1/2 mile | 0 |
| 1001 -1/2 mile | 1 |
| 101-1000' | 2 |
| 0-100' | 3 |
272. HRS Value (Habitat). (1) . .
273. Is a fire like to spread to this critical habitat, regardless of distance? YES or NO (1) . .

TARGETS FOR FIRE AND EXPLOSION:

Land use within 2 miles (note that this item is identical to the air migration pathway, providing the location of the volatilizing substances and the flammable or explosive substance is the same):

(Critical distances requiring measurement for HRS purposes are 1/4 mile, 1/2 mile, 1 mile and 2 miles): See TABLE 14

		<u>DISTANCE/VALUE</u>
274.	Commercial/industrial area. (5)	<u>. . . . / .</u>
275.	Residential area. (5)	<u>. . . . / .</u>
276.	National/State park, forest, wildlife reserves. (5)	<u>. . . . / .</u>
277.	Prime agricultural land. (5)	<u>. . . . / .</u>
278.	Agricultural land in production within the past 5 years. (5)	<u>. . . . / .</u>
279.	Is a historic landmark site within view of the facility or like to be subject to significant impacts from fire or explosion? YES OR NO. Describe (81)	
	<u>.</u>	
	<u>.</u>	
	<u>.</u>	

TABLE 14 is used to determine the HRS value. The highest value is to be chosen.

280.	HRS Value (Land Use). (1)	<u>. .</u>
281.	Population with 2 mile radius. (If areial photography is used in making the count, assume 3.8 individuals per dwelling). (6)	<u>.</u>

<u>POPULATION</u>	<u>VALUE</u>
0	0
1-100	1
101-1000	2
1001-3000	3
3001-10,000	4
10,000	5

282.	HRS Value (Population). (1)	<u>. .</u>
------	-----------------------------	------------

283. Buildings within a 2-mile radius (measures from the hazardous substance). (4)

<u>NO OF BUILDINGS</u>	<u>VALUE</u>
0	0
1-26	1
27-60	2
261-790	3
791-2600	4
2600	5

284. HRS Value (Buildings). (1) . .

DIRECT CONTACT

285. Is there a confirmed instance in which contact caused injury, illness or death to humans or to domestic or wild animals? (100)

Narrative summary:

.

286. HRS Values: YES - 45, NO - 0 (2) . . .

IF ITEM 285 FOR DIRECT CONTACT IS CHECKED "YES" SKIP TO LINE 292 - IF NO, COMPLETE ITEMS 287 TO 291

Accessibility to where the hazardous material is deposited - evaluate the following aspects: (1)

	<u>VALUE</u>
287. Surveillance system: YES	0
NO	1

288. Artificial or natural barriers to entry: (1)

	<u>VALUE</u>
YES	0
NO	1

289.	Control of entry points: (1)	<u>VALUE</u>	
	YES	0	
	NO	1	<u>..</u>

Add values from lines 287, 288 and 289 to mark in 291.

290.	Have any changes in accessibility been made since the confirmed instance of direct contact? (1) Y/N	<u>..</u>
------	---	-----------

291.	HRS Value (Access). (1)	<u>..</u>
------	-------------------------	-----------

292.	Indicate if there is <u>Containment</u> of the hazardous materials against direct contact: (6)
------	--

<u>CONTAINMENT</u>	<u>VALUE</u>	<u>Y OR N</u>
Surface impound.	15	<u>..</u>
Sealed or unsealed containers	15	<u>..</u>
Tanks	15	<u>..</u>
Landfill with less than 2' cover	15	<u>..</u>
Spills	15	<u>..</u>
Otherwise	0	<u>..</u>

293.	HRS Value (Containment) from item 292. (2)	<u>...</u>
------	--	------------

294.	Toxicity of the most hazardous materials that are not adequately contained against direct contact: Refer to TABLES 4 & 5 (60)
------	---

Storage Area #

..... (20)

Material

..... (20)

Toxicity

..... (20)

295.	HRS Value (Toxicity). (1)	<u>..</u>
------	---------------------------	-----------

296. Population within one mile of hazardous materials: (7)

POPULATION WITHIN	
<u>1 MILE</u>	<u>VALUE</u>
0	0
1-100	1
101-1000	2
1001-3000	3
3001-10,000	4
>10,000	5

Basis for this estimate:

297. HRS Value (Population): (1) . .

Location of critical habitat of endangered species, including notation of whether species is on the federal list:

298. Circle the appropriate Distance to the critical habitat (critical distance that require measurement for HRS purposes are 1/4 mile, 1/2 mile and 1 mile): (6)

.

<u>DISTANCE</u>	<u>VALUE</u>
1 mile	0
1/2 mile - 1 mile	1
1/4 mile - 1/2 mile	2
<1/4 mile	3

299. Indicate if the critical habitat is on the State S, Federal F, or both B list(s). (1) . .

300. HRS Value (Distance to critical habitat) from Item 298. (1) . .

301-398. Reserved

399. Remarks. (80)

.
.
.
.

ORDNANCE AND EXPLOSIVE WASTE (OEW)

OEW RISK ASSESSMENT:

The OEW risk assessment is based on records searches, reports of Explosive Ordnance Detachment actions, and field observations and measurements. These data are used to assess the risk involved based upon the hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability.

Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel error, environmental conditions, or other pertinent factors.

Description	Category	Mishap Definition
CATASTROPHIC	1	Explosion, Death, Life-threatening or other injury causing total permanent disability, or Property damage in excess of \$500,000.
CRITICAL	2	Major fire, Severe injury which requires doctor or hospital care for 1 or more persons, or Property damage between \$100K and \$500K.
MARGINAL	3	Minor fire, Minor injury which would require any medical or Property damage between \$700 and \$100,000.
NEGLIGIBLE	4	No injuries or Property damage less than \$700.

400. The Hazard Category assigned for this site is. (1) . .

401. This is based primarily upon the following: (160)

.....

Hazard probability. The probability that a hazard has been or will be created due to the presence of unexploded ordnance or explosive materials on a formerly used DOD site.

Description	Level	Probability Definition
FREQUENT	A	Has already occurred more than once or has the potential to occur at least every 1 or 2 years.
PROBABLE	B	Has already occurred once or has the potential to occur more than once in the next 10 to 20 years.
OCCASIONAL	C	Is likely to occur sometime in the next 10 to 20 years.
REMOTE	D	Unlikely but possible due to the nature of past DOD use of the site.
IMPROBABLE	E	So unlikely that it can be assumed that it will not occur.

402. The hazard probability level assigned for this site is. (1) ..

403. This is based upon the following: (160)

.....

Risk Assessment. The risk assessment value for this site is to be found by using the following table. Enter with the results of items 400 & 402.

Probability					
Level	A	B	C	D	E

Severity					
Category:					
I	20	20	18	14	10
II	20	18	14	10	6
III	18	14	10	6	2
IV	14	10	6	2	0

404. The risk assessment value for this site is. (3)

405. Ordnance and Explosive Waste Characteristics. Is there any direct or other evidence that OEW is present or could be present based upon former DOD uses of the site? This evidence can be based upon direct observation of the site survey team, reports received from individuals, government agencies, or news media, review of drawings or archive documents relating to DOD operations at the site, or any other pertinent source.

YES (Complete the rest of this question).

NO (Enter 0 in Question 2 on the OEW Work Sheet and continue starting with Question 422).

If the answer to this question is YES describe briefly the type of evidence and where that evidence is available for detailed review. (161)

.....

(For Questions 406 through 442 underline, check, circle or otherwise indicate each appropriate answer.)

406. High Explosives. (4)

	YES VALUE	NO VALUE	Y OR N
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, etc.)	10	0	<u>..</u>
Booster or Bursting Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	5	0	<u>..</u>
Military Dynamite	5	0	<u>..</u>
Less Sensitive Explosives (Ammonium Nitrate, Favier Explosives, etc.)	3	0	<u>..</u>

407. High Explosives Ordnance Ranking System (ORS) Value
(Maximum value of 10). (2)

...

408. Propellants. (5)

	YES VALUE	NO VALUE	Y OR N
Single Base Propellant (M10, M12, etc.)	3	0	<u>..</u>
Double Base Propellant (M2, M5, M9, M13, etc.)	4	0	<u>..</u>
Triple Base Propellant (M15, M17, etc.)	4	0	<u>..</u>
Liquid Propellant	4	0	<u>..</u>
Large Rocket Motors	5	0	<u>..</u>

409. Other (describe). (15)

.....

410. Propellants HRS Value from item 408. (1)

..

411. Conventional Ordnance and Ammunition. (11)

	YES VALUE	Y OR N
Small Arms (.22 cal - 20mm)	1	<u>..</u>
Medium/Large Caliber (over 20mm)	5	<u>..</u>
Ammunition, Inert	0	<u>..</u>
Ammunition, Blank or Practice	2	<u>..</u>
Bombs, Explosive	5	<u>..</u>
Bombs, Practice, Fuzed	2	<u>..</u>
Grenades, Mines	5	<u>..</u>
Grenades, Mines, Practice, Fuzed	2	<u>..</u>
Detonators, Blasing Caps	5	<u>..</u>
Rockets, Missiles	5	<u>..</u>
Demolition Charges	4	<u>..</u>

412. Other. (15)

.....

413. Conventional Ordnance and Ammunition ORS Value from item 411 (Maximum of 5). (1)

..

414. Pyrotechnics. (4)

	YES VALUE	Y OR N
White Phosphorus	5	<u>..</u>
Pyrolusite	4	<u>..</u>
Flares	3	<u>..</u>
Smoke Rounds and Bombs	3	<u>..</u>

415. Other Pyrotechnic Devices. (15)

.....

416. Pyrotechnics ORS Value (Maximum of 5). (1)

..

417. Chemical Weapons/Agents. (3)

YES
VALUE

Y O R N

Toxic Chemical Warfare Agents
(GB, VX, H, HD, BZ, , etc.)

40

• •

Vomiting Agents
(DA, DM, DC, etc.)

20

• •

Tear Agents
(CNS, CNB, BBC, CS, etc.)

10

• •

418. Other Chemical Warfare Agents. (15)

• • • • •

419. Chemical Weapons ORS Value. (2)

• • •

420. Total Ordnance and Explosive Waste Characteristics ORS Value (Total = 407 + 410 + 413 + 416 + 419 with a Maximum value of 55). (2)

• • •

421. Provide a detailed description on any and all chemical weapons or chemical agents present at the site. (400)

422. Locations of Contamination. (6)

VALUE

Y OR N

Within Tanks, Pipes, Vessels
or Other confined locations.

5

—

On the surface or within 3 feet.

5

• •

Inside walls, ceilings, or other parts
of Buildings or Structures. -

4

• •

- [illegible]

- Over 5.0 miles

- •

434. Distance to nearest utility system (power, water, or gas) or public highway likely to be at risk from OEW site. (6)

Distance to Nearest Target	VALUE
Less than 1250 feet	5
1251 feet to 1 mile	3
11 mile to 2 miles	1
Over 2 miles	0

435. Distances to Public Utilities/Highways ORS Value (Maximum of 5). (1) ..

436. Distances ORS Value (433 + 435) - (Maximum of 10). (2) ...

437. Numbers and types of Buildings within a 2 mile radius measured from the hazardous area, not the installation boundary. (6)

Numbers of Buildings	VALUE
0	0
1 to 10	1
11 to 50	2
51 to 100	3
101 to 250	4
251 or Over	5

438. Numbers of Buildings ORS Value (Maximum of 5). (1) ..

439. Types of Buildings. (30)

<u>.....</u>	VALUE
Educational, Child Care, etc.	5
Residential, Hospitals, Hotels, etc.	5
Commercial, Shopping Centers, etc.	5

- | | | |
|------|---|------------|
| | Industrial, Warehouse, etc. | 4 |
| | Agricultural, Forestry, etc. | 3 |
| | Detention, Correctional | 2 |
| | Military | 1 |
| | No Buildings | 0 |
| 440. | Types of Buildings ORS Value (Maximum of 5). (1) | <u> </u> |
| 441. | Numbers and Types of Buildings ORS Value (438 + 440) - Maximum of 10). (2) | <u> </u> |
| 442. | Accessibility to site refers to the measures taken to limit access by humans or animals to ordnance and explosive wastes. Assign a value using the following guidance: Describe. (40) | |

.....

Barrier	Assigned Value
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility;	0
or	
An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	0
Security guard, but no barrier	1
A barrier, but no separate means to control entry	2
Barriers do not completely surround the facility	3
No barrier or security system	5

443. ORS Value (Maximum of 5). (1)

. .

444-498. Reserved

499. Remarks. (80)

.....
.....
.....

DEBRIS

Debris description:

500. Type of Debris. (150)

47 BLDGS, 38 CONC. FOUND, 7 FUEL TANKS, SE.
WAGE TREATMENT FAC, 1 TRAILER, 53 TRANS.
FORMERS, 6 CAGES, 2 SWITCHES, 20 UT/L. POST,
20 WATER UT/L. HOOKUPS, BASKETBALL CO.
URT FENCE, RIGID PAVEMENTS, ANTENNA W/ GUY WIRES, HEATING
PIPES, 1 GASOLINE PUMP, 4 BUNKERS
501. Type of construction for structures. (100)

4 CONC. BUNKERS, BLDG, 17 CONC. BLOCK, 23 W
OOD FRAME, 5 STEEL, 1 CONC. BLOCK AND W
OODEN FRAME BLDG

502. Quantity. (80)

SEE ITEM 500
.
.

503. Condition, etc. (15)

HAZARDOUS

504. List underground structures or items. (80)

5 UNDERGROUND STEEL FUEL STORAGE TA
NKS
.

505. DOD use of debris items. (80)

CAMP WAS PART OF THE LONG ISLAND HA
RBOR DEFENSE SYSTEM
.

506. List buildings or other items that owner(s), after DOD disposal, have used for their benefit. Give use. (150)

3 BLDGS CURRENTLY USED FOR ADMINIST
RATION AND MAINTENANCE OF THE SITE .
.
.
.

DEBRIS (CONTINUED)

507. List items onsite that were not constructed or used by DOD or DOD contractor. (80)

C.O.A.S.T. G.U.A.R.D. A.N.T.E.N.N.A.
.
.

508. List items owner wants to retain. (80)

.B.L.O.G.S. #.P.-4. .P.-5. .P.-9. .P.-20. .P.-21. .P.-22. .P.-
.1.0.9. .P.-1.1.1. .P.-206. .M.A.F.-1.0. .M.A.F.-1.2. .M.A.F.-3.
.3.0.0.1. .P.-3.3. and A,T&T Bldg, ALL HYDRANTS, UTILITY POLES,
AND STREETS

509. List items that may have salvage value. (100)

N.O.N.E.
.
.

510. Give location of nearest or most economical disposal location. (80)

D.E.B.R.I.S. M.A.T.E.R.I.A.L.S. S.H.O.U.L.D. B.E. C.O.M.P.A.C.T.E.
D.A.N.D. B.U.R.I.E.D O.N.S.I.T.E. O.R. I.N. C.O.U.N.T.Y. L.A.
N.D.F.I.L.L.

511. Give special labor, equipment or methods that will be required for project. (100)

.I.M.P.L.O.S.I.O.N. T.E.C.H.N.I.Q.U.E.S. W.I.L.L. B.E. U.S.E.D. T.
O. R.E.D.U.C.E. T.H.E. P.O.L.L.U.T.I.O.N. T.O. R.U.B.B.L.E.
.

512. List any restrictions on methods of demolition or disposal. (80)

.T.H.E. A.R.E.A. M.U.S.T. B.E. E.V.A.L.U.A.T.E.D. P.R.I.O.R. . . .
.I.M.P.L.O.S.I.O.N. P.F. G.U.N.D.E.N.
.

513. Describe site grading that will be required for restoration: (include any special requirements or adverse foundation conditions). (40)

M.A.T.C.H. S.U.R.R.O.U.N.D.I.N.G. G.R.A.D.E.
.

514. Give location for borrow material if required. (40)

.F.R.O.M. M.A.T.E.R.I.A.L. O.V.E.R. B.U.N.K.E.R.S.
.

DEBRIS (CONTINUED)

515. List and give location of underground items that need to be preserved.
(60)

NONE

516. Give requirements for seeding and mulching or other erosion measures.
(80)

SITE GRADE AND SEED AREAS DISTURBED
BY DEMOLITION

517. Describe unsightly debris (UD). If no unsightly debris exists, enter
NONE for this item and 0 for item 538, and do not complete items 518
thru 529. (160)

47 BLDGS, 38 CONC. FOUND, 7 FUEL TANKS, SE
WAGE TREATMENT FAC, 1 TRAILER, 53 TRANS
FORMERS, 16 CAGES, 2 SWITCHES, 2 OUTL. P.O.S.
T, 2 WATER UTIL. HOOKUPS, BASKETBALL C
COURT, FENCE, RIGID PAVEMENTS, ANTENNA W GUY WIRES,
HEATING PIPES, 1 GASOLINE PUMP, 4 BUNKERS
Size of Debris Area (UD): (2) Value .10

518. Debris covers area 5 acres or less in size. 2
Debris covers area 6-25 acres in size. 5
Debris covers area over 25 acres in size. 10

519. Debris Above Ground Level (UD): (2) .10

(Include structures, miscellaneous debris items or piles
3' or more in height. Structures larger than 12,000 SF
in area or more than two-story height to count as two
structures. Groups of individual items will be considered
one structure).

<u>Number of Structures or Piles:</u>	<u>Value</u>
0	0
1-2	2
3-6	4
7-15	6
16-30	8
31 or more	10

DEBRIS (CONTINUED)

520. Describe unusual items that require transformation to structure comparison in Item 519. (100)

GASOLINE PUMPS, TRANSFORMERS & SWITCHES,
EXTERIOR HEATING PIPES, 4 BURNERS,
BLOG #P-107, 15 HALF BURNERS

521. Ground level debris (less than 3' high) (UD). Foundations, slabs, small piles, etc: (1)

<u>Area Covered by Debris Items</u>	<u>Value</u>	<u>3.</u>
No Ground Level Debris	0	
0-20,000 SF	1	
20,000 - 100,000 SF	3	
Over 100,000 SF	5	

522. Briefly describe Item 521 (concrete foundation, rubble etc). (80)

CONC. FOUND, BASKETBALL COURT, RIGID P.
AVEMENTS
.

523. Condition of Debris (UD): (2) Value 5.
- Building or structures very unsightly, such as partially demolished or collapsed or deteriorated beyond any reasonable renovation. 10
- Structures that are in need of considerable maintenance, very large foundations, piles of building rubble, etc. 5
- Small foundations, small debris piles or buildings in good condition that are not compatible with surrounding area. 2

524. Give basis for value selected in Item 523. (100)

BLDGS. ARE DETERIORATING, TOO EXPENSIVE
FOR N.Y. STATE TO MAINTAIN
.

DEBRIS (CONTINUED)

525. Location (UD): (2) Value . 5.

Rural	2
Small Town or Community	5
Urban or densely populated residential area	10

526. Effect on Surrounding Area (UD): (1) Value . 2.

Contributes highly to general area being slum or very desirable for use.	5
Serves as a deterrent to development of general area or has slight bearing on above choice.	2
No effect.	0

527. Briefly describe effect in Item 526. (80)

DEBRIS LIMITS THE DEVELOPMENT OF THE
E SITE AS A STATE PARK
.

528. Public Use or Exposure (UD): (2) Value . 6.

Isolated from public exposure.	0
Located in area with little public exposure.	1
Located in area that receives heavy public use or exposure of seasonal or other varying nature.	6
Located in area that receives heavy year round use.	10

529. Give basis for value selected in Item 528. (80)

SITE LOCATED IN SUMMER RESORT VICIN
ITY N.Y. PROP. NOT OPEN TO PUBLIC BUT
IS ACCESSIBLE TO TRESPASSERS, E HAMPTON
PROP DEVELOPED AS YEAR ROUND RESIDENTIAL COMMUNITY

DEBRIS (CONTINUED)

530. Describe Hazardous Debris (HD): (160)

If there is no debris that represents a potential physical or health hazard to persons or is a potential source of damage to surrounding property, enter NONE for this item and 0 for item 539 and do not complete items 531 thru 537.

2 BLDGS. LOCATED ON EAST HAMPTON PROP.
ARE SEVERELY DETERIORATED AND ARE E
ASILY ACCESSIBLE TO CHILDREN RESIDI
NG ACROSS THE WAY. N.Y. PROP. ACCESSIBL
E TO TRESPASSERS. . . .

531. Probability of Injury or Health Hazard Value . 6.
 (HD): (2)

Has occurred frequently or has potential
to occur at least annually. 10

Has occurred once and has potential to
occur at least once every two years. 8

Has potential to occur every 2-10 years. 6

Has potential to occur every 10-25 years. 4

Unlikely to occur once every 25 years. 2

532. List past occurrences or give basis for value selected in Item 531.
 (100)

DETERIORATED STRUCTURES ACCESSIBLE
TO TRESPASSERS
.

533. Severity of Potential Hazard (HD): (2) Value . 6
 (Most probable results from incident
involving debris)

Totally disabling or death. 10

Loss of limb, partial sight, hearing, etc. 8

Would require hospitalization or repeated
medical treatment. 6

Would require minor medical care. 3

Minor cuts and bruises. 1

No injury. 0

DEBRIS (CONTINUED)

534. Give information on past incidents or describe conditions that would contribute to value selected in Item 533. (100)

DETERIORATED BLDGS. ON E. HAMPTON PRO.
P. ACCESSIBLE TO CHILDREN RESIDING A
CROSS THE WAY. DETERIORATED BLDGS ON NY
PROP ACCESSIBLE TO TRESPASSERS

535. Hazard to Property Other Than Owner (HD): (2) Value .0.
 (Damage resulting from fire, collapse, etc.)

Potential for damage in excess of \$250,000. 10
 Potential for damage of \$75,000 to \$250,000. 5
 Potential for damage of less than \$75,000. 1
 No damage potential. 0

536. List hazard and property that would be exposed to hazard in Item 535. (80)

.....

537. Probability of Damage Occurring Value .1.
 (HD): (1)

In next two years. 5
 In 2-10 years. 4
 In 10-25 years. 2
 Beyond 25 years. 1

538. Has site been coordinated for demolition and/or removal under Section 106 of the National Preservation Act? ✓ Yes No (1) ✓

542-598. Reserved.

599. Remarks (80)

.....

DEBRIS WORKSHEET

539. Unsightly Debris Score:

<u>A. Item No.</u>	<u>Value</u>
518	10
519	10
521	3
523	5
525	5
526	2

TOTAL

B. If value for item 528 is 0, multiply total in A. by 0.5 _____.

If value for items 528 is 1, multiply total in A. by 0.9 _____.

If value for item 528 is 6 to 10, add value selected to
Total in A. 41.

C. Divide B. by 2.10 for Unsightly Debris Score 20 (Round
to nearest whole number).

540. Hazard Debris Score:

<u>Item No.</u>	<u>Value</u>
531	6
533	6
535	0
537	1

A. Multiply Item 531 value by Item 533 = 36

B. Multiply Item 535 value by Item 537 = 0

TOTAL A + B = 36

Hazardous Debris Score = Total A+B = 36
(Round to nearest whole
number)

DEBRIS WORKSHEET (CONTINUED)

541. Total Score for Ranking.

Total Score = Unsightly Debris Score (Item 538) + Hazardous Debris
Score (Item 539) = 56.

TABLE 1
CONTAINMENT VALUE FOR GROUNDWATER ROUTE
(Use technical judgement of best fit)

Assign containment a value of 0 if: (1) all the hazardous substances at the facility are underlain by an essentially nonpermeable surface (natural or artificial) and adequate leachate collection systems and diversion systems are present; or (2) there is no groundwater in the vicinity. The value "0" does not indicate no risk. Rather, it indicates a significantly lower relative risk when compared with more serious sites on a national level. Otherwise, evaluate the containment for each of the different means of storage or disposal at the facility using the following guidance.

A. Surface Impoundment

	<u>Assigned Value</u>
Sound run-on diversion structure, essentially nonpermeable liner (natural or artificial) compatible with the waste, and adequate leachate collection system.	0
Essentially nonpermeable compatible liner with no leachate collection system; or inadequate freeboard.	1
Potentially unsound run-on diversion structure; or moderately permeable compatible liner.	2
Unsound run-on diversion structure; no liner; or incompatible liner.	3

B. Piles

	<u>Assigned Value</u>
Piles uncovered and waste stabilized; or piles covered, waste unstabilized, and essentially nonpermeable liner.	0
Piles uncovered, waste unstabilized, moderately permeable liner, and leachate collection system.	1
Piles uncovered, waste unstabilized, moderately permeable liner, and no leachate collection system.	2
Piles uncovered, waste unstabilized, and no liner.	3

TABLE 1 (CONTINUED)

CONTAINMENT VALUE FOR GROUNDWATER ROUTE

(Use technical judgement of best fit)

C. Containers		D. Landfill	
	<u>Assigned Value</u>		<u>Assigned Value</u>
Containers sealed and in sound condition, adequate liner, and adequate leachate collection system.	0	Essentially nonpermeable liner, compatible with waste, and adequate leachate collection system.	0
Containers sealed and in sound condition, no liner or moderately permeable liner.	1	Essentially nonpermeable compatible liner, no leachate collection system, and landfill surface precludes ponding.	1
Containers leaking, moderately permeable liner.	2	Moderately permeable, compatible liner, and landfill surface precludes ponding.	2
Containers leaking and no liner or incompatible liner.	3	No liner or incompatible liner; moderately permeable compatible liner; landfill surface encourages ponding; no run-on control.	3

TABLE 2

CONTAINMENT VALUES FOR SURFACE WATER ROUTE

Assign containment a value of 0 if: (1) all the waste at the site is surrounded by diversion structures that are in sound condition and adequate to contain all runoff, spills, or leaks from the waste; or (2) intervening terrain precludes runoff from entering surface water. Otherwise, evaluate the containment for each of the different means of storage or disposal at the site and assign a value as follows:

A. Surface ImpoundmentAssigned Value

Sound diking or diversion structure, adequate freeboard, and no erosion evident.

0

Sound diking or diversion structure, but inadequate freeboard.

1

Diking not leaking, but potentially unsound.

2

Diking unsound, leaking, or in danger of collapse.

3

B. Waste PilesAssigned Value

Piles are covered and surrounded by sound diversion or containment system.

0

Piles covered, wastes unconsolidated, diversion or containment system not adequate.

1

Piles not covered, waste unconsolidated, and diversion or containment system potentially unsound.

2

Piles not covered, wastes unconsolidated, and no diversion or containment or diversion system leaking or in danger or collapse.

3

TABLE 2 (CONTINUED)
CONTAINMENT VALUES FOR SURFACE WATER ROUTE

C. Containers

Assigned Value

Containers sealed, in sound condition,
and surrounded by sound diversion
or containment system. 0

Containers sealed and in sound condi-
tion, but not surrounded by sound
diversion or containment system. 1

Containers leaking and diversion or
containment structures potentially
unsound. 2

Containers leaking, and no diversion or
containment structures or diversion
structures leaking or in danger of
collapse. 3

D. Landfill

Assigned Value

Landfill slope precludes runoff,
landfill surrounded by sound di-
version system, or landfill has
adequate cover material. 0

Landfill not adequately covered
and diversion system sound. 1

Landfill not covered and diversion
system potentially unsound. 2

Landfill not covered and no diver-
system present, or diversion system
unsound. 3

TABLE 3

QUANTITY RANKING VALUES

Hazardous waste quantity includes all hazardous substances at a facility (as deposited) except that with a containment value of 0 (See items 102 or 103). Do not include amounts of contaminated soil or water; in such cases, the amount of contaminating hazardous substance may be estimated.

On occasion, it may be necessary to convert data to a common unit to combine them. In such cases, 1 ton - 1 cubic yard - 4 drums and for the purposes of converting bulk storage, 1 drum - 50 gallons. Assign a value as follows:

<u>Gallons</u>	<u>Tons/Cubic Yards</u>	<u>No. of Drums</u>	<u>Assigned Value</u>
0	0	0	0
1-2000	1-10	1-40	1
2,050-12,500	11-62	41-250	2
12,550-25,000	63-126	251-500	3
25,050-50,000	126-250	501-1000	4
50,050-125,000	251-625	1001-2500	5
125,050-250,000	626-1250	2501-5000	6
250,050-500,000	1251-2500	5001-10,000	7
500,000	2500	10,000	8

TABLE 4
WASTE CHARACTERISTICS VALUES
FOR SOME COMMON CHEMICALS

CHEMICAL/COMPOUND

Acetaldehyde	3	0	3	2
Acetic Acid	3	0	2	1
Acetone	2	0	3	0
Aldrin	3	3	1	0
Ammonia, Anhydrous	3	0	1	0
Aniline	3	1	2	0
Benzene	3	1	3	0
Carbon Tetrachloride	3	3	0	0
Chlordane	3	3	0*	0*
Chlorobenzene	2	2	3	0
Chloroform	3	3	0	0
Cresol-O	3	1	2	0
Cresol-M&P	3	1	1	0
Cyclohexane	2	2	3	0
Endrin	3	3	1	0
Ethyl Benzene	2	1	3	0
Formaldehyde	3	0	2	0
Formic Acid	3	0	2	0
Hydrochloric Acid	3	0	0	0
Isopropyl Ether	3	1	3	1
Lindane	3	3	1	0
Methane	1	1	3	0
Methyl Ethyl Ketone	2	0	3	0
Methy Parathion in xylene Solution	3	0**	3	2
Naphthalene	2	1	2	0
Nitric Acid	3	0	0	0
Parthion	3	0**	1	2
PCB	3	3	0**	0**
Petroleum, Kerosene (Fuel Oil No. 1)	3	1	2	0
Phenol	3	1	2	0
Sulfuric Acid	3	0	0	2
Toluene	2	1	3	0
Trichlorobenzene	2	3	1	0
- Trichloroethane	2	2	1	0
xylene	2	1	3	0

¹Sax, N. I., Dangerous Properties of Industrial Materials, Van Nostrand Rheinhold Co., New York, 4th ed, 1975. The highest rating listed under each chemical is used.

²JRB Associates, Inc., Methodology for Rating the Hazard Potential of Waste Disposal Sites, May 5, 1980.

³National Fire Protection Association, National Fire Codes, Vol 13, No. 49, 1977.

*Professional judgment based on information contained in the U.S. Coast Guard CHRIS Hazardous Chemical Data, 1978.

**Professional judgment based on existing literature.

TABLE 5

SAX TOXICITY RATINGS

0 - No Toxicity* (None)**

This designation is given to materials which fall into one of the following categories:

(a) Materials which cause no harm under any conditions of normal use.

(b) Materials which produce toxic effects on humans only under the most unusual conditions or by overwhelming dosage.

1 - Slight Toxicity*(Low)**

(a) Acute Local. Materials which on single exposure lasting seconds, minutes, or hours cause only slight effects on the skin or mucuous membranes regardless of the extent of the exposure.

(b) Acute Systemic. Materials which can be absorbed into the body by inhalation, ingestion, or through the skin and which produce only slight effects following a single exposure lasting seconds, minutes, or hours, or following ingestion of a single dose, regardless of the quantity absorbed or the extent of exposure.

(c) Chronic Local. Materials which on continuous or repeated exposure extending over periods of days, months, or years cause only slight and usually reversible harm to the skin or mucuous membranes. The extent of exposure may be great or small.

(d) Chronic Systemic. Materials which can be absorbed into the body by inhalation, ingestion, or through the skin and which produce only slight and usually reversible effects extending over days, months, or years. The extent of the exposure may be great or small.

In general, those classified as having "slight toxicity" produce changes in the human body which are readily reversible and which will disappear following termination of exposure, either with or without medical treatment.

TABLE 5 (CONTINUED)

SAX TOXICITY RATINGS

2 - Moderate Toxicity*(Mod)**

(a) Acute Local. Materials which on single exposure lasting seconds, minutes, or hours cause moderate effects on the skin or mucous membrane. These effects may be the result of intense exposure for a matter of hours.

(b) Acute Systemic. Materials which can be absorbed into the body by inhalation, ingestion, or through the skin and produce moderate effects following single exposure lasting seconds, minutes, or hours, or following ingestion of a single dose.

(c) Chronic Local. Materials which on continuous or repeated exposure extending over periods of days, months, or years cause moderate harm to the skin or mucous membrane.

(d) Chronic Systemic. Materials which can be absorbed into the body by inhalation, ingestion, or through the skin and which produce moderate effects following continuous or repeated exposure extending over periods of days, months, or years.

Those substances classified as having "moderate toxicity" may produce irreversible as well as reversible changes in the human body. These changes are not of such severity as to threaten life or to produce serious physical impairment.

*Sax, N.I., Dangerous Properties of Industrial Materials, Van Nostrand Reinhold Company, New York, 4th Edition, 1975.

**Sax, N.I., Dangerous Properties of Industrial Materials, Van Nostrand Reinhold Company, New York, 5th Edition, 1979.

3 - Severe Toxicity((High)**

(a) Acute Local. Materials which on single exposure lasting seconds or minutes cause injury to skin or mucous membranes of sufficient severity to threaten life or to cause permanent physical impairment or disfigurement.

(b) Acute Systemic. Materials which can be absorbed into the body by inhalation, ingestion, or through the skin and which can cause injury of sufficient severity to threaten life following a single exposure lasting seconds, minutes, or hours, or following ingestion of a single dose.

(c) Chronic Local. Materials which on continuous or repeated exposure extending over periods of days, months, or years can cause injury to skin or mucous membrane of sufficient severity to threaten life or cause permanent impairment, disfigurement, or irreversible change.

(d) Chronic Systemic. Materials which can be absorbed into the body by inhalation, ingestion or through the skin and which can cause death or serious physical impairment following continuous or repeated exposures to small amounts extending over periods of days, months, or years.

TABLE 6

PERSISTENCE (BIODEGRADABILITY) OF
SOME ORGANIC COMPOUNDS*

VALUE = 3 HIGHLY PERSISTENT COMPOUNDS		VALUE = 1 SOMEWHAT PERSISTENT COMPOUNDS	
ALDRIN	HEPTACHLOR	ACETYLENE DICHLORIDE	LIMONENE
BENZOPYRENE	HEPTACHLOR EPOXIDE	BEHENIC ACID, METHYL ESTER	METHYL ESTER OF LIGNOCERIC ACID
BENZOTHAZOLE	1,2,3,4,5,7,7-HEPTACHLORONOR- BORNENE	BENZENE	METHANE
BENZOTHIOPHENE	HEXACHLOROBENZENE	BENSENE SULFONIC ACID	2-METHYL-5-ETHYL- PYRIDINE
BENZYL BUTYL PHTHALATE	HEXACHLORO-1,3-BUTADIENE	BUTYL BENZENE	METHYL NAPHTHALENE
BROMOCHLOROBENZENE	HEXACHLOROCYCLOHEXANE	BUTYL BROMIDE	METHYL PALMITATE
BROMOFORM BUTANOL	HEXACHLOROETHANE	E-CAPROLACTAM	METHYL PHENYL CARBINOL
BROMOPHENYL PHYNTL ETHER	METHYL BENZOTHAZOLE	CARBON-DISULFIDE	METHYL STEARATE
CHLORDANE	PENTACHLOROBIPHENYL	O-CRESOL	NAPHTHALENE
CHLOROHYDROXY BENZOPHENONE	PENTACHLOROPHENOL	DECANE	NONANE
BIS-CHLOROISOPROPHYL ETHER	1,1,3,3-TETRACHLOROACETONE	1,2-DICHLOROETHANE	OCTANE
M-CHLORONITROBENZENE	TETRACHLOROPHENYL	1,2-DIMETHOXY BENZENE	OCTYL CHLORIDE
DDE	THIOMETHYLBENZOTHAZOLE	1,3-DIMETHYL NAPHTHALENE	PENTANE
DDT	TRICHLOROBENZENE	1,4-DIMETHYL PHENOL	PHENYL BENSOATE
DIBROMOBENZENE	TRICHLOROBIPHENYL	DIOCTYL ADIPATE	PHTHALIC ANHYDRIDE
DIBUTYL PHTHALATE	TRICHLOROFLUOROMETHANE	N-DODECANE	PROPYLBENZENE
1,4-DICHLOROBENZENE	2,4,6-TRICHLOROPHENOL	ETHYL BENZENE	1-TERPINEOL
DIELDRIN	BROMODICHLOROMETHANE	2-ETHYL-N-HEXANE	TOLUENE
DIETHYL PHTHALATE	BROMOFORM	O-ETHYLTOLUENE	VINYL BENZENE
DI(2-ETHYLHEXYL) PHTHALATE	CARBON TETRACHLORIDE	ISODECANE	XYLENE
DIMETHYL PHTHALATE	DIBROMODICHLOROETHANE	ISOPROPHYL BENZENE	
4,6-DINITRO-2 AMINOPHENOL	TETRACHLOROETHANE		
DIPROPYL PHTHALATE	1,1,2-TRICHLOROETHANE		
ENDRIN			

TABLE 6 (CONTINUED)

PERSISTENCE (BIODEGRADABILITY) OF
SOME ORGANIC COMPOUNDS*

VALUE = 2 PERSISTENT COMPOUNDS		VALUE = 0 NONPERSISTENT COMPOUNDS	
ACENAPHTHYLENE	CIS-2-ETHYL-4-METHYL-1, 3-DIOXOLANE	ACETALDEHYDE	METHYL BENZOATE
ATRAZINE	TRANS-2-ETHYL-4-METHYL-1, 3-DIOXOLANE	ACETIC ACID	3-ETHYL BUTANOL
(DIETHYL) ATRASINE	GUAIACOL	ACETONE	METHYL ETHYL KETONE
BARBITAL	2-HYDROXYADIPONITRILE	ACETOPHENONE	2-METHYLPROPANOL
BORNEOL	ISOPHORONE	BENZOIC ACID	OCTADECANE
BROMOBENZENE	INDENE	DI-ISOBUTYL CARBINOL	PENTADECANE
CAMPHOR	ISOBORMEOL	DOCOSANE	PENTANOL
CHLOROBENZENE	ISOPROPHENYL-R-ISOPROPYL BENZENE	EICOSANE	PROPANOL
1,2-BIS-CHLOROETHOXY ETHANE	2-METHOXY BIPHENYL	ETHANOL	PROPYLAMINE
B-CHLOROETHYL METHYL ETHER	METHYL BIPHENYL	ETHYLAMINE	TETRADECANE
CHLOROMETHYL ETHER	METHYL CHLORIDE	HEXADECANE	n-TRIDECANE
CHLOROMETHYL ETHYL ETHER	METHYLINDENE	METHANOL	N-UNDECANE
3-CHLOROPYRIDINE	METHYLENE CHLORIDE		
DI-T-BUTYL-P-BENZOQUINONE	NITROANISOLE		
DICHLOROETHYL ETHER	NITROBENZENE		
DIHYROCARVONE	1,1,2-TRICHLOROETHYLENE		
DIMETHYL SULFOXIDE	TRIMETHYL-TRIOXO-HEXAHYDRO-		
2,6-DINITROTOLUENE	TRIAZINE IOSMER		

TABLE 7

Toxicity and Persistence have been combined in the matrix below because of their important relationship. To determine the overall value for this combined factor, evaluate each factor individually as discussed below. Match the individual values assigned with the values in the matrix for the combined rating factor. Evaluate several of the most hazardous substances at the facility independently and enter only the highest score in the matrix on the work sheet.

MATRIX

<u>VALUE FOR TOXICITY</u>	<u>VALUE FOR PERSISTENCE</u>			
	0	1	2	3
0	0	0	0	0
1	3	6	9	12
2	6	9	12	15
3	9	12	15	18

Table 8 Unified Soil Classification

Field Identification Procedures (Excluding particles larger than 3 in. and basing fractions on estimated weights)				Group Symbols	Typical Names	Information Required for Describing Soils	Laboratory Classification Criteria
Coarse-grained soils More than half of material is larger than No. 200 sieve size (The No. 200 sieve size is about the smallest particle visible to naked eye)	Gravels More than half of coarse fraction is larger than No. 4 sieve size (For visual classification, the 3 in. size may be used as equivalent to the No. 4 sieve size)	Gravels with fines (appreciable amount of fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes	GW	Well graded gravel, gravel-sand mixtures, little or no fines	Give typical name; indicate approximate percentages of sand and gravel; maximum size; angularity, surface condition, and hardness of the coarse grains; local or geologic name and other pertinent descriptive information; and symbols in parentheses For undisturbed soils add information on stratification, degree of compaction, cementation, moisture conditions and drainage characteristics Example: <i>Silty sand, gravelly</i> ; about 20% hard, angular gravel particles 1-in. maximum size; rounded and subangular sand grains coarse to fine, about 15% non-plastic fine with low dry strength; well compacted and moist in place; alluvial sand; (<i>SM</i>)	$C_u = \frac{D_{60}}{D_{10}}$ Greater than 4 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for <i>G</i> or <i>S</i> Atterberg limits below "A" line, or <i>PI</i> less than 4 Atterberg limits above "A" line, with <i>PI</i> greater than 7 $C_u = \frac{D_{60}}{D_{10}}$ Greater than 6 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for <i>SW</i> or <i>SP</i> Atterberg limits below "A" line or <i>PI</i> less than 5 Atterberg limits below "A" line with <i>PI</i> greater than 7 Above "A" line with <i>PI</i> between 4 and 7 are <i>borderline</i> cases requiring use of dual symbols
	Sands More than half of coarse fraction is smaller than No. 40 sieve size (For visual classification, the 3 in. size may be used as equivalent to the No. 40 sieve size)	Clean sands (little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes	GP	Poorly graded gravel, gravel-sand mixtures, little or no fines		
Fine-grained soils More than half of material is smaller than No. 200 sieve size (The No. 200 sieve size is about the smallest particle visible to naked eye)	Sands with fines (appreciable amount of fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes	GM	Silty gravels, poorly graded gravel-sand-silt mixtures	For undisturbed soils add information on stratification, degree of compaction, cementation, moisture conditions and drainage characteristics Example: <i>Silty sand, gravelly</i> ; about 20% hard, angular gravel particles 1-in. maximum size; rounded and subangular sand grains coarse to fine, about 15% non-plastic fine with low dry strength; well compacted and moist in place; alluvial sand; (<i>SM</i>)	Decrease percentages of gravel and sand from grain size curve. Depending on percentages of fines (fraction smaller than No. 200 sieve size) coarse grained soils are classified as follows: <i>GW</i> , <i>GP</i> , <i>SW</i> , <i>SP</i> Less than 5% More than 5% to 12% 3% to 12% Borderline cases requiring use of dual symbols	
	Sands with fines (little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes	SW	Well graded sands, gravelly sands, little or no fines			
Identification Procedures on Fraction Smaller than No. 40 Sieve Size	Silt and clay liquid limit less than 50	Dry Strength (crushing characteristics)	Dilatancy (reaction to shaking)	Toughness (consistency near plastic limit)	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands with slight plasticity	Give typical name; indicate degree and character of plasticity, amount and maximum size of coarse grains; colour in wet condition, odour if any, local or geologic name, and other pertinent descriptive information, and symbol in parentheses For undisturbed soils add information on structure, stratification, consistency in undisturbed and remoulded states, moisture and drainage conditions Example: <i>Clayey silt, brown</i> ; slightly plastic; small percentage of fine sand; numerous vertical root holes; firm and dry in place; loess; (<i>ML</i>)
		None to slight	Quick to slow	None			
Silt and clay liquid limit greater than 50	Silt and clay liquid limit greater than 50	Medium to high	None to very slow	Medium	OL	Organic silts and organic silts of low plasticity	OH
		Slight to medium	Slow to none	Slight to medium	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
Highly Organic Soils	Silt and clay liquid limit greater than 50	High to very high	None	High	CH	Inorganic clays of high plasticity, fat clays	PI
		Medium to high	None to very slow	Slight to medium	OH	Organic clays of medium to high plasticity	
Readily identified by colour, odour, spongy feel and frequently by fibrous texture					PI	Peat and other highly organic soils	

Use grain size curve in identifying the fractions as given under field identification

Plasticity index

Liquid limit

Plasticity chart for laboratory classification of fine grained soils

From Wagner, 1957.

2. Boundary classifications. Soils possessing characteristics of two groups are designated by combinations of group symbols. For example GW-CC, well graded gravel-sand mixture with clay binder.

^b All sleeve sizes on this chart are U.S. standard.

Field Identification Procedure for Fine Grained Soils or Fractions

These procedures are to be performed on the minus No. 40 sieve size particles, approximately $\frac{1}{4}$ in. For field classification purposes, screening is not intended, simply remove by hand the coarse particles that interfere with the tests.

These procedures are to be performed by the following personnel:

Dilatancy (Reaction to shaking):
After removing particles larger than No. 40 sieve size, prepare a pat of moist soil with a volume of about one-half cubic inch. Add enough water if necessary to make the soil soft but not sticky.

Place the pat in the open palm of one hand and shake horizontally, striking vigorously against the other hand several times. A positive reaction consists of the appearance of water on the surface of the pat which changes to a lively consistency and becomes glossy. When the sample is squeezed between the fingers, the water and gloss disappear from the surface, the pat stiffens and finally it crumbles or crumbles. The rapidity of appearance of water during shaking and of its disappearance during squeezing assist in identifying the character of the fines in a soil.

Very fine clean sands give the quickest and most distinct reaction whereas a plastic clay has no reaction. Inorganic silts, such as a typical rock flour, show a moderately quick reaction.

Das Eiweiß (Crushing charakteristisch)

dry strength (Crushing characteristics): After removing particles larger than No. 40 sieve size, mould a pat of soil to the consistency of putty, adding water if necessary. Allow the pat to dry completely by oven, sun or air drying, and then test its strength by breaking and crumbling between the fingers. This strength is a measure of the character and quantity of the colloidal fraction contained in the soil. The dry strength increases with increasing plasticity.

High dry strength is characteristic for clays of the CH group. A typical inorganic silt possesses only very slight dry strength. Silty fine sands and silts have about the same slight dry strength, but can be distinguished by the feel when powdering the dried specimen. Fine sand feels gritty whereas a typical silt has the smooth feel of flour.

Toughness (Consistency after plastic limit):

After removing particles larger than the No. 40 sieve size, a specimen of soil about one-half inch cube in size, is moulded to the consistency of putty. If too dry, water must be added and if sticky, the specimen should be spread out in a thin layer and allowed to lose some moisture by evaporation. Then the specimen is rolled out by hand on a smooth surface or between the palms into a thread about one-eighth inch in diameter. The thread is then folded and re-rolled repeatedly. During this manipulation the moisture content is gradually reduced and the specimen stiffens, finally losing its plasticity, and crumbles when the plastic limit is reached.

After the thread crumbles, the pieces should be lumped together and a slight bending action continued until the lump crumbles. The tougher the thread near the plastic limit and the stiffer the lump, the more plastic the soil. Weakness of the thread at the plastic limit and quick loss of coherence of the lump below the plastic limit indicate either the presence of clay of low plasticity, or materials such as loam-type clays which are clayey but do not occur below the A-line.

TABLE 9

DISTANCE TO DRINKING WATER OR IRRIGATION INTAKE

Population*	>3 Miles	2-3 Miles	1-2 Miles	2001 FEET to 1 Mile	0-2000 Feet
0	0	0	0	0	0
1-100	0	4	6	8	10
101-1000	0	8	12	16	20
1001-3000	0	12	18	24	30
3001-10,000	0	16	24	32	35
> 10,000	0	20	30	35	40

Determine population by:

*3.8 persons/house and

*1-1/2 persons/acre of irrigated land or by

*census

TABLE 10
PERMEABILITY OF GEOLOGIC MATERIALS*

TYPE OF MATERIAL	APPROXIMATE RANGE OF HYDRAULIC CONDUCTIVITY	ASSIGNED VALUE
Clay, compact till, shale; unfractured metamorphic and igneous rock	$<10^{-7}$ cm/sec	0
Silt, loess, silty clays, silty loams, clay loams; less permeable limestone, dolomites, and sandstone; moderately permeable till	$<10^{-5} - 10^{-7}$ cm/sec	1
Fine sand and silty sand; sandy loams; loamy sands; moderately permeable limestone, dolomites, and sandstone (no karst); moderately fractured igneous and metamorphic rocks, some coarse till	$<10^{-3} - 10^{-5}$ cm/sec	2
Gravel, sand; highly fractured igneous and metamorphic rocks; permeable basalt and lavas; karst limestone and dolomite	10^{-3} cm/sec	3

*Derived from:

Davis, S. N., Porosity and Permeability of Natural Materials in Flow-Through Porous Media, R.J.M. DeWiest ed., Academic Press, New York, 1969.

Freeze, R.A. and J.A. Cherry, Groundwater, Prentice-Hall, Inc., New York, 1979.

TABLE 11

VALUES FOR FACILITY SLOPE AND INTERVENING TERRAIN

DEPOSITION SITE		Intervening Terrain				
		Terrain Average Slope 3%; or Site Separated from Water Body by Areas of Higher Elevation	Terrain Average Slope 3-5%	Terrain Average Slope 5-8%	Terrain Average Slope 8%	Site in Surface Water
Facility Slope						
Facility is closed basin		0	0	0	0	3
Facility has average slope	3%	0	1	1	2	3
Average slope	3-5%	0	1	1	2	3
Average slope	5-8%	0	2	2	3	3
Average slope	8%	0	2	3	3	3

TABLE 12
VALUES FOR SENSITIVE ENVIRONMENT (SURFACE WATER)

ASSIGNED VALUE =	0	1	2	3
<u>DISTANCE TO WETLANDS*</u> (5 acre minimum)				
Coastal	2 miles	1 - 2 miles	1/2 - 1 mile	1/2 mile
Fresh Water	1 mile	1/4 - 1 mile	100 feet - 1/4 mile	100 feet
<u>DISTANCE TO</u> <u>CRITICAL HABITAT</u> (of endangered species)**	1 mile	1/2 - 1 mile	1/4 - 1/2 mile	1/4 mile

*Wetland is defined by EPA in the Code of Federal Regulations 40 CFR Part 230, Appendix A, 1980

**Endangered species are designated by the U. S. Fish and Wildlife Service.

TABLE 13

INCOMPATIBLE MATERIALS (CONTINUED)

<u>Group 3-A</u>	<u>Group 3-B</u>
Alcohols	Any concentrated waste in
Water	Groups 1-A or 1-B
	Calcium
	Lithium
	Metal hydrides
	Potassium
	Thionylchloride
	Sulfonylchloride, Phosphorus dichloride
	Methane, Silicon Trichloride
	Other water-reactive waste

Potential consequences: Fire, explosion, or heat generation;
generation of flammable or toxic gases.

SOURCE: Hazardous Waste Management Law, Regulation, and Guidelines for the Handling of Hazardous Waste. California Department of Health, Sacramento, California, February 1975.

TABLE 13

INCOMPATIBLE MATERIALS

In the lists below, the mixing of Group A material with a Group B material may have the potential consequence as noted.

<u>Group 1-A</u>	<u>Group 1-B</u>	<u>Group 4-A</u>	<u>Group 4-B</u>
Acetylene sludge	Acid sludge	Alcohols	Concentrated Group 1-A
Alkaline caustic liquids	Acid and water	Aldehydes	or 1-B wastes
Alkaline cleaner	Battery acid	Halogenated hydrocarbons	Group 2-A wastes
Alkaline corrosive liquids	Chemical cleaners	Nitrated hydrocarbons	
Alkaline corrosive batter fluid	Electrolyte acid	Unsaturated hydrocarbons	
Caustic wastewater	Etching acid liquid	Other reactive organic	
Lime sludge and other	or solvent	compounds and solvents	
corrosive alkalies	Pickling liquor and other		
Lime wastewater	corrosive acids	Potential consequences: Fire, explosion, or violent	
Lime and water	Spent acid	reaction.	
Spent caustic	Spent mixed acid		
	Spent sulfuric acid	<u>Group 5-A</u>	<u>Group 5-B</u>
Potential consequences: Heat generation; violent reaction.		Spent cyanide and sulfide	Group 1-B wastes
		solutions	
		Potential consequences: Generation of toxic hydrogen	
		cyanide or hydrogen sulfide.	
<u>Group 2-A</u>	<u>Group 2-B</u>	<u>Group 6-A</u>	<u>Group 6-B</u>
Aluminum	Any waste in Group 1-A or	Chlorates	Acetic acid and other
Beryllium	1-B	Chlorine	organic acids
Calcium		Chlorites	Concentrated mineral
Lithium		Chromic acid	acids
Potassium		Hyphochlorites	Group 2-A wastes
Sodium		Nitrates	Group 4-A wastes
Zinc powder		Nitric acid, fuming	Other flammable and
Other reactive metals and		Perchlorates	combustible wastes
metal hydrides		Permanganates	
Potential consequences: Fire or explosion;		Paroxides	
generation of flammable hydrogen gas.		Other strong oxidizers	
		Potential consequences: Fire, explosion or violent	
		reaction.	

TABLE 14
VALUES FOR LAND USE (AIR ROUTE)

ASSIGNED VALUE =	0	1	2	3
Distance to Commercial- Industrial	1 mile	1/2 - 1 mile	1/4 - 1/2 mile	1/4 mile
Distance to National/State Parks, Forests, Wildlife Reserves, and Residential Areas	2 miles	1 - 2 miles	1/4 - 1 mile	1/4 mile
Distance to Agricultural Lands (in Production within 5 years)				
Ag land	1 mile	1/2 - 1 mile	1/4 - 1/2 mile	1/4 mile
Prime Ag land*	2 miles	1 - 2 miles	1/2 - 1 mile	1/2 mile
Distance to Historic/Landmark Sites (National Register of Historic Register and National Natural Landmarks)			within view of site or if site is subject to significant im- pacts	

*Defined in the Code of Federal Regulations, 7 CFR 657.5, 1981.

TABLE 15

NFPA IGNITABILITY LEVELS AND ASSIGNED VALUES

NFPA LEVEL	ASSIGNED VALUE
4 Very flammable gases, very volatile flammable liquids, and materials that in the form of dusts or mists readily form explosive mixtures when dispersed in air. Flashpoint less than 80 F.	3
3 Liquids which can be ignited under all normal temperature conditions. Any material that ignites spontaneously at normal temperature in air. Flashpoint less than 80 F.	
2 Liquids which must be moderately heated before ignition will occur and solids that readily give off flammable vapors. Flashpoint 80 to 140 F.	2
1 Materials that must be preheated before ignition can occur. Most combustible solids have a flammability rating of 1. Flashpoint 141 to 200 F.	1
0 Materials that will not burn. Flashpoint greater than 201 F.	0

TABLE 15A

<u>DISTANCE TO POPULATION</u>	<u>VALUE</u>
>2 mi.	0
>1 to 2 mi.	1
>1/2 to 1 mi.	2
201' to 1/2 mi.	3
51' to 200'	4
0' to 50'	5

TABLE 16

NFPA REACTIVITY RATINGS

NFPA LEVEL	ASSIGNED VALUE
0 Materials which are normally stable even under fire exposure conditions and which are not reactive with water.	0
1 Materials which in themselves are normally stable but which may become unstable at elevated temperatures and pressures or which may react with water with some release of energy but not violently.	1
2 Materials which in themselves are normally unstable and readily undergo violent chemical change but do not detonate. Includes materials which can undergo chemical change with rapid release of energy at normal temperatures and pressures or which can undergo violent chemical change at elevated temperatures and pressures. Also includes those materials which may react violently with water or which may form potentially explosive mixtures with water.	2
3 Materials which in themselves are capable of detonation or of explosive decomposition or of explosive reaction but which require a strong initiating source or which must be heated under confinement before initiation. Includes materials which are sensitive to thermal or mechanical shock at elevated temperatures and pressures or which react explosively with water without requiring heat or confinement.	3
4 Materials which in themselves are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperature and pressures. Includes materials which are sensitive to mechanical or localized thermal shock.	3

NORMAL ANNUAL TOTAL PRECIPITATION (Inches)

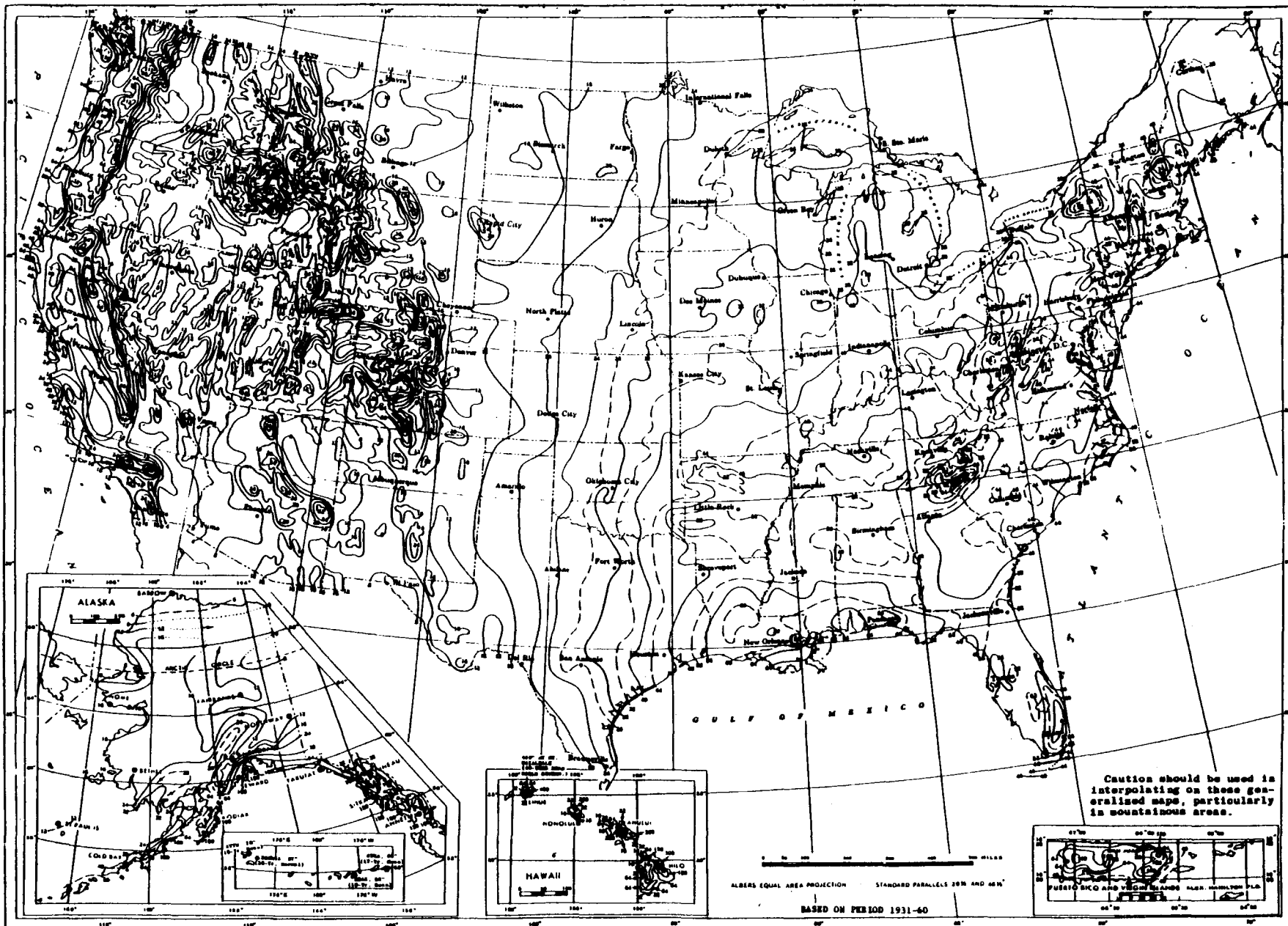
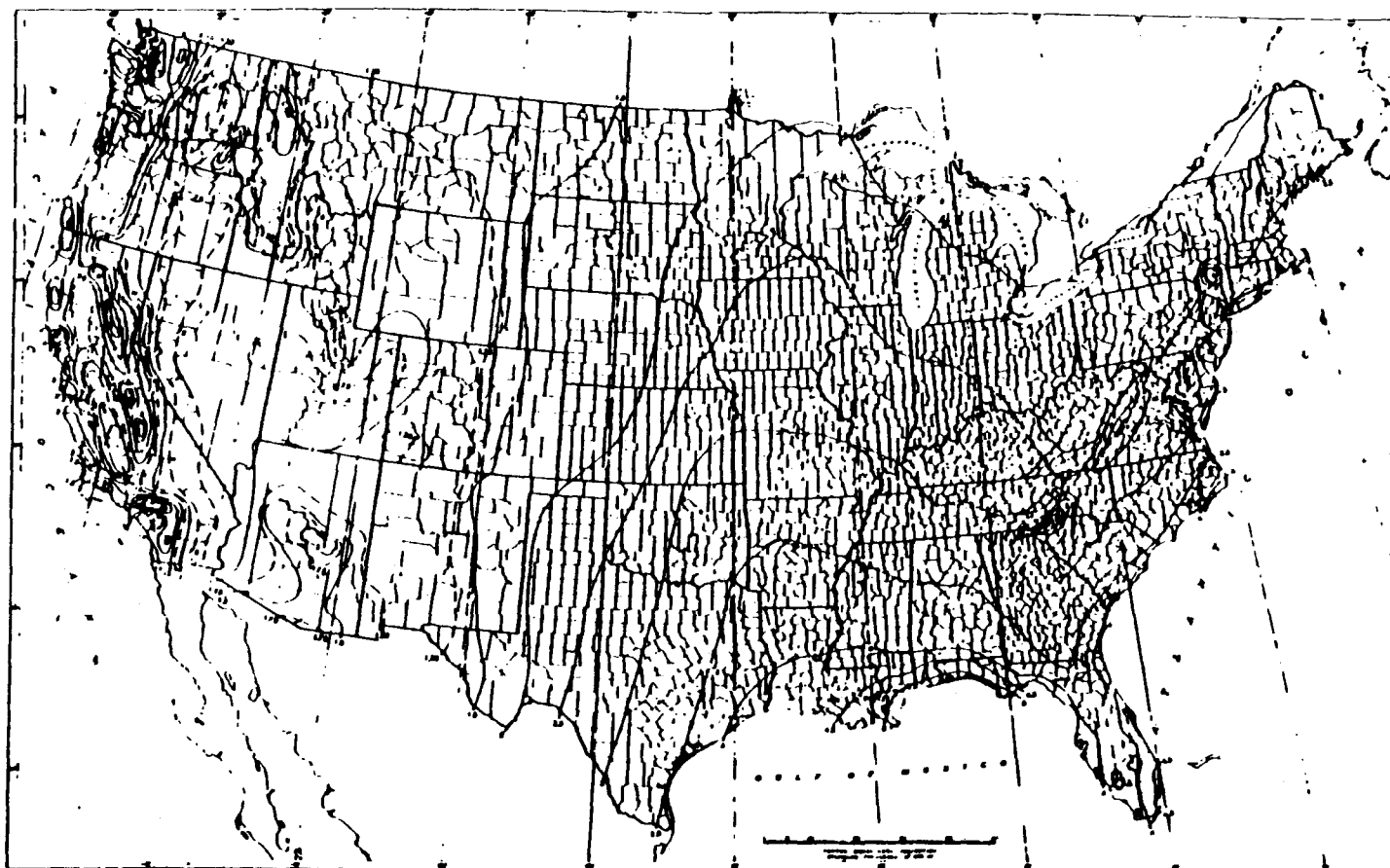


FIGURE 2



Source: Rainfall Frequency Atlas of the United States, Technical Paper No. 40, U.S. Department of Commerce, U.S. Government Printing Office, Washington, D.C., 1963.

FIGURE 3
1-YEAR 24-HOUR RAINFALL
(INCHES)

<u>Figure 3 inches</u>	<u>Value</u>
less than 1.0	0
1.0 - 2.0	1
2.1-3.0	2
greater than 3	3