Final
Environmental Impact Statement for
Disposal and Reuse of the
Stratford Army Engine Plant, Stratford, Connecticut

Prepared for

US Army Materiel Command

by

US Army Corps of Engineers
Mobile District

with Technical Assistance from

Tetra Tech, Inc.
Fairfax, VA 22030
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ENVIRONMENTAL IMPACT STATEMENT ORGANIZATION

This Environmental Impact Statement (EIS) addresses the proposed action of disposal and reuse of the Stratford Army Engine Plant, Stratford, Connecticut. As required by AR 200-2 and the National Environmental Policy Act, the potential environmental and socioeconomic impacts are analyzed.

An ***EXECUTIVE SUMMARY*** briefly describes the proposed action, environmental and socioeconomic consequences, and mitigation measures.

SECTION 1.0 ***PURPOSE, NEED, AND SCOPE*** summarizes the purpose of and need for the proposed action and describes the scope of the environmental impact analysis process.

SECTION 2.0 ***DESCRIPTION OF THE PROPOSED ACTION*** describes the proposed action of disposal and reuse of the Stratford Army Engine Plant.

SECTION 3.0 ***ALTERNATIVES CONSIDERED*** examines alternatives for implementing the proposed action.

SECTION 4.0 ***AFFECTED ENVIRONMENT*** describes the existing environmental and socio-economic setting of the Stratford Army Engine Plant.

SECTION 5.0 ***ENVIRONMENTAL AND SOCIOECONOMIC CONSEQUENCES*** identifies potential environmental and socioeconomic effects of implementing the proposed action.

SECTION 6.0 ***LIST OF PREPARERS*** identifies persons who prepared the document and their areas of expertise.

SECTION 7.0 ***DISTRIBUTION LIST*** indicates recipients of this EIS.

SECTION 8.0 ***REFERENCES*** provides bibliographical information for cited sources.

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ENVIRONMENTAL IMPACT STATEMENT
DISPOSAL AND REUSE OF THE
STRATFORD ARMY ENGINE PLANT

Prepared by:
Mobile District
U.S. Army Corps of Engineers

J. David Norwood
Colonel, Corps of Engineers
Commanding

Reviewed by:
U.S. Army Materiel Command

Norman E. Williams
Major General, USA
Chief of Staff

Recommended for Approval by:
Department of the Army
Office of the Chief of Staff

R.L. Van Antwerp
Major General, USA
Assistant Chief of Staff
for Installation Management

Approved by:
Office of the Secretary of the Army

Raymond J. Fatz
Deputy Assistant Secretary of the Army
(Environment, Safety and Occupational Health)

ENVIRONMENTAL IMPACT STATEMENT

LEAD AGENCY: U.S. Army Materiel Command (AMC)

TITLE OF PROPOSED ACTION: Disposal and Reuse of Stratford Army Engine Plant, Stratford, Connecticut

AFFECTED JURISDICTION: Fairfield and New Haven Counties, Connecticut

PREPARED BY: J. David Norwood, Colonel, USA, U.S. Army Corps of Engineers, Mobile District, Commanding

REVIEWED BY: Norman E. Williams, Major General, U.S. Army, Chief of Staff, U.S. Army Materiel Command

RECOMMEND FOR APPROVAL BY: Robert L. Van Antwerp, Major General, USA, Assistant Chief of Staff for Installation Management, Office of the Chief of Staff

APPROVED BY: Raymond J. Fatz, Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health)

ABSTRACT: The proposed action is the disposal and reuse of approximately 75 acres of property made available by the closure of the Stratford Army Engine Plant (SAEP). Two disposal alternatives (encumbered and unencumbered) are presented and evaluated in this environmental analysis, as are three reuse scenarios representing low, medium-low, and medium intensity reuse. In addition to the proposed action, a no action alternative, with the property remaining in caretaker status, is evaluated. Other alternatives are discussed but not analyzed because they were considered infeasible. The effects of the proposed action on the environment and on social and economic systems are analyzed in the document. Implementation of the preferred alternative, encumbered disposal, would have a variety of minor beneficial and minor adverse impacts on the human and natural environment.

REVIEW COMMENT DEADLINE: Comments may be provided to Mr. Joe Hand at the Corps of Engineers, Mobile District (ATTN: PD-EC), P.O. Box 2288, Mobile, Alabama 36628-0001, or by facsimile at (334) 690-2721. Comments on the Final Environmental Impact Statement must be received within 30 days of the date of publication.

EXECUTIVE SUMMARY

INTRODUCTION

The 1995 Base Closure and Realignment Commission (BRAC 95) made recommendations for realignment and closure actions for military installations. On July 13, 1995, the President of the United States approved the BRAC 95 Commission's recommendations. The United States Congress reviewed the recommendations, and they became law on September 28, 1995. Among the actions recommended by the BRAC 95 Commission was closure of the Stratford Army Engine Plant (SAEP). This Environmental Impact Statement (EIS) analyzes the disposal and subsequent reuse of the BRAC property at SAEP.

BACKGROUND

SAEP is located in Stratford, Connecticut, on the Stratford Point Peninsula in the northeast corner of Fairfield County. The installation consists of about 75 acres of improved land, with riparian rights extending over intertidal flats of the Housatonic River. The region of influence for this action includes Fairfield and New Haven counties, Connecticut, which include the cities of New Haven, Bridgeport, Stamford, Danbury, and Waterbury. The entire parcel has been identified through the BRAC process as excess to Department of Defense (DoD) needs.

PROPOSED ACTION

The proposed action is the disposal of SAEP land and facilities. Redevelopment by others is treated as a secondary action resulting from disposal.

Principal laws and regulations related to real estate that are applicable to the proposed action include the Defense Base Closure and Realignment Act of 1990; the Federal Property and Administrative Services Act of 1949; DoD Base Closure Regulations implementing the Pryor Act (32 CFR Parts 174-176); and the Federal Property Management Regulations. Other major influences on the disposal and reuse of BRAC property at SAEP include federal statutes such as the Community Environmental Response Facilitation Act; Clean Air Act; Clean Water Act; Coastal Zone Management Act; Comprehensive Environmental Response, Compensation, and Liability Act; Endangered Species Act; National Historic Preservation Act; and Resource Conservation and Recovery Act. These laws impose standards for environmental compliance and planning and help to ensure the consideration of environmental values in the property transfer and reuse planning process. Executive orders pertaining to compliance with floodplain management (EO 11988), protection of wetlands (EO 11990), pollution control standards (EO 12088), Superfund implementation (EO 12580), protection of children from environmental health risks and safety risks (EO 13045), and environmental justice (EO 12898) were also considered.

DISPOSAL PROCESS

Methods available to the Army for property disposal include transfer to another federal agency, public benefit discount conveyance, economic development conveyance, negotiated sale, and competitive sale. The real estate screening process first invites expressions of interest by DoD and other federal

agencies, then the Stratford Army Engine Plant Local Redevelopment Authority (SAEP LRA), state and local authorities, and homeless providers. The Army has completed an environmental baseline survey to describe the environmental condition of the property as required by the Community Environmental Response Facilitation Act to identify uncontaminated parcels for early release.

As a result of public agency screening, seven requests for property were received. Since several of the requests were for use of the same property by different entities, the Army will consult with the LRA and, if necessary, enter into negotiations with various entities to determine appropriate courses of action for transfer of disposal of the SAEP property.

As a result of the BRAC screening process, the SAEP LRA would be able to acquire most of the approximately 75 acres of improved land for redevelopment in accordance with its reuse plan. A few acres may be transferred to public agencies as public benefit conveyances. The SAEP LRA considered a final reuse plan that included four specific redevelopment proposals, one of which was chosen as the preferred alternative. The LRA's preferred alternative includes a comprehensive reuse plan that envisions mixed use of the lands and facilities that have been declared surplus. The plan entails the demolition of most structures to create three areas to help facilitate development—an economic development area, a waterfront open space area, and a special use/museum area. In September 1998, the Town of Stratford indicated its intent to reevaluate its choice of preferred alternative, with a view toward adaptive management of the site. Under such an approach, it is anticipated that redevelopment of the site would occur over a longer time frame. The Army is considering the SAEP LRA's reuse plan as the primary factor in defining the reuse scenarios analyzed in the EIS.

ALTERNATIVES

Two disposal alternatives (encumbered and unencumbered) are presented and evaluated in this EIS. The environmental effects of no action, with the property remaining indefinitely in caretaker status, are also evaluated. Three reuse scenarios (low, medium-low, and medium intensity), which are broad enough to encompass the community's reuse plan, are also discussed and evaluated.

ENVIRONMENTAL CONSEQUENCES

The No Action Alternative. The no action alternative would result in both minor beneficial and minor adverse impacts on the human and natural environment. The elimination of mission activities and greatly reduced human presence on the BRAC property during caretaker status would have direct minor beneficial impacts on land use, air quality, infrastructure, hazardous and toxic substances, and biological and cultural resources. Direct minor adverse impacts would be expected for economic development and sociological environment. Indirect beneficial impacts would occur for geology, water resources, infrastructure, and biological resources, while indirect adverse impacts would occur for land use, infrastructure, cultural resources, and economic development. Climate, noise, permits and regulatory authorizations, and quality of life would not be affected by implementation of the no action alternative.

The no action alternative would not be expected to result in cumulative effects within the region of influence.

Encumbered Disposal Alternative. The Army's preferred alternative is encumbered disposal. Under this alternative, the disposal of SAEP would include imposition of encumbrances related to asbestos-containing materials, an easement for aircraft navigation (avigation), an easement for public access, existing easements and rights-of-way, floodplains, groundwater use prohibition, historic resources, land use restrictions, lead-based paint, remedial activities, and wetlands. These would result in both minor beneficial and minor adverse impacts on the human and natural environment. Implementation of encumbered disposal would result in long-term minor beneficial impacts on air quality, water resources, infrastructure, permits and regulatory authority, biological resources, sociological environment, hazardous and toxic substances, and quality of life. Land use would be adversely affected by encumbering the property. Where land use is viewed as development of real estate to its highest and best economic use, encumbrances related to historic resources, remedial activities, easements and rights-of-way, and wetlands would impair development of SAEP. However, the tendency for these encumbrances to deny development of SAEP would maintain and even increase the amount of lands within the region associated with conservation and preservation of environmental resources such as wildlife and significant habitat. Economic development would be both beneficially and adversely affected by encumbered disposal. At specific sites requiring remediation of hazardous substances, the remedial activities encumbrance would allow economic development activities to begin immediately, having a beneficial effect on local sales volume, employment, and income. However, the remedial activities encumbrance could also have an adverse impact because it might dampen interest in the property as a result of the contamination. Restrictive covenants prohibiting land uses that would eliminate or degrade wetlands would limit the potential reuse of areas surrounding the wetlands, resulting in an adverse impact on sales volume, employment, and income.

Climate, noise, and quality of life would not be affected by implementation of encumbered disposal. Cultural resources would be indirectly adversely affected if following property transfer the new owner sought to lessen or remove the preservation deed restriction, resulting in loss or degradation of properties eligible for the National Register of Historic Places.

Encumbered disposal would be expected to result in long-term minor beneficial cumulative impacts on cultural resources.

Unencumbered Disposal Alternative. Implementation of unencumbered disposal would result in long-term minor adverse impacts on air quality, geology, water resources, infrastructure, biological resources, hazardous and toxic substances, and cultural resources. It would also have both short-term minor beneficial and minor adverse impacts related to land use, economic development, hazardous and toxic substances, and sociological environment. Removal of land use prohibitive covenants (e.g., restrictions for wetlands, historic resources, easements, and rights-of-way) would have beneficial economic impacts. In most cases, however, the removal of encumbrances would result in minor adverse impacts on the natural and human environment. Removal of the wetlands encumbrance would have long-term adverse impacts on biological resources and on water and habitat quality. Removal of the historical resources encumbrance would have long-term adverse effects on cultural resources. The elimination of access easements and rights-of-way could unduly burden management of resources and make cleanup activities difficult if not impossible. Removal of the remedial activities encumbrance would require that all remedial activities be completed before property transfer. This would forestall reuse and delay economic revitalization within the community. Removal of the asbestos and lead-based paint encumbrances would pose human health and safety risks.

Unencumbered disposal would be expected to result in long-term minor adverse cumulative impacts on cultural resources.

Reuse Alternatives. Medium intensity reuse of SAEP would result in beneficial impacts on land use, air quality, infrastructure, economic development, and quality of life, and minor adverse impacts on water resources, infrastructure, biological resources, and cultural resources. Medium-low and low intensity reuse would result in beneficial impacts on land use, air quality, water resources, and infrastructure. Minor adverse impacts would occur for biological and cultural resources and for economic development.

Medium intensity reuse at SAEP would be expected to result in long-term minor beneficial or adverse cumulative impacts on economic development, sociological environment, and quality of life within the ROI, depending on usage.

Table ES-1 provides a graphic summary of the potential impacts on the 14 resource areas examined in the EIS.

MITIGATION SUMMARY

The Army would implement several actions to reduce, avoid, or compensate for potential adverse effects associated with caretaker status and disposal of SAEP. These actions include the following:

- Continue to work with the SAEP LRA to ensure that, to the maximum extent feasible, encumbered disposal transactions are consistent with the community reuse plan.

- Until final disposal, maintain installation buildings, infrastructure, and natural resources in caretaker status to the extent provided by Army policy and regulations.

- Identify clean or remediated portions of the installation for disposal and reuse and prioritize restoration and cleanup activities to ensure timely disposal and reuse of remaining portions. Recycle solid wastes and debris where practicable.

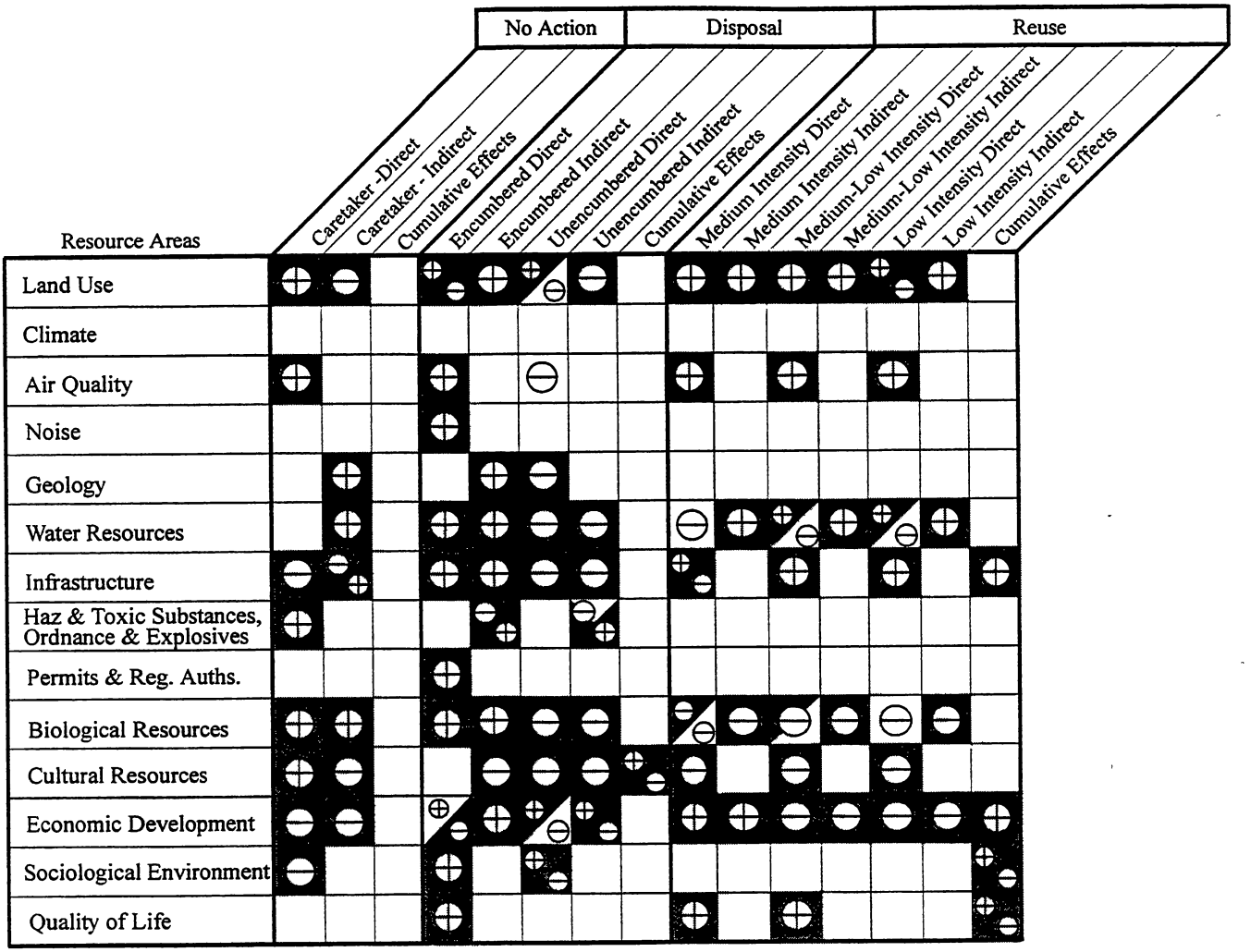
- Actively support interim leasing arrangements, where environmental restoration efforts permit, to provide for job creation, habitation and maintenance of structures, and rapid reuse of the installation.

- Ensure that interim leasing documents notify future lessees of the property of particular obligations concerning natural and cultural resources that would be imposed as a result of the Army's determination of the applicability of an encumbrance. Interim leasing documents would also identify past hazardous waste activities at each site, as required by the Comprehensive Environmental Response, Compensation, and Liability Act.

- Provide caretaker maintenance for historic buildings as required by the MOA dated July 1996.

- Impose in transfer or conveyance of BRAC property appropriate encumbrances to avoid potential adverse impacts on a variety of environmental resource areas. The encumbrances would include those pertaining to asbestos-containing materials, lead-based paint, groundwater use restriction,

Table ES-1
Impacts Summary



Impacts Legend

- Long-term Minor Beneficial Effect
- Short-term Minor Beneficial Effect
- Long-term Minor Adverse Effect
- Short-term Minor Adverse Effect
- Long-term Significant Beneficial Effect
- Short-term Significant Beneficial Effect
- Long-term Significant Adverse Effect
- Short-term Significant Adverse Effect
- No Effects Expected

historical resources, remedial activities, wetlands, and easements and rights-of-way. With respect to historical resources, preservation covenants would be used for the disposal of historic properties as required by the MOA dated July 1996.

- Before final disposal, maintain installation buildings, infrastructure, and historic and natural resources in caretaker status in accordance with Army policies and regulations.

Under reuse, non-Army entities would assume reuse planning and execution of redevelopment actions. Consequently, mitigation actions for intensity-based reuse scenarios are not the responsibility of the Army. However, the following points identify general mitigation actions that could be implemented by other parties for the reduction, avoidance, or compensation of impacts resulting from their actions.

- *Land use.* Adverse impacts associated with development of SAEP to a level of intensity equal to a medium intensity reuse could be at least partially reduced through sound site planning and design and creation of appropriate buffer zones. Officials could also evaluate the desirability of establishing land use zoning mechanisms to provide for orderly growth throughout the region of influence.

- *Air quality.* The permit process established in the Clean Air Act provides effective controls over potential stationary air emission sources. Adherence to the State Implementation Plan's provisions for mobile sources could address that source category. Additional mitigation mechanisms, such as application of best management practices to control fugitive dust during construction, could be used to control airborne contaminants.

- *Water resources.* Application of best management practices to reduce sediment loading to surface waters could aid in reducing impacts on water quality. Such practices could be required by state permits and local ordinances and would be expected to comply with Connecticut's Coastal Zone Management Program. Construction of stormwater retention systems could help mitigate impacts associated with stormwater runoff from impervious surfaces.

- *Biological resources.* Adverse impacts on biological resources could occur, especially as a result of new construction. Two principal measures for conservation of significant biological resources are ensuring consultation with natural resources experts and regulatory agencies before initiating actions and implementing best management practices in association with approved construction projects. Operational controls could also be applied to minimize any adverse effects of noise and light on sensitive biological resources.

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1.1 PURPOSE AND NEED

The Department of the Army is reducing its force structure in response to changing security requirements, resulting in a need for fewer installations. As the Army reduces, activities are being realigned and consolidated for maximum readiness to the most efficient installations capable of projecting and sustaining combat power in support of national military objectives.

Recommendations of the Defense Base Closure and Realignment Commission made in conformance with the provisions of the Defense Base Closure and Realignment Act of 1990 (1990 Base Closure Act), Public Law 101-510, as amended, require the closure of the Stratford Army Engine Plant. The Commission's findings stated that through Anniston Army Depot, Alabama, and Corpus Christi Army Depot, Texas, the Army can sustain the tank engine and helicopter turbine base. The installation property is excess to Army needs and will be disposed of according to applicable laws, regulations, and national policy. Pursuant to the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations, the Army has prepared this Environmental Impact Statement (EIS), which addresses the environmental and socioeconomic impacts of disposing of the property and reasonable, foreseeable reuse alternatives.

To recommend closure and realignment actions, the military services used criteria established by the Secretary of Defense and approved by Congress, as well as a force structure plan provided by the Joint Chiefs of Staff. The evaluation criteria used were military value, return on investment from cost savings, and environmental and socioeconomic impacts. A consolidated Department of Defense (DoD) list of recommended actions was submitted by the Secretary of Defense to an independent commission appointed by the President and confirmed by the Senate. The 1995 Defense Base Closure and Realignment Commission (Commission) evaluated the recommendations and sent the findings to the President, who forwarded the recommendations to Congress on July 13, 1995. The 1990 Base Closure Act stipulated that the recommendations would be implemented unless Congress disapproved them within a specified period of time. No disapproval was issued, and thus the Commission's recommendations became binding on September 28, 1995. The Commission's recommendations for base realignments and closures made in 1995 are referred to in this document as BRAC 95. These recommendations are being implemented as required by the 1990 Base Closure Act.

In its 1995 report to the President, the Commission recommended closure of the Stratford Army Engine Plant (SAEP). Pursuant to that recommendation, all Army missions at SAEP must cease or be relocated. Following closure, the property will be excess to Army needs. Accordingly, the Army proposes to dispose of its real property interests at SAEP consisting of 75.3 acres of improved land and riparian rights in the adjacent Housatonic River. The proposed action of disposal is more fully described in Section 2.0. The proposed action supports the Army's need to transfer the excess property to new owners.

1.2 SCOPE

The 1990 Base Closure Act specifies that NEPA does not apply to actions of the President, the Commission, or DoD, except "(i) during the process of property disposal, and (ii) during the process of relocating functions from a military installation being closed or realigned to another military installation after the receiving installation has been selected but before the functions are relocated" (Public Law 101-510, Sec. 2905(c)(2)(A)).

The 1990 Base Closure Act further specifies that in applying the provisions of NEPA to the process, the Secretary of Defense and the secretaries of the military departments concerned do not have to consider "(i) the need for closing or realigning the military installation which has been recommended for closure or realignment by the Commission, (ii) the need for transferring functions to any military installation, or (iii) military installations alternative to those recommended or selected" (Public Law 101-510, Sec. 2905(c)(2)(B)).

The Commission's deliberations and decision, as well as the need for closing or realigning a military installation, are exempt from NEPA (Public Law 101-510, Sec. 2905(c)(2)). Accordingly, this EIS does not address the need for closure or realignment. NEPA does, however, apply to disposal of excess property as a direct Army action and to reuse of such property as an indirect effect of disposal; therefore, those actions are addressed in this document.

Two disposal alternatives (encumbered and unencumbered) are presented and evaluated in this EIS. Three reuse scenarios (low, medium-low, and medium intensity), which encompass the community's reuse plan, are identified and evaluated as secondary actions. The environmental effects of "no action," with the property remaining in caretaker status, are also evaluated. These alternatives and scenarios, and the rationale for selecting them, are further described in Section 3.0. A summary of reuse obligations and limitations, distinguishing the boundaries of Army decision making and future activities, is provided in Section 5.1.4. The Army will prepare other NEPA documentation for interim leasing, if required, before the completion of a Record of Decision concerning the matters evaluated in this EIS.

1.3 PUBLIC INVOLVEMENT

1.3.1 NEPA Public Involvement Process

The Army invites full public participation in the NEPA process to promote open communication and better decision making. All persons and organizations that have a potential interest in the proposed action, including minority, low-income, disadvantaged, and Native American groups, are urged to participate in the NEPA environmental analysis process.

Public comments are invited anytime throughout the process. Formal opportunities for public participation following the Army publication of a notice of intent to prepare an EIS include submission of comments on the scope of the environmental evaluation, review of the draft EIS, presentation of comments at the public meeting, and review of the final EIS before initiating the proposed action. Each of these steps in the process is briefly discussed below. An additional public involvement process, applicable to contaminated site remediation, is also discussed.

1.3.2 *Notice of Intent*

The Notice of Intent (NOI), informing the public that an EIS will be prepared, is the first formal step in the NEPA public involvement process. The notice is published in the *Federal Register* prior to the start of the scoping process by the agency proposing the action. The NOI includes a description of the proposed action and gives the name and address of an agency contact person. The NOI declaring the Army's intent to prepare an EIS for the disposal and reuse of SAEP was published in the *Federal Register* on September 22, 1995.

1.3.3 *Scoping Process*

The purpose of scoping is to solicit public and agency comments on issues or concerns that should be addressed in the EIS. It is designed to involve the public early in the EIS process. Public comments are solicited through mailings, media advertisements, and both agency and public scoping meetings. Although informal comments are welcome at any time throughout the process, the scoping period and the scoping meeting provide formal opportunities for public participation in and comment on the environmental impact analysis process.

A public scoping meeting was held December 4, 1996, at the Stratford Town Hall in Stratford, Connecticut. Display advertisements for the meeting were published in the *Connecticut Post* on November 20 and 27, 1996, and in *The Stratford Star* on November 21 and 28, 1996. Notices concerning the public meeting were also sent to a mailing list comprising 99 public officials, agencies, organizations, and individuals. Names on the list were compiled from a variety of sources, including the installation. All persons and organizations thought to have a potential interest, including minority, disadvantaged, and Native American groups, were included. The mailing identified a contact person at the installation for further information, as well as another contact person to whom comments could be sent by December 18, 1996.

More than 30 members of the public attended the scoping meeting. Six persons spoke at the scoping meeting, and following the meeting the Army received correspondence from three agencies and three individuals. This EIS appropriately considers the following comments received during the scoping process.

The issues raised at the scoping meeting include concern that the input of the Local Redevelopment Authority (LRA) and the community regarding the reuse of SAEP would be considered only to the extent it is coincidental with the Army's interests; concern that the environmental contamination could be a significant encumbrance on the use of SAEP property; and concern as to how the EIS could be completed without knowing the types and extent of contamination. In addition, it was expressed that the Army should seek a timely assessment and remediation of the site and that the various agencies involved in reuse of the installation should work together to achieve continuity. One individual suggested that the SAEP site be used for clothing manufacturing.

Several sources have provided written comments concerning the scope of the EIS and the environmental impact analysis process. The town of Stratford requested that the following six matters be addressed in the EIS: consideration of comments and findings regarding the Sikorsky Memorial Airport EIS; consideration of the effect that disposal of industrial property and buildings would have on surrounding properties and how it might affect prices and the marketability of existing unoccupied

properties; consideration of the impact on redevelopment and interim leasing due to the lack of sufficient federal funding to perform a timely environmental cleanup; consideration of the number of new jobs created under each alternative and how these would add to the tax base; consideration that the LRA's reuse plan be the primary focus of the EIS; and consideration as to whether there is a need for granting concessions to attract new business in light of the manufacturing and industrial facilities leaving the state.

Region 1 of the U.S. Environmental Protection Agency (EPA) submitted comments and recommendations concerning matters that should be addressed in the EIS. These included consideration of direct, indirect, and cumulative impacts on water quality (surface water and groundwater), wetlands, hazardous wastes, air quality (SAEP is in a severe nonattainment area for ozone and a moderate nonattainment area for carbon monoxide), and noise; a full characterization of the extent and nature of the contamination caused by past use of hazardous substances; the recommendation that the Army provide as much detail as possible regarding the reasonably foreseeable reuse options for the SAEP property, including possible low and high intensity levels; and that any information that might be available, including proposals of potential developers and the reuse plans of the citizen advisory committees and local redevelopment authorities, be evaluated in the EIS.

The Connecticut Department of Environmental Protection (CTDEP) provided written comments focused on three matters. It invited the Army to use the State's Natural Diversity Data Base to aid in identifying biological resources and their habitats. The CTDEP also asked that the EIS include information and current status on a 1993 consent agreement and order issued to the site contractor concerning violations of regulations pertaining to polychlorinated biphenyls. Finally, the CTDEP provided a detailed discussion of requirements pertaining to the Connecticut Coastal Management Act and the propriety of the Army's preparation of a consistency determination assuring that the Army's proposed action would not result in adverse effects on the enforceable policies.

Three individuals also submitted comments. The comments included the suggestion that the Army reserve a parcel of the site for use in treating contamination; the belief that the site should be used for manufacture of aircraft engines because it is uniquely equipped to fabricate, assemble, and test small- to medium-thrust turbines; and the recommendation that subsurface toxic wastes be left in place and future excavating activity be limited to sinking piles on which foundation girders could rest just above the surface whenever new construction is proposed.

1.3.4 Public Review of Draft EIS

The draft EIS was made available for public comment and review. A notice of availability of the draft EIS was published in the *Federal Register* by DoD on May 1 and by the Environmental Protection Agency on May 8, 1998. Copies of the draft EIS were sent to people on the mailing list and to those who requested copies in response to the NOA. In addition, copies of the draft EIS were provided to the Stratford Public Library in Stratford, Connecticut. Agencies, organizations, and individuals were invited to review and comment on the document. A review period of 45 days allowed reviewers an opportunity to comment on the analysis or on other aspects of the EIS process.

1.3.5 Public Meeting

During the 45-day comment period, the Army conducted a public meeting to receive public input on the draft EIS. Display advertisements were published in the *Connecticut Post* and the *Stratford Star* on May 21 and May 28, 1998. In addition to announcing the time and place of the public meeting, the advertisement identified Mr. Joseph Hand, U.S. Army Corps of Engineers, Mobile District, as the person designated to receive written comments. The meeting was held on June 4, 1998, at 7:30 PM in the Council Chambers at Stratford Town Hall. Public comments received at the meeting and during the 45-day comment period and the Army's responses, along with a verbatim transcript of the meeting, are provided in Appendix A.

1.3.6 Final EIS

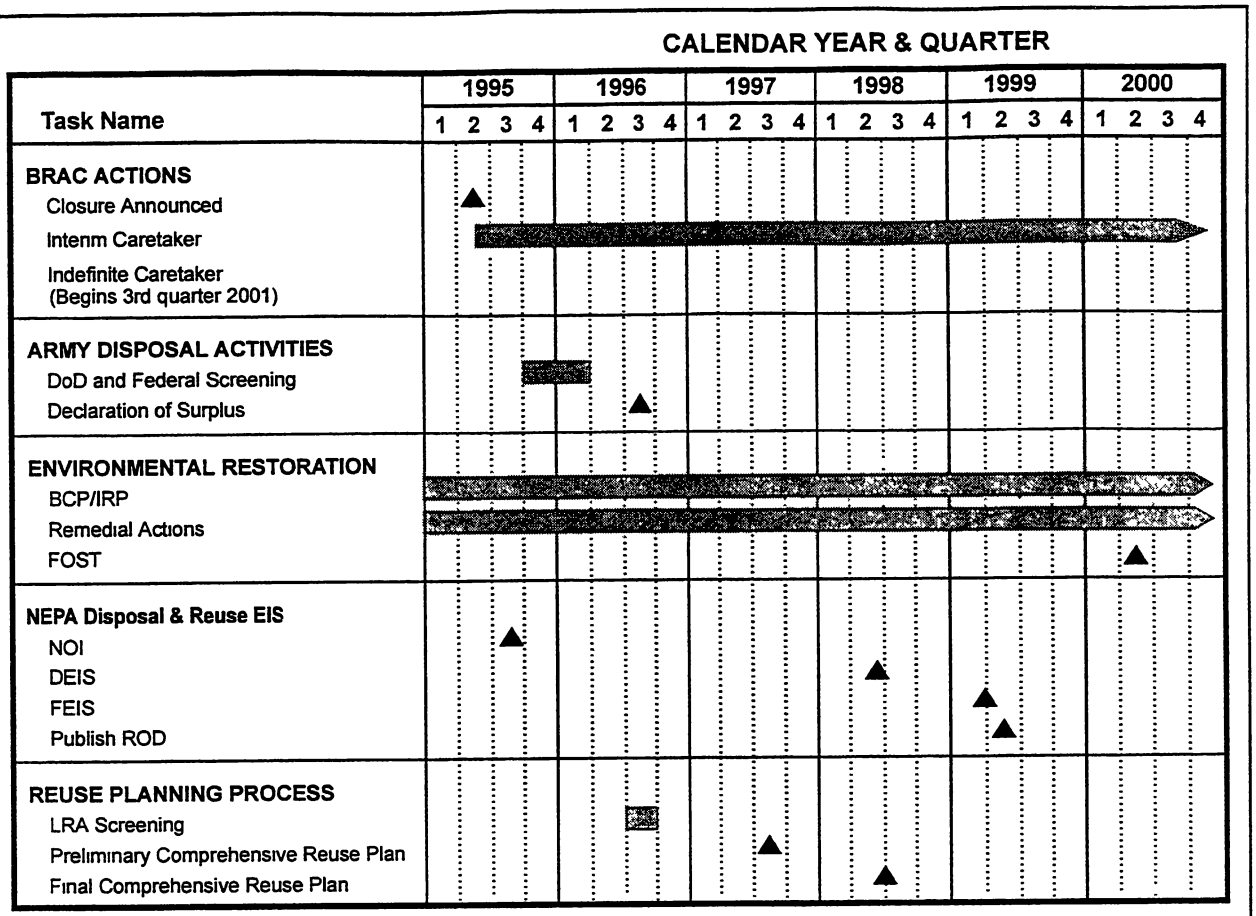
The Army considered all comments, both individually and collectively, provided by the public and agencies on the draft EIS. This final EIS incorporates changes suggested by comments on the draft EIS, as appropriate, and contains responses to all comments received during the review period. Copies of the final EIS will be mailed to various federal, state, and local agencies. Copies will also be placed in the Stratford Public Library for review, and notice of the EIS's availability will be published in the *Federal Register*. After a 30-day period following completion of this final EIS, during which further comments may be submitted for Army consideration, the Army will prepare a Record of Decision, which will state how the disposal of SAEP will take place and include any required mitigation measures associated with disposal.

1.4 IMPACT ANALYSIS PERFORMED

This EIS identifies, evaluates, and documents the effects of disposal and reuse of the SAEP property. Several other, related processes occur in conjunction with the Army's preparation of the property for closure and disposal. These associated processes and their time frames are shown in Figure 1-1.

An interdisciplinary team of environmental scientists, biologists, planners, economists, engineers, archeologists, historians, and military technicians performed the impact analysis. The team identified the affected resources and topical areas, analyzed the proposed action against the existing conditions, and determined the relevant beneficial and adverse affects associated with the action. Section 4.0, Affected Environment, describes the conditions of the affected resources and other areas of special interest at SAEP as of July 1995 (prior to the BRAC Commission's recommendation). Along with information presented in the no action alternative, these conditions constitute the baseline for the analysis of effects of disposal and reuse. These effects are described in Section 5.0, Environmental and Socioeconomic Consequences. Findings and conclusions regarding the potential environmental and socioeconomic effects of the proposed action are presented in Section 6.0.

The document analyzes direct impacts (those caused by the proposed action and alternatives and occurring at the same time and place) and indirect impacts (those caused by the proposed action and alternatives but occurring later in time or farther removed in distance but still reasonably foreseeable). Cumulative effects on the existing conditions and future development planned in the ROI are also addressed. Mitigation measures are identified where appropriate.



Note: Concurrent actions leading to property disposal and reuse include environmental restoration, reuse planning, and environmental documentation.

LEGEND:

- Period Task
- ▲ Milestone Task
- BCP = BRAC Cleanup Plan
- DEIS = Draft Environmental Impact Statement
- EIS = Environmental Impact Statement
- FEIS = Final Environmental Impact Statement
- FOST = Finding of Suitability to Transfer
- IRP = Installation Restoration Program
- LRA = Local Redevelopment Authority
- NEPA = National Environmental Policy Act
- NOI = Notice of Intent
- ROD = Record of Decision

Schedule of BRAC Actions

Stratford Army Engine Plant
Stratford, Connecticut
Figure 1-1

The socioeconomic effects of disposal and reuse are assessed by use of the Economic Impact Forecast System (EIFS), developed by the U.S. Army Construction Engineering Research Laboratory. The EIFS model allows for consistency in the evaluation of all base closure and realignment actions. The region of influence (ROI) consists of Fairfield and New Haven counties, Connecticut. The rationale for selection of this area as the ROI is provided in Section 4.13.

1.5 *FRAMEWORK FOR DISPOSAL*

Numerous factors contribute to Army decisions relating to disposal of installation property. The Defense Base Closure and Realignment Act of 1990 triggers reference to several other statutes and directives. In addition to adhering to the Defense Base Closure and Realignment Act's requirements, the Army must abide by rules pertaining to transfer of federal property, as well as executive branch policies. There are also practical concerns such as identifying base assets to allow for disposal in a manner most consistent with statutory and regulatory guidance. These matters are further discussed below.

1.5.1 *BRAC Procedural Requirements*

Statutory Provisions. The disposal process is governed by the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510, as amended) and the Federal Property and Administrative Services Act of 1949 (Title 40 of the United States Code [U.S.C.], Sections 471 and following, as amended). The latter is implemented by the Federal Property Management Regulations at Title 41 of the Code of Federal Regulations (CFR), Subpart 101-47. The disposal process is also governed by 32 CFR Part 174 (*Revitalizing Base Closure Communities*) and 32 CFR Part 175 (*Revitalizing Base Closure Communities - Base Closure Community Assistance*), regulations issued by DoD to implement BRAC law, the Pryor Amendment, and the President's Program to Revitalize Base Closure Communities (see below).

Screening Process. Having been recommended for closure, the SAEP property has been determined to be excess to Army needs and, therefore, subject to specific procedures to identify potential subsequent public sector users. That is, the property has been offered to a hierarchy of potential users through procedures called the screening process. This process and its results to date are discussed in Section 2.3.4.

The President's Program to Revitalize Base Closure Communities. On July 2, 1993, the President announced a major new program to speed the economic recovery of communities near closing military installations. The President pledged to give top priority to early use of each closing installation's most valuable assets. A principal goal of the initiative is to provide for rapid redevelopment and creation of new jobs. In announcing the program, the President outlined the five parts of his community revitalization plan:

- Job-centered property disposal that puts local economic redevelopment first.
- Fast-track environmental cleanup that removes delays while protecting human health and the environment.
- Appointment of transition coordinators at installations slated for closure.

- Easy access to transition and redevelopment help for workers and communities.
- Larger economic development planning grants to base closure communities.

The Army is fully committed to the President's Program to Revitalize Base Closure Communities. A Base Transition Coordinator has been appointed for the SAEP property, and the Army has taken an active role in providing assistance to the local community.

The Pryor Amendment. Congress endorsed the President's plan by enacting Title XXIX of Public Law 103-160, the Base Closure Communities Assistance Act, popularly known as the "Pryor Amendment" in recognition of its principal legislative sponsor. Title XXIX, as amended, provides legal authority to carry out the President's plan by granting conveyances of real and personal property at or below fair market value to LRAs. Title XXIX creates a federal property conveyance, the economic development conveyance (EDC). An EDC can help induce a market for the property and thereby enhance economic recovery and generate jobs. Flexibility is given to the military departments and the communities to negotiate the terms and conditions of the EDC. A detailed application, including the approved community redevelopment plan, serves as the basis for a determination of whether an LRA will be eligible for an EDC. The DoD's final rule implementing the Pryor Amendment appears at 32 CFR Parts 90 and 91. The EDC is further described in Section 2.3.4.

1.5.2 Relevant Statutes and Executive Orders

Several statutes and Executive Orders bear specifically on the disposal and reuse of the SAEP property. The following summaries note their relevance to the disposal and reuse process.

Comprehensive Environmental Response, Compensation, and Liability Act. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), better known as Superfund, addresses cleanup of past hazardous substance sites that pose threats to human health or the environment. The Superfund Amendments and Reauthorization Act of 1986 (SARA) expanded applicability of this law to federal facilities. With respect to property transferred by federal agencies, and relevant to disposal and reuse of SAEP, Section 120(h) of CERCLA requires that the Army identify real property on which any hazardous substance was known to have been disposed of or released.

Community Environmental Response Facilitation Act. In October 1992, Congress amended Section 120(h) of CERCLA with the Community Environmental Response Facilitation Act (CERFA), Public Law 102-426. CERFA establishes new requirements for contamination assessment, cleanup, and regulatory agency notification and concurrence for federal facility transfers.

CERFA requires federal agencies to identify uncontaminated parcels, with regulatory concurrence. It allows transfer by deed of remediated parcels at the point when successful operation of an approved remedy has been demonstrated to the U.S. Environmental Protection Agency (EPA).

CERFA stipulates the identification of petroleum products as well as CERCLA hazardous substances. For property that is part of a facility listed on the National Priorities List, the identification cannot be considered complete until the EPA Administrator concurs. For real property not on the National Priorities List, such as SAEP, the identification cannot be considered complete until the state concurs.

The law also requires an agency transferring parcels identified as uncontaminated to provide a covenant that any response action or corrective action found necessary will be undertaken by the United States. The deed for such parcels must also provide for a right of access to perform any additional response action, including appropriate investigations. CERFA does not mandate that the Army transfer real property identified as available; rather, it is the first step in satisfying the objective of identifying real property where no CERCLA-regulated hazardous substances or petroleum products were disposed of or released. The procedures mandated by CERFA will be observed in property disposal actions at SAEP.

Resource Conservation and Recovery Act. Under the Resource Conservation and Recovery Act (RCRA), EPA defines those substances which are hazardous and regulates their generation, treatment, storage, transportation, and disposal. EPA also establishes technical and performance requirements for hazardous substance management units and exercises responsibility over a permit system for hazardous substance management facilities. RCRA is also the source for regulations pertaining to solid waste management and underground storage tank (UST) management. All of the 43 USTs at SAEP have been removed or closed in place; operations now are supported by the use of 58 aboveground storage tanks. As described in Section 4.9, hazardous substance activities at SAEP, including cleanup of spills or releases at solid waste management units, are subject to the provisions of RCRA.

Clean Air Act. The Clean Air Act (CAA) controls the emission of pollutants into the atmosphere. Under the CAA, EPA has established national air standards. These standards, which express concentrations of designated pollutants, are called the National Ambient Air Quality Standards (NAAQS). The NAAQS, uniformly applied throughout the Nation, are time-averaged concentrations of the specified pollutants that cannot be exceeded in the ambient air more than a specified number of times. Standards have been established for the pollutants sulfur dioxide, carbon monoxide, ozone, nitrogen oxides, lead, and inhalable particulate matter. The NAAQS are to be achieved by the states through State Implementation Plans, which provide for limitations, schedules, and timetables for compliance with NAAQS by stationary sources and transportation control plans for mobile sources.

Amendments to the CAA in 1990 introduced, at Section 176(c) of the act, a requirement that "No department, agency, or instrumentality of the Federal Government shall engage in, support in any way, or provide financial assistance for, license or permit, or approve any activity which does not conform to an implementation plan ... approved or promulgated. The assurance of conformity ... shall be an affirmative responsibility of the head of such department, agency, or instrumentality." Conformity to an implementation plan means conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. It further refers to conducting activities so that they will not cause or contribute to any new violation of any standard in any area, increase the frequency or severity of any existing violation of any standards in any area, or delay timely attainment of any standard of any required interim emission reductions or other milestone in any area. Regulations regarding determining conformity of general federal actions to implementation plans appear at 40 CFR Parts 51 and 93.

As shown by the discussion in Section 4.4, operational activities at SAEP are subject to the provisions of the CAA.

Clean Water Act. Since major amendments in 1977, the Federal Water Pollution Control Act has been known as the Clean Water Act (CWA). This statute, which seeks to restore and maintain the chemical, physical, and biological integrity of the Nation's waters, identifies certain pollutants and sets required treatment levels for those pollutants. The CWA addresses both point source and nonpoint source discharges. Point sources are distinct entities that discharge wastewater with pollutants into rivers or lakes through distinct conveyances such as pipes, ditches, or canals. Nonpoint sources are those which do not discharge wastewater from a discrete conveyance (e.g., agricultural lands, construction sites, parking lots, streets).

Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES) program. NPDES permits are required for all point source discharges to waters of the United States, including discharges of storm water associated with industrial activities.

Section 404 of the CWA contains provisions for protection of wetlands and establishes a permitting process for activities having potential effects in wetland areas. Wetlands and riverine and open-water systems are considered waters of the United States under Section 404 and, as such, fall under the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE). The USACE's definition of waters of the United States includes all interstate waters and lakes, as well as rivers, streams, mudflats, sandflats, sloughs, prairie potholes, wet meadows, and other wetland communities. Section 404 regulates the discharge of dredge or fill into wetlands, or other waters of the United States, and requires sequencing for proposed impacts. Sequencing requires the avoidance of wetland losses, minimization of impacts, and replacement of unavoidable losses. All development activities that might involve impacts on wetlands, through dredging and filling, require consultation with the USACE. If a given wetland is determined to meet the regulatory definition, either a nationwide permit is issued or an individual permit application is required, depending on the development proposal for fill or land disturbance activities.

Section 401 of the CWA addresses water quality certification and authorizes the review and conditioning, approval, or denial of federal permits or licenses that might result in discharges to waters of the United States.

Clean Water Act provisions apply to SAEP with respect to operations at the installation's wastewater treatment facilities, which are subject to the NPDES permitting provisions, and to wetlands present on the installation.

Coastal Zone Management Act. The Coastal Zone Management Act (CZMA) provides incentives for coastal states to develop and implement coastal zone management programs. Such management programs frequently incorporate flood control, sediment control, grading control, and storm water runoff control statutes. The law requires that federal agencies be consistent to the maximum extent practicable with the enforceable policies of state coastal zone management programs when conducting or supporting activities that affect the coastal zone.

To comply with CZMA, a federal agency must identify the activities for which it is the proponent that would affect the coastal zone, including development projects. If an activity would affect the coastal zone, the federal agency must review the state coastal zone management plan to determine whether the activity would be consistent with the plan and then notify the state of its determination. Federal agencies must prepare a written consistency determination that includes a detailed description of the

action, its associative facilities, and coastal zone effects; a brief description of how the activity would be consistent with the state coastal zone management plan; and data to support the consistency determination. Federally licensed and permitted activities and federal financial assistance to state and local governments that affect the coastal zone are also subject to federal consistency provisions.

Under CZMA, the coastal zone includes islands, beaches, transitional and intertidal areas, and salt marshes. Since SAEP is located wholly within Connecticut's coastal boundary, the disposal and future reuse of the site are governed by the Connecticut Coastal Management Program as defined by the Connecticut Coastal Management Act.

Endangered Species Act. Under the Endangered Species Act (ESA), federal agencies are required to conserve species that have been federally listed as endangered or threatened. All federal agencies must consult with the U.S. Fish and Wildlife Service (USFWS) to ensure that any actions authorized, funded, or carried out by the agencies are not likely to jeopardize the continued existence of any endangered or threatened species or to result in the destruction of or substantial damage to its critical habitat. This consultation, deriving from Section 7 of the act, is often referred to as the Section 7 consultation process. While this consultation is in progress, an agency must not make an irretrievable commitment of resources to its project. A consultation typically leads to the USFWS's suggestion of alternatives or mitigating measures that can be incorporated into the project, thereby allowing its completion. In connection with disposal of SAEP, at a minimum, informal consultation with the USFWS is required to ensure thorough consideration of potential effects on endangered and threatened species.

The ESA prohibits the taking of endangered fish and wildlife species. Taking includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to do any of these things. With respect to the taking of endangered plants, it is prohibited to remove or reduce to one's possession any listed species. Under the ESA, the Secretary of the Interior issues regulations to conserve threatened species.

Amendments to the ESA in 1982 allow the Secretary of the Interior to approve "incidental" taking of listed species if, after notice and comment, the Secretary finds that the taking will be incidental, the applicant will exert maximum effort to minimize and mitigate the effects of taking, the applicant will ensure adequate funding for the plan, and the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild.

No federally listed threatened or endangered mammal, amphibian, invertebrate, aquatic, or plant species have been reported to occur in the vicinity of SAEP. One federally listed species (the piping plover), an occasional transient bald eagle or peregrine falcon, and 11 state-listed threatened, endangered, or special concern birds have the potential to occur in the vicinity of SAEP. In addition, a USFWS/EPA bird survey conducted at Milford Point and in the intertidal flat area at SAEP during the summer of 1997 identified four state threatened species and three state species of special concern (LeBlanc, personal communication, 1997). During this survey the piping plover was not observed. Review of the Natural Diversity Data Base maps and files by the CTDEP identified that there are state threatened Atlantic sturgeon (*Acipenser oxyrhynchus*) in the vicinity of SAEP.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA), Title 16 of the U.S. Code, Sections 703-712, and its implementing regulations (1988) make it unlawful for any persons to take

(i.e., pursue, hunt, shoot, wound, trap, capture, or collect) any migratory bird without first receiving a permit to do so. "Take," under the MBTA, does not include "harass" or "harm" as in the Endangered Species Act and pertains predominantly to actions involving the deliberate killing or collecting of species (not destruction of habitat). The USFWS is responsible for issuing take permits and for enforcing the MBTA and its implementing regulations. Although the MBTA does not provide for incidental take of migratory birds, it does authorize the USFWS to issue "special purpose" permits. These permits are required before any person can lawfully take or otherwise possess migratory birds, their parts, nests, or eggs for any purpose not otherwise covered by the general permit regulations. The USFWS does not have an official policy governing issuance of such permits to federal agencies.

National Historic Preservation Act. The National Historic Preservation Act of 1966 (NHPA) protects buildings, sites, districts, structures, and objects that have significant scientific, historic, or cultural value. The act establishes affirmative responsibilities of federal agencies to preserve historic and prehistoric resources. Effects on properties that are on, or eligible for, the National Register of Historic Places must be taken into account in planning and operations. Any property that may qualify for inclusion on the National Register of Historic Places must not be inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate.

National Register of Historic Places criteria are those qualities of significance in American history, architecture, engineering, archeology, and culture present in districts, sites, buildings, structures, and objects of state, local, regional, or national importance. These properties possess integrity of location, design, setting, materials, workmanship, feeling, and association.

Fulfillment of the purposes of the NHPA is achieved through consultation with the Advisory Council on Historic Preservation (ACHP) and with each State Historic Preservation Officer (SHPO). Building 2 (Engine Assembly Plant Building) and Building 16 (Aircraft Engine Test Cells) at SAEP have been determined eligible for inclusion in the National Register of Historic Places. The Army has entered into a Memorandum of Agreement (MOA) with the ACHP and SHPO for preservation of these facilities. (See Appendix B.)

Executive Orders. Several Executive Orders (EOs) address topics particularly relevant to the Army's disposal of SAEP:

- *Executive Order 11988, Floodplain Management* (May 24, 1977), requires federal agencies to take action to reduce the risk of flood loss; to minimize the impacts of floods on human safety, health, and welfare; and to restore and preserve the national and beneficial values served by floodplains in carrying out their responsibilities for managing and disposing of federal lands. Before taking an action, an agency must determine whether the proposed action will occur in a floodplain; if so, alternatives to avoid adverse effects and incompatible development in floodplains must be considered. SAEP is located within the 100-year floodplain of the Housatonic River. Because SAEP is immediately adjacent to the river and has an average elevation of less than 10 feet above mean sea level, this EO is relevant to land use planning at the installation. Evaluation of the Army's proposed action includes consideration of this EO.

- *Executive Order 11990, Protection of Wetlands* (May 24, 1977), requires federal agencies to take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agencies' responsibilities for

managing and disposing of federal lands and facilities. For any proposal for lease, easement, right-of-way, or disposal to nonfederal public or private parties, a federal agency is to reference in the conveyance document those uses which are restricted under federal, state, or local wetland regulations and to attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law, or withhold such properties from disposal. The presence of wetlands at SAEP makes this EO relevant to resource protection and land use planning at the installation. Evaluation of the Army's proposed action includes consideration of this EO.

- *Executive Order 12088, Federal Compliance with Pollution Control Standards* (October 13, 1978), provides that federal agencies are to comply with all federal, state, and local environmental requirements. In the context of property to be disposed of at SAEP, these requirements will continue as long as the Army retains ownership of the property, including the period during which any portion of the property would be held in caretaker status prior to disposal. Evaluation of the Army's proposed action includes consideration of this EO.

- *Executive Order 12580, Superfund Implementation* (January 23, 1987), delegates to agency heads several decision-making authorities under CERCLA. In the context of SAEP, certain responsibilities related to environmental restoration may not be transferred to non-federal parties. CERCLA is applicable at SAEP because Section 120 H levies certain requirements pertaining to property prior to transfer or conveyance. Evaluation of the Army's proposed action includes consideration of this EO.

- *Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994), requires that federal agencies conduct their programs, policies, and activities that substantially affect human health or the environment in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under such programs, policies, and activities because of their race, color, or national origin. On February 11, 1994, the President also issued a memorandum for heads of all departments and agencies, directing that EPA, whenever reviewing environmental effects of proposed actions pursuant to its authority under Section 309 of the CAA, ensure that the involved agency has fully analyzed environmental effects on minority communities and low-income communities, including human health, social, and economic effects. The essential purpose of the EO is to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. Evaluation of the Army's proposed action at SAEP includes consideration of this EO.

- *Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks* (April 21, 1997), recognizes a growing body of scientific knowledge demonstrates that children may suffer disproportionately from environmental health risks and safety risks. These

risks arise because children's bodily systems are not fully developed; because children eat, drink, and breathe more in proportion to their body weight; because their size and weight may diminish protection from standard safety features; and because their behavior patterns may make them more susceptible to accidents. Based on these factors, the President directed each federal agency to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. The President also directed each federal agency to ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks. Evaluation of the Army's proposed action at SAEP includes consideration of this EO.

1.5.3 Other Reuse Regulations and Guidance

DoD's Office of Economic Adjustment published its *Community Guide to Base Reuse* in May 1995. The guide describes the base closure and reuse processes that have been designed to help with local economic recovery and summarizes the many assistance programs administered by DoD and other agencies. DoD's Office of the Assistant Secretary of Defense for Economic Security published the *DoD Base Reuse Implementation Manual* in July 1995; it was revised in December 1997. This volume serves as a handbook for the successful execution of reuse plans. DoD and the Department of Housing and Urban Development have published guidance (at 32 CFR Part 175) required by Title XXIX of the National Defense Authorization Act for Fiscal Year 1994. The guidance establishes policy and procedures, assigns responsibilities, and delegates authority to implement the President's Program to Revitalize Base Closure Communities (July 2, 1993).

SECTION 2.0: DESCRIPTION OF THE PROPOSED ACTION

2.1 INTRODUCTION

The proposed action (Army primary action) is to dispose of the excess property generated by the BRAC-mandated closure of the installation, including interim leases, caretaker operations, and cleanup of contaminated sites. Redevelopment by others is a secondary action resulting from disposal.

SAEP is located in Stratford, Connecticut, on the Stratford Point Peninsula in the northeast corner of Fairfield County (Figure 2-1). The installation consists of about 75 acres of improved land, with riparian rights extending over intertidal flats of the Housatonic River.

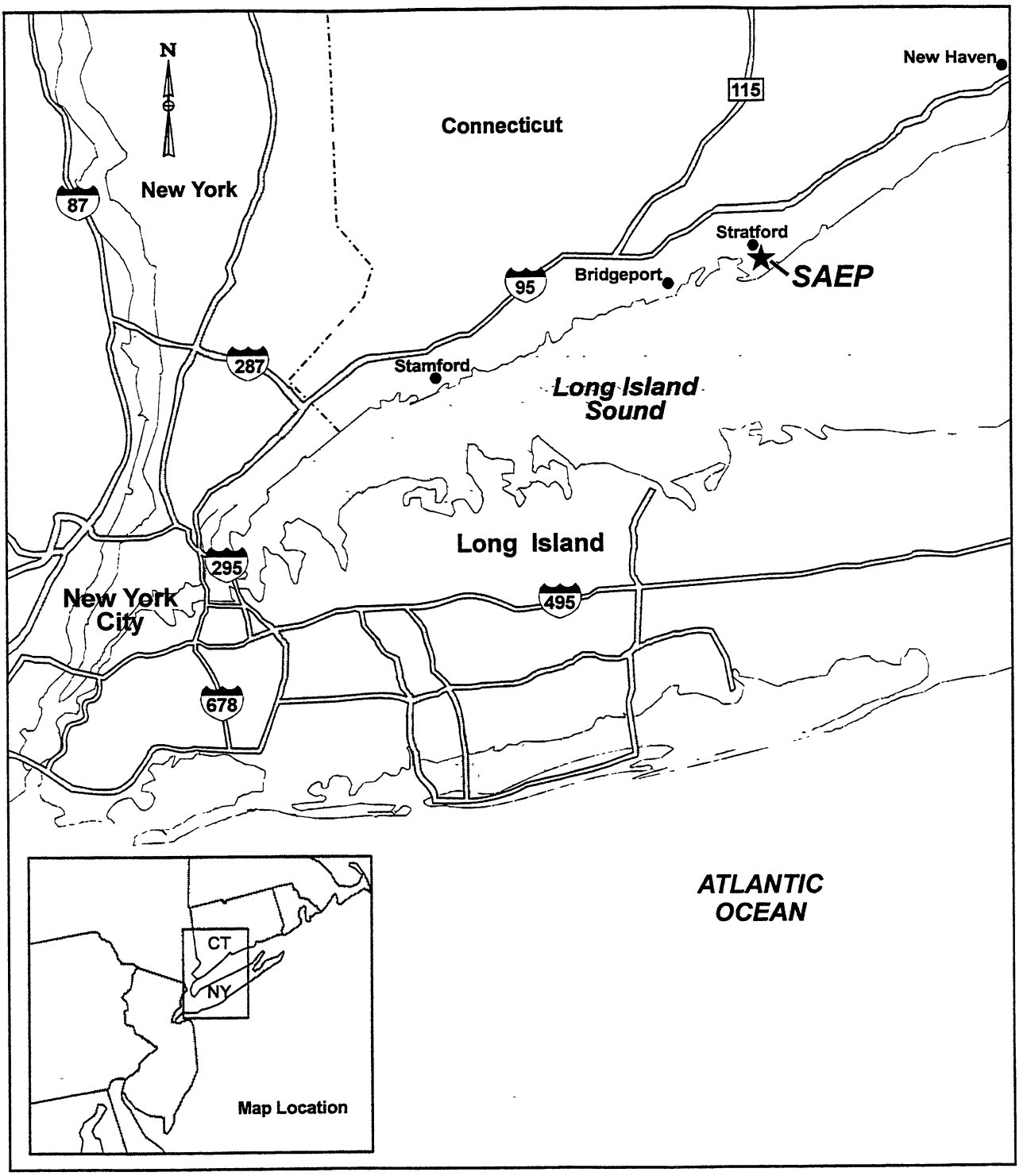
SAEP is a government-owned, contractor-operated installation. It has 57 buildings (providing about 1.7 million square feet of space) and 25 acres of parking lots (Figure 2-2). In 1929, Sikorsky Aero Engineering Company developed the site as a manufacturing facility. In 1939, Chance Vought Aircraft relocated to the Stratford plant and developed the helicopter, which it started to produce in 1942. In addition, Navy aircraft, including the Kingfisher and the Corsair, were mass-produced at Stratford during the 1940s. The Air Force purchased the facility in 1951 and transferred control of it to the Army in 1976. In the past, the facility has been used for manufacture of tank, aircraft, and watercraft engines. Most recently, it has been operated by AlliedSignal, Inc., to produce military and commercial turbine engines and spare parts for tanks, aircraft, and watercraft, with primary production being devoted to M1 Abrams tank engines and spare parts.

Properties in the vicinity of SAEP are zoned for light industrial, business, commercial, and residential uses. The installation is identified as light industrial. It is bounded by a parking lot and wetlands to the north; by the Housatonic River to the east; by an open field, drainage ditch, and small commercial businesses to the south; and by the Sikorsky Memorial Airport, several small businesses, and Frash Pond to the south and west.

2.2 PROPOSAL IMPLEMENTATION

Army Action. Identification of recipients of the property being disposed of at SAEP is governed by expressions of interest submitted by potential recipients in response to the Army's Declaration of Excess Property and Determination of Surplus Property. A complete discussion of the screening process is provided in Section 2.3.4. As a result of the screening process, which resulted in no timely expression of interest in the SAEP property by other federal agencies, the Army proposes to dispose of the 75 acres of improved lands and riparian rights adjacent to the installation. As described below, the installation would be available for transfer or conveyance to and subsequent reuse by the Stratford Army Engine Plant Local Redevelopment Authority (SAEP LRA) or other entities.[1]

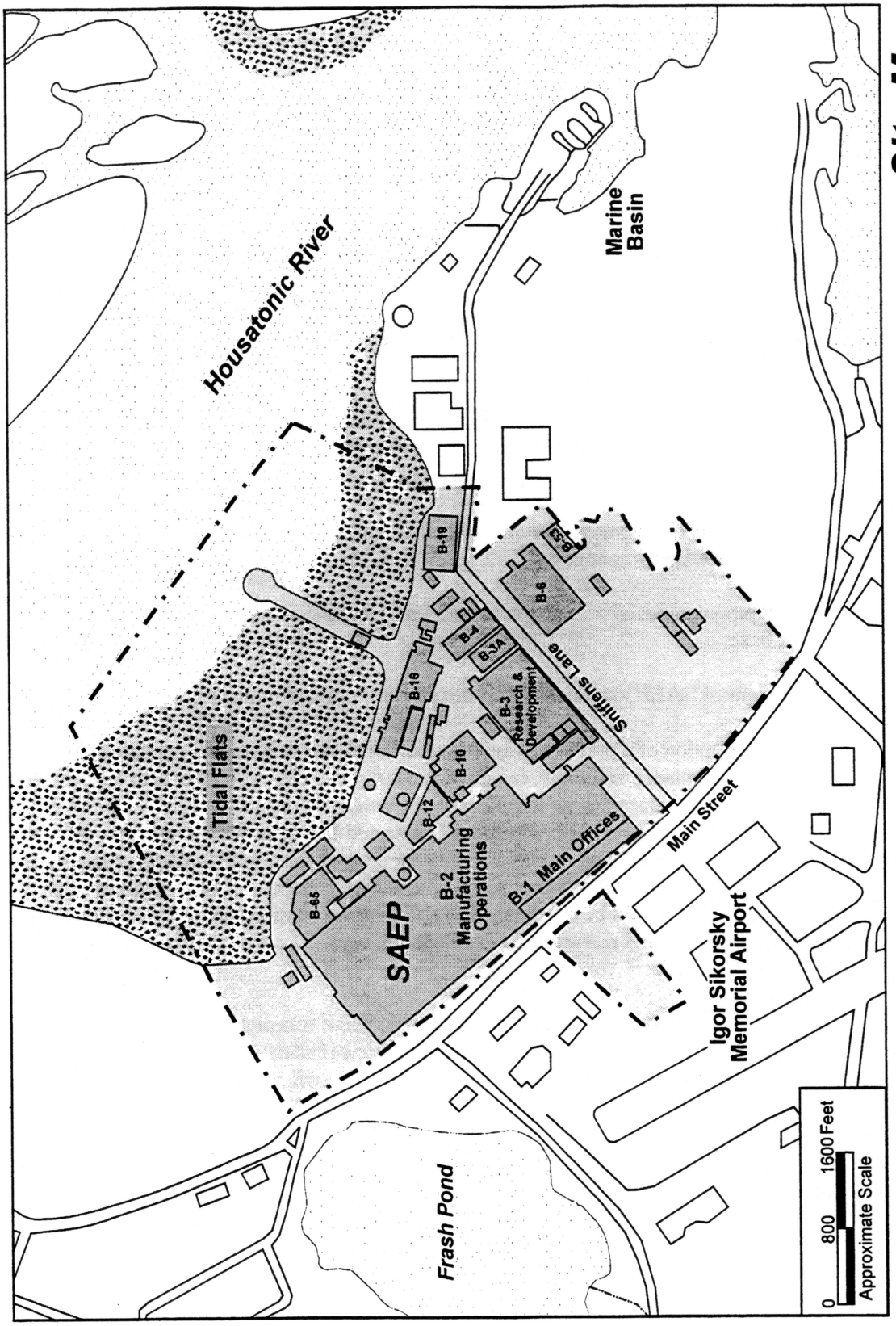
[1] On May 21, 1998, the Department of Defense recognized the SAEP LRA as an "implementing" LRA (as opposed to being a "planning" LRA). Among other things, the ILRA designation entitles the community redevelopment agent to receive the excess property. Depending on the context, this EIS might refer to the redevelopment authority as either the "LRA" or the more recent "ILRA." Both titles refer to the same entity, the community's redevelopment agent.



Note. This map is not drawn to scale.

Location Map

Stratford Army Engine Plant
Stratford, Connecticut
Figure 2-1



Site Map
Stratford Army Engine Plant
Stratford, Connecticut
Figure 2-2

Two aspects of the Army's disposal actions warrant particular note.

- *1943 fill area.* In 1943, the state of Connecticut granted the plant property owner permission to fill an estimated 8 to 10 acres of wetlands below the mean high water mark along the Housatonic River. In 1951, the Air Force brought an eminent domain action to obtain title to the plant property. The state of Connecticut claims title to the filled area because the 1943 permit specifically reserved title in the underlying land in the state. The Army and the state of Connecticut, agreeing there is a cloud on the title to the filled area, are working together to enable the Army to grant good title to the property at the time of transfer or conveyance.

- *Transfer of riparian rights.* The Army holds riparian rights along the Housatonic River. These riparian rights would be transferred to the same entity obtaining title to the upland, waterfront property.

Community Reuse. The LRA for the town of Stratford has adopted a comprehensive reuse plan in its *Stratford Army Engine Plant Master/Redevelopment Plan and Implementation Strategy.* (See Appendix C.) The reuse plan focuses on achievement of three primary goals:

- The creation of new employment opportunities that will also contribute to the diversification of the community's employment base.

- The redevelopment of SAEP as a major component in the stabilization and diversification of the town's tax base.

- Redevelopment of SAEP in a fiscally responsible and prudent manner.

The community's adoption of a preferred land use plan for SAEP is based on consideration of four alternatives for redevelopment of the site, ranging from reuse of existing structures to comprehensive site redevelopment. Alternative 1 would be redevelopment through industrial reuse of existing structures. Alternative 2 would consist of industrial reuse and limited new development. Alternative 3 would entail major new office and research and development space, with limited reuse of existing structures. Alternative 4 would be comprehensive site redevelopment. In this last alternative, most of the buildings at the site would be demolished to enable new construction on independent parcels supporting corporate office and research and development uses. These alternatives are described in more detail in Appendix C.

The preferred reuse alternative selected by the town of Stratford was alternative 4—comprehensive site redevelopment. This alternative would involve demolition of all major structures to create a series of independent parcels to facilitate redevelopment for corporate office and R&D use. Alternative 4 would completely reshape the site's identity and set the stage for attracting new users to a unique waterfront location. Access Road would be extended across Main Street to provide a roadway between the site and open space along the Housatonic River. Building 19 would be retained and dedicated to a water-dependent use. A public access corridor and associated public open space would be provided along the Housatonic River.

To achieve this alternative, the SAEP site would be divided into three areas—an Economic Development Zone (52 acres), a Waterfront Open Space Zone (16 acres), and a Special Use/Museum

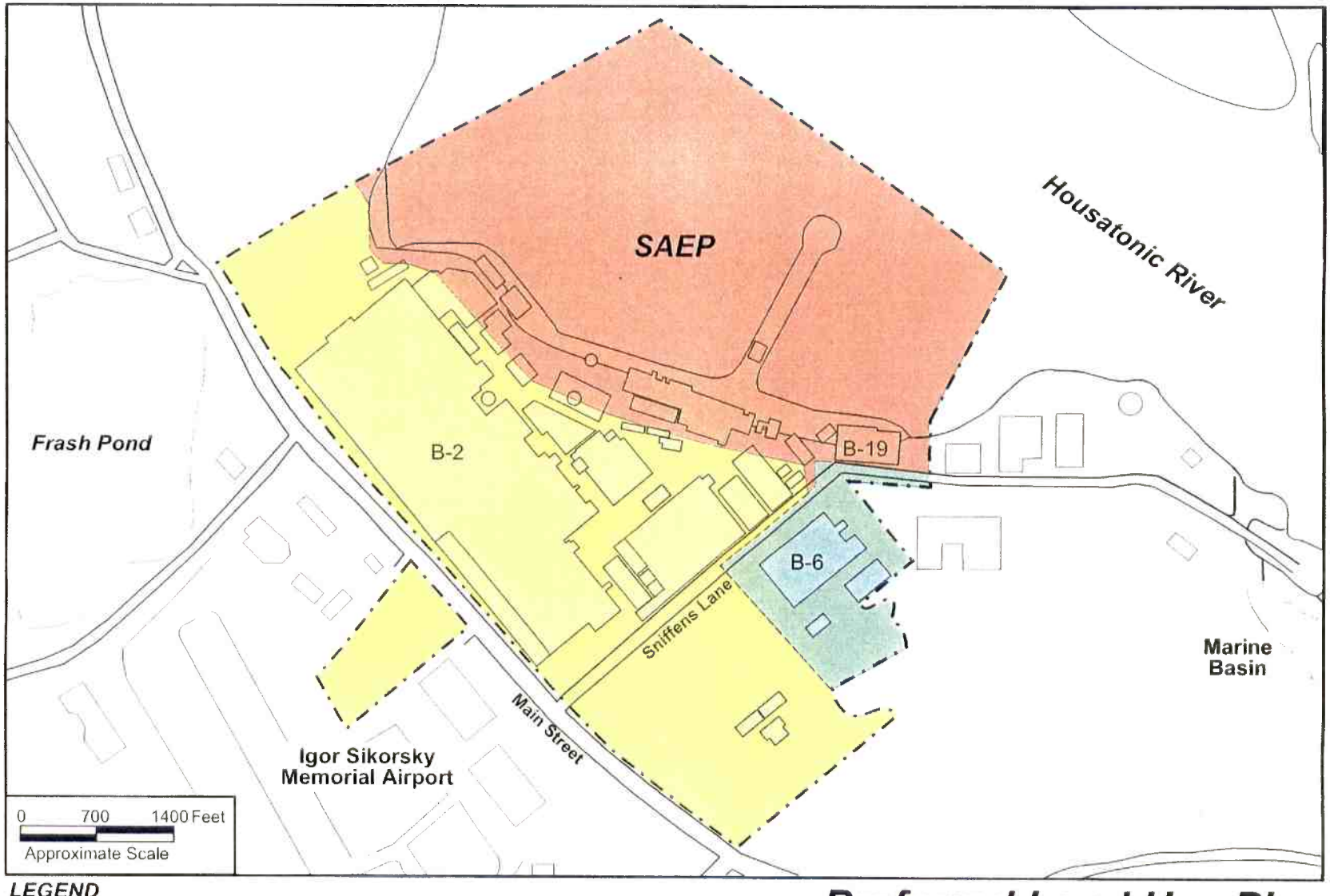
Zone (7 acres) (Figure 2-3). The Economic Development Zone would provide opportunities for users that would bring jobs to Stratford while expanding the community's tax base. The Waterfront Open Space Zone, extending across the site's waterfront frontage, would ensure public access to this area and would be developed as a park. The Special Use/Museum Zone recognizes the potential of Building 6 and its 105,000 square feet of space suitable for use as an exhibit facility.

By letter dated September 30, 1998, the town of Stratford informed the Army that it might reconsider its selection of Alternative 4 as its preferred alternative. Upon further consideration of the costs associated with demolition of structures, the community has decided to reevaluate an option closer to Alternative 1. Also, the community believes that adaptive reuse of existing structures could allow it to develop a more viable business plan, a necessary component of an economic development conveyance application. The town of Stratford, maintaining its ultimate goal of redevelopment for corporate office space and research and development uses, now recognizes that the initial phases of a 20-year build-out period could closely resemble Alternative 1 rather than the marked changes associated with implemention of Alternative 4. The town of Stratford's letter is attached to Appendix C.

Reuse of SAEP Property by the City of Bridgeport. The city of Bridgeport owns and operates Sikorsky Memorial Airport adjacent to SAEP. Proposals for safety improvements at the airport are described in a Federal Aviation Administration (FAA) draft EIS issued in May 1998, *Sikorsky Memorial Airport Draft Environmental Impact Statement/Environmental Impact Evaluation for the Proposed Improvements to Runway 6-24*. Proposed changes at the airport would result in the installation of an approach lighting system for Runway 6, relocation of Runway 6-24 some 875 feet to the northeast, and creation of a 500-foot by 1,000-foot runway safety area at the northeastern end of Runway 6-24. Relocation of the runway would be accompanied by extension of the taxiway along the northerly side of the runway. This extension of the taxiway would necessitate transfer of about 3 acres of SAEP property along the northern side of Runway 6-24. Relocation of the runway would also require rerouting of Main Street onto Sniffens Lane. For this rerouting, a small portion of the northerly quadrant of the present Main Street-Sniffens Lane intersection would have to be transferred to enable construction of a curve to allow better traffic flow. Finally, the Army could impose an aircraft navigation (avigation) easement on the SAEP property at the time of transfer. This easement, which would prohibit land activities that could adversely affect aviation safety, would restrict the heights of buildings that might otherwise encroach into FAA-controlled airspace, limit electromagnetic radiation that might interfere with aviation, and control lighting that might affect pilots' aircraft operational safety. These property transfers would reduce the real estate interests subject to ILRA redevelopment.

Implementation. Under the Defense Base Closure and Realignment Act, closure is required no later than the end of the 6-year period beginning on July 13, 1995, the date on which the President transmitted his report to Congress containing the recommendations of the BRAC Commission. The Army ceased operations at SAEP in 1998.

The BRAC process of property disposal includes predisposal activities and real estate disposal, which in turn allow for subsequent reuse development. Predisposal activities include contaminated site cleanup, interim uses, and the caretaking of vacated facilities until disposal. Disposal activities include a real estate screening process that identifies potential reuse entities, including federal, state, and local organizations. Redevelopment, a secondary effect of disposal, offers extensive community



LEGEND

Land Use Zones

- Economic Development Zone (52.4 Acres)
- Special Use/Museum Zone (7.5 Acres)
- Waterfront Open Space Zone (15.7 Acres)
- SAEP Installation Boundary

Source: RKG Associates, 1997.

Preferred Land Use Plan

Stratford Army Engine Plant
Stratford, Connecticut
Figure 2-3

involvement. The local community, represented by the town of Stratford, established the SAEP LRA to produce a reuse development plan for the surplus property to be made available to the community. Property disposal can be either encumbered or unencumbered. In transferring or conveying property at SAEP, the Army would recognize or impose encumbrances consistent with requirements of law, agency negotiation, and protection of environmental values. These could include encumbrances related to asbestos-containing materials, easement for aviation, easement for public access, easement for a public park, existing easements and rights-of-way, floodplains, groundwater use, historic resources, land use restrictions, lead-based paint, remedial activities, and wetlands. These encumbrances, arising from Army imposition or legal restraint, could be expected to apply at the time of transfer or conveyance of the SAEP property and influence future uses of the property. Section 3.3.1 provides information on the Army's procedures for identifying encumbrances and additional details on the encumbrances likely to apply at the time of transfer.

2.3 *DISPOSAL PROCESS*

The following subsections discuss actions that will occur before transfer or conveyance and the steps required to accomplish disposal.

2.3.1 *Caretaking of Property Until Disposal*

The Army recognizes that maintenance of an installation plays a key role in ensuring its redevelopment. The Army would employ two levels of maintenance.

From the time of operational closure until conveyance of the property to private ownership, the Army would provide for maintenance procedures to preserve and protect those facilities and items of equipment needed for reuse in an economical manner that facilitates base redevelopment. In consultation with the ILRA and consistent with available funding, the Army would determine required levels of maintenance of facilities and equipment for an initial period following closure. Although the Army would work closely with the ILRA to ensure that facilities are maintained for rapid reuse, the levels of maintenance during this initial period would not exceed maintenance standards in effect before approval of the closure decision (September 28, 1995). During this initial period, maintenance would not include any property improvements such as construction, alteration, or demolition. In an appropriate case, however, demolition could occur if required for health, safety, or environmental reasons or if it were economically justified in lieu of continued maintenance.

The initial period of maintenance possibly would be for a specific user (e.g., commercial enterprise) identified by the ILRA. Consultation by the Army with the ILRA to establish specific caretaking plans for each structure and facility has occurred. The Army and LRA have agreed to discuss maintenance levels for facilities on a case-by-case basis as reuse opportunities are identified. When those discussions do occur, the Army and the ILRA will be guided by the provisions of Chapter 6 of the *Base Reuse Implementation Manual* and its delineation of actions during the initial maintenance period. Generally, maintenance during this initial period would involve keeping buildings and machinery in as good a condition as possible. Typical maintenance activities that would continue before conveyance of property to the ILRA would include the maintenance of fenced areas to ensure adequate security, mowing and weed control on grounds for aesthetics and fire protection, and trimming and maintenance of trees and brush to avoid interference with roadways, fences, or

buildings. Diseased trees and vegetation would be identified and removed as appropriate. Security at SAEP would be conducted as in the town and county jurisdictions within the ROI.

If property were not transferred within an agreed-to period of time and the ILRA were not actively seeking reuse opportunities for the available facilities, the Army would reduce maintenance levels to the minimum level for surplus government property required by 41 CFR 101-47.402, 41 CFR 101-47-4913, and Army Regulation 210-17 (*Inactivation of Installations*). Maintenance during the later period would not be focused on keeping the facilities in a state of repair to permit rapid reuse. Rather, maintenance during this period would consist of minimal activities intended primarily to ensure security and to avoid deterioration. This reduced level of maintenance would continue indefinitely until disposal. Specific activities that would occur during this later maintenance period are provided in Section 3.2. Table 2-1 identifies the actions that would be taken during the first and second levels of maintenance during caretaker status.

Table 2-1
Caretaker Maintenance Procedures for Facilities

Component	First Level of Maintenance	Second Level of Maintenance
Security Inspections	External inspections are conducted approximately every 2 hours by security patrols. Interior patrols are done every 2 hours on off-shift and weekends and holidays.	Conduct daily exterior inspection.
Interior Walk-Through	Drive through daily as part of normal duties. Security patrols go through every 2 hours on off-shift weekends and holidays.	Monthly and after severe storms.
Building Shell	Inspected after severe weather; ensure shell is maintained weather-tight.	Inspect semiannually and after severe weather. Keep gutters, drains, and downspouts clean. Building shells will be kept weather-tight.
Exterior Windows, Doors, and Other Openings	Security patrols ensure all doors and security access system are operational, close and lock all doors and windows. Repair broken doors and windows to ensure buildings are secured immediately.	Inspect semiannually.

Table 2-1
Caretaker Maintenance Procedures for Facilities

Component	First Level of Maintenance	Second Level of Maintenance
Building Interior	Minimal maintenance to ensure soundness of facility roof, structures, floor, office space, receiving and storage areas.	Minimal maintenance required to ensure structural soundness of floors, roof framing, and other structural members.
Heating System	Preventive maintenance on a scheduled basis and general maintenance as required.	Heat facilities at 55 degrees Fahrenheit (°F). Perform scheduled operational checks and periodic maintenance.
Air-Conditioning System	Preventive maintenance on a scheduled basis and general maintenance as required.	Facilities not cooled.. Perform visual inspections on inactive systems.
Electrical System	Preventive maintenance on a scheduled basis and general maintenance as required.	Check after severe thunderstorms. Check operating equipment during walk-through inspections.
Water/Plumbing System	Repair as required, and preventive maintenance on a scheduled basis.	Monthly, turn on water to toilets, urinals, faucets, etc. to keep traps wet and seals good.
Fire Protection System	Maintained in accordance with NFPA codes. Fire Marshall performs all inspection and maintenance in accordance with schedules and maintains all records.	System active; conduct visual inspection semiannually; routine maintenance annually, quarterly for fire pumps.
Pest Control Services	Weekly inspection.	Identify potential problems during walk-through inspections and initiate appropriate control procedures. Conduct annual termite inspection.
Grounds Maintenance	Performed by contractor. Maintain grass between 1½ inches and 6 inches. Snow removal where necessary.	Maintain grass between 1½ inches and 6 inches. Snow removal where necessary.

Table 2-1
Caretaker Maintenance Procedures for Facilities

Component	First Level of Maintenance	Second Level of Maintenance
Installed Mechanical Equipment	Repair as required; periodic inspection and maintenance are performed to preventive maintenance schedule.	Exercise equipment per manufacturer's recommendations on preservation, expected deterioration rates, or safety considerations. Perform scheduled periodic maintenance inspections.
Fire Hydrants	All scheduled periodic maintenance and inspections, including annual winterization of fire hydrants.	Perform annual inspections.
Electrical Substation	Quarterly visual inspection. Annual preventive maintenance.	Quarterly visual inspection. Annual preventive maintenance.
Steam/Condensate Lines	Monthly visual inspection. Implement corrective action.	Monthly visual inspection. Implement corrective action.
Water/Sewer Lines	Monthly visual inspection. Implement corrective action.	Monthly visual inspection. Implement corrective action.
Groundwater Monitoring Program	Continued groundwater monitoring as required for a RCRA closure (postclosure) facility that stored hazardous waste and was considered a treatment, storage, and disposal facility.	Continued groundwater monitoring as required under RCRA.

2.3.2 *Cleanup of Contaminated Sites*

Past operations at SAEP have resulted in the generation of various types of contaminants and their disposal and release. The primary contaminants of concern at SAEP include petroleum hydrocarbons, solvents, and heavy metals. A RCRA Facilities Assessment in 1992 identified 31 land parcels that require remediation or further investigation (Categories 5 through 7) because hazardous waste or hazardous constituents might have been managed or are located in the vicinity where releases might have occurred (CDM, 1992). These areas of concern are more fully described in Section 4.9.

In preparing to dispose of the SAEP property, the Army will follow the provisions in CERCLA Section 120(h)(3), which require that:

> (A)(ii) A covenant warranting that all remedial action necessary to protect human health and the environment with respect to any such substances remaining on the property has been taken before the date of transfer ...
>
> (iii) For purposes of subparagraph (A)(ii), all remedial action described in such subparagraph has been taken if the construction and installation of an approved remedial design has been completed, and the remedy has been demonstrated to the [USEPA] Administrator to be operating properly and successfully. The carrying out of long-term pumping and treating, or operation and maintenance, after the remedy has been demonstrated to the Administrator to be operating properly and successfully, does not preclude transfer of the property.[2]

Under CERFA, federal agencies are required to identify expeditiously real property that offers the greatest opportunity for immediate reuse and redevelopment. CERFA does not mandate that the Army transfer real property identified as available; rather, it is the first step in satisfying the objective of identifying real property where no CERCLA-regulated hazardous substances or petroleum products were disposed of or released. To these ends, the Army's final Environmental Baseline Survey (EBS) identifies areas at SAEP where release or disposal of hazardous substances or petroleum products or their derivatives has occurred (ABB Environmental Services Inc., 1996a). The EBS also identifies non-CERCLA-related environmental or safety issues (i.e., asbestos, lead-based paint [LBP], radon, polychlorinated biphenyls [PCBs], radionuclides, and unexploded ordnance [UXO]) that would limit or preclude the transfer of property for unrestricted use; completed or ongoing removal or remedial actions taken at the installation; and possible sources of contamination on adjacent properties that could migrate to the SAEP real property.

The EBS further serves as a database describing environmental conditions related to remediation issues. It also will be a contributing factor in formulation of the BRAC Cleanup Plan. Finally, the EBS is a major source for information in developing a Finding of Suitability to Lease (FOSL) for interim leases and a Finding of Suitability for Transfer (FOST).

Under DoD and Army policy, the Army's environmental restoration efforts for SAEP will attempt to facilitate the land use and redevelopment needs, to the extent reasonably practicable, as stated by the community's reuse plans prior to the remedy selection process. It is the Army's expectation that the community at large, and in particular the LRA's redevelopment plan, will take the environmental condition of the property, planned remedial activities, and technology and resource constraints into consideration in developing their reuse plan. For SAEP, the LRA's redevelopment plan, specifically the land use plan, is the basis for the land use assumptions the Army will consider during the remedy selection process. After considering these reuse assumptions, the Army will select an appropriate

[2] Section 334 of the National Defense Authorization Act for Fiscal Year 1997 enlarges authority for transfer of property before completion of all remedial action. To make such an earlier transfer, a federal agency must give public notice and provide the public the opportunity to submit written comments. Moreover, an agency must provide assurances that the deed or other agreement used to govern property transfer will provide that restrictions will be placed on use necessary to ensure required remedial investigations, actions, or oversight activities will not be disrupted; provide that all remedial action will be taken and will identify schedules for investigation and completion; and provide that the federal agency responsible for the property subject to transfer will submit a budget request to the Director of the Office of Management and Budget that adequately addresses schedules, subject to congressional authorizations and appropriations DoD, EPA, and state officials are developing procedures to carry out this amendment of CERCLA

remedy and take all remedial action necessary to protect human health and the environment in accordance with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300).

If a selected remedy at SAEP is determined to be no longer protective of human health and the environment (e.g., the remedy failed to perform as expected, an institutional control has proven to be ineffective, or additional contamination attributable to DoD activities is subsequently discovered), the Army will, consistent with CERCLA Section 120(h), perform such additional cleanup as is both necessary to remedy the problem and consistent with the future land use assumptions used to determine the original remedy. However, where additional remedial action is required only to facilitate a use prohibited by deed restriction or other appropriate institutional control, DoD will neither perform nor pay for such additional remedial action. For instance, if the Army conducts a cleanup sufficient to enable nonresidential use of the SAEP property as proposed by the LRA reuse plan and terms of the property transfer prohibit residential uses, future owners desiring to change the property's land use to residential use would be responsible for any additional cleanup costs that might be required to ensure continued protection of human health and the environment.

2.3.3 *Interim Uses*

Before disposal, the Army may execute interim leases to facilitate state and local economic adjustment efforts and to encourage economic redevelopment. Pending issuance of a record of decision (ROD) regarding the NEPA analysis for disposal and reuse of SAEP, the Army will not make commitments that would significantly affect the quality of the human environment or irreversibly alter the environment in a way that precludes any reasonable alternative for disposal of the property. Hence, leases in furtherance of conveyance before completion of the NEPA analysis of disposal and reuse and issuance of a ROD will not be considered. The Army may, however, enter into an interim lease having a duration beyond the expected completion date of the NEPA analysis of disposal and reuse of the installation. In such a case, the Army will consult with the SAEP ILRA before entering into the lease. Such interim leases allow limited use of the property and facilities such that no reasonable reuse options would be foreclosed before the publication of the conclusions of the basewide disposal NEPA analysis. The Army has initiated action to lease SAEP's Buildings 58 and 65 to the State of Connecticut Department of Economic and Community Development. Building 65 has been leased to a private-sector firm engaged in light industrial activities. This interim use is compatible with the environmental remediation and has been the subject of separate analysis in accordance with NEPA.

2.3.4 *Real Estate Disposal Process*

Disposal as a Package or in Parcels. Army policy provides that, upon completion of all required hazardous substance cleanup activities and cleanup that may be required for other environmental conditions such as asbestos, fuel, or other substances, property subject to disposal under BRAC should generally be disposed of as a single entity. Alternatively, the Army may dispose of the SAEP property in parcels. Based on identification of parcels upon completion of cleanup, disposal may occur to meet objectives related to reuse goals, tax revenue generation, and job creation.

Disposal Process. Methods available to the Army for property disposal include transfer to another federal agency, public benefit discount conveyance, economic development conveyance, negotiated sale, and competitive sale.

- *Transfer to another federal agency.* The Army may transfer the real property to another federal agency.

- *Public benefit discount conveyance.* State or local government entities may obtain property at less than fair market value when sponsored by a federal agency for uses that would benefit the public such as education, parks and recreation, wildlife conservation, or public health.

- *Economic development conveyance.* The 1994 Defense Authorization Act provides for conveyance of property to an ILRA at or below fair market value using flexible payment terms. The EDC is designed to promote economic development and job creation in the local community. An EDC is not intended to supplant other federal property disposal authorities and cannot be used if the proposed reuse can be accomplished through another authority. If certain criteria are met for a rural installation, an EDC may be made at no cost. To qualify for an EDC, the ILRA must submit a request to the Department of the Army describing its proposed economic development and job creation program.

- *Negotiated sale.* The Army would negotiate the sale of the property to state or local governmental entities including tribal governments or private parties at fair market value.

- *Competitive sale.* Sale to the public would occur through either an invitation for bids or an auction.

The method of disposal is determined, in part, by a two-step screening procedure that first assesses the demand for the facilities by DoD, other federal agencies, homeless assistance providers, and public agencies. If no interests are indicated through the screening process, the property is usually advertised for sale to the public by competitive bid.

DoD and Federal Agency Screening. The screening process first offers the property to other DoD agencies and federal agencies. A DoD or other federal agency that indicates an initial interest must follow up with a firm proposal for the future use of the property. Under the 1994 Defense Authorization Act, DoD and other federal screening was to have been completed within 6 months after September 28, 1995, the date of approval of the BRAC Commission's recommendations. Federal screening has been completed for SAEP. In October 1996, the FAA submitted a notice of interest on behalf of the city of Bridgeport. Since this notice was submitted after the federal screening period ended, it will be taken into consideration after public agency screening is closed. On behalf of the U.S. Fish and Wildlife Service, and while submitting comments on the draft EIS in June 1998, the Department of the Interior requested transfer of the intertidal flats with riparian rights along the Housatonic River for use in conjunction with the Salt Meadows National Wildlife Refuge. The Army cannot act on this request because the lands comprising the intertidal flats are owned by the state of Connecticut. Upon disposal of the installation, the Army would transfer its interest in the riparian rights along with the upland waterfront property.

LRA Screening. Pursuant to the Base Closure Community Redevelopment and Homeless Assistance Act of 1994, which amended the Defense Base Closure and Realignment Act of 1990, property that is surplus to the federal government's needs is to be screened through an LRA's soliciting notices of interest from state and local governments, representatives of the homeless, and other interested parties. An LRA's outreach efforts to potential users or recipients of the property include working with the

Department of Housing and Urban Development and other federal agencies that sponsor public benefit transfers under the Federal Property and Administrative Services Act. The LRA's reuse plan incorporates the notices of interest submitted to the LRA and reflects an overall reuse strategy for the installation.

Public Agency Screening. Consistent with the Federal Property and Administrative Services Act, screening notices have been sent to federal agencies that approve or sponsor public benefit conveyances and appropriate state and local agencies in the vicinity of the property. The Army initiated this screening after coordination with the LRA. In response to this screening, the Army received seven requests for transfer of property.

- *Park use.* On behalf of the town of Stratford, the Department of the Interior requested transfer of 15.7 acres for use as a park. This use, coordinated with the ILRA, is addressed in the reuse plan.

- *Educational museum.* On behalf of the town of Stratford, the Department of Education requested transfer of 7.5 acres for use as an educational museum. This use, coordinated with the ILRA, is addressed in the reuse plan.

- *Historic monument.* On behalf of the town of Stratford, the Department of the Interior requested transfer of 7.5 acres for use as a historic monument. This use, coordinated with the ILRA, is addressed in the reuse plan. Like the preceding request for an educational museum, this request pertains to Building 6 and areas adjacent to it.

- *Educational museum.* On behalf of the Connecticut Aerospace Hall of Fame and Museum, Inc., the Department of Education requested transfer of 21.6 acres for use as an educational museum. This use is addressed in the reuse plan but only to the extent pertaining to 7.5 acres. Like the preceding requests, it concerns Building 6 and adjacent areas.

- *Museum.* On behalf of the Connecticut Aerospace Hall of Fame and Museum, Inc., the Department of the Interior requested 21.6 acres for use as a museum. This request is similar to the immediately preceding one.

- *Airport purposes.* On behalf of the city of Bridgeport, the Federal Aviation Administration requested 5 acres in fee and easements for use by Sikorsky Memorial Airport. This use is not addressed in the LRA's reuse plan.

- *School, classroom, and educational purposes.* On behalf of Connecticut Community Technical Colleges, the Department of Education requested transfer of 12,000 to 15,000 square feet of space in Building 2 for educational uses. This use is not addressed in the LRA's reuse plan.

Since certain of the foregoing requests are for use of the same property by different entities, the Army will consult with the IRLA and, if found necessary, enter negotiations with various entities to determine appropriate courses of action for transfer or disposal of the SAEP property.

SECTION 3.0: ALTERNATIVES

3.1 INTRODUCTION

This section addresses alternatives to the Army's primary action (property disposal) and to the secondary action (property reuse by other parties).

Disposal alternatives are developed to help the Army decide whether to dispose of the property with or without restrictions. Disposal alternatives, with or without restrictions (called encumbrances; see Sections 3.3.1 and 3.3.2), as well as a no action alternative, are evaluated. Future reuse of surplus SAEP property is analyzed in the context of land use intensity categories as described in Section 3.4.2. The land use intensity-based scenarios are used to inform Army decision makers and the public of environmental impacts expected to occur given the reasonable range of reuses future property owners might implement. The SAEP LRA's reuse plan is the primary factor in development of the proposed action, reuse alternatives, and effects analysis in the Army's NEPA process for the disposal action. Consideration of the reuse plan as part of the proposed federal action aids both the community and the Army in achieving informed decision making and consensus on redevelopment at SAEP. The alternatives evaluation process is shown in Figure 3-1.

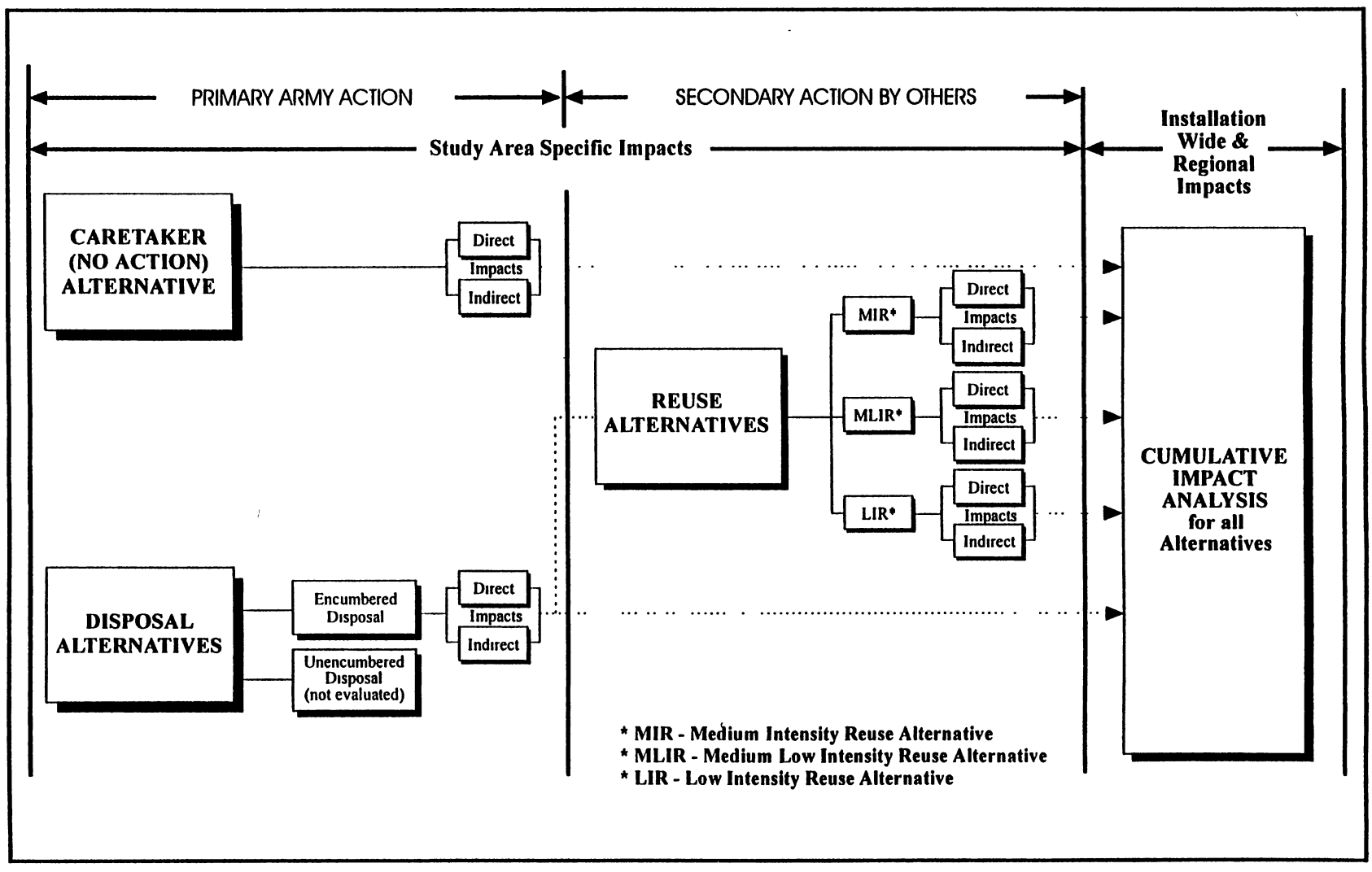
The Army's preferred disposal alternative is encumbered disposal, as described in Section 2.0. The Army expresses no preference with respect to reuse scenarios since that decision will be made by others.

3.2 NO ACTION ALTERNATIVE

Inclusion of the no action alternative is prescribed by the Council on Environmental Quality regulations and serves as a benchmark against which federal actions can be evaluated. The no action alternative assumes that the Army would be unable to dispose of all, or portions of, the available BRAC property within the period of time defined for initial caretaking of the property (refer to Section 2.3.1). Once the time period for the initial level of maintenance elapses, the Army would reduce maintenance to levels consistent with federal government standards for excess and surplus properties (i.e., 41 CFR 101-47.402 and 101-47.4913) and with Army Regulation 210-17 (*Inactivation of Installations*). This second stage of caretaker status would not be focused on keeping the facilities in a state of repair to facilitate rapid reuse. Rather, maintenance during this period would consist of minimal activities intended primarily to ensure security, health, and safety and to avoid physical deterioration. Maintenance activities would occur on those portions of the BRAC property not yet transferred or conveyed, and they would include the following:

- Inspection, maintenance, and use of utility systems, telecommunications, and roads to the extent necessary to avoid their irreparable deterioration.

- Periodic maintenance of landscaping around unoccupied structures, as necessary, to protect them from fires or nuisance conditions.



Alternatives Evaluation Process
Disposal and Reuse EIS

Stratford Army Engine Plant
Stratford, Connecticut

Figure 3-1

- Maintenance of access to permit servicing of publicly owned or privately owned utility or infrastructure systems.
- Maintenance of security patrols, security systems, fire prevention, and protection services.
- Reduction in the level of natural resources management programs including land management, pest control, and erosion control.

A summary of Facilities Caretaker Maintenance Procedures is shown in Table 2-1.

3.3 *DISPOSAL ALTERNATIVES*

Pursuant to the Defense Base Closure and Realignment Act of 1990 and the 1995 BRAC Commission's recommendation pertaining to SAEP, continuation of operations at SAEP is not feasible. There is no alternative to closure without further legislative action. As discussed in Section 2.0, the Army is acting to implement BRAC 95 by disposing of surplus property. Interim actions include cleaning up hazardous substance contamination, caring for vacated facilities, and, as circumstances arise, making interim leasing arrangements. Disposal alternatives analyzed in this EIS are encumbered disposal and unencumbered disposal. This subsection describes the encumbered and unencumbered alternatives evaluated for potential impacts in Section 5.0.

3.3.1 *Encumbered Disposal*

The Army's methodology to ensure environmentally sustainable redevelopment of BRAC disposal property identifies natural and man-made resources that must be used wisely or protected after ownership transfers out of federal control. The Army develops this information from the environmental baseline information early in the NEPA process and provides it to the LRA with the recommendation that the reuse plan consider protecting these resources. This methodology describes these valuable resources plus any other conditions that might influence reuse. Using this methodology, the LRA develops a reuse plan that satisfies community redevelopment goals and objectives while achieving a high environmental standard.

Consistent with this methodology and as part of the disposal process, the Army might find it necessary to impose legal constraints, as part of the encumbered disposal alternative, to protect environmental values, to meet requirements of federal law, to effect results from Army negotiations with regulatory agencies, or to address specific Army needs. Typical encumbrances that the Army might place on disposal include the protection and preservation of threatened and endangered species, jurisdictional wetlands, critical habitat, historic properties and sites, archeological sites, legacy resources, access to remediation sites, and retention of easements and utility/infrastructure rights-of-way.

Conditions of special hazardous materials, such as asbestos-containing material, lead-based paint, radon, polychlorinated biphenyls, and radiological material, require specific handling. Such conditions may result in encumbrances, but usually can be handled without limiting redevelopment.

Other types of conditions that might be identified to the LRA as potentially limiting use but are not identified as legal encumbrances for the purposes of the encumbered disposal alternative are excessive

slope areas, poor construction soil conditions, a high water table, overflow easements, heavy rock outcrops, zoning ordinances, and the need to consider homeless persons in the plan.

Major Categories of Encumbrances (General). Six major categories of encumbrances can be identified:

- *Easements and rights-of-way.* Real estate may be burdened with utility system, other infrastructure-related, roadway, or access easements and rights-of-way.

- *Use restrictions.* Activities on property may be limited by existing conditions or in recognition of adjacent land uses. For example, use of a former landfill site would preclude ground disturbance of a clay cap but could otherwise permit passive uses such as recreation. The presence of unexploded ordnance would preclude many uses of a parcel because of the potential safety hazards. In other instances, restrictive covenants could impose or maintain buffer zones between incompatible uses.

- *Habitat and wetland protection.* The presence of federally listed threatened or endangered species of wildlife or plants and the presence of wetlands may constrain unlimited use of property.

- *Historic building or archeological site protection.* Negotiated terms of transfer or conveyance may result in requirements for new owners to maintain the status quo of historic buildings or archeological sites or may impose a requirement for consultation with the State Historic Preservation Office prior to any actions affecting such resources.

- *Water rights.* Protective covenants may be required to protect existing well fields or aquifers.

- *Utility dependencies.* Utilities operated as a single system create dependencies with future owners unless the systems are individualized to separate parcels or facilities. Wastewater collection and treatment, potable water supply and distribution, telecommunications, gas, and electricity should be available to each property owner. An encumbrance may be needed wherever a parcel's or facility's future use depends on a common provider of these services or a common distribution system. As part of property disposal, the Army would cooperate with new owners and local utility companies to make arrangements for utility services, including creating or preserving appropriate easement across transferred land.

The Army's identification and imposition of encumbrances takes into consideration opportunities for the protection and preservation of environmental values, as well as the requirements of federal law and specific Army requirements. Consistent with the stewardship principles by which it operates its installations, the Army has a vital interest in perpetuating important resource protections, which in some cases the Army is able to do by use of encumbrances. Establishment of encumbrances reflects the Army's objective of returning property to public and private sector use as soon as possible in a manner that will result in continued stewardship of environmental resources, protection of public health and safety, and promotion of Army and reuse interests.

Encumbrances Identified at SAEP. The following specific encumbrances, considered in relation to the encumbered disposal alternative for SAEP, would be expected to apply at the time of transfer or conveyance of the SAEP property:

- *Asbestos-containing material.* Ongoing surveys at SAEP reveal the presence of asbestos-containing material (ACM) in pipe wrap insulation, pipe gaskets, wiring insulation, transite wallboard, and floor tile. Before transfer or conveyance, the Army would remove or encapsulate all friable asbestos posing a risk to human health. Transfer or conveyance documents would notify new owners or lessees of the property that they would be responsible for any future remediation of asbestos found to be necessary. Appendix D shows the notification the Army would typically provide.

- *Easement for avigation.* Improvements at the Sikorsky Memorial Airport would relocate Runway 6-24 and create a runway safety area at the northeast end of Runway 6-24. These actions would lead to consideration of FAA regulations at 14 CFR Part 77, which prescribe standards for determining obstructions to air navigation. Structures that exceed specified heights at specified distances from runways and other designated areas are deemed obstructions to air navigation. At the time of property transfer, the Army could include in the conveyance documents limitations on future construction of buildings or other structures in the vicinity of the airport. Also, in consultation with the FAA, the Army's conveyance document could prohibit emissions of electromagnetic radiation, installation of nonshielded lighting devices, or other activities which could interfere with air navigation.

- *Easement for public access.* The Army's disposal action would be undertaken in a manner that would ensure consistency with the Connecticut Coastal Management Program. An important aspect of that program is the assurance of water-dependent uses of waterfront properties, and a principal means of achieving water-dependent use is through the provision of public access. The Army recognizes that the community's reuse plan envisions a waterfront park along SAEP's frontage on the Housatonic River. To meet the Army's obligation for consistency with the state's program, however, the Army would include in conveyance documents, as a condition of acceptance of title, an affirmative obligation on the part of the transferee to provide public access to the Housatonic River. The Army would further require that the public access granted by the property recipient would have to meet regulatory standards established by the state of Connecticut for public use of waterfront property.

- *Easement for public park.* In the event the town of Stratford withdrew its request for a public benefit conveyance of 15.7 acres for a park, or other federal agencies failed or declined to sponsor a public benefit conveyance enabling establishment of a park, the Army would include in its conveyance document a requirement for establishment of a public park of not less than 15 acres along the Housatonic River. The Army has no reason to expect that the town of Stratford's request for a public benefit conveyance would not be approved and executed. The Army recognizes its independent obligation to ensure consistency with the Connecticut Coastal Management Program and therefore would resort to this encumbrance as a reserve mechanism to ensure compliance.

- *Easements and rights-of-way.* Existing easements and rights-of-way benefiting or burdening SAEP property would continue after transfer or conveyance. An example of such easements is one held by the town of Stratford for sewer piping serving private-sector customers as well as SAEP.

- *Floodplains.* The SAEP property lies within the 100-year floodplain of the Housatonic River. In consideration of EO 11988, Army property conveyance documents will notify property transferees of their obligations to adhere to applicable restrictions on the property imposed by federal, state, or local floodplain regulations.

- *Groundwater use prohibition.* The EBS reports that groundwater contamination has been found below many of the 33 parcels composing SAEP. There is currently no on-base use of groundwater. Transfer or conveyance of the SAEP property would include a prohibition on any use of the site's groundwater. This encumbrance on the property would extend until such time as appropriate regulatory agencies certified the completion of remedial action pertaining to the groundwater.

- *Historic resources.* Buildings 2 and 16 have been found eligible for the National Register of Historic Places (NRHP). The Army has entered into a Memorandum of Agreement with the Connecticut SHPO and the ACHP concerning these buildings' eligibility for the NRHP to provide that deed restrictions requiring protection of the historic properties would be passed on to the new owners as a condition of the sale or transfer of installation property. If the new owners desire to lessen or remove the deed restrictions requiring preservation, the deed will delineate a process for the new owners to consult with the SHPO to arrive at mutually agreeable and appropriate measures for mitigating the adverse effects of their proposed undertaking. Sample provisions that would typically be included in deeds to protect historic structures are shown in Appendix B.

- *Land use restrictions.* As noted at Section 2.3.2, the Army's environmental restoration efforts for SAEP will attempt to facilitate the land use and redevelopment needs stated by the community's reuse plan. The Army has not yet selected a remedy for cleanup of SAEP property. As a component of remedy selection, the Army may restrict certain types of future land use (e.g., residential use), impose institutional controls, or take other actions affecting land use to protect human health and the environment. Such restrictions would be included in conveyance documents as restrictions on future land use.

- *Lead-based paint.* Paints used at SAEP between 1930 and 1970 contained lead. Lead-based paint (LBP) is assumed to be present in buildings constructed before 1978, the vast majority of the buildings at the site. Consistent with the Residential Lead-Based Paint Hazard Reduction Act of 1992 (Public Law 102-550), the Army would provide notice in transfer and conveyance documents that buildings containing LBP would be restricted from residential use unless the recipient of the property abated any LBP hazards. Appendix D shows LBP provisions the Army would typically use for BRAC leases and deeds.

- *Remedial activities.* Operations at SAEP over several decades have resulted in localized hazardous waste contamination. The contaminants of concern primarily include petroleum hydrocarbons, solvents, and heavy metals. As indicated in Section 4.9, several buildings and areas at SAEP may be subject to some level of cleanup activity. In many instances, details of specific remedial actions remain to be determined. In conjunction with remedial activities that might be required during an interim lease or upon conveyance, the Army would retain a right to conduct investigations and surveys; to have government personnel and contractors conduct field activities; and to construct, operate, maintain, or undertake any other response or remedial action as required.

- *Wetlands*. The intertidal flats adjacent to SAEP are considered special aquatic sites and are regulated, along with wetlands, under Section 404(b)(1) of the Clean Water Act. To assist future transferees in understanding their obligations under Section 404 of the Clean Water Act with respect to activities that might affect wetlands, the Army would notify prospective transferees of their requirement to adhere to Section 404 permitting requirements for activities in or related to wetlands. Section 4 of EO 11990 authorizes the Army to impose other appropriate restrictions on the uses of property to protect wetland areas.

3.3.2 *Unencumbered Disposal*

Unencumbered disposal would involve transfer or conveyance of the property with the Army's not having created any encumbrances or with the Army's having removed encumbrances that could be removed. Removal of certain encumbrances is either infeasible or impracticable. For instance, elimination of the town of Stratford's sewer pipe easement could result in the loss of wastewater collection services.

Creation, retention, and removal of encumbrances must be considered in light of land use planning flexibility, market value, environmental concerns, potential increased management burdens on subsequent owners, and the potential for future property owners to be liable for failure to comply with encumbrance-related requirements. The Army examines the potential for removal of encumbrances to determine feasibility, costs, and other issues (e.g., timing) that could be involved in transfer or conveyance of property in an unencumbered status.

3.4 *REUSE ALTERNATIVES*

Consistent with Congress's mandate, the Army must cease performance of active missions at SAEP no later than July 13, 2001. Depending on numerous factors, including information presented in this EIS, disposal might occur as a single event involving transfer of the entire facility to one or more subsequent owners, or it might occur over time with multiple transactions involving the same or several new owners. Regardless of the method of disposal, timing, or identity of new owners, reuse of SAEP is reasonably foreseeable. Consistent with statutory requirements, this EIS treats the LRA's reuse plan as the primary factor in developing the proposed action and alternatives.

This EIS analyzes reuse of SAEP, which is expected to occur. CEQ regulations require evaluation of reasonably foreseeable actions, without limitation on the party conducting them, and evaluation of consequent environmental impacts. Accordingly, reuse of the property is evaluated as an action secondary in time, following the Army's primary action of disposal. The following subsections discuss the methodology used to define the reuse scenarios to be considered. Because of the speculative and changeable nature of reuse planning, specific activities cannot be precisely identified at this time. The Army considers the SAEP LRA's redevelopment plan the primary factor in defining the reuse scenarios to be considered and evaluates that reuse plan for potential environmental effects.

3.4.1 *Development of Reuse Alternatives*

Reuse planning for SAEP consists of establishing reuse objectives, planning for compatible land uses that support environmentally sustainable reuse and the community's needs, and marketing among potential public and private-sector entities to obtain interest in use of the property. The reuse planning

process is dynamic and often dependent on market and general economic conditions beyond the control of the reuse planning authority.

In recognition of the dynamics attending reuse planning, the Army uses intensity-based probable reuse scenarios to identify the range of reasonable reuse alternatives required by NEPA and by DoD implementing directives. That is, instead of speculatively predicting exactly what will occur at a site, the Army establishes ranges or levels of activity that reasonably *might* occur. These levels of activity, referred to as intensities, provide a flexible framework capable of reflecting the different kinds of uses that could result at a location. Reuse intensity levels also take into account the effects that encumbrances exert on reuse.

3.4.2 Land Use Intensity Categories Described

Five intensity-based levels of redevelopment of SAEP can be evaluated for their potential environmental and socioeconomic impacts. These are low intensity reuse (LIR), medium-low intensity reuse (MLIR), medium intensity reuse (MIR), medium-high intensity reuse (MHIR), and high intensity reuse (HIR). At any given installation, however, analysis of all five levels of intensity might not be appropriate due to historical usage, physical limitations, or other cogent reasons.

Levels of reuse intensity can be viewed as a continuum. At SAEP, LIR could represent a level of activity such as might be found in uses requiring only minimal numbers of buildings, with park or recreation functions occurring over substantial portions of the installation. An MLIR in the context of SAEP would represent the next greater level of use intensity. For instance, decreased use of existing facilities from present levels could represent a medium-low intensity use. An MIR represents the approximate midpoint of reuse intensity that could occur at a site. In the context of SAEP, an MIR would be represented by use of existing facilities in the same way as they have been used in the recent past. At a site such as SAEP, an MHIR and HIR might be achievable by increases in facilities and population and reduction in the amount of lands used for passive purposes (e.g., parking). At SAEP, these levels of intensity might involve conversion or replacement of existing structures and construction of additional buildings for housing, commercial, institutional, or industrial uses on greater amounts of acreage at the installation. However, MHIR and HIR would be impractical because such intensity of use would be essentially incompatible with the character of the adjoining areas.

Indicators of levels of intensity can be quantified by counting the number of people at a location (employees or residents), the potential number of vehicle trips generated as a result of the nature of the activity, or the number of dwelling units. Other indicators of the intensity of use are the rates of resource consumption (electricity, natural gas, water) and the amount of building floor space per acre (identified as the floor area ratio [FAR], expressed as the amount of square feet per acre).

Development of intensity parameters is based on several sources, including existing land use plans for various types of projects and planning jurisdictions, land use planning reference materials, and prior Army BRAC land use planning experience. Private-sector redevelopment of property subject to BRAC action, on the other hand, seeks different objectives and uses somewhat different planning concepts in that it focuses on creation of jobs and capital investment costs, and it typically uses

traditional community zoning categories (e.g., residential, industrial).[3] Upon evaluation of various types of indicators in light of their applicability to Army lands subject to BRAC action, the Army has selected five representative, illustrative intensity parameters. These are residential density, employee density (general spaces), employee density (warehouse spaces), floor area ratio, and development ratio. These intensity parameters aid in evaluation of environmental effects at various levels of redevelopment (see Table 3-1). The parameters are discussed in the following paragraphs.

Residential Density. This parameter identifies the number of dwelling units per acre. It indicates the number of people who might reside or work in an area.

Square Feet Per Employee (General Space). This parameter indicates the number of square feet available per employee in all types of facilities at an installation except family housing and warehouses or storage structures.

Square Feet Per Employee (Warehouse and Storage Space). This parameter indicates the number of square feet available per employee engaged in warehouse or storage activities at an installation.

Table 3-1
Land Use Intensity Parameters

Intensity Level	Residential Density [1]	Square Feet Per Employee (General Space)	Square Feet Per Employee (Warehouse Space)	Floor Area Ratio	Development Ratio
Low	<2	> 800	> 15,000	<0.05	<0.2
Medium-Low	2-6	601-800	8,001-15,000	0.05-0.10	0.2-0.4
Medium	6-12	401-600	4,001-8,000	0.10-0.30	0.4-0.6
Medium-High	12-20	200-400	1,000-4,000	0.30-0.70	0.6-0.8
High	> 20	< 200	< 1,000	>0.70	0.8-1.0
SAEP	NA [2]	815[3]	9,066[4]	0.50	1.0

[1] Dwelling units per acre.
[2] Not applicable. There are no residential units at SAEP.
[3] Based on 1,990 employees occupying 1,621,410 square feet of general space.
[4] Based on an estimated 10 employees assigned duties associated with an estimated 90,658 square feet of warehouse and storage space.

Sources: Fairfax County, 1990; HQDA, 1993; Lynch and Hack, 1994; Tompkins and White, 1984; ULI, 1982, 1985, 1987, 1988, 1989, 1994; USACE, 1993.

[3]Under AR 210-20 *(Master Planning for Army Installations)*, land use planning for Army installations is based on development of facilities and physical plants that support an overall environment of quality for the force and that provide the basis for projecting power assets (trained personnel, equipment, and supplies) necessary for national security. In contrast to the wide variety of zoning classifications used by local jurisdictions, Army planning relies on 12 land use classifications—airfields, maintenance, industrial, supply/storage, administration, training/ranges, unaccompanied personnel housing, family housing, community facilities, medical, outdoor recreation, and open space.

Only built, fully enclosed and covered storage space is calculated; sheds or open storage areas are excluded from computation. In describing Army uses of facilities, estimates of the number of employees engaged in warehouse or storage operations are used to determine the portion of the installation workforce in this employee density category.

Floor Area Ratio. This ratio reflects how much building development occurs at a site or across an area. For example, a 3-story building having a 7,500-square-foot footprint on a 4-acre site would represent an FAR of 0.13 (22,500 square feet of floor space over 4 acres [174,240 square feet]).

Development Ratio. A final indicator of intensity is based on the amount of developed property in relation to the total amount of property subject to land use planning at a given location. Developed property includes the acreage of not only those specific sites on which structures have been erected, but also immediately adjacent areas capable of being easily served by existing infrastructure elements such as roadways, electrical service, water and sewer, natural gas, heating steam, and telecommunications systems. For purposes of this ratio, developed property includes buildings, roadways, parking lots, and other structures such as storm water retention basins. The developed property ratio is expressed as the ratio of acres of developed property to the whole acreage within the area under consideration (e.g., 0.5). This indicator is useful to provide a general estimate of the degree of build-out, or potentially full development, that has occurred at a location.

Employee density, FAR, and development ratio considerations shown in Table 3-1 are appropriate to describe intensity levels for reuse planning at SAEP. The intensity parameters shown in Table 3-1 reflect generalized values or ranges appropriate to describe the variety of installations subject to Army management, as well as the variety of redevelopment situations. The intensity parameters should be considered together in evaluating the intensity of reuse of a site so as to provide full context. Use of any single parameter in isolation might unduly emphasize certain aspects of a site or preclude broader consideration. As applied to any particular parcel or area, or the whole of the installation, the values given might require some adjustment to account for the context in which an activity is located. For instance, the size of a redevelopment project might result in distorting effects on the generalized values for the parameters provided.

3.4.3 Baseline Land Use Intensity

Present use of SAEP is characterized as medium intensity. The total floor area of all buildings is 1,712,068 square feet over 75 acres, resulting in an FAR of 0.50, representative of a medium-high intensity use. The employee density in general space (815 square feet per employee) is a low intensity value. The presence of about 2,000 employees at the time of the BRAC Commission closure recommendation reflects a workforce somewhat lower than historical numbers of personnel employed at the site. (There are more than 3,000 parking places available for employees.) The employee density in warehouse and storage space (9,066 square feet per employee) is a medium-low intensity value. Improvements across the developable acreage reflect full development, a ratio of 1.0. Taken together, these factors indicate a medium intensity level of use at the time of the BRAC closure announcement.

3.4.4 Local Reuse Plan

In July 1997, the community selected its preferred alternative from those presented in the SAEP LRA's reuse plan. Alternative 4, the alternative selected to guide redevelopment, envisions

demolition of most existing buildings and use of the site for office and research and development purposes. These purposes advance the economic redevelopment goals set by the community. The preferred alternative also provides for waterfront park and museum uses, functions that are not focused on economic goals.

Three premises appear to underlie the community's preference for demolition of existing facilities and development of nonindustrial space. First, facilities at SAEP are, in general, approaching the end of their useful service lives. Continued use could require substantial expenditures to maintain them at a satisfactory level for use. Second, community reuse planners indicate that there is an excess inventory of large industrial facilities in the state. Finally, since few industrial operations require a building as large as Building 2, the facility would more likely be shared by multiple tenants. Marketing such a facility presents additional burdens such as sharing of common support and continuous on-site management.

On September 30, 1998, the town of Stratford notified the Army that it would reevaluate its choice of preferred alternative. Due to the high costs of demolition, the community would consider an option closer to Alternative 1. This alternative would involve adaptive reuse of most major structures and could enable a more viable business plan to be developed. The town of Stratford continues to believe that ultimate use of the site would more closely resemble Alternative 4 at the end of a 20-year planning horizon. Thus, it appears that the community would explore a lengthy transition period between existing facilities and new demolition and new construction. A copy of the town of Stratford's September 30 letter is attached to Appendix C.

Intensity-based probable reuse scenarios based on the SAEP LRA's reuse plan can be described. Realization of these scenarios might require several years because of impediments such as encumbrances (see Section 3.3.1), fluctuation in the availability of capital and general market conditions, and competition among regional development authorities to attract businesses and jobs to their locations. The community's recognition of the need for adaptive reuse, vice rapid demolition of the site to make way for new construction, further indicates the likelihood of a lengthy redevelopment transition. Because of ongoing hazardous substance remedial actions, the time required to demolish facilities and provide for new construction, and the phased improvements to infrastructure (e.g., extension of Access Road), it is assumed that redevelopment would occur over a 20-year period. Upon phasing out of existing structures and reconfiguration of the site, ultimately construction of up to 800,000 square feet of new office and research and development facilities would occur over the nine parcels identified as the 52-acre economic development zone.

Achievement of the SAEP LRA's reuse plan would, at build-out, most closely resemble an MIR scenario. The SAEP LRA's reuse plan projects that Alternative 4 would involve use of 860,000 square feet of space, resulting in 1,700 to 3,400 jobs (based on a range of 250 to 500 square feet per employee occupying office space). Using a higher average of 400 to 1,000 square feet per employee (appropriate to other kinds of uses), the SAEP LRA's reuse plan projects an employee population of 860 to 2,150. The midpoints of the two reuse plan estimates (2,550 and 1,505 employees, respectively) fairly bracket the Army's estimate that 1,986 employees would be present at the site under an MIR scenario.

Table 3-2 identifies major indicators associated with reuse of SAEP at the LIR, MLIR, and MIR levels that could occur as a result of implementation of the SAEP LRA's reuse plan. Depending on the types

Table 3-2
Reuse Attributes

Reuse Intensity	Residential Population [1]	Square Feet per Employee (General Space)	Square Feet per Employee (Warehouse Space)	Floor Area Ratio	Square Feet in Use	Employee Population
LIR	NA [2]	>800	>15,000	0.05	165,528 ft [2]	207
MLIR	NA [2]	601-800	8,001-15,000	0.10	331,056 ft [2]	473
MIR	NA [2]	401-600	4,001-8,000	0.30	993,168 ft [2]	1,986

[1] Dwelling units per acre.
[2] Not applicable. There are no residential units, present or proposed, at SAEP.

and numbers of activities that might occupy the site during reuse and the growth patterns associated with redevelopment, it is probable that reuse would reflect each of the LIR, MLIR, and MIR intensities as the SAEP LRA progressed from initialization of reuse (adaptive reuse) to achievement of complete redevelopment objectives (demolition and new construction) at the site.

3.5 ALTERNATIVES NOT TO BE ADDRESSED IN DETAIL

3.5.1 Medium-High Intensity Reuse

Assuming a midpoint FAR of 0.5, redevelopment of the SAEP site to a medium-high intensity level would involve the use of 1,655,280 square feet of space. If all the space were used for office and research and development purposes, with each employee having an average of 300 square feet available, the site would have an employee population of 5,518 persons. Judging by the number of employee parking places adjacent to the facilities, a workforce of this size would be nearly twice that of most previous periods. Especially in light of the park and recreation values addressed by the reuse plan, this magnitude of redevelopment would represent an unrealistic outcome of reuse and would place a disproportionate number of employees at a single location. Such an outcome would be unreasonable and therefore is not further evaluated.

3.5.2 High Intensity Reuse

High intensity reuse of the SAEP site at an FAR of at least 0.7 would involve use of 2,317,400 square feet of space and support an employee population of more than 11,500 persons. For reasons similar to those regarding medium-high intensity reuse, this scenario represents an unrealistic outcome of reuse and is not further evaluated.

SECTION 4.0: AFFECTED ENVIRONMENT

4.1 INTRODUCTION

Section 4.0 describes the environmental and socioeconomic conditions at SAEP as they were in July 1995. It provides information to serve as a baseline from which to identify and evaluate environmental and socioeconomic changes resulting from implementation of the proposed action. The effects of the proposed action and alternatives are discussed in Section 5.0. Two resources—legacy resources and installation agreements—do not exist at SAEP and therefore are not discussed.

4.2 LAND USE

4.2.1 Regional Geographic Setting and Location

SAEP is located in Stratford, Connecticut, on the Stratford Point Peninsula in the northeast corner of Fairfield County (Figure 2-1). It is bordered on the north by Shelton, on the west by Bridgeport and Trumbull, on the east by the Housatonic River, and on the south by Long Island Sound. East of the Housatonic River lies Milford, in New Haven County. Stratford and Bridgeport are mostly urban areas, though the northern portion of Stratford along the river is a less intensely developed residential area. The peninsula on which SAEP is located has an inlet referred to as the Marine Basin one-half mile to the southeast, a residential area on the tip of the peninsula 1 mile to the south, the Sikorsky Memorial Airport immediately to the south and southwest, and the Great Meadows salt marsh 1 mile to the southwest, on the opposite side of the airport from SAEP. Across the Housatonic River from the installation is the Charles E. Wheeler Wildlife Refuge, which contains approximately 850 acres of tidal marsh and estuary.

4.2.2 Existing Land Use

SAEP occupies approximately 75 acres along the Housatonic River, which lies immediately to the northeast (Figure 2-2). The facility has more than 1.7 million square feet of space in 57 buildings. The Army owns the buildings and most of the production equipment at the facility (HQDA, 1997). The state of Connecticut asserts that there is a cloud on the Army's title to a portion of the site based on fill activities along the Housatonic River circa 1943. The property for which title is unsettled consists of an estimated 8 to 10 acres along the waterfront and the causeway that extends out into the river. With the assistance of the state, efforts are under way to enable the Army to grant good title upon conveyance or transfer of the property. Also, the town of Stratford owns a parcel of 0.076 acre (66.5 feet by 50 feet), which is located at the west end of Building 2 along a city-held easement for a sewer line running under the north parking lot. This parcel is entirely surrounded by SAEP property.

Eighty-eight percent of the buildings were built before 1946. Approximately 71 percent of the interior space is located in Buildings B-2, B-3, and B-6 (RKG Associates, 1997). Almost all of the facility's buildings are constructed on concrete slabs. They have frames of steel, concrete, reinforced concrete, or wood. Exterior walls are constructed of masonry, metal, combinations of glass and metal or masonry and metal, and in some cases wood. Based on factors such as exterior and interior condition, design, age, type of construction material, and overall functional utility, 75 percent of the building space has been assessed to be in average or better-than-average condition. Table 1 in Appendix E

provides a summary of the major buildings on the facility. Most buildings at the facility do not meet the standards of the Americans with Disabilities Act, which requires that buildings be accessible to disabled persons, or the Federal Emergency Management Act, which requires that ground floor elevations be located at or above the 100-year flood level or be flood-proofed (RKG Associates, 1997).

SAEP has approximately 3,000 parking spaces, with parking lots located to the north of the facility, south of Sniffens Lane, and west of the facility across Main Street. The main facility property where most of the buildings are located is very limited for internal vehicular circulation.

Most of the SAEP property is zoned as light industrial. In the town of Stratford, light industrial zoning can be used for industrial purposes (e.g., product assembly, vehicle repair), commercial purposes (e.g., retail, office, warehouse, public parking), and recreational purposes (e.g., theaters and assembly halls). Lodging, residential, and heavy industrial uses are not permitted in light industrial zones. A small northern portion of the facility (the north parking lot) and SAEP property south of Sniffens Lane (the south parking lot) are zoned coastal industrial. In coastal industrial zones, many commercial uses (e.g., marine equipment sales, libraries, museums, convention halls, laboratories) require special approval. Industrial uses other than boat repairs, which also require special approval, are not permitted in coastal industrial zones.

Twenty-five percent of the town of Stratford lies within the Connecticut coastal zone (GBRPA, 1995), and SAEP lies entirely within the Connecticut coastal zone. Development activities in the Connecticut coastal zone generally require approval by the zoning board and are subject to coastal site plan review requirements and procedures, as described in Sections 22a-105 through 22a-109 of the Connecticut General Statutes. Activities that are not subject to coastal site plan review include minor additions or modifications to existing buildings and construction of fences, walks, walls, or underground utility connections.

Minimum standard requirements for public access are applicable to waterfront sites undergoing redevelopment or development that require a coastal site plan review, as defined in Section 3.1.1.3 of the Zoning Regulations of the town of Stratford. Local standards include the following: an unobstructed view lane that is in width at least 20 percent of the road or river frontage is required; a pedestrian access easement requires a 20-foot-wide (minimum) walkway along the waterfront that is connected to a public street or parking area; and a vehicle access easement requires the provision of a minimum amount of parking as close to the marine frontage as possible. In addition, two of the following seven amenities must be provided: open space easement for public park, conservation easement for natural preservation, canoe and/or boat ramp, fishing pier/public viewing walkway, public docking facilities, upland winter boat storage, or boat rentals (RKG Associates, 1997).

4.2.3 Surrounding Land and Airspace Use

The land surrounding SAEP is zoned for light industrial, business, commercial, and residential uses (HQDA, 1997). A paved parking lot owned by AlliedSignal lies to the north of the facility. AlliedSignal also owns a small wetland area bordering the Housatonic River just east of the north parking lot. An open field, a drainage channel that flows to the marine basin near to the facility on the Housatonic River, and several commercial businesses lie to the south. A hangar, the Sikorsky Memorial Airport, a strip mall, gas stations, restaurants, and Frash Pond lie to the west and south.

Table 4-1 lists land use types in Stratford along with the accompanying amount of land (in acres and percent of total land).

Airspace use within the immediate area of SAEP is influenced by the proximity of several airports, Victor (jet) airways, and controlled and restricted airspace, as depicted on the *New York Sectional Aeronautical Chart*. Airports in the vicinity of SAEP include Sikorsky Memorial Airport, Westchester County Airport, Danbury Airport, Tweed-New Haven Airport, and Long Island MacArthur Airport, as well as numerous named and unnamed private airports. Several Victor airways (V44, V91, V99, V229, V433, V475, and V487) traverse the airspace area. Airspace above and immediately surrounding Sikorsky Memorial Airport is Class D (controlled to an altitude of 2,500 feet above mean sea level). There are no restricted, warning, or military operations areas within the immediate vicinity of SAEP.

Sikorsky Memorial Airport, owned and operated by the city of Bridgeport, lies entirely within the municipal boundaries of the town of Stratford. The airport has two active runways, Runway 6-24 (4,677 feet) and Runway 11-29 (4,761 feet). Sikorsky Memorial Airport, primarily a general aviation airport accommodating general aviation and corporate activity, also handles some regional commercial services. Three fixed-based operators serve general aviation and corporate operations.

4.2.4 Future Land Use

Much of the planned development in the SAEP ROI involves redevelopment or revamping of existing structures, rather than large new construction projects. In Stratford, this includes the redevelopment of the Raymark facility and the Lake Success Business Park. Both sites are undergoing remediation

Table 4-1
Land Use in Stratford, Connecticut

Land Use Type	Acres	Percent of Total
Residential	5,700	46.3
Business and Commercial	306	2.5
Industrial and Utilities	1,588	12.9
Public/Private Institutions	498	4.1
Roads	2,590	21.1
Total Developed Land	10,682	86.9
Recreational	700	5.7
Total Area Used	11,382	92.6
Total Area Unused	913	7.4
Total Area	12,295	100

Source: Town of Stratford, 1993.

and are expected to be used eventually as a retail complex and office space, respectively (Killeen, personal communication, 1997).

In Bridgeport, previously used sites are also being developed for new uses. For example, the Steel Point Peninsula, a 2.4 million-square-foot retail, entertainment, and office complex, is planned on a 62-acre site that includes currently unused buildings. In addition, an office complex is planned on previously developed land at interchange 29 of Interstate 95. This land has been remediated and development is under way. In downtown Bridgeport, construction of an intermodal transport facility is under way. This facility will combine a rail station, a bus station, a ferry dock, and space for taxi and airport limo service. In addition, Harbor Yards, an entertainment complex that includes a minor league baseball park and a regional arena, is currently under construction (Nidoh, personal communication, 1997).

The Connecticut Department of Transportation has a number of projects planned to improve regional transportation infrastructure to keep pace with future development. Most of the bridges in the town of Milford are scheduled to be repaired or reconstructed (Gregory, personal communication, 1997). Major road improvements include the reconstruction of Connecticut Route 130 over the Yellow Mill Channel and the reconstruction of the I-95 bridge in the same area. Reconstruction is also planned at exit 29 of I-95, which coincides with a planned office complex in that area. A number of other improvement projects are slated for I-95 in this area, including resurfacing and paving sections of the roadway and installing conduits and fiber optic cables for the I-95 Incident Management System (CT DOT, 1997).

In May 1998, the FAA published its *Sikorsky Memorial Airport Draft Environmental Impact Statement/Environmental Impact Evaluation for the Proposed Improvements to Runway 6-24*. The document considers four "build" alternatives and a no action alternative for proposed runway improvements. The proposed build alternatives involve the construction of improved runway safety areas on Runway 6-24, reconstruction of the existing runway pavement, the installation of a Medium Intensity Approach Light System with sequenced flashers (MALSF) at the Runway 6 end, the partial relocation of a public highway (Route 113, Main Street), or a combination thereof. These improvements are required to address deficiencies in deteriorated runway pavement conditions, the failure of existing runway safety areas to meet current FAA minimum safety standards, absence of a standard runway approach lighting system for Runway 6-24 instrument approach, and the runway length, which does not appropriately accommodate existing and projected air transportation demand. Improvements are also prompted in part by a National Transportation Safety Board report on an accident in 1994 in which eight persons died. The Board's report included a recommendation that a runway safety area be established at the approach end of Runway 24 and that approach lighting be installed on Runway 6.

The FAA's preferred alternative would relocate Runway 6-24 some 875 feet to the northeast and establish a 1,000-foot by 500-foot runway safety area at the northeastern end of the runway. The runway relocation would require rerouting of Main Street onto a portion of Sniffens Lane. Transfer of SAEP property to the city of Bridgeport would also be required to accommodate the rerouting of Main Street and to enable the airport's complete adherence to current FAA safety standards.

4.2.5 *Connecticut Coastal Management Program Consistency*

Since SAEP is located wholly within Connecticut's coastal boundary, the disposal and future reuse of the site is governed by the Connecticut Coastal Management Program (CCMP) as defined by the Connecticut Coastal Management Act. Resources on or adjacent to SAEP that are covered by the CCMP include coastal flood hazard area, developed shorefront, intertidal flats, intertidal wetlands, shellfish concentration areas, and estuarine embayment (Housatonic River). In addition the proposed disposal of SAEP meets the definition of a "federal development activity" in 15 CFR 930.31(b), and consequently the disposal of this property by the Army requires a federal coastal consistency determination pursuant to 15 CFR 930.37 with state review and concurrence from the State of Connecticut Department of Environmental Protection, Office of Long Island Sound Programs.

The town of Stratford enforces a set of Coastal Area Management Regulations to achieve the policies of the Connecticut Coastal Area Management Act and to promote and encourage public access to the coast. These regulations are particularly significant to redevelopment of the SAEP site because of its immediate proximity to and length of shoreline along the Housatonic River. The SAEP site lies entirely within the coastal boundary as defined by Section 22a-94 of the Connecticut General Statutes. Therefore, all new development on the SAEP site is subject to the coastal site plan review requirements and procedures in Sections 22a-105 through 22a-109 of the Connecticut General Statutes.

The SAEP LRA consists of the Stratford Town Council with advice from the Connecticut Department of Environmental Protection; the Connecticut Department of Economic and Community Development; and local citizens, businesses, and industries. The community is responsible for establishing an LRA to act as the legal entity for participation by the community in reuse actions. The LRA is responsible for developing and obtaining community approval of a reuse plan for excess Army property. The LRA developed a reuse plan, which was subsequently adopted by the Stratford Town Council and approved on June 16, 1997.

The primary redevelopment goals included expansion of employment opportunities, stabilization and diversification of the town's tax base, and redevelopment that could be accomplished in a fiscally responsible manner. In addition to these primary goals, secondary goals included increased public access to the Housatonic River, land uses consistent with existing neighborhood conditions, and protection of the natural/coastal environment.

Regarding the SAEP LRA's reuse plan and activities within the Army's purview, the following topics were addressed in detail in the final coastal zone consistency determination letter dated December 21, 1998:

- Water-dependent use
- Easement for public access
- Easement for public park
- Storm water management
- Coastal Flood Hazard Area
- Cleanup of contaminated sites

A copy of the letter is provided as Appendix F. Based on a review of the Connecticut Coastal Management Program, the proposed actions (disposal of SAEP by the U.S. Army and future reuse as determined by the SAEP LRA) are consistent with the long-term goals and policies of the Connecticut Coastal Management Program. The Army has carefully reviewed the LRA's reuse plan and has incorporated easements within the Army's authority to ensure consistency. Existing regulations are sufficient to ensure the ILRA's redevelopment would be consistent. Compliance with the Connecticut Coastal Management Act and the Coastal Zone Management Act of 1972 will be included in the Final Environmental Impact Statement.

4.3 CLIMATE

The climate at SAEP is strongly influenced by a land-sea breeze, which is most pronounced from spring to early autumn and leads to slightly higher amounts of precipitation and cooler temperatures at SAEP than inland (ABB Environmental Services, Inc., 1996a). Because SAEP is situated near the coast, it is subject to hurricanes.

In 1996 average temperatures at SAEP ranged from 34.6 °F during the winter months (2.3 degrees above normal) to 70.7 °F in the summer months (0.8 degree below normal) (Nasarah, personal communication, 1997). Prevailing wind is from the southwest at an average speed of 11 miles per hour. Precipitation averages about 44 inches per year, with about 16 inches per year of snowfall.

4.4 AIR QUALITY

4.4.1 Ambient Air Quality Conditions

National Ambient Air Quality Standards (NAAQS) have been set for six "criteria" pollutants—sulfur dioxide, carbon monoxide, ozone, nitrogen oxides, lead, and inhalable particulate matter. The problems associated with carbon monoxide and inhalable particulate matter are usually related to localized conditions, such as congested traffic intersections or construction activities. The other criteria pollutants are associated with more regionalized problems that result from the interactions of pollutants from a great number of widely dispersed sources (e.g., a large city containing many stationary and mobile sources). The Connecticut Department of Environmental Protection (CTDEP) monitors the concentrations of the criteria pollutants and, where necessary, is responsible for developing State Implementation Plans (SIPs) to ensure that the national standards are achieved and maintained. Areas within the state that fail to meet the NAAQS are designated as "nonattainment areas" and are potentially subject to regulatory enforcement.

SAEP is located in the New Jersey-New York-Connecticut Interstate Air Quality Region, which is classified as being in severe nonattainment for ozone (O_3) and moderate nonattainment for carbon monoxide (CO). In addition SAEP is within the Ozone Transport Region (CAA Section 184.(a)), which includes most of the northeastern United States. The air quality region is currently classified as in attainment for nitrogen oxides, sulfur dioxides, and particulate matter.

Significant pollutant emissions within the Air Quality Region affect the air quality within the region; that is, air quality problems do not stem solely from poor-quality air that is blown into the region. These emissions originate from the activities of millions of residents, hundreds of thousands of vehicles operating daily, and a vast array of commercial/manufacturing activities. Focusing on the nonattainment pollutants, carbon monoxide and ozone, the total annual regional emissions of some

air pollutants have been estimated and are listed in Table 4-2 for 1995 (CTDEP, 1995). These estimates can be used to qualitatively judge the significance of SAEP emissions and to serve as a basis for evaluating future redevelopment scenarios.

Subsections below describe SAEP emissions under baseline conditions (1995) and the emissions originating from adjacent areas (ABB Environmental Services, Inc., 1996a).

4.4.2 Air Pollutant Emissions

For the baseline year (1995) the emission sources within SAEP include:

- Thirty-six engine test cells (22 active)
- One emergency backup generator burning No. 2 fuel
- Four solvent cleaners/processors
- Three boilers in the Central Steam Plant

In addition to the sources listed above, there are two sand blasters, which are not currently used to finish/clean surfaces but would become emission sources if they were used. The largest single emission source on SAEP is the Central Steam Plant, which contains three natural gas boilers that can also operate with No. 6 fuel oil in a backup capacity. By agreement with the natural gas provider, SAEP has an interruptible service-type contract, which means gas delivery to SAEP can be stopped if there is a pressure drop in the regional distribution system (i.e., if there is a very cold day that causes excessive gas consumption). To date, interruption of gas delivery has been rare and resulting use of No. 6 fuel has been relatively small.

The emission sources listed above are operating under a proposed permit, CTDEP Air Permit 178-007-GPLPL. Table 2 in Appendix E lists the 1995 total annual emission amounts for the various SAEP emission sources, including the test cells used for jet engine tests. For comparison purposes, Table 2 also provides a summary of 1993 annual emissions, a year more representative of full-scale operations of the SAEP facility.

SAEP was a major emission source in the Air Quality Region based on current emissions (Fleming, personal communication, 1997). Although normally required, a Title V facility-wide air

Table 4-2
Estimated Annual New York-New Jersey-Connecticut Interstate Air Quality Emissions

Air Pollutant	Existing (Tons/Year)
Hydrocarbons	417,500
Nitrogen oxides, NO_x	421,000
Carbon monoxide, CO	1,114,500

Source: CTDEP, 1995.

emissions permit application is not being processed by SAEP, as agreed to by representatives of the state. SAEP is currently operating under the proposed general air synthetic minor permit, which will remain active until the ownership of the facility is transferred. This arrangement stems from the known closing schedule of the SAEP, given its placement on the BRAC list.

The state is currently focused on emissions of nitrogen oxides (NO_x, an ozone precursor) within the region and as a result has interacted with SAEP regarding ways to reduce this pollutant. EPA Region 1 has not approved the SIP for NO_x, nor has the region approved an NO_x trade agreement proposed by SAEP in the fall of 1996. In the proposed trade agreement, SAEP established the maximum permitted discharge rate for NO_x (19.65 tons/yr) and agreed to acquire Emission Reduction Credits (ERCs) for any emission amount over this emission limit. In addition, the agreement would have acknowledged peak emission rate limits that were not to be exceeded in operation of the Central Steam Plant boilers.

In addition to the stationary sources of air pollutants at SAEP (listed in Table 2 in Appendix E), vehicle traffic associated with the installation also contributes to regional air emissions. Installation-related traffic consists primarily of employees, contractors, and vendors driving to and from SAEP. The 1995 emissions associated with these activities have been estimated based on EPA's Mobile5 (an emission model) and conservative assumptions for the distance and types of vehicles driven. Typically, daily automotive travel in 1995 resulted from a commuting workforce of approximately 2,000 persons and operation of 60 trucks and 80 contractor/vendor vehicles[1] (Nicoletti, personal communication, 1997). The evaluation performed produced the following estimates of vehicle annual emissions: 27 tons of reactive organic compounds, 30 tons of nitrogen oxides, and 159 tons of carbon monoxide. Note that due to the absence of roadways within SAEP, operation of on-site vehicles (e.g., forklifts and electric golf carts) is limited and therefore they contribute negligible emissions.

4.5 NOISE

There is a history of noise complaints resulting from activities at SAEP. Table 4-3 indicates the number of noise-related complaints logged within the last decade by the security department of SAEP. Based on information provided by SAEP, the bulk of the noise complaints occurred when there were generally calm conditions and a light wind was blowing from the east. Under these conditions, the noise originating from SAEP travels across the Housatonic River estuary and affects residential areas on the northwestern shoreline. The majority of the complaints correlated with operation of engine test cells at late night/early morning hours. On some occasions it was found that the Sikorsky Airport (e.g., jet engine operations) was the actual source of the noise that prompted the complaint. As illustrated in Table 4-3, the number of complaints has dropped with time because fewer tests are conducted and because an effort was made to shift testing to daylight hours (Nicoletti, personal communication, 1997).

In addition, as a result of an Installation Compatible Use Zone (ICUZ) analysis performed for SAEP in 1984, better soundproofing was installed in some of the test cells.

[1] Estimates were based on the following assumptions: each commuter was each assumed to travel 25 miles/day at 40 mph with 10 minutes of total automotive idle time; 60 truck trips per day (27 percent heavy gas trucks and 73 percent heavy diesel trucks) of 25 miles with 10 minutes of idle time; 80 contractor/vendor trips with passenger (gasoline) vehicle traveling 25 miles with 10 minutes of idle time. It was conservatively assumed that there are 185 workdays commuting under summer conditions and 75 workdays commuting under winter conditions per year.

Table 4-3
History of Noise Complaints Placed with SAEP

Number of Noise Complaints	Year Reported
12	1986
25	1987
11	1988
5	1989
6	1990
4	1991
3	1992
2	1993
0	1994
0	1995

Source: SAEP, 1996.

4.6 GEOLOGY

4.6.1 Physiography and Topography

SAEP is located in the Western Highlands of Connecticut, part of the New England Physiographic Province. The site is located in a coastal belt of dissected hilly country that extends along the coast of Connecticut. The topography is characterized by uplands that range in elevation from mean sea level (MSL) to approximately 650 feet above MSL. The coastline is irregular and rocky. Within the coastal belt, hilltops slope southward at a rate of about 50 feet per mile. SAEP is located on the Stratford Point peninsula, which extends into the Long Island Sound. The peninsula is relatively flat, with a slight slope toward the sound. Elevations on SAEP are generally less than 10 feet above MSL, with the exception of a levee that was constructed along the Housatonic River in 1951 for flood protection. The site is located within the 100-year floodplain of the Housatonic River. Approximately 10 acres of upland on the site was created circa 1943 by placing fill over intertidal mudflats.

4.6.2 Structure and Stratigraphy

The bedrock geology underlying SAEP is reported to consist of lower Ordovician period (500 to 430 million years ago) metamorphic schists, phyllites, and paragniesses of the Oronoque member of the Derby Hill Schist (Fritts, 1965, cited in ABB Environmental Services, Inc., 1996a). The bedrock does not outcrop in the vicinity of SAEP. Borings placed along the Housatonic River (Fritts, 1965, cited in ABB Environmental Services, Inc., 1996a) and on SAEP (ESE, 1991, cited in ABB Environmental Services, Inc., 1996a) indicated that bedrock occurs at depths ranging from about 100 to 150 feet below the land surface in the area.

Bedrock on SAEP is overlain with unconsolidated glacial sediments consisting of stratified drift and till deposited during the Quaternary period (2 million years ago to present). Holocene epoch (10,000 years ago to present) deposits of alluvium, estuarine silt, tidal marsh, beach sediments, and fill occur along the Housatonic River. Unconsolidated surficial deposits occurring on SAEP consist of the Stratford outwash, tidal marsh peat, and artificial fill. The shallow geology on SAEP is characterized by five distinct units—sand, gravel, and debris fill material; organic silt and peat (tidal inlet or marsh deposits); silt and sandy silt alluvium associated with the peat; estuarine silt; and stratified drift consisting of outwash sand with gravel and ice-contact sand, gravel, and cobble deposits (ABB Environmental Services, Inc., 1996a).

Fill deposits form a mantle on SAEP consisting of sand, gravel, and debris fills associated with buildings, roads, utilities, site grading, and other structures. The fill is generally about 5 feet thick but ranges from 5 to about 20 feet in thickness on the site. Organic silt and peat have been found below the fill in two areas on site. The largest peat deposit occurs in the southern section of SAEP in the former lagoon area. A second area of organic silt and peat occurs near the storage facility in the northern section of the site. The peat and silt in the southern section of the site are located in a former tidal inlet that drained from SAEP and is now artificially filled. The peat ranges in thickness from about 4 feet to a maximum thickness of about 15 feet. Glacial sand and gravel deposits underlie the fill and peat deposits. The deposits are divided into units of sand with trace amounts of coarser sand and gravel with clay, silt, cobbles, and occasional boulders. The sand and sand and gravel units may be the Stratford Outwash and ice-contact stratified drift, respectively. These units are continuous across the site, but are eroded along the Housatonic River. The sand and sand and gravel deposits may be up to 150 feet thick on SAEP (Figures 4-1 and 4-2) (ABB Environmental Services, Inc., 1996a).

An estuarine deposit consisting of silt, fine sandy silt, and silty sand with some organic material and shells occurs along the Housatonic River. The stratified drift in this area was eroded by rising sea levels and the Housatonic River, and the estuarine sediments were deposited in its place.

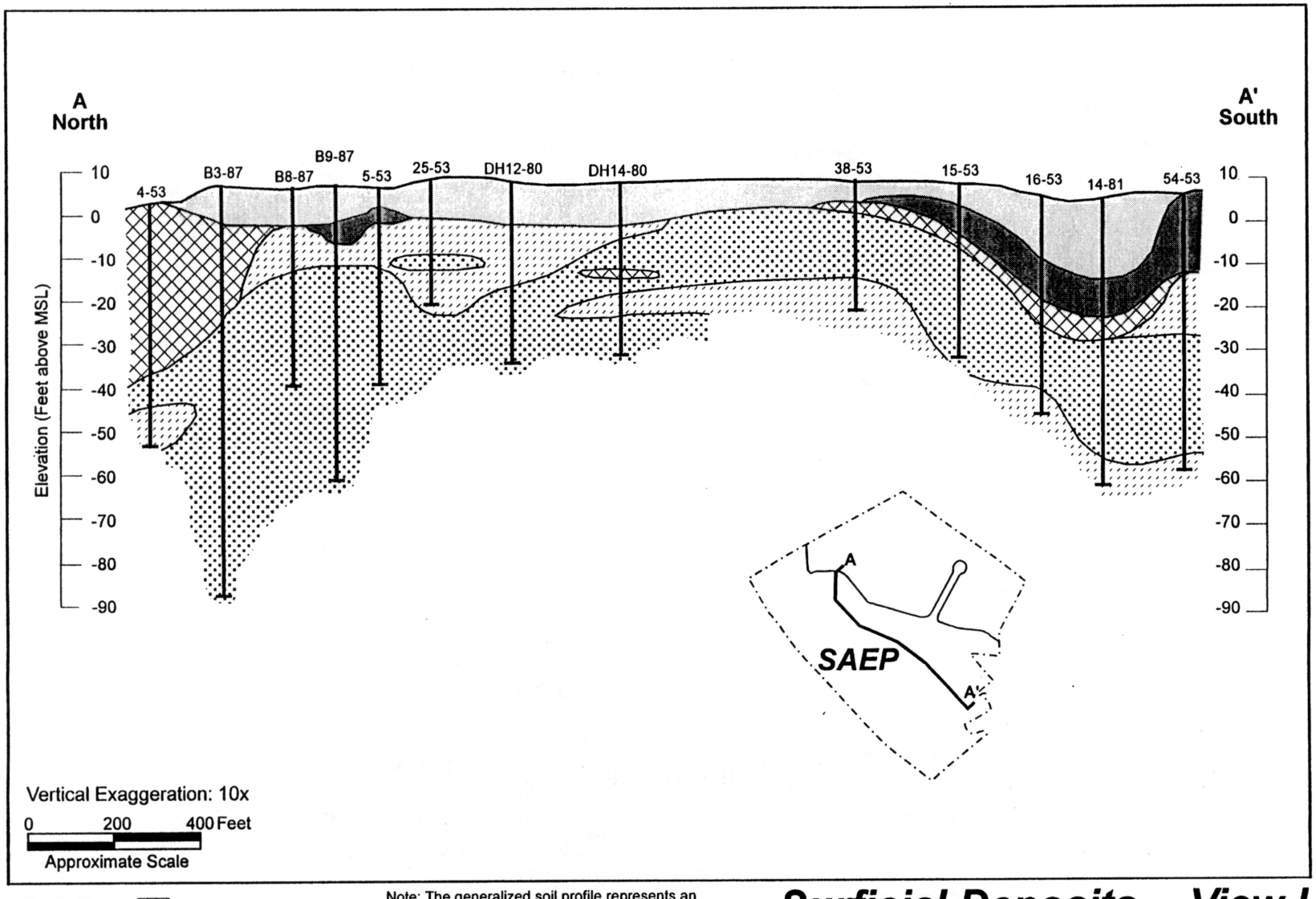
4.6.3 Soils

Based on the Fairfield County Soil Survey (Wolf, 1981), SAEP is classified entirely as Urban land (not including the substrate underlying the intertidal flats, which would be classified as sediment). The Urban land soil unit consists of areas where structures such as buildings and parking lots cover more than 85 percent of the land surface. Urban land typically consists of disturbed areas of Udorthents, Hinkley, Hollis, Agawam, Charlton, Paxton, Ninigret, and Sutton soils. Because of the disturbed nature of the Urban land unit, on-site investigation and evaluation of the soil are required to determine uses and limitations.

4.7 WATER RESOURCES

4.7.1 Surface Water

The region surrounding and including SAEP drains to Long Island Sound, primarily by way of the Housatonic River. Surface water bodies in the vicinity of SAEP include Long Island Sound, the Housatonic River, Frash Pond, and the Marine Basin and drainage channel. The surface waters, excluding Frash Pond, are classified as SC/SB by CTDEP Water Quality Standard regulations. The



LEGEND

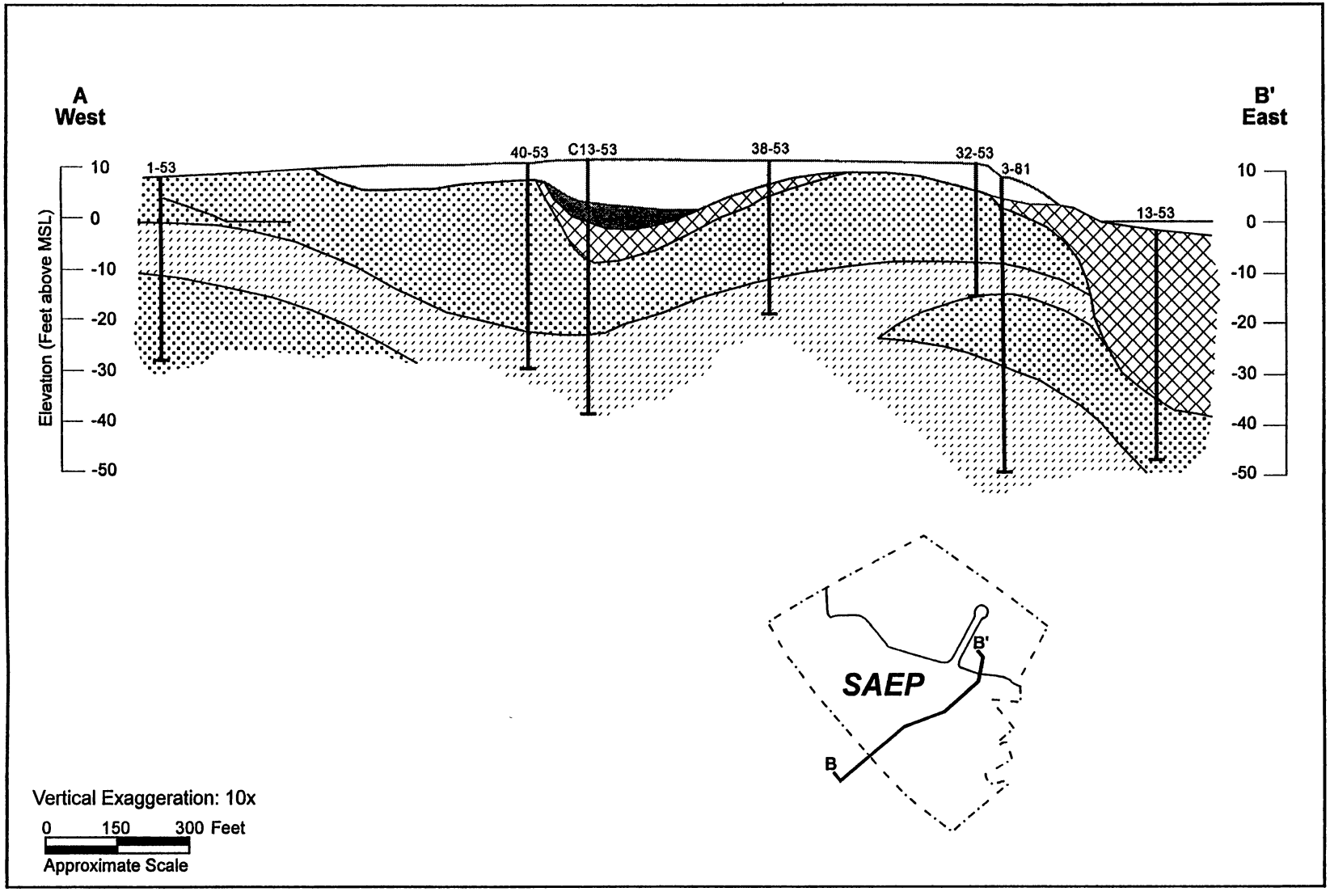
- Fill
- Peat
- Silt
- Sand
- Sand and Gravel
- 1-53 Boring Identification
- ⊥ Boring Bottom

Note: The generalized soil profile represents an interpretation of borings done by others. Actual sub-surface conditions may vary.

Sources: ABB, 1997; Woodward-Clyde, 1991.

Surficial Deposits -- View I

Stratford Army Engine Plant
Stratford, Connecticut
Figure 4-1



LEGEND

- Fill
- Peat
- Silt
- Sand
- Sand and Gravel
- 1-53 Boring Identification
- ⊥ Boring Bottom

Note The generalized soil profile represents an interpretation of borings done by others Actual sub-surface conditions may vary

Sources. ABB, 1997, Woodward-Clyde, 1991

Surficial Deposits -- View II

Stratford Army Engine Plant
Stratford, Connecticut
Figure 4-2

classifications relate the water quality to concentrations of constituents that limit the distribution or abundance of aquatic life. This classification recognizes the Housatonic in this area as being estuarine in character and as having been affected by previous activities in the watershed. The current status (between an SB and SC classification) reflects the state's goal of returning these waters to a more recreational use, but indicates that shellfish harvesting for human consumption might not be a reasonable use in the tidal flats area adjacent to SAEP. The tidal flats along the Housatonic River are areas of alternating periods of tidal coverage and exposure.

SAEP is located within the 100-year floodplain and is partially protected from flooding by a dike extending the entire length of the site and bordering the Housatonic River. The site was flooded twice, in 1951 and in 1968.

4.7.2 Hydrogeology/Groundwater

Stratified drift, fill material, and alluvial and estuarine deposits dominate the shallow geology of SAEP, greatly influencing the flow of groundwater in the area. Depths to groundwater range from 4 to 11 feet. The water table is relatively flat across SAEP, with an increasing slope beginning within 500 feet of the shore of the Housatonic River. The general direction of groundwater flow is easterly toward the tidal flats of the Housatonic River and northwesterly to Frash Pond, indicating a possible groundwater divide. Borings and groundwater monitoring records also suggest the existence of buried tidal inlets on the site, as well as buried outlets from Frash Pond. These features, along with the general subsurface geology of the area, influence the flow of groundwater and potentially determine the fate of contaminants.

The five distinct geologic units on SAEP affecting groundwater movement patterns are granular fill, organic silt and peat, silt and sandy silt alluvium associated with the peat, estuarine silt, and stratified drift. Sand, gravel, and debris fill was placed over 10 acres of intertidal flats at SAEP to develop the area. The fill layer composes the top geologic layer, extending across SAEP. Near the area of the former lagoon (B-6, B-72, and B-3) in the southern end of the site, the drift layer thickens and overlies a layer of alluvial peat. A groundwater mound coincides with this area, where the thick fill layer overlies a layer of alluvial peat.

The groundwater mound might be caused by differences in infiltration through the layers. Areas located to the west and north in the site have layers of drift rather than peat under the fill layer, and those areas would not have such an accumulation of perched water because there is not as significant a difference between the specific yield of the fill and drift layers as between the fill and peat/silt layers. The area with underlying peat layers and the associated accumulation of water create a localized groundwater mound.

The groundwater mound might also be influenced by an apparent buried tidal inlet. From the northwest corner of Building B-3, the peat/silt deposit becomes progressively thicker in the seaward (southerly) direction, forming a wedge-shaped deposit (ABB Environmental Services, Inc., 1996a). The shape of the deposit and the overlying layer of granular fill indicate the previous existence of a tidal inlet channel. In that channel, peat and silt accumulated as the sea level rose since the last glaciation and as daily tides migrated through the inlet depositing alluvial sediment, which was then artificially covered by the granular fill. The relative positions of the peat and fill layers could create a localized, preferential groundwater flow path. Water, as well as contaminants, that enters the

subsurface could flow along the deposit, being distributed to the south through the fill layer. The layers would act as a controlling factor in the movement of contaminants beneath SAEP.

Glacial drift deposits of sand and gravel are present across SAEP under the peat and fill layers, continuing across the entire site in stratified layers of sand and sand with gravel. The drift layer is the main water-bearing hydrogeologic unit in the site. It forms SAEP's upper aquifer, which may be as thick as 150 feet. The aquifer contains fresh water with no apparent evidence of a saltwater intrusion typical of coastal areas (ABB Environmental Services, Inc., 1996a).

The Housatonic River and the rising sea level eroded the stratified drift layer along the river and deposited a layer of estuarine silt. The facies change created by the deposited estuarine silt reduces the rate of groundwater flow from the glacial drift deposits to the estuarine layer within the river. Deposits of estuarine silt and peat are also found east of Frash Pond near B-65, indicating a former natural outlet of the pond (ABB Environmental Services, Inc., 1996a).

Groundwater wells for the supply of drinking water or for other domestic uses do not exist on or in the vicinity of SAEP. Potable water for SAEP is supplied from Trap Falls Reservoir in Shelton, located approximately 6.5 miles north-northwest of SAEP. The nearby city of Milford is supplied with potable water from Lake Gaillard, located 21 miles east-northeast of SAEP. Both of these water supplies are located upgradient of SAEP with no potential impact from groundwater conditions on SAEP.

4.8 INFRASTRUCTURE

The infrastructure at SAEP consists of systems for potable water, wastewater treatment, solid waste disposal, roadways and transportation, electricity, natural gas, and compressed air. For the most part, the utility systems at the facility have been designed and installed specifically for the uses and processes that occur at SAEP. Privately owned utilities at the facility—including water, electricity, and natural gas—have all been installed to be fed, metered, and distributed to a single user (RKG Associates, 1997).

The capacities of all utilities are adequate, and the infrastructure systems are in good condition. There is no history of any severe utility service problems in the areas served by the utility companies, and it is expected that the systems at SAEP will provide years of additional service life (RKG Associates, 1997).

4.8.1 Potable Water Supply

Potable water is supplied by the Bridgeport Hydraulic Company from three interconnected main reservoir systems and two main well fields. The three reservoirs are the Hemlocks reservoir in Fairfield, the Easton reservoir in Easton, and the Trap Falls reservoir in Shelton. The Trap Falls reservoir is the main source of water for the facility (ABB Environmental Services, Inc., 1996a; RKG Associates, 1997). It is spring-fed, and its supply can be augmented with well water from one of the two well fields during the summer when demand for water is high (Anglace, personal communication, 1997; Dillman, personal communication, 1997). Water treatment at the Bridgeport Hydraulic Company's treatment plant includes filtration, chlorination, fluoridation, pH control, and corrosion inhibition (Anglace, personal communication, 1997).

Water is supplied to SAEP via 8-inch and 16-inch water mains on Main Street and a 12-inch water main on Sniffens Lane. Lateral service lines from the mains serve the SAEP buildings. Building B-1 is served by a 4-inch metered line; Building B-2 is served by 4-, 6-, and 8-inch metered lines; and most of the rest of the facility is served by ½-inch to 8-inch unmetered lines. The water supply and distribution system at SAEP has no significant operational problems, though Bridgeport Hydraulic Company reports that the subsurface meter vaults in use at the facility will have to be replaced with aboveground, insulated meter vaults. AlliedSignal reports that water line replacements have been ongoing over the last 5 years to replace fire sprinkler systems and distribution and service lines (RKG Associates, 1997).

The existing metering and distribution systems for the water supply at SAEP are set up to serve a single user (RKG Associates, 1997). Currently, under a facilities contract with TACOM, AlliedSignal is reimbursed on a square foot basis for the cost of utilities associated with maintaining idled areas of the plant, such as water and electricity.

Usage. The capacity of the Bridgeport Hydraulic Company's water supply is 84 million gallons per day (mgd) (EDS, 1995b; RKG Associates, 1997). The safe yield capacity of all three systems is 77 mgd (Dillman, personal communication, 1997). Current water demand (annual average) in the area supplied by the Bridgeport Hydraulic Company is 50 to 55 mgd, which leaves a reserve capacity of approximately 20 mgd (Dillman, personal communication, 1997; EDS, 1995b; RKG Associates, 1997).

Potable water use at SAEP is approximately 2.5 mgd (SAEP, no date). No significant pressure or volume problems have been experienced at the facility (RKG Associates, 1997), though the presence of excess water in the on-site distribution system (due to recent reductions in demand as the number of employees at the facility has declined) has caused a slight change in the taste of the water (Dillman, personal communication, 1997).

The Bridgeport Hydraulic Company reports that the available water volumes and pressures are adequate to supply the facility under fully operational conditions (Dillman, personal communication, 1997).

Fire Protection. An on-site water tank with a capacity of 200,000 to 300,000 gallons provides water for fire fighting supply purposes. All major buildings are equipped with wet sprinkler fire suppression systems; some buildings have pull-box alarm systems. Each building is connected to the on-site fire alarm system, which is hard-wired but not directly linked to the local fire department. The fire alarm system is monitored on site, and public announcement equipment and audio alarms are also provided (RKG Associates, 1997).

4.8.2 Wastewater Treatment

SAEP is authorized to discharge to the Housatonic River from eight outfalls, designated Outfall 001 through Outfall 008, under NPDES permit No. CT0002984 . Before construction of the Oil Abatement Treatment Plant (OATP), the specific amounts or constituents of materials and wastes that were discharged from the outfalls were not known and were potentially released to the intertidal flats (ABB Environmental Services, Inc., 1996a).

Storm Water. Most of the SAEP facility has an impervious covering of concrete, asphalt, or building roofs. Typical storm water runoff coefficients at the facility range from 0.8 to 0.9, which indicates that 80 to 90 percent of storm water that falls on the facility property runs off the site. Most is conveyed through storm drains. Most storm water runoff from the site is treated and discharged to the Housatonic River, though small roof areas of Building B-2 drain to either Frash Pond or the Sikorsky Memorial Airport (ABB Environmental Services, Inc., 1996a). Because SAEP is on low-lying ground, all storm water must be pumped to the outfalls.

The OATP (Building B-64), constructed in 1976, removes oil and grease from wastewater in the plant's storm water drainage system prior to discharge to the Housatonic River. Storm water runoff is collected by one of a network of six storm drain systems. Dry weather flow due to infiltration and inflow and the first flush of storm water are conveyed to the OATP for treatment. Each half of the plant has its own transmission main to convey storm water to the OATP. Each system is equipped with a pumping station. Pump stations B-36, B-37, and B-38 serve the northern half of the facility, and pump stations B-41, B-40, and B-64 serve the southern half. Each pump station has four pumps, two of which direct runoff to the OATP and two of which direct runoff to the Housatonic River (RKG Associates, 1997). Influent to the OATP enters a surge tank for flow equalization. Treatment processes at the OATP include coagulation, flocculation by addition of liquid alum, and dissolved air flotation and skimming in a flotation chamber. Outfalls 001 to 006 discharge intermittently (i.e., during storms) from the storm water drainage system (ABB Environmental Services, Inc., 1996a).

The OATP operates continuously with an average flow of 1.8 mgd and a maximum design flow of 6.0 mgd (ABB Environmental Services, Inc., 1996a). Average use of the OATP is 0.9 mgd, or 890,000 gallons per day (gpd) (SAEP, no date). When the volume of storm water is too large for the OATP to handle, overflow is discharged directly to the Housatonic River (ABB Environmental Services, Inc., 1996a). Effluent from the OATP is discharged to the Housatonic River through Outfall 007. The OATP has dual identical facilities so if one shuts down, the other is able to keep the system operational (RKG Associates, 1997).

The OATP was redesigned in 1995 to bring it into compliance with new toxicity performance standards. It had continuously or intermittently discharged oil, copper, 1,1,1-trichloroethane, and ammonia to the waste collection stream (ABB Environmental Services, Inc., 1996a), but it now operates within performance standards. A new NPDES permit has been applied for, but the CTDEP has not yet acted on the application (Fleming, personal communication, 1997). Expansion of the OATP is possible with a permit from the CTDEP (SAEP, 1997).

Industrial Wastewater Treatment. Industrial activities at SAEP generate wastewater with heavy metals, cyanide, caustics, acids, oils, greases, fuels, and solvents. Two operational treatment facilities and wastewater collection streams at SAEP handle these waste streams—the chemical waste treatment plant (CWTP, Building B-18), which was constructed in 1958 and upgraded in 1986, and the cyanide destruction facility (CDF, Building B-70), which was constructed in 1986 (ABB Environmental Services, Inc., 1996a).

The CWTP handles wastewater generated by electroplating and other corrosion resistance operations (ABB Environmental Services, Inc., 1996a). It has an average use of 120,000 gpd and a maximum capacity of 360,000 gpd (SAEP, no date). Chemical wastes are first directed to the pump station at the CWTP (Building B-63) and then pumped to the CWTP itself (RKG Associates, 1997). Treatment at the CWTP involves chromium reduction, precipitation of chromium and other heavy metals, and

clarification. Sludge from the clarifier is dewatered by a sludge thickener and filter process. The filter cake is disposed of off site, and the filtrate is returned to the CWTP for further treatment. Effluent from the clarifier passes through sand filters and then through Outfall 008, from which it is discharged to a drainage ditch that flows to the marine basin on the Housatonic River southeast of SAEP. Expansion of the CWTP is possible with a permit from the CTDEP.

Cyanide-contaminated wastewater is separated from other industrial wastewaters and piped for pretreatment to the CDF, where the cyanide is treated by alkali chlorination and converted to nitrogen and carbon dioxide. Effluent from the CDF is combined with other wastewaters and pumped to equalization tanks at the CWTP (ABB Environmental Services, Inc., 1996a).

Sanitary Sewer Systems. Sanitary sewers from the buildings at SAEP connect to a sewer discharge line, 10 to 15 inches in diameter, that lies along Sniffens Lane near Building B-19. The line continues behind Buildings B-4, B-10, and B-12 and beneath Building B-2 and finally goes to a pump station that is owned and maintained by the town of Stratford and is located in the north parking lot. The town of Stratford has an easement across SAEP for the sewer line and pump station. The easement dates from 1982 and consists of approximately 1,250 linear feet and 0.22 acre of land (ABB Environmental Services, Inc., 1996a). The sanitary line from Sniffens Lane to Building B-10 is owned by the town of Stratford. The sanitary sewer mains that serve SAEP and the pump station in the north parking lot have been upgraded to provide for periods of heavy or peak use, and the capacity of the system at present is ample to accommodate SAEP in a fully operational condition (RKG Associates, 1997).

Sanitary wastewater from the facility is conveyed to the town of Stratford's treatment plant, the Stratford Water Pollution Control Facility (SWPCF), which is managed by the Stratford Water Pollution Control Authority. The SWPCF provides activated sludge secondary treatment. Effluent from the SWPCF is discharged to the Housatonic River approximately one-half mile upstream of SAEP. SAEP cannot discharge any industrial or chemical wastes to the SWPCF, and there are no known violations or records of noncompliance with this restriction (ABB Environmental Services, Inc., 1996a; RKG Associates, 1997). The SWPCF was rehabilitated in 1992 to comply with its NPDES permit (RKG Associates, 1997).

The town of Stratford's sewer system consists of 200 miles of sewer mains. Approximately 90 percent of Stratford is connected to the system (Town of Stratford, 1993). The capacity of the system is 11.5 mgd, and the average flow is 8.0 mgd (RKG Associates, 1997).

Two future issues could face the SWPCF. First, EPA studies indicate the need for the town of Stratford to provide advanced wastewater treatment to decrease the levels of nitrogen that enter Long Island Sound. This could cost $44 million in capital construction and lead to increased sewer user charges. Second, the CTDEP could require all wastes (industrial and sanitary) to be treated at the SWPCF, which would entail the SWPCF's treating the toxic discharges currently handled by the CWTP or CDF at SAEP. However, once production stops at SAEP, the operation of the CWTP will be phased out and should not affect the SWPCF (Burleson, 1997).

The sewer system at SAEP is configured to serve a single user, and this could create a problem for billing purposes if the facility were to be occupied by more than one user. Under an interim lease, the Army bills the lessee for sewer use on a pro rata basis (HQDA, 1997).

4.8.3 *Solid Waste Disposal*

SAEP generated approximately 1,130 tons of nonhazardous trash per year when the facility was operating at peak capacity. The facility generates scrap metal and wood, waste paper, small amounts of waste food scraps and medical waste (from an on-site dispensary), and sludge from the treatment processes at the CWTP and the OATP. Marketable scrap metals are sold to salvage contractors. Other wastes are disposed of or reclaimed by private contractors (ABB Environmental Services, Inc., 1996a). There is no on-site disposal of solid waste at SAEP.

Waste sludge from the CWTP was formerly stored in three unlined sludge lagoons. It was removed biannually by a private contractor and disposed of at the town of Stratford's landfill. This practice stopped in 1968 when the landfill stopped accepting sludge. Ten thousand cubic yards of sludge was removed from the lagoons in 1981 for disposal in Bridgeport's Seaside Park landfill under a U.S. Army Corps of Engineers project. The lagoons were closed in 1990. These four impoundment areas are now under a Post Closure Plan with a groundwater monitoring assessment needed for another 16 years under RCRA requirements. Waste sludge from the OATP is stored on site in an oil-alum tank near Building B-48. Waste sludges from the CWTP and the OATP are disposed of by a private contractor. Because SAEP is a government installation, bids on sludge removal must be taken every year. As a result, the contractor used for sludge removal and the location and means of disposal change annually. Chemical Waste Management, a nationwide firm, disposed of the waste sludges in 1997.

The town of Stratford operates a transfer station for solid waste collection. From the transfer station, waste is transported to the Connecticut Resources Recovery Authority's facility in Bridgeport. The town of Stratford has an agreement to deliver a minimum of 23,000 tons per year to this facility. The town is also a member of the Southwest Connecticut Regional Recycling Operating Committee, which operates regional recycling programs. As a member, Stratford has a commitment to provide approximately 3,700 tons of recyclables per year to the recycling facility, which is located in Stratford (Town of Stratford, 1993). The facility recycles approximately 60,000 tons per year (Catalano, personal communication, 1997). Stratford has had a recycling program since 1990. Newspaper, glass, metal, and No. 1 and No. 2 plastics are recycled. Other trash is taken to a burn-steam center in Bridgeport (League of Women Voters, no date).

4.8.4 *Landfills*

There are no landfills on the SAEP property.

4.8.5 *Incinerators*

An incinerator was present at SAEP from 1944 to 1970 (ABB Environmental Services, Inc., 1996a). The incinerator was used for classified documents from contracted Government work that had been terminated or completed. The environmental baseline survey (ABB Environmental Services, Inc., 1996a) reports that ash and cinders from incineration were disposed of on site, but personnel at the installation have no knowledge of any such disposal. A second incinerator was constructed at SAEP in 1978-1980, but it was never permitted and has been removed from the installation (Fleming, personal communication, 1997).

4.8.6 *Traffic and Transportation*

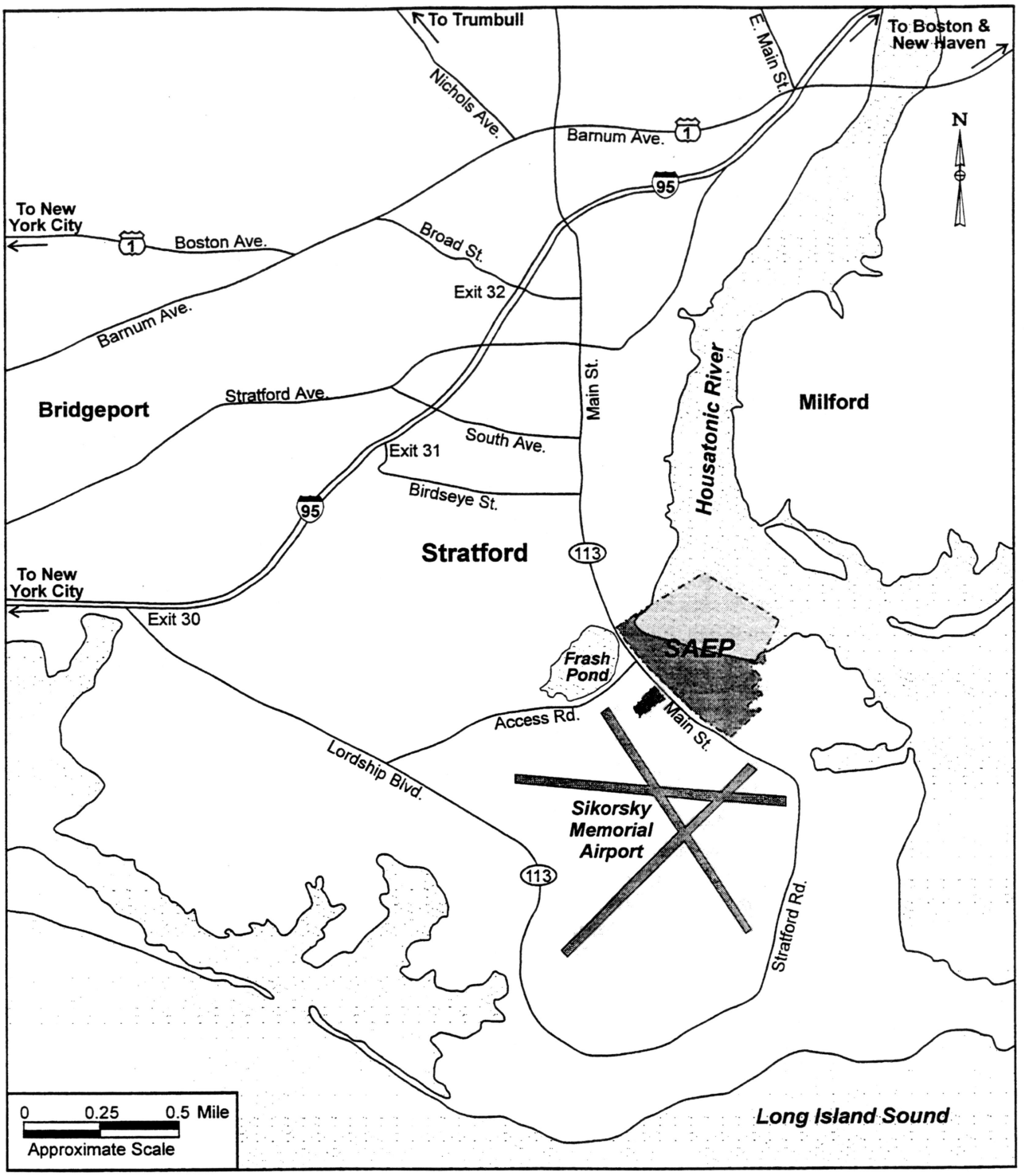
Major highways serving the region near SAEP are Interstate 95, U.S. Route 1, and State Routes 15, 108, 110, and 113 (EDS, 1995b). (See Figure 4-3.) Interstate 95 passes approximately 1.5 miles from SAEP and provides access to the facility through three interchanges—Exit 30 (Lordship Boulevard and Surf Avenue), Exit 31 (South Avenue and Birdseye Street), and Exit 32 (West Broad Street). The primary access to SAEP from Interstate 95 is via Exit 31 and then through residential and business areas. Access to the facility via Exit 32 is through a congested downtown area and historical residential development, and access via Exit 30 is through a business and industrial area. The routes between Interstate 95 and SAEP from Exit 31 and Exit 32 are congested during peak hour traffic, but the route from Exit 30 via Lordship Boulevard and Access Road has ample additional traffic capacity (RKG Associates, 1997).

The commuting pattern of the workforce of approximately 1,200 at the facility at baseline was as follows: 15 percent from Stratford, 14 percent from Milford, 14 percent from Bridgeport, 6 percent from West Haven, 5 percent from Shelton, and 46 percent from other communities. Fifteen percent used local roadways and 85 percent used Interstate 95 (RKG Associates, 1997).

Main Street (Route 113), which runs adjacent to SAEP, is a two-lane road with shoulders except where it passes the facility and becomes a four-lane roadway with nonstandard 10-foot lanes and no shoulders. Intersections along the street are signalized. Main Street is classified as an urban collector roadway south of Access Road and as an urban minor arterial north of Access Road. Access Road is classified as an urban minor arterial (RKG Associates, 1997).

Traffic counts are taken by the Connecticut Department of Transportation every 3 years. Counts taken in 1995 (when employment at SAEP was approximately 1,700) revealed the following traffic volumes at intersections near SAEP: Sniffens Lane and Main Street (Route 113), 11,500 two-directional average daily traffic (ADT); Access Road and Route 113, just north of Access Road, 12,400 ADT; Access Road and Route 113, just south of Access Road, 12, 500 ADT; Access Road and Lordship Boulevard, just north of Access Road, 8,900 ADT; and Access Road and Lordship Boulevard, just south of Access Road, 5,600 ADT (Lagosh, personal communication, 1997). Traffic volumes in the vicinity of SAEP in 1990 when employment was 4,200 were 16,800 ADT along Main Street adjacent to the facility and 16,500 ADT on Lordship Boulevard. The Connecticut Department of Transportation has estimated that these volumes will increase to 20,400 ADT and 16,900 ADT, respectively, by the year 2000 (RKG Associates, 1997). (See Figure 4-4.)

Level of service (LOS) is used by traffic planners to characterize operational conditions within a traffic stream and their perception by motorists and passengers. Six levels of service are defined for each type of roadway (e.g., urban streets or rural highways). They take into account factors such as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. The six levels of service are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions. Although LOS E corresponds to a roadway operating at its capacity, LOS D and LOS C are often used by traffic planners for design purposes because they ensure a more acceptable quality of service to roadway users (TRB, 1994).

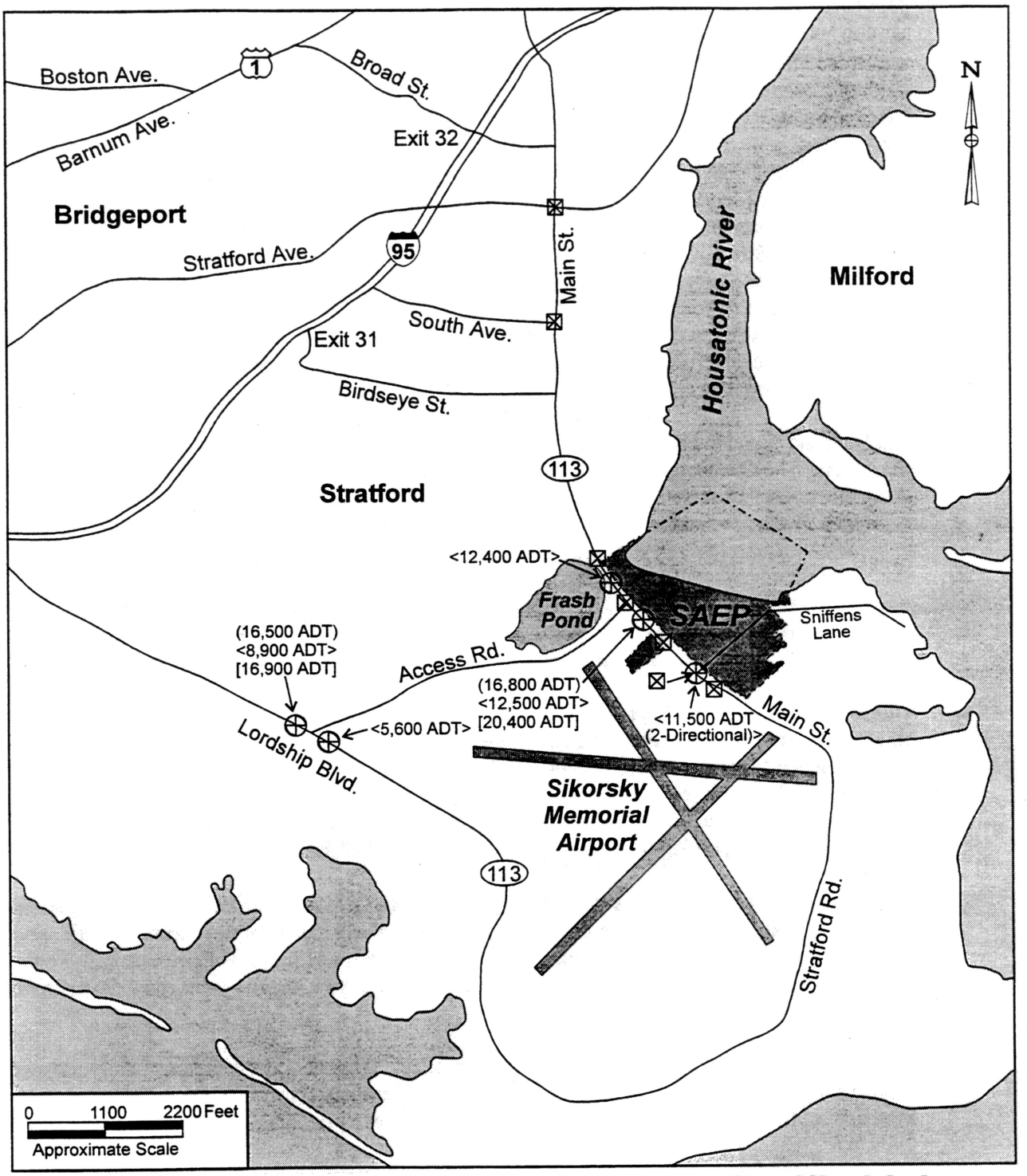


LEGEND

Stratford Army Engine Plant

Road Map

Stratford Army Engine Plant
Stratford, Connecticut
Figure 4-3



LEGEND

- ⊕ (### ADT) - Average Daily Traffic (ADT), 1990
- ⊕ < ### ADT> - ADT, 1995
- ⊕ [### ADT] - ADT, 2000 (estimated)
- ⊠ Intersections at LOS D

Notes: 1) Main St. between Broad St. and Access Rd. operated below LOS D with SAEP employment at 4,200 during 1990. 2) Intersections on Main St. all operated at LOS D with SAEP employment at 4,200.

Traffic Volume

Stratford Army Engine Plant
Stratford, Connecticut
Figure 4-4

In 1990, with employment at SAEP at 4,200, the two Main Street intersections between Sniffens Lane and Broad Street, the intersections on Main Street that serve the SAEP parking lots, and Main Street south of Access Road all operated at LOS D. Main Street between Broad Street and Access Road operated below LOS D (RKG Associates, 1997). Recent roadway and signal improvements along Main Street in Stratford should enhance future traffic, and roadway studies by the Connecticut Department of Transportation indicate that Main Street adjacent to SAEP would operate with a favorable level of service assuming 4,200 SAEP employees, projected future growth, and planned roadway improvements. Exceptions would include the intersection of Main Street and Birdseye Street and the Main Street intersections near Interstate 95, which will continue to operate with an unfavorable level of service. The intersections on Main Street near the Stratford town center and the train station are congested during peak traffic hours, and traffic problems occurred at these intersections in the past when peak traffic times coincided with shift changes at SAEP. The maximum employment level at SAEP was approximately 10,000 in the 1970s, and employees worked in three shifts (RKG Associates, 1997). (See Figure 4-4.)

Roadway and signal improvements along Main Street immediately adjacent to SAEP would improve site access. The Connecticut Department of Transportation has planned some traffic improvements along the routes that serve SAEP. They include reconstruction of Route 113 (Lordship Boulevard) to provide four lanes and turning lanes and improvements at Main Street intersections, with signal improvement upgrades at most intersections except the town-owned signals adjacent to SAEP. No other improvements are planned in the vicinity of SAEP. The traffic signals at access points to SAEP parking lots and drives and Sniffens Lane from Main Street are antiquated and uncoordinated, and numerous parking lot drives and curb cuts onto Main Street from SAEP result in excessive points of conflict (RKG Associates, 1997).

There are no actual roadways on the facility grounds. Traffic circulates on the facility between buildings where space is available. Buildings east of Building B-2 and between Building B-2 and the Housatonic River restrict internal circulation for passenger and large vehicles. Access to this area is from Sniffens Lane. There are approximately 3,000 parking spaces at SAEP in three parking lots—the north parking lot at the north end of the facility, the south parking lot on the south side of Sniffens Lane, and the west parking lot across Main Street from Building B-2 (RKG Associates, 1997).

Rail Service. Passenger rail service is provided on numerous trains daily from the station in downtown Stratford. The station is operated by Metro-North and provides commuter rail service between New York City and New Haven from four stations in the area—Stratford, with 46 daily trains; Bridgeport, with 59; Fairfield, with 33; and Southport, with 30. The trains run 7 days per week from 5 AM to 3 AM (GBRPA, 1992).

The nearest Amtrak station is in Bridgeport, Connecticut. Amtrak operates frequent daily passenger service from Bridgeport in both northbound (connecting through Hartford, Connecticut, and Boston, Massachusetts) and southbound (connecting through New York City) directions.

The closest freight rail spur is 2 miles west of SAEP. Marine access to the tracks is limited by the tidal flats adjacent to the SAEP property. Extension of the tracks from the west would require acquisition of a right-of-way and the placement of more than 2 miles of new rail line through tidal wetlands and tidal pools. Access from the north would require the placement of lines through a high-density residential area (RKG Associates, 1997). Rail service directly to the SAEP property is

therefore highly unlikely. Conrail provides freight service to the area from the rail spur near Lordship Boulevard to the west (EDS, 1995b; RKG Associates, 1997).

Public Transportation. Bus service, provided by the Greater Bridgeport Transit District (EDS, 1995b), consists of 16 fixed bus routes through Bridgeport, Fairfield, Stratford, and Trumbull. Service begins daily at 5:10 AM and continues to 9 PM or later. Approximately 438,000 riders per month use the bus system, which has 52 vehicles (39 with lifts) and 211 miles of regular bus routes. Additionally, the Human Service Transportation Consortium began providing service for elderly and disabled persons in 1980. The consortium operates 28 lift-equipped vehicles and carried an estimated 7,670 riders per month in 1991 (GBRPA, 1992).

Long-distance bus service is available on both Greyhound Bus Lines and Peter Pan Trailways bus line at the Bridgeport Transportation Center. Direct service is provided to Albany and New York City, New York; New Haven and Hartford, Connecticut; Providence, Rhode Island; and Springfield and Boston, Massachusetts, with connections to all parts of the United States and Canada. Thirteen northeast-bound buses and 11 southwest-bound buses serve Bridgeport daily (GBRPA, 1992).

A regional rideshare program is operated by MetroPool, Inc., a nonprofit organization. MetroPool, Inc. provides a variety of commuting services, including technical assistance to employers; ride matching services to employees; and commuter information, workshops, and services in southwestern Connecticut and the Hudson Valley Region of New York (EDS, 1995b; MetroPool, 1997). Eight taxi services are also available to the public in the area (GBRPA, 1992).

A bike path along the Housatonic River, which will use the SAEP dike, is in the design phase. The design phase is to be completed in September 1997 (RKG Associates, 1997).

Air Travel. Air service is available at numerous nearby airports. Sikorsky Memorial Airport in Stratford is across Main Street from SAEP, and the Tweed/New Haven Airport in East Haven, Connecticut, is 19 miles from Stratford. Both serve commuter and feeder airlines. La Guardia Airport and John F. Kennedy International Airport, 56 miles and 67 miles from Stratford, respectively, are both in New York City. Bradley International Airport is in Windsor Locks, Connecticut, 63 miles from Stratford. These three major airports serve most major airlines (EDS, 1995b). Assuming implementation of the preferred alternative evaluated in the FAA's *Sikorsky Memorial Airport Draft Environmental Impact Statement/Environmental Impact Evaluation for the Proposed Improvements to Runway 6-24*, improvements to and changes at Sikorsky Memorial Airport would result in construction of improved runway safety areas on Runway 6-24, reconstruction of the existing runway pavement, the installation of a Medium Intensity Approach Light System with sequenced flashers at the Runway 6 end, and the partial relocation of a public highway (Route 113, Main Street). The runway pavement has reached the end of its useful life. Relocation of Runway 6-24 is a necessary part of its refurbishing to comply with revised FAA safety standards. (Ricci, personal communication, 1997; RKG Associates, 1997).

Water Transportation. The nearest port is in Bridgeport, Connecticut, less than 5 miles from SAEP. The port offers direct access to Long Island Sound and direct service via the Bridgeport-Port Jefferson Ferry to Long Island, New York. The ferry has been operational for more than 100 years and carries more than 1,000 passengers daily (EDS, 1995b; RKG Associates, 1997). It is operated by the Bridgeport and Port Jefferson Steamboat Company. Two ferries provide 10 trips daily from late spring to December and 9 the rest of the year. They carried 310,878 passengers and 221,608 vehicles

in 1988-1989. The ferry trip between Bridgeport and Port Jefferson takes 90 minutes (GBRPA, 1992).

Access from SAEP to the deep water channel in the Housatonic River would require dredging or extension of the existing causeway (RKG Associates, 1997).

4.8.7 *Energy*

Electricity. Electricity is provided to SAEP by the United Illuminating Company (HQDA, 1997). All power usage is registered through one meter and distributed throughout the facility via underground and overhead lines in a loop system arrangement. The meter is owned by the United Illuminating Company, and all equipment downline of the meter is owned by the Army. Four 13.8-kilovolt circuits provide power to the facility, though the electrical system is normally operated on three of the circuits. Each of the four circuits is rated to deliver 8,400 kilovolt-amperes. The electrical services at most buildings are adequate if not excessive for industrial/commercial applications, and most buildings have had electrical system upgrades within the last 5 years (RKG Associates, 1997). United Illuminating Company reported that no problems were encountered in providing electricity to the facility when it was under full operation with more than 10,000 employees (Marella, personal communication, 1997).

There are two issues regarding the electrical system at SAEP. First, the system includes up to 17 PCB-containing transformers, with their removal presenting significant potential costs due to their size and inaccessibility (RKG Associates, 1997). Second, the feeders from the four circuits are connected in a loop system that was designed to provide electrical power to a single user.

Natural Gas. Natural gas is used at SAEP primarily for the production of steam, which is used to heat the buildings at the facility. A small amount of natural gas is also used for cooking and heating and as part of the electroplating operations, and it could be used for other purposes at the facility, such as manufacturing (RKG Associates, 1997). The natural gas is provided by the Southern Connecticut Gas Company. The boilers in which it is used have an efficiency rating of 1,033 British thermal units per cubic foot (EDS, 1995b; RKG Associates, 1997). The central steam plant provides 97 percent of the heat for the facility. Two gas mains, one high-pressure and one low-pressure, serve the facility from Main Street; one high-pressure main serves the facility from Sniffens Lane (RKG Associates, 1997).

Steam can be produced in three boilers located in Building B-2, though only two of the boilers are needed at any one time to provide the steam necessary to operate at peak capacity. Two of the boilers are rated at 60,000 pounds (lb) and are 20 to 30 years old, and the third boiler is rated at 40,000 lb and is 4 to 5 years old. AlliedSignal employs two full-time plumbers to maintain and operate the steam system (RKG Associates, 1997).

According to Southern Connecticut Gas Company, SAEP used approximately 100,000 cubic feet of gas per hour when the facility was operating at peak capacity. Southern Connecticut Gas Company also reported that it has ample capacity to meet a similar or greater need in the future. AlliedSignal has an agreement with Southern Connecticut Gas Company to allow the flow of natural gas to SAEP to be shut off during times of peak usage within the community. During such times, oil (fuel oil No. 6) is used to fuel the boilers. The oil is stored in one aboveground storage tank located near Building B-10. It has a capacity of 80,000 gallons, sits on a concrete pad, and is surrounded by a concrete containment dike.

Future issues include boiler replacement. One of the 60,000-lb boilers will need to be replaced soon since its present maximum capacity is 40,000 lb. The estimated replacement cost is $500,000. Also, the system is designed to serve a single user, and accommodating multiple tenants on the property could require improvements in the distribution and service systems and gas metering (RKG Associates, 1997). Under an interim lease, the Army bills the lessee for heat on a pro rata basis (HQDA, 1997).

Compressed Air. Condensate return lines for the steam system rely on compressed air and gravity. The compressed air is generated at Building B-2 with five 350-horsepower compressors that produce 100 to 110 pounds per square inch (psi) of pressure each and approximately 16,000 cubic feet of air per minute. Some test cells have additional compressors that provide up to 250 psi. There are 39 condensate pumps at the facility. The compressors provide ample capacity for operation of the condensate return system and some manufacturing and testing operations (RKG Associates, 1997).

4.8.8 Communications Systems

Telephone service is provided and billed directly by Southern New England Telephone (HQDA, 1997; RKG Associates, 1997). Southern New England Telephone has underground conduits of copper wire and fiber optics that run along Main Street. Service is provided to SAEP via a 900-pair copper wire that runs to Building B-2. According to Southern New England Telephone, this system provides substantial communication capabilities for the facility. No fiber optic service is provided to SAEP. There are no planned service improvements at SAEP, and Southern New England Telephone has no current plans to provide fiber optics in the facility's vicinity. Southern New England Telephone reports, however, that the existing system was sufficient to meet the needs of the facility at peak operating capacity and would be sufficient to meet any future needs. The telephone and communications system is facility-wide and is maintained by American Telephone and Telegraph (RKG Associates, 1997).

Cable service is provided by Bridgeport Cable (HQDA, 1997). Lightpath Cablevision, a subsidiary of Cablevision of Connecticut, will have installed fiber optic cable along Main Street by the end of the summer of 1997 (Cablevision of Connecticut, personal communication, 1997). This service will provide complete commercial telephone and video capabilities (RKG Associates, 1997).

4.9 HAZARDOUS AND TOXIC SUBSTANCES

Preliminary investigations have been completed for the identification of hazardous and toxic materials for the characterization of baseline conditions. The results are presented in the following subsections.

4.9.1 Storage and Handling Areas

SAEP is a RCRA-permitted Treatment, Storage, or Disposal Facility and is considered a large quantity generator. The installation has a Part A permit for Satellite Accumulation Areas for temporary storage and applied for a RCRA Part B permit for the three storage units. Currently, there is no likelihood of this permit being needed or used (Flemming, 1997).

The dedicated storage areas (current and historical) and their respective types of waste are listed in Table 4-4. Since 1990, numerous satellite accumulation areas have been established for hazardous/toxic materials within SAEP. The 1996 EBS (ABB Environmental Services, Inc., 1996a) placed the total number of satellite storage areas at 27 but projected that this number would decrease significantly in the near future.

Before disposal of SAEP, the hazardous waste storage facilities will be closed in accordance with 40 CFR 265 Subpart G, and a complete stand-alone closure plan will be prepared. The closure plan will approved by the Connecticut DEP prior to its implementation. The public will be notified of the availability of the final closure plan.

4.9.2 Uses

Hazardous materials are used for a wide variety of manufacturing processes including machining, electroplating, corrosion proofing, cleaning, and other miscellaneous activities. Hazardous wastes generated include metal salts, oils, solvents, paint-related materials, and acids. Approximately 950 tons of hazardous substances were generated by SAEP and manifested in 1994 (ABB Environmental Services, Inc., 1996a). Table 4-5 lists specific types and amounts of hazardous substances generated in 1994, which are close to the generation under baseline conditions.

Table 4-4
Summary of Historical and Current Storage Areas within SAEP

Building Number/ Location	Chemical and Type of Storage	Historical or Current Use and Storage Containers
B-15, east side	Various chemicals	The current primary chemical storeroom
B-15	Oils, solvents, and cleaners	Current storage in various containers
B-13 and adjacent open area	Raw and waste chemicals	Historical storage in 55-gallon drums
B-70 and adjacent open area	Sulfuric acid, sodium hydroxide, and sodium hypochlorite	Historical storage in 55-gallon drums
B-2 (area next to the plating room)	Acids, cyanides, and alkalines	Current storage on wood pallets
B-8	Flammable materials	Current storage on wood pallets or metal shelves
B-9	Batteries, oil, grease, and hydraulic fluid	Current storage in various containers

Source: ABB Environmental Services, Inc., 1996a.

4.9.3 *Disposal*

At this time, hazardous wastes are accumulated at various sites around SAEP, where they reside for a period of less than 90 days. Under baseline conditions, SAEP-generated hazardous wastes were containerized and disposed of off site with the exception of certain industrial liquid wastes, which were treated in on-site industrial wastewater facilities and discharged to the Housatonic River under an NPDES Permit. (See Section 4.8.2 for more information.) There are no actively employed hazardous waste management units, such as an on-site hazardous waste landfill, at SAEP.

4.9.4 *Contaminated Sites, Soils, and Groundwater*

Multiple programs are under way to define the condition of SAEP land areas, including those related to the BRAC Installation Restoration Program (IRP) and RCRA. In addition, because prior studies did not attempt to characterize potential groundwater contamination, a remedial investigation and feasibility study (RI/FS) is occurring at the site to determine the nature and extent of groundwater contamination.

Currently, there are insufficient data to describe the quantity and nature of constituents in the groundwater and the potential plumes at the site. This detailed information will not be available until completion of the RI/FS, expected by summer 1999 (Burleson, personal communication, 1998). As described in the EBS, SAEP was divided into 33 parcels and then examined for contamination from past operational and waste disposal activities. All 33 parcels are suspected to have potential groundwater contamination (Burleson, personal communication, 1998). The groundwater and surface waters at the facility are controlled through institutional controls (e.g., permits to drill) by state and local authorities. The waters are classified as SB/SC (non-drinking water), and access for direct contact is limited.

The current status of these efforts is summarized using the DoD Environmental Categories (DODECs), which indicate the potential for transfer of Army property. Property in DODECs 1 through 4 is suited for property transfer, whereas properties in DODECs 5 through 7 must be investigated and, where appropriate, remediated before transfer. Table 4-6 summarizes the current information available on hazardous/toxic substances on land parcels at SAEP, which is illustrated in Figure 4-5. A more detailed summary for each individual hazardous/toxic substance (e.g., lead-based paint, unexploded ordnance) is provided below. Approximately 60 acres of the SAEP land area is currently under investigation (DODEC 7). The largest single parcel, categorized as DODEC 3 (the 43.5-acre area labeled Parcel 2), is the shallow tidal area located just offshore of SAEP. Parcel 21 (3.35 acres categorized as DODEC 5) is a RCRA Closure that is in the postclosure stage of monitoring only. Remedial actions of other parcels with known contamination, including Parcels 12 and 32, are pending the finalization of the RI/FS, which is in the scoping phase (Burleson, 1997). Detailed information regarding the nature of potential or existing contamination and ongoing investigation and remediation efforts can be obtained from the EBS (ABB Environmental Services, Inc., 1996a).

Table 4-5
Manifested Hazardous Wastes Generated at SAEP and Disposed Of Off Site in 1994

Waste Description	Pounds Generated
1,1,1-Trichloroethane	63,470
Contaminated Oil	674,977
Contaminated Soil and Concrete	603,500
Oil and Water	129,750
Oily Absorbents and Rags	83,500
Metal Hydroxide Sludge	63,680
Oil Sludges	63,300
PCB Articles	51,225
Aviation Fuel	44,407
Machine Grinding Sludge	17,400
Ammoniacal Strip Solution	12,800
Plating Wax	12,200
Trichloroethane and Solids	10,292
Chrome-contaminated Solids	9,600
Emulsifier	9,500
Wood Flooring Blocks	6,680
Paints and Solvents	5,880
Metal Powders	4,221
Filters	4,080
Carbon and Ardrox	4,000
TCP Solvent	3,850
Aluminum Deoxidizer Solution	3,150
Corrosive Liquids	2,640
Chromic Acid Liquids	2,640
Paint-related Solids	2,050
Boiler Sludge	1,700

Table 4-5
Manifested Hazardous Wastes Generated at SAEP and Disposed Of Off Site in 1994

Waste Description	Pounds Generated
Lab Pack Chemicals	1,050
Desiccant	1,050
Polyol	1,000
Acid/Alcohol Etch	880
Ardrox Penetrant	850
Roofing Tar	800
Sodium Metasilicate	800
Alcohol	750
Nickel-Cadmium Batteries	500
Resins	500
Potassium Permanganate	500
Rags and Solvents	426
Corrosive Solids	400
Cyanide Wastes	388
Medical Wastes	280
Hydrogen Peroxide	240
Dynaflo Compound	200
Perchloric Acid	130
PCB Fluid	59
Bromine Solution	8

Source: ABB Environmental Services, 1996a.

4.9.5 Special Hazards

Asbestos. Since the mid-1970s, SAEP has observed a policy to avoid asbestos-containing material (ACM) in any new or renovation construction. In addition, whenever ACM has been identified during renovation, it has been removed by a licensed contractor and disposed of in a licensed landfill. An asbestos survey is to be completed at SAEP in late 1997 or early 1998. ACM is present in structures located within SAEP, primarily in pipe wrap insulation, pipe gaskets, wiring insulation, transite wallboard, and floor tile. Detailed data provided in the EBS (ABB Environmental Services, Inc.,

Table 4-6
Land Parcel Classification

Parcel ID	Total Acres	Hazardous/Toxic Condition Indicators							DODEC Category[1]
		A	HR	L	PR	PS	RD	HS	
1	5.34	X	X	X	X				7
2	43.52		X		X				3
3	4.17	X	X	X	X				7
4	1.14		X						7
5	0.69	X		X			X		7
6	0.48	X		X	X	X		X	7
7	1.67	X	X	X	X				7
8	11.35	X	X	X	X			X	7
9	3.32	X	X	X	X	X		X	7
10	3.56		X			X			7
11	1.86	X	X	X	X				7
12	4.53	X	X	X	X	X		X	6
13	3.28	X	X	X	X	X		X	7
14	0.87	X	X	X	X	X			7
15	0.82		X		X				7
16	3.39	X	X	X				X	7
17	3.27	X	X	X	X	X		X	7
18	2.74	X	X		X				7
19	10.37								7
20	0.93	X		X		X		X	7
21	3.35		X					X	5
22	2.76				X				4
23	0.52				X	X			7
24	3.47	X	X	X	X			X	7
25	1.19	X	X	X					7
26	0.48	X	X		X	X			7

Table 4-6
Land Parcel Classification

Parcel ID	Total Acres	Hazardous/Toxic Condition Indicators							DODEC Category[1]
		A	HR	L	PR	PS	RD	HS	
27	2.51	X	X	X	X	X		X	7
28	1.67	X	X	X		X		X	7
29	0.32	X	X	X	X	X			7
30	0.24	X		X		X		X	7
31	0.54		X			X		X	7
32	3.37		X		X				6
33	0.2					X			7

Note
A = asbestos-containing material
HR = release or disposal of hazardous substances
L = lead-based paint
PR = storage of petroleum products or derivatives
PS = petroleum storage
RD = radionuclides
HS = storage of hazardous substances

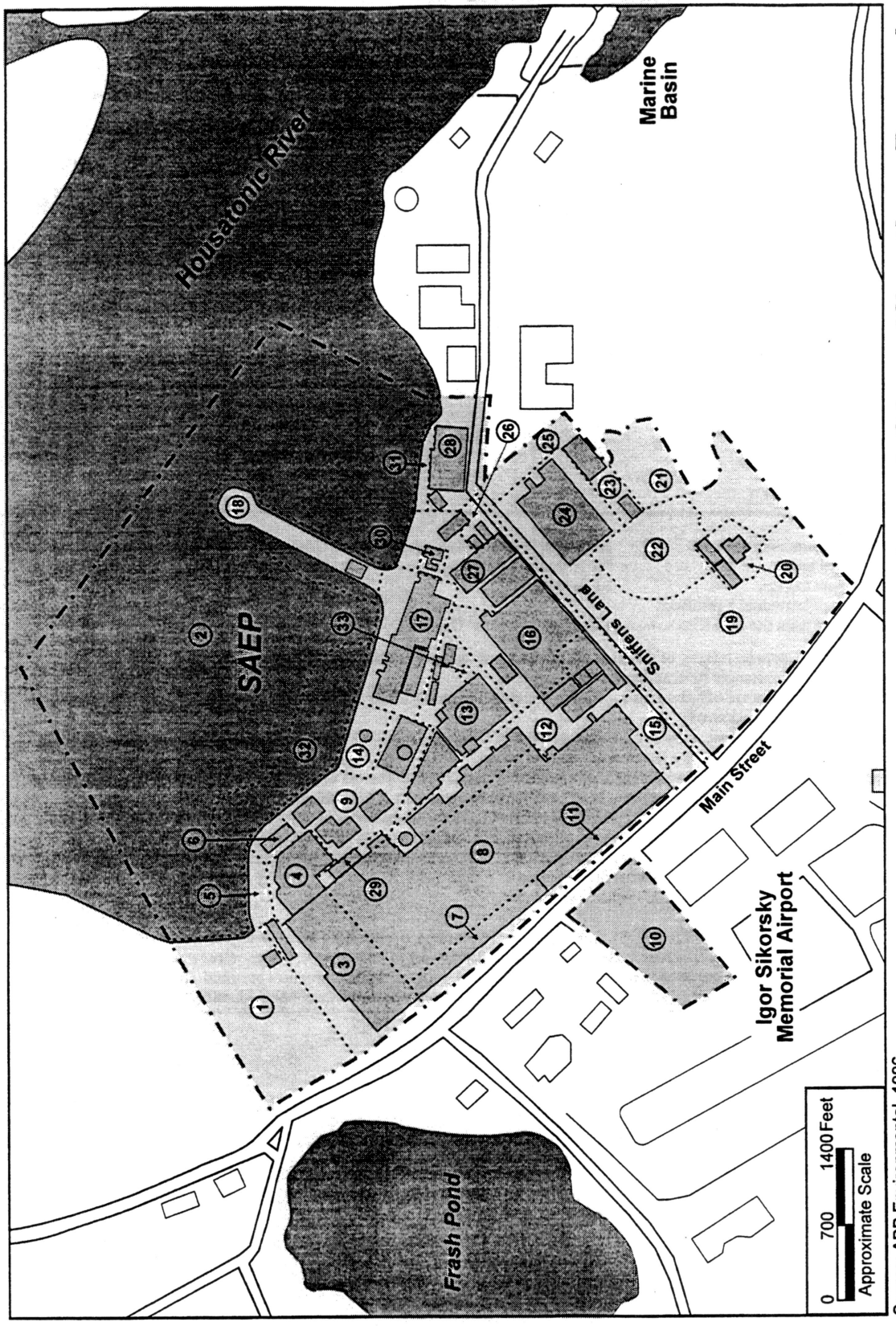
[1] Data obtained from the final EBS, which calls these categories "CERFA Categories." They are defined as follows:

1-Areas where no storage, release, or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas).
2-Areas where only storage of hazardous substances or petroleum products has occurred (but no release, disposal, or migration from adjacent areas has occurred).
3-Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but at concentrations that do not require a removal or remedial action.
4-Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, and all remedial actions necessary to protect human health and the environment have been taken.
5-Areas where storage, release, disposal, and /or migration of hazardous substances or petroleum products has occurred, and removal and/or remedial actions are under way, but all required actions have not yet been taken
6-Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but required response actions have not yet been implemented
7-Areas that are unevaluated or require further investigation.

Note: Since preparation of the EBS, CERCLA and DoD implementing guidance have been amended. Based on the amendments, Category 1 parcels now include locations where no hazardous substances or petroleum products were released or disposed of, and Category 2 parcels now include locations where no release or disposal of petroleum products occurred. In light of these changes, storage of hazardous substances or petroleum products no longer prevents property from being identified as uncontaminated

Source: Office of the Assistant Deputy Under Secretary of Defense, 1996.

1996a) suggests that a large portion of SAEP's 124 acres are affected or potentially affected by ACM. (Note that this estimate conservatively assumes that if any portion of the 33 land parcels defined in Figure 4-5 is affected by ACM, all of the land area in the parcel is affected.) Appendix D shows the contents of the notification that the Army would provide upon transfer or conveyance of property containing ACM.



Land Classification Parcels
Stratford Army Engine Plant
Stratford, Connecticut
Figure 4-5

Radon. In 1989-1990, a radon survey of SAEP was completed by the Textron Lycoming Environmental Department in cooperation with the state of Connecticut. Since no radon was detected during the survey, radon levels are not considered to be in excess of applicable limits (ABB Environmental Services, Inc., 1996a).

Lead-Based Paint (LBP). No lead-based paint survey is currently scheduled at SAEP. It is known that paints used at SAEP between 1930 and 1970 did contain lead (ABB Environmental Services, Inc., 1996a). If all buildings constructed before 1978 are assumed to have LBP, the vast majority of existing structures within SAEP contain LBP, including the largest building (B-2). Based on detailed data provided in the EBS (ABB Environmental Services, Inc., 1996a), a large portion of SAEP's 124 acres are affected or potentially affected by LBP. (Note that this estimate conservatively assumes that if any building located within the 33 land parcels defined in Figure 4-5 is affected by LBP, all of the land area in the parcel is affected.)

The Residential Lead-Based Paint Hazard Reduction Act of 1992 (Public Law 102-550) applies to buildings constructed before 1978 and transferred for residential use. Under the law, residential structures built between 1960 and 1978 must be inspected for LBP and LBP hazards (as defined in the act) and the results of the inspection must be provided to prospective purchasers of the property. For buildings constructed before 1960, LBP hazards must be abated if the property is to be used for residential purposes (as defined in the act). Appendix D shows the contents of the notification the Army would provide upon transfer or conveyance of property containing LBP.

Pesticides and Rodenticides. Pesticides have been and are used at SAEP as required to maintain a safe and effective work environment. All pest control services are provided by purveyors that are licensed by the state of Connecticut and use their own supplies. Under baseline conditions, no pesticides or rodenticides were stored or mixed at SAEP. In addition, no containers or excess products are known to have been disposed of on site, based on interview information and other reports (ESE, 1981).

Polychlorinated Biphenyls (PCBs). There are 17 transformers within SAEP classified as "PCB transformers," or transformers containing fluids with greater than 500 ppm of PCB. With the exception of one transformer, each of these transformers is contained by a concrete curb or vault. Substation 43 at Building B-3 has the only PCB transformer that is not contained within a bermed area; as at all other transformer locations, however, a drip pan has been placed below this transformer.

Unexploded Ordnance (UXO). Explosives were stored in a single building within SAEP (B-59) during the late 1960s and 1970s for manufacturing of explosive bolts/materials for intercontinental ballistic missiles. Due to the classified nature of the weaponry, records on the types and quantities of explosives used and stored at SAEP are not available. However, in multiple site assessments there has been no reported or observed UXO at SAEP (ABB Environmental Services, Inc., 1996a; Woodward-Clyde Consultants, 1991).

Radionuclides. Radiological isotopes (americium, cadmium, cobalt, silver, thorium, and tritium) have been used during manufacturing at SAEP. The U.S. Army Environmental Hygiene Agency performed a radiation protection study in 1988 to evaluate potential health hazards from thorium (USAEHA, 1988). The results indicated the largest building within SAEP (B-2) had readings that did not exceed background levels.

A comprehensive radiological survey of the buildings and grounds at SAEP will be conducted as part of U.S. Nuclear Regulatory Commission license decommissioning. This survey is scheduled to be completed in 1998. Radiological surveys were conducted in February 1997 for Buildings B-58 and B-65, which are under consideration for interim leasing. The United States Army Center for Health Promotion and Preventive Medicine has determined that both buildings are available for unrestricted use.

4.9.6 Storage Tanks

There are more than 57 aboveground storage tanks (ASTs), ranging in size from 500 to 400,000 gallons, in use at SAEP. All but two of these ASTs are situated on concrete pads and have either concrete containment dikes or synthetic liners. Forty-three underground storage tanks (USTs) have been identified as present or having been present at SAEP; 38 of them have been removed, and 5 have been abandoned in place (ABB Environmental Services, 1996b). Three of the abandoned USTs are located at Building B-2. One has been sand-filled, and the remaining two are located underneath the building. The other two abandoned USTs, located at Building B-6, have been sand-filled.

4.10 PERMITS AND REGULATORY AUTHORIZATIONS

SAEP currently operates under interim RCRA status as a large-quantity hazardous waste generator, with the EPA identification number CTD001181502. Facilities under interim RCRA status were required to submit a Part B application by November 1988. SAEP met this deadline, and although CTDEP has not acted on the application, SAEP is in compliance with regulations (ABB Environmental Services, Inc., 1996a).

SAEP operates under NPDES permit CT0002984. The permit was issued to Textron Lycoming-SAEP by CTDEP in 1991 and subsequently was transferred to AlliedSignal (ABB Environmental Services, Inc., 1996a). The permit allows direct discharge to the Housatonic River via eight outfalls, which have the discharge serial numbers 001 to 008 (ABB Environmental Services, Inc., 1996a). The NPDES permit requires quarterly sampling, analysis, and reporting of effluents from Outfalls 007 and 008 for acute and chronic toxicity (ABB Environmental Services, Inc., 1996a). There are no known violations of the permit (RKG Associates, 1997).

The Nuclear Regulatory Commission has issued two material licenses to AlliedSignal. One license is for the possession and use of the source material thorium (License STB-393), and the other license is for the possession of two sealed by-product sources (License 06-23592-01) in a Kevex spectrometer for sample analysis. These licenses expire on August 31, 2002, and August 31, 2001, respectively.

SAEP is currently operating its air emission sources under proposed CTDEP Air Permit 178-007-GPLPL. This is a general operations synthetic minor permit that covers the limited array of point source (heating and manufacturing) emission sources present at SAEP.

4.11 BIOLOGICAL RESOURCES AND ECOSYSTEMS

The USFWS and the CTDEP were consulted regarding issues of sensitive species and habitats on SAEP. Response letters from these agencies are provided in Appendix G.

4.11.1 Vegetation

Excluding the intertidal flats portion of SAEP, the area available for disposal and reuse is almost entirely developed. Vegetation is limited to trees and shrubs, such as European white birch (*Betula alba*) and hawthorn (*Crataegus* spp.), planted as ornamentals around buildings and next to roads.

Most of the vegetation in the immediate vicinity of SAEP consists of tidal marsh sedges, rushes, and grasses. Saltmeadow cordgrass (*Spartina patens*), saltmarsh cordgrass (*Spartina alterniflora*), and phragmites (*Phragmites australis*) are dominant species.

4.11.2 Wildlife

Given the highly developed nature of SAEP, the large majority of the installation supports little to no wildlife. The intertidal flats, however, provide feeding grounds for many species of birds. Approximately 220 bird species, many of which are migratory waterfowl and shorebirds, have been observed in wetlands in the immediate vicinity (ABB Environmental Services, Inc., 1996a). A study conducted between May 12, 1997, and August 22, 1997, under a grant from the USFWS, recorded the following bird species using the site (LeBlanc, personal communication, 1997): osprey (*Pandion haliaetus*), belted kingfisher (*Ceryle alcyon*), semipalmated sandpiper (*Calidris pusilla*), least sandpiper (*Calidris minutilla*), willet (*Catoptrophorus semipalmatus*), semipalmated plover (*Charadrius semipalmatus*), black crowned night heron (*Nycticorax nycticorax*), snowy egret (*Egretta thula*), great egret (*Casmerodius albus*), least tern (*Sterna antillarum*), common tern (*Sterna hirundo*), double breasted cormorant (*Phalacrocorax auritus*), black duck (*Anas rubripes*), and mallard (*Anas platyrhynchos*). Additional species recorded near the installation include the fish crow (*Corvus ossifragus*) and glossy ibis (*Plegadis falcinellus*). All of the aforementioned birds are protected under the Migratory Bird Treaty Act.

Studies conducted in Long Island Sound and surrounding embayments (including the lower Housatonic River) identified the presence of nearly 100 species. Some of the fish species recorded include the Atlantic sturgeon (*Acipenser oxyrinchus*), blueback herring (*Alosa aestivalis*), northern kingfish (*Menticirrhus saxatilis*), white perch (*Morone americana*), longhorn sculpin (*Myoxocephalus octodecemspinosus*), and yellowtail flounder (*Pleuronectes ferrugineus*) (URS Greiner, 1996). It is likely that many of these species enter into SAEP's intertidal flats zone during periods of high tide inundation.

4.11.3 Threatened and Endangered Species

According to the USFWS, the federally listed piping plover (*Charadrius melodus*) is known to nest on Short Beach, located to the south of SAEP (Bartlett, personal communication, 1997). Suitable nesting habitat also exists on Long Beach and Milford Point. It is not known if the species feeds in the intertidal flats portion of the installation. However, a USFWS bird survey conducted during the summer of 1997 did not observe piping plovers using the SAEP basin tidal flats (LeBlanc, personal communication, 1997; von Oettingen, personal communication, 1998). Based on the results of the 1997 survey, it has been determined that the piping plover does not use the site (von Oettingen, personal communication, 1998). No other federally listed or proposed species are known to occur in the project area, with the exception of occasional transient bald eagles (*Haliaeetus leucocephalus*) or peregrine falcons (*Falco peregrinus*)(Bartlett, personal communication, 1997).

The CTDEP reports that 11 state-listed species have the potential to occur in the vicinity of SAEP (ABB Environmental Services, Inc., 1996a). One of these species, the state threatened least tern (*Sterna antillarum*), is known to nest in the immediate vicinity of the installation and to use the intertidal flats for feeding. A bird survey of the intertidal flats conducted between May 12, 1997, and August 22, 1997, under a grant from the USFWS, observed the least tern at the site twice (June 24 and 30), foraging for small fish during high-tide periods (LeBlanc, personal communication, 1997). Other state threatened species observed using the site during the survey include the great egret (*Casmerodius albus*), commonly observed using the site for feeding and roosting (western shore and the jetty); the snowy egret (*Egretta thula*), commonly observed feeding on the western shore near the discharge unit, in the marsh grasses in the northwest and northern sections of the intertidal flats, and along the eastern boundary of the flats where it feeds and roosts; and the willet (*Catoptrophorus semipalmatus*), feeding at low tide on small worms, crustacean larvae, and other benthic invertebrates in the intertidal flats. State species of special concern observed using the intertidal flats during the survey include the black crowned night heron (*Nycticorax nycticorax*), occasionally observed wading/hunting along the water's edge or roosting in the tall marsh area on the northern shore of the tidal flats; osprey (*Pandion haliaetus*), observed on June 19 hunting in the tidal flats (two osprey nests have been observed in Wheeler Salt Marsh); and the common tern (*Sterna hirundo*), observed feeding on the tidal flats during high tide on June 25. Other state-listed or candidate species potentially found in the area include the seaside sparrow (*Ammodramus maritimus*), upland sandpiper (*Bartramia longicauda*), horned lark (*Eremophila alpestris*), common moorhen (*Gallinula chloropus*), least bittern (*Ixobrychus exilis*), savannah sparrow (*Passerculus sandwichensis*), Ipswich sparrow (*P. sandwichensis princeps*), pied-billed grebe (*Podilymbus podiceps*), and purple martin (*Progne subis*). All of the aforementioned birds are protected under the Migratory Bird Treaty Act. The Atlantic sturgeon (*Acipenser oxythynchus*), also listed as threatened in Connecticut, is believed to occur in portions of the Housatonic River adjacent to the installation.

The CTDEP is updating the Connecticut Endangered, Threatened and Special Concern Species List. Under the current schedule, the updated list should become effective in the spring of 1998. Proposed changes to the list will affect the status of three bird species that have been observed on the intertidal flats. The status of the willet will change from state threatened to a state species of special concern. The black crowned night heron and osprey will be taken off the State Species of Special Concern List.

4.11.4 Wetlands

Intertidal flats and associated tidal marshes are located adjacent to the eastern section of SAEP. Vegetation is sparse over most of the intertidal flats, but where it occurs it is dominated by cordgrasses (*Spartina* sp.) and common reed (*Phragmites australis*). The vegetated, or marsh, areas occur primarily along the northern, northeastern, and northwestern shorelines of the intertidal flats and in small patches across the remainder of the flats. There is also a small wetland located just off the site adjacent to the parking lot in the northern section of the parcel. The intertidal flats are not considered to be wetlands where macrophytic vegetation is absent. The intertidal flats are considered to be special aquatic sites and are regulated, along with wetlands, under Section 404(b)(1) of the Clean Water Act. The intertidal flats and associated marsh areas are important feeding grounds for shorebirds, and they harbor abundant invertebrates both below and above the surface of the mud.

Large areas of tidal marshes occur in the vicinity of SAEP, including riverine tidal wetlands along the fringe of the Housatonic River, emergent tidal wetlands on Nells Island, emergent tidal wetlands

around Sikorsky Airport, and the Great Meadow Salt Marsh (Figure 4-6). Several emergent freshwater wetlands also occur around Sikorsky Airport.

The Great Meadows Salt Marsh, which is located to the west and southwest of Igor Sikorsky Memorial Airport, is one of the more significant wetlands in the immediate vicinity of SAEP. Great Meadows is a tidal marsh system encompassing up to 600 acres, with approximately 475 acres flushed by tidal flows from Lewis Gut and its associated network of tidal creeks. The Great Meadows Salt Marsh was originally approximately 1,450 acres and represented one of the largest tidal wetland ecosystems in the Long Island Sound area. Beginning in the 1920s, however, a variety of activities combined to reduce the size of the salt marsh system to the current acreage, which is estimated to represent less than 25 percent of the original system (URS Grenier, 1996).

Great Meadows has long been recognized as having extremely high habitat value despite its history of disturbance (URS Grenier, 1996). Specific habitat types within the salt marsh include aquatic estuarine habitat associated with Lewis Gut and the other tidal creeks, intertidal flats along the tidal creeks, and emergent tidal salt marshes. The use of the habitats is enhanced for some species by the adjacent beach and dune habitats of Long Beach, which, included with Great Meadows, form an even broader assemblage of habitats known as a salt marsh-barrier beach complex. The variety of plant communities associated with these areas makes the potential for habitat diversity very high (URS Greiner, 1996). The Great Meadows Salt Marsh and Nells Island have been recognized as having high value to wildlife, and both have been set aside as wildlife refuges.

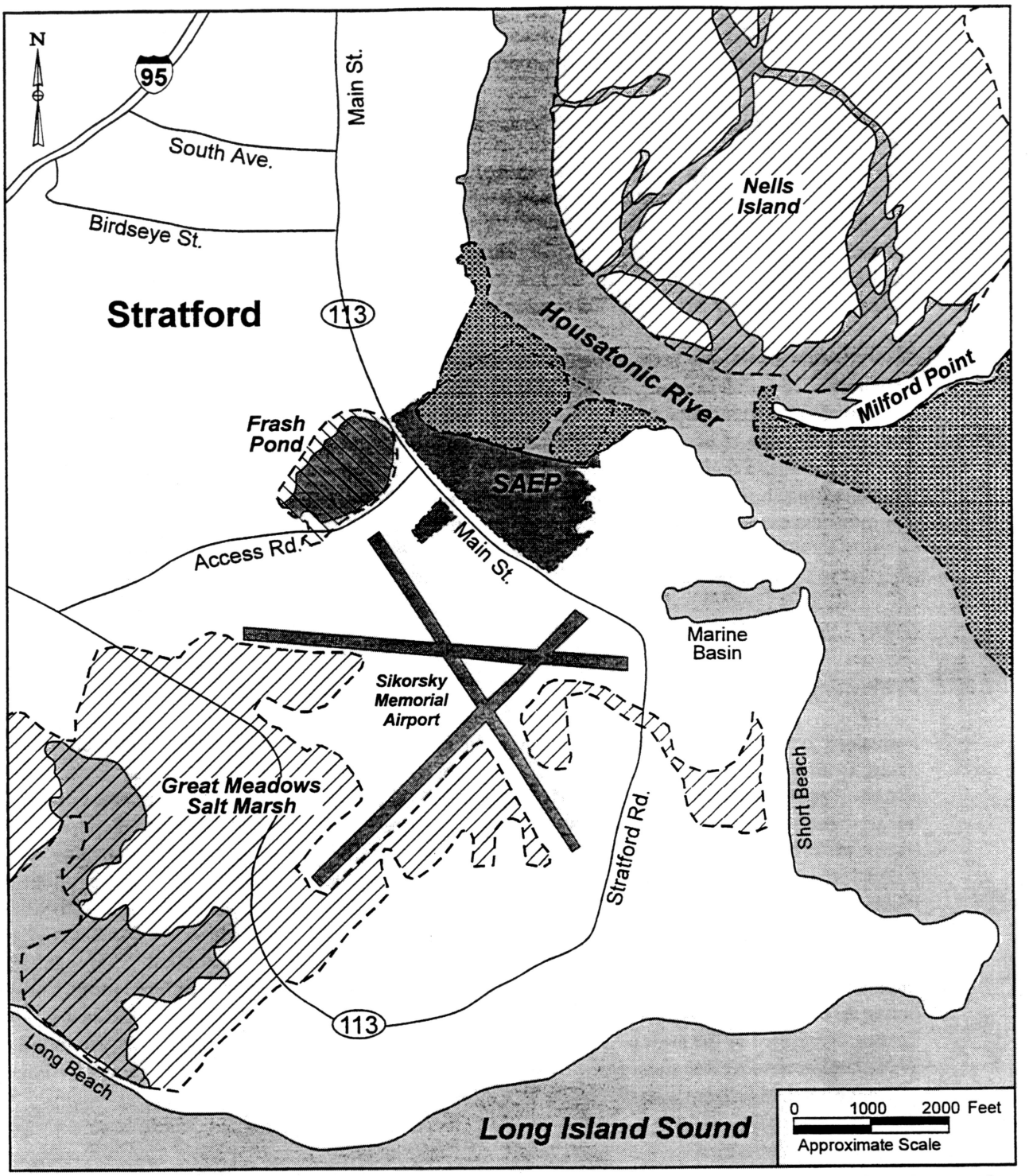
4.12 CULTURAL RESOURCES

4.12.1 Prehistory

Prehistoric occupation in Connecticut is divided into three major periods—the Paleo-Indian Period, dating from ca. 12,000 B.C. to ca. 8,000 B.C., the Archaic Period (ca. 8,000 B.C. to ca. 1,000 B.C.), and the Woodland Period (ca. 1,000 B.C. to ca. A.D. 1600). Paleo-Indian peoples were nomadic hunters and gatherers who lived in small groups and ate wild plants and animals. This period is distinguished by a low population density with groups residing in seasonal or base camps. The Paleo-Indian Period is also noted for diagnostic fluted projectile points and the exploitation of Pleistocene megafauna. During the Archaic Period the cold, dry environment that had existed during the Paleo-Indian Period changed to one that was warmer and wetter. Groups responded to this change, and archeological evidence shows an increasing use of the new forested environment. Stone axes and fishing paraphernalia appear in larger numbers. Late Archaic sites are more common, indicating an increase in population toward the end of this period. The Woodland Period is the last before Europeans arrived in the region. Domesticated plants, including corn and bean species, are found at Woodland archeological sites, and true fired ceramics also appear (Lavin, 1985). Larger villages indicate the change from a nomadic life to a more settled life.

4.12.2 Historic Background

Native Americans who lived in the region in which SAEP is located consisted of small groups, including the Paugussetts and the Pequannocks (DeForest, 1852; Wilcoxson, 1939). These people were decimated by disease and warfare associated with European contact, and by the 19th century very few Native Americans lived in the region.



LEGEND

- Freshwater Wetlands
- Intertidal Flats
- Salt Marsh

Source: ABB Environmental, 1996.

Wetlands

Stratford Army Engine Plant
Stratford, Connecticut
Figure 4-6

The area that includes SAEP was settled by the Dutch and the English. The earliest known European to visit the area was the Dutchman Adrian Block, who sailed from what was then New Amsterdam (now New York). Land was purchased by the English in a piecemeal fashion from various Native American groups and individuals during the first half of the 17th century (Wilcoxson, 1939). In 1639, the town of Stratford was begun by English settlers led by the Reverend Adam Blakeman and his congregation, who founded the Cupheag plantation. Other English settlers arrived in the area shortly afterward. Stratford and the surrounding communities grew and became a commercial center from which native agricultural goods, as well as timber, fish, and livestock, were traded to Boston, New York, Europe, and the West Indies (HVA, No date). The shipbuilding industry also flourished in the region, as did numerous lumber and grist mills and tanneries. The region flourished as an industrial center throughout the 19th century.

The property on which SAEP is located was part of the original Cupheag plantation (ABB Environmental Services, Inc., 1996a; Wilcoxson, 1939). As the town of Stratford grew, the area on which SAEP is located remained agricultural until the first manufacturing facility was constructed in 1929. The site was first developed by the Sikorsky Aero Engineering Corporation, which had been founded in March 1923. Sikorsky developed and manufactured seaplanes there between 1929 and 1939. The original plant included an administration building, a manufacturing facility, and a service building.

In April 1939, Chance Vought Aircraft moved its operations to the Stratford plant, and the new subsidiary was called the Vought-Sikorsky Aircraft Division. In 1940, at the start of World War II, Sikorsky developed the helicopter, and the first free flight of the prototype occurred at the Stratford Plant in May 1940. This helicopter was manufactured at the plant in 1942, as was the "Kingfisher" airplane. In addition, mass production of the Corsair took place there beginning in June 1941. To provide for this manufacturing demand, there were extensive additions to the plant, including an aircraft assembly plant addition on the north end of the facility in 1942 and an eastward extension of the plant's shoreline, into the intertidal flats of the Housatonic River, in 1944. Between 1944 and 1946 Chance Vought developed and manufactured its first jet aircraft, before moving operations in 1948.

In 1951, the U.S. Air Force purchased the plant, which became known as Air Force Plant No. 43. During its ownership, the Curtis Wright nine-cylinder radial engine and various airplane, helicopter, and land vehicle engines were manufactured at the plant by the AVCO Corporation, a contractor that occupied the plant. Reentry vehicles for the Titan and Minuteman missile systems were also manufactured by AVCO during this period at the plant.

In 1976, the plant was transferred from the U.S. Air Force to the U.S. Army and was renamed the Stratford Army Engine Plant. AVCO continued to act as the contractor, manufacturing industrial and military engines, including engines for the Abrams tank. The U.S. Army and AVCO-Textron/Lycoming, as the contractor became known, continued to improve the property. In 1994, the contract was transferred to AlliedSignal, Inc. which also developed and manufactured engines. In September 1995, SAEP was placed on the BRAC 95 list.

4.12.3 Historic Resource Investigations/Section 106 Consultation

Archeological Resources. An archeological overview and management plan were completed for SAEP in 1984. That study identified two archeological sites at SAEP and two archeological sites on territory adjacent to SAEP along the Housatonic River (Envirosphere Company, 1984, cited in ABB

Environmental Services, Inc., 1996). However, extensive modification of shoreline areas, combined with the site's poor drainage characteristics make it unlikely that any intact, unrecorded resources exist on the on-shore portion of SAEP (Envirosphere Company, 1984, cited in ABB Environmental Services, Inc., 1996).

Architectural Resources. An inventory of historic properties at SAEP was completed. Two buildings, the Engine Assembly Plant Building (Building B-2) and its additions (the Office Extension [1943-1944], the Assembly Plant Addition [1944], and the North Factory Extension [1943-1944]) and the Aircraft Engine Test Cells Building (Building B-16) were identified as being eligible for the National Register of Historic Places (NRHP). These buildings are associated with the World War II era. In addition, the buildings are the design works of Albert Kahn, the noted architect. Building B-2 was constructed in 1942, and Building B-16 was completed in 1952.

The U.S. Army Materiel Command negotiated previously a No Adverse Effect determination with the Connecticut Historical Commission (Connecticut SHPO) for the leasing of facilities at SAEP to AlliedSignal. In compliance with that determination, the lease requires that all maintenance and rehabilitation for Buildings B-2 and B-16 be carried out in accordance with the procedures described in the No Adverse Effect determination letter and its attachment B (see Appendix B). Maintenance and rehabilitation are to be conducted in consultation with the Connecticut SHPO and according to guidelines for preservation found in Army Technical Manual 5-801-2, the *Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitation of Historic Buildings*, and the National Park Service *Historic Buildings Preservation Briefs Series 1-14*, as appropriate.

A Memorandum of Agreement (MOA) was concluded between the U.S. Army Materiel Command, the Advisory Council on Historic Preservation, and the Connecticut SHPO concerning the treatment of Stratford historic properties that are to be disposed of as a result of this BRAC action (see Appendix B). Under this MOA, AlliedSignal will continue to provide caretaker building maintenance until the SAEP is transferred. As part of the MOA, a preservation covenant for the NRHP-eligible properties (Buildings B-2 and B-16) will be included in the instrument of transfer to the new owner. (See Appendix B.)

4.13 ECONOMIC DEVELOPMENT

This section describes the contribution of SAEP to the economy and the sociological environment in the region. The socioeconomic indicators used for this study include regional economic activity, population, housing, and schools. In addition, recreational and community facilities, and public and social services are discussed. These indicators characterize the ROI.

An ROI is a geographic area selected as a basis on which social and economic impacts of project alternatives are analyzed. The criteria used to determine the ROI are the residency distribution of SAEP employees, commuting distances and times, and the location of businesses providing goods and services to SAEP, its personnel, and their dependents. Based on these criteria, the ROI for the social and economic environment is defined as Fairfield and New Haven counties in Connecticut. The ROI covers an area of 1,232 square miles and includes the cities of New Haven, Bridgeport, Stamford, Danbury, and Waterbury.

The baseline year for socioeconomic data is 1995, the date of the BRAC Commission's announcement of the SAEP realignment. This base year represents the most recent fiscal year in which SAEP

staffing and operations were conducted under "normal" conditions. Where 1995 data are not available, the most recent data available are presented.

4.13.1 Regional Economic Activity

The SAEP ROI has a diverse economy containing a mix of urban centers including New Haven, Bridgeport, and Waterbury; numerous small towns and bedroom communities; and seasonal resort towns along the coastal areas. The ROI includes the headquarters of several Fortune 500 companies, small high-technology companies, and a wide array of service sector establishments. Manufacturing, once a major source of employment in the larger cities of the ROI, has declined in importance over the last several decades. This decline has continued unabated, and during the period between 1990 and 1994 more than 20,000 manufacturing jobs were eliminated in the ROI. This large decline was responsible for the net decrease in ROI employment over that period. More recently, the primary sources of employment have been services; wholesale and retail trade; manufacturing; government; and finance, insurance, and real estate. During 1994, these industries accounted for more than 90 percent of regional employment. Because the area is highly urbanized, farming employed less than 0.2 percent of the workforce.

The largest single source of jobs in the ROI during 1994 was the service sector, which provided 34.2 percent of the total employment. The wholesale and retail trade sectors provided 20.8 percent of the total number of jobs, while manufacturing accounted for 15.7 percent. Government, including the military, and the finance, insurance, and real estate sector each accounted for 9.9 percent of the total employment. Table 4-7 shows ROI employment by industry category; Table 4-8 lists major employers in the area.

The ROI civilian labor force totaled 847,768 in 1995. The unemployment rate in the region was 5.3 percent in 1995, lower than both the unemployment rate in Connecticut (5.5 percent) and the U.S. average of 5.6 percent (Table 4-9).

The per capita income in the ROI was $32,117 in 1994, an increase of 15.6 percent since 1990. In 1994, the per capita income in the United States was $21,696, an increase of 16.2 percent since 1990 (U.S. DOC, BEA, 1996).

4.13.2 Installation Contribution, Local Expenditures

Total nonsalary expenditures in FY 1995 were approximately $137 million. These included spending for utilities, supplies, services, and operations.

4.13.3 Installation Workforce Structure and Salaries

SAEP is a government-owned, contractor-operated facility. Therefore, all employees of the installation are civilian employees of the contractor, AlliedSignal. In 1995, there were 1,174 employees at the site (RKG Associates, 1997). For the year 1995, the average salary for the contractor workforce was $45,324 (Hyatt, personal communication, 1997).

Table 4-7
SAEP ROI Employment by Industry

Employment Sector	1990 ROI Employment (Percent of Total Employment)		1994 ROI Employment (Percent of Total Employment)	
Services	302,620	(31.4%)	316,273	(34.2%)
Wholesale and Retail Trade	202,480	(21.0%)	191,933	(20.8%)
Manufacturing	167,803	(17.4%)	144,933	(15.7%)
Finance, Insurance, and Real Estate	98,314	(10.2%)	91,317	(9.9%)
Transportation and Public Utilities	41,915	(4.4%)	39,998	(4.3%)
Construction	44,405	(4.6%)	37,939	(4.1%)
Other Nonfarm Private Sector	6,809	(0.7%)	7,701	(0.8%)
Government and Government Enterprises	96,274	(10.0%)	91,767	(9.9%)
Total Nonfarm Employment	**961,848**	**(99.8%)**	**923,042**	**(99.8%)**
Farm Employment	**1,525**	**(0.2%)**	**1,573**	**(0.2%)**
Total Employment	***963,373***		***924,615***	

Source: U.S. DOC, BEA, 1996.

Table 4-8
Major Employers in the SAEP ROI

Company	Employees
Sikorsky Aircraft	9,000
Pitney Bowes	7,000
Yale University	5,000+
SNET	2,500+
Hospital of St. Raphael	2,500+
Peoples Bank	2,500
AlliedSignal, Inc.	1,800
Perkin-Elmer	1,200
Dun Bradstreet	1,200
Union Carbide	1,100

Source: EDS, 1995a; Fairfield County Information Exchange, 1995.

Table 4-9
Unemployment Trends

	1990 Unemployment Rate	1995 Unemployment Rate
Fairfield County	4.7%	4.8%
New Haven County	5.5%	5.8%
Connecticut	5.2%	5.5%
United States	5.5%	5.6%

Source: BLS, 1997.

4.14 SOCIOLOGICAL ENVIRONMENT

4.14.1 Demographics

Population characteristics in the ROI are provided for the baseline year of 1995 or the most recent year for which data are available. To illustrate trends, data are also provided for 1980 and 1990, as well as forecasts through 2005.

The ROI population, which increased approximately 4 percent during the 1980s, decreased by 0.5 percent from 1990 to 1995 when the population totaled 1,625,513. The ROI population is projected to increase 2.7 percent between 1995 and 2005. Table 4-10 presents the population changes between 1980 and 1995, as well as projections through 2005.

4.14.2 Housing

On-Base Housing. There is no on-base housing at SAEP.

Off-Base Housing. There were 651,434 housing units in the ROI in 1990, as shown in Table 4-11. The median value of owner-occupied housing ranged from $165,200 in New Haven County to $249,800 in Fairfield County. The median contract rent was $493 in New Haven County and $599 in Fairfield County.

4.14.3 Public Services

Law Enforcement Services. The SAEP does not have law enforcement staff. Public safety services are provided by the Stratford Police Department, which is located about 1 mile from the installation. The Department has 101 officers on staff and can respond to calls within 5 minutes. There are no mutual aid agreements between SAEP and the town of Stratford Police Department.

Table 4-10
SAEP ROI Population Trends

	Population 1980	Population 1990	Population 1995	Population 2000 (projected)	Population 2005 (projected)
Fairfield County	807,143	827,645	830,728	832,420	843,190
New Haven County	761,325	804,219	794,785	816,880	825,950
ROI	**1,568,468**	**1,631,864**	**1,625,513**	**1,649,300**	**1,669,140**

Sources: Connecticut Office of Policy and Management, 1996; U.S. DOC, Census, 1994; 1996.

Table 4-11
ROI Housing Quantity and Quality

	Fairfield County	New Haven County	ROI
Total housing units	324,355	327,079	651,434
Occupied housing units	305,011	304,730	609,741
Owner-occupied	208,121	191,497	399,618
Renter-occupied	96,890	113,233	210,123
Vacant housing units	19,344	22,349	41,693
Homeowner vacancy rate	2.0%	1.8%	NA
Rental vacancy rate	7.5%	7.5%	NA
Lacking complete plumbing facilities	1,287	1,164	2,451
Lacking complete kitchen facilities	2,049	1,375	3,424

Source: U.S. DOC, Census, 1992.

Fire Protection Services. Fire protection services are provided by the town of Stratford Fire Department, which employs 22 professional firefighters. More than 80 volunteer firefighters are also associated with the fire department. Response time is about 2 to 3 minutes. There are no mutual aid agreements between SAEP and the town of Stratford Fire Department.

Medical Services. There are seven hospitals in the ROI (including the Veterans Administration Medical Center in West Haven), which have a total of 3,271 beds. The Yale New Haven Hospital is the largest hospital with 785 beds. Many smaller outpatient facilities are also located throughout the two-county region. The town of Stratford provides free emergency medical services throughout the town, through a volunteer service with more than 200 members.

4.14.4 Environmental Justice

On February 11, 1994, President Clinton issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*. The Executive order is designed

to focus the attention of federal agencies on the human health and environmental conditions in minority communities and low-income communities. Environmental justice analyses are performed to identify potential disproportionately high and adverse impacts from proposed actions and to identify alternatives that might mitigate these impacts.

The ROI has a larger proportion of minority residents than Connecticut, but both the ROI and the state have a lower proportion of minority residents than the United States as a whole, as shown in Table 4-12. In 1990, 85 percent of the ROI population was white and 10 percent was black. All other racial groups totaled approximately 5 percent of the population. Approximately 7.5 percent of the population was of Hispanic ethnicity. In Connecticut, 87 percent of the population was white, 8.3 percent was black, and 4.6 percent was another racial group. Approximately 6.5 percent was of Hispanic ethnicity. In the United States as a whole, 80.3 percent of the population was white, 12.1 percent was black, and 7.6 percent was of other racial groups. Nine percent of the U.S. population was Hispanic.

The 1989 median household income in the ROI ranged from $38,471 in New Haven County to $49,891 in Fairfield County. The average household size was 2.6 persons in New Haven County and 2.7 persons in Fairfield County. The U.S. poverty threshold is $11,921 for a family of three (Grolier, 1995). The Census Bureau bases the poverty status of families and individuals on 48 threshold variables, including income, family size, number of family members under 18 and over 65 years of age, and amount spent on food.

In 1990, approximately 6.7 percent of the ROI residents were classified by the U.S. Census Bureau as living in poverty, slightly lower than the 6.8 percent in Connecticut and significantly lower than the 13.1 percent in the nation as a whole (U.S. DOC, Census, 1994).

Table 4-12
Race, Ethnicity, and Poverty Status for the SAEP ROI, Connecticut, and the United States

	ROI	Connecticut	United States
White	85.0%	87.0%	80.3%
Black	10.0%	8.3%	12.1%
American Indian, Eskimo, Aleut	0.2%	0.2%	0.8%
Asian or Pacific Islander	1.7%	1.5%	2.9%
Other	3.1%	2.9%	3.9%
Hispanic	7.5%	6.5%	9.0%
Living in Poverty	6.7%	6.8%	13.1%

Note: Persons of Hispanic origin may be of any race.
Source: U.S. DOC, Census, 1994.

Table 4-12 depicts race, ethnicity, and poverty status characteristics of the population in the ROI, Connecticut, and the United States.

4.14.5 Homeless and Other Special Programs

There are a number of programs and shelters in the area to assist individuals and families in need of temporary placement due to lack of a fixed, regular, or adequate residence, including the Bridgeport Rescue Mission and A.C.T. (Area Congregations Together) in Derby. None of these programs receive funding from SAEP.

4.14.6 Protection of Children

Executive Order 13045 seeks to protect children from disproportionately incurring environmental health risks or safety risks that might arise as a result of Army policies, programs, activities, and standards. Historically, very few children have been present at SAEP as visitors. The Army has taken safety precautions for those visiting children, including use of fencing, limitations on access to certain areas, and provision of adult supervision. In addition, Army regulations related to transferring property (e.g., lead-based paint regulations) help to ensure that past Army practices will not pose a future threat to children who subsequently use the property.

4.15 QUALITY OF LIFE

4.15.1 Schools

There are a total of 50 public school districts in the ROI, with approximately 240,700 students. Opportunities for higher education in the ROI include twelve 4-year colleges and four 2-year colleges, as well as a number of technical and professional schools. Among the universities in the area are Yale University and the state-supported Southern Connecticut State and Western Connecticut State.

4.15.2 Family Support

Because SAEP is contractor-operated, there are no Army-sponsored support services available at the installation.

4.15.3 Shops and Services

No shops or services are available at SAEP. However, there are major shopping centers in the towns of Stratford and Fairfield, as well as in the larger cities of Bridgeport, New Haven, Westbury, and Danbury. Financial and real estate services are also widely available throughout the ROI.

4.15.4 Recreation

There are no recreation facilities on the installation, but the region provides a vast array of outdoor and cultural activities. Several parks are very close to the town of Stratford, including Short Beach Park and Longbrook Park and Roosevelt Forest. Stratford's proximity to the coast provides boating and beach opportunities. The region also contains many historic and cultural institutions. Stratford is

within easy distance of a number of universities, each of which offers concert series, art exhibits, and lectures. In addition, the larger cities of the ROI, including New Haven, have permanent museums and symphony orchestras.

4.15.5 Visual and Aesthetic Values

SAEP is located in an urban, developed area adjacent to the Housatonic River. The visual character of many views in the area around SAEP has been disturbed by development at the site, including the views of the Housatonic River, the airport, and Long Island Sound. Views from the river's edge on the property northeast onto the Nell's Island marshes are still noteworthy (RKG Associates, 1997).

SECTION 5.0
ENVIRONMENTAL AND SOCIOECONOMIC CONSEQUENCES

5.1 INTRODUCTION

5.1.1 Background

This section describes the environmental and socioeconomic consequences of implementing the primary Army proposed action (disposal of excess property), the secondary action to be taken by other parties (property reuse), and the no action alternative. Interim lease activities are not included in this analysis because they are considered an interim activity. The proposed actions are evaluated in the context of the disposal alternatives and reuse scenarios presented in Section 3.0.

The discussion of consequences is divided into four major subsections:

- *No Action Alternative*. Analysis of impacts on resource areas associated with caretaker status (Section 5.2).
- *Disposal Alternatives*. Analysis of impacts on resource areas associated with implementation of the encumbered disposal alternative and the unencumbered disposal alternative (Section 5.3).
- *Reuse Scenarios*. Analysis of impacts on resource areas associated with reuse scenarios (alternatives) of various levels of intensity (Section 5.4).
- *Cumulative Effects*. Analysis of effects of each alternative action on all resource areas to evaluate cumulative effects likely to occur given the disposal and reuse of all excess installation property and other reasonably foreseeable actions within the affected environment/ROI (Section 5.6). Cumulative effects address past, present, and reasonably foreseeable near-future activities.

5.1.2 Definition of Key Terms

Evaluation of potential impacts on the physical, economic, and sociological environments as a result of disposal and reuse relies on the use of several key terms and concepts. These include direct and indirect impacts, short- and long-term impacts, cumulative effects, mitigation, and significance. Detailed discussions of these terms are provided in Appendix H.

5.1.3 Methodology for Reuse Alternatives

This EIS analyzes potential environmental impacts of implementing the SAEP LRA's reuse plan in terms of intensity-based probable reuse scenarios. Resource demands and outputs potentially affecting the environment that could occur as a result of implementing the reuse plan must be compared to the resource demands and outputs that have occurred in the past. Characteristics of the baseline have been identified to permit comparisons.

For matters related to infrastructure, baseline information is founded on there being 1,621,410 square feet of usable built space that requires electricity, water, sewer, heat, and other services. This baseline figure is derived by subtracting the installation's unmanned warehouse and storage space from its total

built space. The unmanned warehouse and storage space requires only nominal electrical service and no water, sewer, or heating services. Resource areas relying on infrastructure elements include electricity, fuel oil or coal, natural gas, steam, solid waste landfill or incineration capacity, industrial wastewater, industrial potable water, industrial traffic, and railways.

For matters related to population, baseline information is founded on an on-base population of 1,900 personnel, approximating the number of employees at SAEP at the time of announcement of closure. Resource areas relying on the population element include amounts of sanitary wastewater, potable water usage, employee traffic, and public transportation.

5.1.4 *Summary of Reuse Obligations and Limitations*

Army disposal of SAEP property would result in management of the property or ownership by public and private-sector entities. Except as encumbrances might affect reuse, upon transfer or conveyance the Army will no longer manage or control activities that would occur on the land. Elimination of the Army from land use decision making would have several ramifications.

Proponency. The Army would not be the proponent for future activities on SAEP lands. The SAEP LRA is the responsible proponent for future planned actions and development of the site. Other areas might be conveyed directly from the Army to the public or private sector, but this is not likely. The LRA would be responsible for determining and preparing the appropriate level of environmental impact analysis of proposed actions occurring on the property transferred to it. The entire range of possible actions that could occur, including land use planning and plan implementation, economic development, management of facilities, capital improvements, and further transfer or conveyance, would take place at the discretion of future facility owners and managers.

Applicable Controls. The Army and other federal agencies are obliged to follow federal land management practices and federal statutes pertaining to numerous resources on lands they own and operate. However, all SAEP lands would be transferred or conveyed to non-federal entities. Many federally sponsored protections would continue, such as the requirement to consult with the Connecticut SHPO in accordance with deed restrictions established for NRHP-eligible properties. Transfer or conveyance of SAEP lands to non-federal entities could also result in application of several additional statutes and regulations not previously applicable to federal ownership. For example, zoning criteria established by the town of Stratford would apply, as would requirements of the Connecticut Coastal Management Program (since SAEP is located wholly within Connecticut's coastal boundary) pertaining to enforceable policies regarding the preservation and protection of intertidal flats and tidal wetlands.

Magnitude of Redevelopment. Upon transfer or conveyance, the LRA would be fully responsible for redevelopment of the SAEP property conveyed to it. The magnitude of redevelopment would be a function of several factors, all of which, with the exception of certain encumbrances, would be beyond the control of the Army. Although this EIS evaluates reuse of the installation up to a medium intensity level of reuse by the LRA, the likelihood of such reuse's occurring is completely speculative. Some constraints identified in this EIS suggest that reuse above a medium intensity reuse level would be difficult to attain. As described in Section 3.4, redevelopment above a medium intensity reuse level is unrealistic to consider because of the disproportionate number of employees that would be concentrated in one location and the heavy volume of traffic that would be associated with such a high level of development in a single location. Moreover, reuse of such magnitude could be incompatible

with surrounding residential land uses. Analysis of a medium intensity reuse level does not constitute an endorsement by the Army that such redevelopment would be warranted or prudent.

Mitigation. Examination of potential impacts resulting from disposal and reuse of SAEP includes identification of mitigation actions that could avoid, reduce, or compensate for the severity of those predicted impacts. Upon disposal, and except as circumscribed by encumbrances, responsibility for implementation of mitigation actions would rest with the agencies or entities that receive the property. Where appropriate, this EIS identifies mitigation actions that subsequent managers or owners could implement to ameliorate adverse impacts. Whether such mitigation would be implemented, however, rests in the sound discretion of those future owners and managers. The Army's listing of mitigation actions that could be taken represents a beginning point for future owners and managers to consider as they assume stewardship of the property.

5.2 *NO ACTION ALTERNATIVE*

5.2.1 *Introduction*

Closure of SAEP will result in the Army's placing all installation assets into an inactive or "caretaker" status until the property disposal process is complete. Because the decision to close SAEP has been mandated by law, the no action alternative has been defined as maintaining the installation in caretaker status indefinitely. SAEP entered caretaker status in October 1998.

As described in Section 2.3.1, for a period of at least 12 months following operational closure the Army could provide for levels of maintenance that would ensure transfer of facilities in optimal condition for reuse. Subsequent to that time frame, however, the Army may reduce the level of maintenance to that consistent with federal government standards for excess and surplus property. This latter caretaker activity would be less intense than that immediately following closure and pending transfer of assets to the SAEP LRA. The caretaker status evaluated in this section refers to the latter type of maintenance, which could occur for an indefinite period until transfer or disposal of the installation.

The environmental consequences identified in this section reflect the absence of current mission-related or interim lease activities at the installation.

5.2.2 *Land Use*

Direct. Long-term minor beneficial impacts would be expected. The absence of an ongoing manufacturing mission at SAEP would not preclude interim use of the property by entities drawn by the LRA's marketing efforts. Caretaker status would represent opportunities for the initiation of redevelopment and management of planned growth by the community.

Indirect. Long-term minor adverse impacts would be expected. Continuation of caretaker status by the Army would occur upon failure of the Army to find a willing buyer or transferee of the property. In this event, Army lands would remain out of reach of the jurisdictions within Fairfield County and would represent a lost opportunity for raising of tax receipts to fund orderly development within the county.

5.2.3 Climate

No direct or indirect impacts would be expected.

5.2.4 Air Quality

Direct. Long-term minor beneficial impacts would be expected. The greatest influence of the no action alternative would be on local carbon monoxide levels, which would drop because of less crowded roadways/intersections. However, the no action alternative would not reduce total regional emission levels sufficiently to affect levels of pollutants such as ozone, which are correlated strongly with regional emission levels.

Caretaker activities at SAEP would involve fewer emission-producing activities than normal mission-related operations at the installation. Activities associated with infrastructure maintenance, site remediation, and security operations would contribute only minor quantities of emissions from the use of motor vehicles, paints and solvents, and small internal combustion engines such as snow removal equipment. Emissions from stationary sources such as the facility's boilers and space heaters would decrease considerably from their current levels. Creation of new air emission sources would not be expected as a result of caretaker activities.

Indirect. No impacts would be expected.

5.2.5 Noise

Direct. No impacts would be expected. Based on operations during the baseline condition, existing noise sources within SAEP are not affecting adjacent areas and thus the decrease in activity associated with caretaker status would not result in a noticeable net benefit.

Indirect. No impacts would be expected.

5.2.6 Geology

Direct. No impacts would be expected. Under the no action alternative, natural resources and land management programs would be continued, ensuring the preservation of existing vegetative covers and erosion controls.

Indirect. Long-term minor beneficial impacts would be expected. Beneficial impacts on soils would result as remedial actions are continued for existing hazardous waste sites on SAEP.

5.2.7 Water Resources

Direct. No impacts would be expected.

Indirect. Long-term minor beneficial impacts would be expected. Relative to operational activities on SAEP, caretaker activities involve less vehicle use, fewer manufacturing activities, and less warehouse use, thereby reducing potential sources of contaminants to be transported in storm water runoff. The reduction of contaminants in runoff would beneficially affect the quality of groundwater

and surface water. Improvement of groundwater quality could also occur due to the remediation of contaminated sites currently present on SAEP.

5.2.8 *Infrastructure*

Direct. Long-term minor adverse impacts would be expected. Under caretaker status, structures on the property would be maintained to the extent necessary to preserve valuable assets and support reuse and redevelopment for an initial period of time, after which the property would be maintained to the minimum level necessary for surplus government property. (Refer to Section 2.3.1 for further discussion of the level of maintenance provided under caretaker status.) This level of maintenance would be expected to be less than that which the property would receive if it were being used. Use of the infrastructure would decline, which would result in a lower demand for water, electricity, sewer, and gas, though the storm sewer system, including the OATP, would have to be kept operative to prevent flooding on the property.

Indirect. Long-term minor adverse and beneficial impacts would be expected. Structures (buildings, parking lots, road surfaces) and the infrastructure on the property could be expected to deteriorate gradually as a result of the generally minimal level of maintenance and use under long-term caretaker status. The lack of employees at the property under caretaker status would result in a decrease in traffic in the surrounding area. The loss of employee traffic to the property would also lessen the need to widen Main Street in the vicinity of the property and to change traffic signalization at entrances to the property (as suggested in a previously published traffic study). Maintaining the present width of Main Street would avoid an increase in impervious surface, having a beneficial effect on surface water due to reduced sediment content in storm water. Caretaker status would also indirectly benefit transportation safety by virtue of the fact that, except in limited circumstances involving interim leasing (itself having only a low probability of being extensive), there would be no new construction or activities that might conflict with airspace controls designed to ensure aviation safety in the vicinity of Sikorsky Memorial Airport.

5.2.9 *Hazardous and Toxic Materials*

Direct. Long-term minor beneficial impacts would be expected. The Army would continue to remediate any contaminated sites at SAEP. Deteriorated asbestos and lead-based paint would continue to be subject to Army management policies and practices. Any remedial activities such as repair of deteriorated asbestos-containing materials would be managed, and such materials would be disposed of, properly and in accordance with all applicable federal, state, and local regulations.

Under caretaker status, the generation of new hazardous/toxic wastes associated with manufacturing would decline to minimal levels, as would the storage of hazardous materials. The packaging, manifesting, and shipment of hazardous/toxic wastes from SAEP would decrease to negligible levels.

Indirect. No impacts would be expected.

5.2.10 *Permits and Regulatory Authorizations*

Direct. No impacts would be expected. Permits and regulatory authorizations would continue and would be subject to regulating agency procedures and rules.

Indirect. No impacts would be expected.

5.2.11 Biological Resources and Ecosystems

Direct. Long-term minor beneficial impacts would be expected. With the installation in caretaker status, the reduced human presence would benefit biological resources by creating less of a disturbance. This would especially be the case for shorebirds and migratory waterfowl that use intertidal flats habitat.

Indirect. Long-term minor beneficial impacts would be expected. Reduced use of parking areas on SAEP would result in a reduction in vehicle-related pollutants, such as lubricants, fuels, and antifreeze, in storm water runoff, which otherwise could adversely affect adjacent intertidal flats.

5.2.12 Cultural Resources

Direct. Long-term minor beneficial impacts would be expected. Cessation of operations would reduce the probability that construction or renovation activities, except for environmental restoration activities, might affect the integrity of NRHP-eligible properties at SAEP.

Indirect. Long-term minor adverse impacts could potentially occur when those maintenance activities traditionally conducted for an active installation cease at SAEP. NRHP-eligible properties at SAEP will be maintained in accordance with caretaker measures stipulated in an agreement document between the Army, Connecticut SHPO, and Advisory Council (see Appendix B).

5.2.13 Economic Development

Direct. Long-term minor adverse impacts would be expected. Under this alternative, the Army would not dispose of the property, but would maintain it in caretaker status. Because there would be no reuse of the property, minor adverse impacts would result from forgone economic development. Implementation of caretaker status would also result in a decrease in local expenditures by the installation.

Indirect. Long-term minor adverse impacts would be expected. Forgone direct employment would translate into losses in indirect employment and income.

5.2.14 Sociological Environment (Including Environmental Justice and Protection of Children)

Direct. Long-term minor adverse impacts would be expected. Due to the reduced number of employees present on a daily basis, there could be an increase in vandalism, trespassing, or theft. Reduced staffing could also result in less timely discovery of fire and longer fire fighting response times. Response times could also increase for medical emergencies for the caretaker force. No impacts on demographics, housing, environmental justice, or homeless and other special programs would be expected. The Army's proposed action to dispose of property at SAEP essentially consists of transferring or conveying title of real estate to other entities. The no action alternative does not involve activities that would pose any disproportionate environmental health risks or safety risks to children.

Indirect. No impacts would be expected.

5.2.15 *Quality of Life*

No direct or indirect impacts would be expected.

5.2.16 *Cumulative Effects*

Cumulative environmental effects are those which result from the environmental effects of an action when considering past, present, or reasonable foreseeable future actions, regardless of the agencies or parties involved. In other words, cumulative effects can result from individually minor but collectively potentially significant impacts taking place over time or within the same general time frame at different places within an ROI.

- *Past actions.* "Past actions" are defined as actions within the region of influence for a particular resource that occurred before the decision to close SAEP. These include past actions at SAEP and past demographic, land use, and development trends in the areas that surround the facility. Unless otherwise indicated, the characteristics and results of these past actions are described in Section 4.0, Affected Environment.

- *Present actions.* "Present actions" include (1) current operations at SAEP that will continue until closure and (2) current resource management programs, land use activities, and development projects that are being implemented by other governmental agencies and the private sector (where they can be identified) within the region. Unless otherwise indicated, the characteristics and results of these current actions are described in Section 4.0, Affected Environment.

- *Reasonably foreseeable future actions.* To avoid undue speculation, "reasonably foreseeable future actions" are those which have been approved for implementation by appropriate authority and that can be identified and defined with respect to time frame and location.

Since there is a surplus of vacant facilities and warehouses within the ROI, and much of the planned future development within the ROI involves redevelopment or revamping of these existing structures, caretaker status at SAEP would not result in cumulative effects within the ROI. Implementation of the no action alternative would contribute only minimally to beneficial effects on land use, infrastructure, air quality, biological and cultural resources, and geology and water resources at SAEP and in the immediate vicinity of the town of Stratford. Continuation of caretaker status indefinitely would contribute negatively to economic recovery and growth within the town of Stratford. However, these impacts cumulatively would not have enough of an impact to significantly affect the ROI. Thus, no cumulative effects would be associated with caretaker status at SAEP.

5.3 *DISPOSAL ALTERNATIVES*

5.3.1 *Introduction*

Section 3.1 discusses the rationale associated with the development of alternatives to the primary Army action of disposal of excess property at SAEP. The encumbered disposal alternative has been formulated to consider the type and degree of reuse constraint to be imposed on future owners as a condition of disposal and reuse. Encumbrances are imposed by the Army to protect future Army requirements or interests; to make available as soon as possible, through expedient disposal and reuse,

BRAC property that is determined to be available and suitable for the planned reuse; to transfer the responsibility to protect important natural or cultural resources to future owners through the use of deed restrictions or covenants; or to meet special mitigation requirements or additional deed restrictions that are mutually agreed upon by the Army and a regulatory agency. The unencumbered disposal alternative evaluates impacts that would be associated with disposal of the property without constraints on reasonably foreseeable reuse. Encumbrances applicable to SAEP property are identified in Section 3.3.1.

Sections 5.3.2 through 5.3.16 identify the potential direct and indirect impacts of encumbered and unencumbered disposal of SAEP property.

5.3.2 Land Use

Encumbered, Direct. Long-term minor adverse and minor beneficial impacts would be expected. Encumbrances related to historical resources, remedial activities, lead-based paint, asbestos-containing materials, wetlands, groundwater use prohibition, and easements and rights-of-way could constrain development of the BRAC property to less than its highest and best economic use. The historical resources encumbrance could hinder disposal of the property if requirements for preservation of Buildings 2 and 16 were viewed negatively by prospective users of the property. Similarly, the asbestos-containing material and lead-based paint encumbrances, as well as the wetlands, groundwater use prohibition, and easements and rights-of-way encumbrances, could be viewed by prospective users of the property as burdens, thereby reducing the size and diversity of the entities potentially having interest in the property. The use of the remedial activities encumbrance could signal the incomplete status of cleanup of hazardous substance contamination. This, too, would have a dampening effect on the types of activities that would move to the property.

Use of the land use restriction encumbrance would not likely affect land use since the present zoning of the site for light industrial purposes would not be expected to change. Given the extent of light industrial activities in the vicinity, as well as the expected long-term presence of the airport, attempts to develop the site for residential purposes would not be anticipated.

Long-term minor beneficial impacts would result from use of the easements for public access and public park encumbrances. Creation of additional park property along the Housatonic River would tie in with other park settings in the vicinity and contribute to their value. Increases in the inventory of park lands at appropriate sites would generally aid land use planning by making land use decisions based on inherent characteristics of land (i.e., adjacent to rivers bodies). Use of these easements would be consistent with state policies for coastal areas and would enhance land uses advocated by the public.

Encumbered, Indirect. Long-term minor beneficial impacts would be expected. To the extent that encumbrances would be viewed by potential property users as operational or managerial burdens, the likelihood for reuse of the property would be reduced. The resulting low levels of activity at the site would create a minor beneficial effect in favor of wildlife species on or near SAEP. Imposition of the aviation easement encumbrance, while reducing the potential variety of activities that might occur at the site and setting limits on the height of structures, would indirectly benefit transportation safety related to aviation activities at Sikorsky Memorial Airport.

Unencumbered, Direct. Long-term minor beneficial and short-term minor adverse impacts would be expected. In the long-term, elimination or removal of encumbrances that constrain development would permit greater potential for flexibility in land use planning. Transfer or conveyance of SAEP property without restrictions could result in its having a higher economic value. Elimination of the remedial activities encumbrance, however, would necessitate completion of hazardous substance site cleanup which, by law, is required before transfer or conveyance. This would delay return of the property to the inventory of usable lands and forestall reuse. Unencumbered disposal would not be expected to affect land use patterns adjacent to the SAEP site.

Unencumbered, Indirect. Long-term minor adverse impacts would be expected. Elimination or removal of the wetlands encumbrance could potentially expose biological resources to loss or damage, resulting in degradation or loss of land conservation values.

5.3.3 Climate

No direct or indirect impacts would be expected for either encumbered or unencumbered disposal.

5.3.4 Air Quality

Encumbered Disposal, Direct. Long-term minor beneficial impacts would be expected. The remedial activities encumbrance would provide for continued access for the federal government to attend to equipment used in remediation of hazardous waste at locations transferred for reuse. Depending on the nature of the remediation and the type of treatment, this equipment has the potential to release trace amounts of contaminants into the air. It is not always possible to achieve complete breakdown of the pollutants in contaminated soil or groundwater. The government will need access to the remediation equipment to ensure the proper operation and maintenance of the air pollution control measures used to minimize the release of these contaminants. Use of the encumbrances related to easements for public access and public parks would result in the creation of areas where there would be no construction of stationary air emission sources such as have existed at the site in the past.

Encumbered Disposal, Indirect. No impacts would be expected.

Unencumbered Disposal, Direct. Short-term minor adverse impacts would be expected. Elimination of the remedial activities encumbrance could hinder cleanup efforts if the new property owners denied the government access to areas of the property where remedial actions were being undertaken. Depending on the nature of the remediation and the type of treatment, the equipment used for cleanup efforts has the potential to release trace amounts of contaminants into the air. Without the remedial activities encumbrance, the Army might be denied the necessary access to the remediation equipment to ensure the proper operation and maintenance of the air pollution control measures used to minimize the release of these contaminants. Short-term adverse impacts on air quality could result if the equipment were not properly maintained.

Unencumbered Disposal, Indirect. No impacts would be expected. Section 176(c) of the Clean Air Act requires federal agencies to ensure that their actions are consistent with the act and with federally enforceable air quality management plans. EPA's General Conformity Rule requires a formal conformity determination document for federal actions occurring in nonattainment or maintenance areas (i.e., areas that are violating or have in the past violated the federal ambient air quality standards). Certain federal actions are exempt from this requirement, however, because they would

result in no emission increase or an increase that is clearly *de minimis* (a level of emissions considered not significant and below the established thresholds for criteria pollutants). Among the recognized exemptions are "transfers of ownership, interests and titles in land, facilities, and real and personal properties, regardless of the form or method of transfer" (40 CFR 93.153(c)(2)(XIV)). Because the Army's proposed disposal action will involve the sale or other title transfer of property, a Record of Non-Applicability concerning the General Conformity Rule has been prepared (see Appendix I).

5.3.5 *Noise*

Encumbered Disposal, Direct. Long-term minor beneficial impacts would be expected. Use of the public park easement encumbrance would, in effect, create a quiet zone along the site's waterfront on the Housatonic River. Assuming that only passive activities would be allowed (consistent with park development and use), the park would provide a direct benefit to wildlife inhabiting or foraging along the intertidal flats areas. Activities made possible by the Army's use of the remedial activities encumbrances are unlikely to affect noise generation levels.

Encumbered Disposal, Indirect. No impacts would be expected.

Unencumbered Disposal, Direct. No impacts would be expected. The Army would use the public park easement encumbrance only in the event transfer of property under a public benefit conveyance failed to occur.

Unencumbered Disposal, Indirect. No impacts would be expected.

5.3.6 *Geology*

Encumbered Disposal, Direct. No impacts would be expected.

Encumbered Disposal, Indirect. Long-term minor beneficial impacts would be expected. Beneficial effects on fill deposits and underlying soils would occur as a result of the remedial action encumbrance ensuring cleanup of hazardous waste sites that occur on SAEP.

Unencumbered Disposal, Direct. Long-term minor adverse impacts would be expected. Removal of the remedial action encumbrance could hinder cleanup efforts, affecting the Army's ability to adequately treat contaminated soils at SAEP.

Unencumbered Disposal, Indirect. No impacts would be expected.

5.3.7 *Water Resources*

Encumbered Disposal, Direct. Long-term minor beneficial impacts would be expected. Impacts on groundwater quality would occur as a result of the remedial action encumbrance ensuring cleanup of contaminated groundwater. Use of the wetlands encumbrance would ensure appropriate protections for wetland areas, which provide a natural means of improving water quality. Under the groundwater use prohibition encumbrance, groundwater would not be pumped to the surface, thereby maintaining its location (in large part) for remedial actions.

Encumbered Disposal, Indirect. Long-term minor beneficial impacts would be expected. The remedial activities encumbrance would permit the Army to perform necessary operations and maintenance work at hazardous substance sites. This would ensure that, over the long term, surface water and groundwater would be restored to conditions consistent with federal and state water quality standards. Also, imposition of the groundwater use prohibition encumbrance would protect human health.

Unencumbered Disposal, Direct. Long-term minor adverse impacts would be expected. Removal of the remedial action encumbrance could hinder cleanup efforts, affecting the ability to adequately treat contaminated groundwater. In addition, elimination of the wetlands (intertidal flats) encumbrance could result in long-term adverse impacts on water. In the absence of the wetlands encumbrances, potential construction of buildings or other structures adjacent to or within wetlands could result in direct adverse impacts on water and habitat quality. However, the intertidal flats would still be regulated under Section 404(b)(1) of the Clean Water Act under the unencumbered disposal alternative. Army Corps of Engineers permits would be required for dredge or fill activities in this area. In addition, the intertidal flats would be regulated under the Connecticut Tidal Wetlands Act, Connecticut General Statutes (C.G.S.), Sections 22a-28 through 22a-35, which regulates activities in tidal wetlands. The Tidal Wetlands Act does not apply to the unvegetated intertidal flat, but only to resource areas that meet the definition found in C.G.S. 22a-29(2). The intertidal flats are further regulated by state statutes regarding structures, dredging and fill in tidal, coastal, or navigable waters (C.G.S.. 22a-359 through 22a-363f). Permits issued under either of these programs must be consistent with the enforceable policies and standards of the Connecticut Coastal Management Act. Upland development at the SAEP site would also qualify for the storm water general permit program, and appropriate registration would be required.

Unencumbered Disposal, Indirect. Long-term minor adverse impacts would be expected. Failure to impose an encumbrance prohibiting the use of groundwater until completion of remedial actions would unnecessarily expose people to health risks presented by the contaminants in the groundwater.

5.3.8 Infrastructure

Encumbered Disposal, Direct. Long-term minor beneficial impacts would be expected. Several portions of infrastructure systems at SAEP use asbestos-containing material (e.g., heating system thermal insulation) and lead-based paint (e.g., installed equipment). Imposition of encumbrances related to asbestos-containing material and lead-based paint would protect human health by providing for informed management decisions regarding workplace facilities. Use of the avigation easement encumbrance would contribute to aviation safety in the vicinity of Sikorsky Memorial Airport.

Encumbered Disposal, Indirect. Long-term minor beneficial impacts would be expected. Reliance on the easements and rights-of-way encumbrance would allow continuation of real estate agreements entered into previously and would support the rapid reuse of the BRAC property. Use of the encumbrance would avoid removal or relocation of infrastructure elements (e.g., sewer lines). In addition, avoidance of such terrain-disruptive action would minimize potential adverse effects on soils and surface water quality.

Unencumbered Disposal, Direct. Long-term minor adverse impacts would be expected. The absence of encumbrances related to ACM and LBP could result in human exposure to these health hazards.

Unencumbered Disposal, Indirect. Long-term minor adverse impacts would be expected. Elimination of the easements and rights-of-way encumbrance could result in grantees' having to remove or relocate certain infrastructure elements, which would pose substantial costs to a future management entity. In addition, terrain-disruptive actions could potentially result in adverse impacts on soils and surface water quality.

5.3.9 Hazardous and Toxic Materials

The presence of hazardous substances is a condition that is neither directly nor indirectly affected by the disposal process. CERCLA requires that before property is transferred, necessary remedial actions must be completed or remedial action must be in place, proven to be operating effectively, and approved by the EPA Regional Administrator (see also footnote in Section 2.3.2). If additional remediation is needed beyond the date of transfer, the federal government will be responsible only for remediation that is attributable to activities of the federal government prior to transfer. CERCLA also requires that on properties where hazardous materials were released or disposed of, the type and quantity of material and time at which release or disposal occurred must be disclosed in the deed.

Regardless of the type of disposal, the Army is under a mandate to characterize contamination, define the appropriate remediation in coordination with regulatory agencies, and conduct required remediation.

DoD policy regarding LBP and ACM is to manage them in a manner protective of human health and the environment. DoD will manage LBP at SAEP in accordance with the provisions of the Residential Lead-Based Paint Hazard Reduction Act of 1992. LBP hazards and the results of the inspection will be provided to prospective purchasers or transferees. Residential information pertaining to ACM on the property will be provided to prospective purchasers or transferees, and where property is determined to be in such condition as to pose a threat to human health at the time of transfer, it will be remediated. Any additional remediation by future changes in reuse would be the responsibility of the new landowner.

Radioactive material contamination is also subject to Army policy and practices and, where required, will be remediated in compliance with Nuclear Regulatory Commission requirements.

Encumbered Disposal, Direct. No impacts would be expected.

Encumbered Disposal, Indirect. Long-term minor adverse and minor beneficial indirect impacts would result from the imposition of hazardous-substance-related encumbrances. Imposition of the remedial activities, LBP, and ACM encumbrances could adversely affect land use by constraining development of the BRAC property to less than its highest and best economic use. Those encumbrances could be viewed by prospective users of the property as burdens, thereby reducing the size and diversity of the entities potentially having interest in the property. The use of the remedial activities encumbrance would signal the incomplete status of cleanup of hazardous substance contamination. This, too, would have a dampening effect on the types of activities that would move to the property.

Long-term minor beneficial impacts would also be expected. Beneficial effects on fill deposits, underlying soils, and groundwater would occur as a result of the remedial activities encumbrance by ensuring cleanup of hazardous waste sites that occur on SAEP. Several portions of infrastructure

systems at SAEP use ACM (heating system thermal insulation) and LBP (buildings). Imposition of encumbrances related to ACM and LBP would protect human health by providing for informed management decisions regarding workplace facilities. The remedial activities encumbrance would allow economic development activities to begin immediately, thereby having a beneficial effect on local sales volume, employment, and income, and could provide jobs for persons associated with cleanup activities. Moreover, disposal of the property could also result in the addition of resources to the local tax base.

Unencumbered Disposal, Direct. No impacts would be expected.

Unencumbered Disposal, Indirect. Long- and short-term minor adverse impacts and long-term minor beneficial indirect impacts would result from the removal of hazardous-substance-related encumbrances. Removal of the remedial activities, LBP, and ACM encumbrances would require that those hazardous substances be remediated before transfer of the property. The remediation of soil and groundwater contamination, as well as the removal of LBP and ACM, could have a long-term beneficial effect on land use by eliminating development constraints and allowing development of the BRAC property to its highest and best economic use. However, in the short term, removal of those encumbrances would significantly delay the transfer of property to the community and forestall economic recovery until such time that the hazardous substances were remediated (which could take several years). The removal of these encumbrances could also have long-term adverse effects on human health and safety.

5.3.10 Permits and Regulatory Authorizations

Encumbered Disposal, Direct. Long-term minor beneficial impacts would be expected. Permits and regulatory authorizations to continue activities previously conducted by the Army would be subject to procedures and rules of the regulating agencies. Army imposition of an encumbrance related to wetlands, amounting to a notification that owners would have to adhere to Section 404 permitting requirements for activities in or related to wetlands, would provide assurance of protection for wetland resources.

Encumbered Disposal, Indirect. No impacts would be expected.

Unencumbered Disposal, Direct. No impacts would be expected.

Unencumbered Disposal, Indirect. No impacts would be expected.

5.3.11 Biological Resources and Ecosystems

Encumbered Disposal, Direct. Long-term minor beneficial impacts would be expected. Use of the wetlands encumbrance would provide notification to future property owners of their obligation to obtain permits under Section 404 of the Clean Water Act and, thereby, help to preserve and protect wetland areas at SAEP, including the intertidal flats.

Encumbered Disposal, Indirect. Long-term minor beneficial impacts would be expected. In recognizing the encumbrance protecting wetlands, wildlife that use wetland habitats would indirectly benefit. These species, as well as those located in proximity to a wetland, would also benefit if the encumbrance requires a protective buffer around each wetland. Use of the public park easement

encumbrance would result in creation of a park, which would indirectly benefit wildlife inhabiting and foraging in the intertidal flats areas. The establishment of a park would also beneficially contribute, though in only a minor way, to partial reunification of ecologically sensitive areas along the Housatonic River that historically have been fragmented by industrialization and development.

Unencumbered Disposal, Direct. Long-term minor adverse impacts would be expected. Disposal of SAEP without a wetlands (intertidal flats) encumbrance would reduce the level of protection of these habitats on SAEP. However, the intertidal flats would still be regulated under Section 404 (b)(1) of the Clean Water Act under the unencumbered disposal alternative. Department of the Army permits would be required for dredge or fill activities in this area. In addition, the intertidal flats would be regulated under the Connecticut Tidal Wetlands Act, C.G.S. Sections 22a-28 through 22a-35, which regulates activities in tidal wetlands; Structures, Dredging and Fill in Tidal, Coastal or Navigable Waters, C.G.S. Sections 22a-359 through 22a-363f, which regulates dredging and erection of structures and placement of fill in tidal, coastal, and navigable waters; and the Stream Channel Encroachment Line Program, C.G.S. Sections 22a-342 through 22a-349a, which requires permits to develop within delineated stream channel encroachment lines.

Unencumbered Disposal, Indirect. Long-term minor adverse effects would be expected. Under this alternative, wildlife species that use wetland habitats could be adversely affected by the removal of the wetlands encumbrance and resulting reduction in source protection.

5.3.12 Cultural Resources

Encumbered Disposal, Direct. No impacts would be expected. An MOA concerning the BRAC disposal of SAEP historic properties has been concluded between the U.S. Army Materiel Command, the Advisory Council on Historic Preservation, and the Connecticut SHPO. Under this MOA, a preservation covenant for the NRHP-eligible properties (Buildings 2 and 16) will be included in the instrument of transfer. The actual preservation covenant to be used for the transfer of SAEP historic properties to non-federal entities is provided as an attachment to the MOA included in Appendix B.

Encumbered Disposal, Indirect. Long-term minor adverse impacts could occur. Under the MOA described above, a preservation covenant for the NRHP-eligible properties would be included in the instrument of transfer. However, if preservation deed restrictions are used, the new owners might seek to lessen or remove the preservation deed restriction in the future, resulting in a degradation or loss of any properties determined eligible for the NRHP. If the new owner(s) finds that the NRHP-eligible properties cannot be preserved intact, the preservation covenant requires the owner(s) to consult with the Connecticut SHPO to amend the MOA before proceeding with any action that might affect the integrity of the properties. Measures worked out between the SHPO and the new owner(s) would either continue to protect the properties or establish acceptable recordation measures to mitigate for their loss.

Unencumbered Disposal, Direct. Long-term minor adverse impacts would be expected. Under this alternative, NRHP-eligible properties would be adversely affected by the withdrawal of federal protection. If SAEP historic properties must be disposed of without preservation covenants, the Army, the Connecticut SHPO, and the ACHP would consult in accordance with Section 106 of the NHPA to determine appropriate measures for treating the loss of these properties.

Unencumbered Disposal, Indirect. Long-term minor adverse impacts would be associated with the potential degradation or loss of properties eligible for the NRHP. As a result, people living near SAEP would lose these components of their historical heritage. The adverse impacts of the undertaking could be mitigated to an insignificant level by implementing appropriate treatment measures, which would be determined through Section 106 consultations between the Army, the Connecticut SHPO, and the ACHP.

5.3.13 Economic Development

Encumbered Disposal, Direct. Short-term minor beneficial and long-term minor adverse impacts would be expected. Under some circumstances, the Army may transfer property with deed restrictions related to implementing an approved remedial action or relating to a situation in which a remedy is in place and working effectively but the contamination has not yet been fully remediated. Deed restrictions would be required to ensure access for operation and maintenance of remedial measures. The remedial activities encumbrance would therefore assist in the early economic redevelopment of the BRAC property, which would have a beneficial effect on local sales volume, employment, and income and could provide jobs for persons associated with cleanup activities. Moreover, disposal of the property could also result in the addition of resources to the local tax base. The wetlands and historic resource encumbrances, however, would limit the development potential of the area, resulting in forgone economic opportunity. The LBP and ACM encumbrance and groundwater use prohibition would also constrain the future development of the property.

Encumbered Disposal, Indirect. Long-term minor beneficial impacts would be expected. Use of the avigation easement encumbrance would contribute to aviation safety, thereby enhancing operations at Sikorsky Memorial Airport. Improvements in safety would, in turn, assist in further use and development of the airport for the economic benefit of the jurisdictions most directly benefiting from increased airport operations.

Unencumbered Disposal, Direct. Long-term minor beneficial and short-term minor adverse impacts would be expected. Removal of the historic resources, wetlands, ACM, LBP, and groundwater use encumbrances would increase the development potential of the site. However, the Army's inability to transfer the property by deed prior to completion of remedial activities would directly affect the potential reuse of SAEP, resulting in the forgone economic benefit of immediate reuse.

Unencumbered Disposal, Indirect. Long-term minor beneficial and adverse impacts would be expected. Removal of encumbrances that inhibit redevelopment would result in increased development potential, thereby leading to future increases in sales volume, employment, and local income. However, elimination of the remedial activities encumbrance, thereby rendering the Army unable to return to the property periodically to perform cleanup actions, would preclude transfer of the property by deed. This would directly affect the reuse of portions of the installation.

5.3.14 Sociological Environment (Including Environmental Justice and Protection of Children)

Encumbered Disposal, Direct. Long-term minor beneficial impacts would be expected. Imposition of encumbrances concerning ACM and LBP would ensure protection of human health in the workplace. Use of the groundwater use prohibition encumbrance would protect occupants of property where contamination has reached groundwater supplies. Encumbrances would not contribute to creation of disproportionately high or adverse human health or environmental impacts on minority or

low-income populations of the surrounding communities. No impacts on public services would be expected.

The Army's proposed action to dispose of property at SAEP essentially consists of transferring or conveying title of real estate to other entities. The proposed disposal action does not involve activities that would pose any disproportionate environmental health risks or safety risks to children. Imposition of the lead-based paint encumbrance would result in property recipients' actions to ensure the elimination of any hazards associated with LBP that might affect children or other persons occupying residential structures.

Encumbered Disposal, Indirect. No impacts would be expected.

Unencumbered Disposal, Direct. Long-term minor adverse and beneficial impacts would be expected. Elimination of the asbestos-containing material encumbrance could result in workplace exposure harmful to human health and might affect children or other persons occupying structures. Nonuse of the lead-based paint or asbestos-containing material encumbrances, which could occur only upon completion of abatement projects, would reflect elimination of potential LBP hazards to employees. No impacts on environmental justice or homeless and other special programs would be expected.

Unencumbered Disposal, Indirect. No effects would be expected.

5.3.15 Quality of Life

Encumbered Disposal, Direct. Long-term minor beneficial impacts would be expected. Protection of wetlands would maintain the aesthetic resources of the area. Imposition of the public park easement encumbrance would result in creation of additional park areas for the enjoyment of Stratford residents. No impacts on schools, family support, or shops and services would be expected.

Encumbered Disposal, Indirect. No impacts would be expected.

Unencumbered Disposal, Direct. No impacts would be expected.

Unencumbered Disposal, Indirect. No impacts would be expected.

5.3.16 Cumulative Effects

As defined in Section 5.2.16, cumulative impacts are considered those impacts which result from the incremental effects of an action when considering past, present, or reasonably foreseeable future actions, regardless of the agencies or parties involved. In other words, cumulative impacts can result from individually minor, but collectively significant, factors taking place over time as they may relate to the entire installation and ROI. As stated in Section 5.2.16, current and proposed development activities within the ROI are limited compared to those proposed for SAEP. The following section summarizes the potential cumulative impacts for the two disposal alternatives, and within each resource area, where appropriate.

Encumbered Disposal. Long-term beneficial impacts would be expected. Use of the air navigation encumbrance, in conjunction with proposed improvements to enhance safety at Sikorsky Memorial

Airport, would result in beneficial effects on transportation safety and economic development related to the airport. Continued protection of historic properties at SAEP through transfer of the installation with a historic properties encumbrance would have a positive cumulative effect on the architectural history of the ROI.

Unencumbered Disposal. Long-term minor adverse impacts would be expected. Loss of historic properties at SAEP through unencumbered disposal could represent a negative cumulative effect on the architectural history of the ROI. If SAEP National Register-eligible historic properties were subject to unencumbered disposal, the Army would consult with the Connecticut SHPO and the ACHP in accordance with Section 106 of the NHPA to determine appropriate measures for treating the potential loss of these properties. Mitigation measures undertaken as a result of SHPO and ACHP consultations would reduce the adverse effects on these properties to an insignificant level.

5.4 *REUSE ALTERNATIVES*

5.4.1 *Introduction*

The reuse scenarios evaluated in this document are referenced as the medium intensity reuse scenario (MIR), medium-low intensity reuse scenario (MLIR), and low intensity reuse scenario (LIR). As noted in Section 3.4.1, these reuse scenarios are not intended to predict the exact nature or pattern of reuse activities that will ultimately occur at SAEP. The reuse intensity alternatives are described in sufficient detail to inform the Army decision maker of the potential secondary effects of reuse resulting from the primary action of disposal.

Sections 5.4.2 through 5.4.16 identify and discuss the environmental or socioeconomic consequences of the three reuse scenarios. The reuse scenarios are evaluated based on the assumption that the Army would implement its preferred alternative, encumbered disposal. Reuse of SAEP property is proposed to include waterfront park and museum uses, office use, and research and development uses. In the following sections, the LRA's reuse plan and examples of the range of activities that might occur within a given category are discussed under each reuse intensity scenario (MIR, MLIR, and LIR) and alternative impact (direct and indirect) as they might apply. Full build-out to MIR could occur over a 20-year time frame.

Stratford selected its approach to reuse after deliberation of four means to achieve its redevelopment objectives: Alternative 1 (industrial reuse of existing structures), Alternative 2 (industrial reuse and limited new development), Alternative 3 (major new office/research and development with limited reuse of existing structures, and Alternative 4 (comprehensive site redevelopment). Alternatives 1 through 3, involving progressively less adaptive uses of existing conditions, would be environmentally less intrusive than the nearly total demolition of existing structures envisioned under Alternative 4. Analysis of reuse by reference to LIR, MLIR, and MIR, while encompassing from an environmental effects viewpoint the range of adaptation and complete demolition that would occur, is premised on the alternative selected by the community.

Analysis in this section is premised on the assumption that property disposal will occur to the LRA as indicated in BRAC law. There are potentially three realty interests, however, that could obtain a result different from this general procedure. The Army has not, however, determined the ultimate recipient of SAEP property. Interests that might be conveyed or transferred to an entity other than the LRA include a small portion of real estate along the southern border of the south parking lot (to

facilitate establishment of a taxiway and runway safety area at the northeastern end of Runway 6-28), a small parcel (less than 3 acres) at the intersection of Main Street and Sniffens Lane (to facilitate rerouting of Main Street onto Sniffens Lane and around the northeastern end of Runway 6-24), and imposition of an easement for avigation (to support aviation safety). Where appropriate in this section, these possible dispositions are evaluated as part of the reuse intensity scenarios. Specific environmental impacts attributable to transfer or conveyance of property interests to an entity other than the LRA would not occur if all property interests were transferred or conveyed to the LRA. The evaluations of non-LRA property transfers do not indicate a decision on the part of the Army to dispose of property to entities other than the LRA but, rather, help to provide a full understanding of the potential environmental impacts of reuse of the SAEP property.

As defined in Section 5.1.1, cumulative effects are considered those which could result from the incremental effects of an action when considering past, present, or reasonably foreseeable future actions, regardless of the agencies or parties involved. Cumulative effects can result from individually minor, but collectively significant, actions taking place over time as they may relate to the entire installation and in the region. As stated in Section 5.4.16, current and proposed development activities within the region appear limited compared to those proposed for SAEP. The following sections summarize the potential cumulative impacts for each action, and within each resource area, where appropriate.

5.4.2 Land Use

Medium Intensity, Direct. Long-term minor beneficial impacts would be expected. At an FAR of 0.30, 993,168 square feet of floor space would be present on the property. This would entail removal of 45 percent of the existing floor space or redevelopment to 55 percent of the existing floor space. This level of development would increase the open space on the property. The decrease in floor space density would improve the suitability of the property for uses other than industrial and improve the aesthetic aspect of the property. Adaptive reuse of the site, which would lengthen the time until complete redevelopment under the LRA's Alternative 4 would occur, would permit a gradual transition from manufacturing use to other light industrial uses.

Transfer of a small portion of the south parking lot adjacent to Runway 6-24 to any entity other than the LRA would not be expected to cause any serious disruption or impairment to redevelopment of the site. The parcel requested to support runway safety occurs at the "fringe" of the SAEP property in the area most prone to airport noise and is therefore likely the least desirable parcel for development.

Medium Intensity, Indirect. Long-term minor beneficial impacts would be expected. The decreased density of structures on the property and its redevelopment, along with improvements generally associated with redevelopment (such as landscaping), could result in increased values of surrounding property. The increased open space on the property would also provide an opportunity to improve on-site traffic circulation, which at present is poor. Transfer of property to non-LRA recipients to support improvements at the airport would indirectly benefit transportation safety and, subsequently, economic development.

Medium-Low Intensity, Direct. Long-term minor beneficial impacts would be expected. At an FAR of 0.10, 331,056 square feet of floor space would be present on the property. This would entail removal of 80 percent of the existing floor space or redevelopment to 20 percent of the existing floor

space. This level of development would represent a significant reduction in the density of structures on the property. The resultant increase in open space would increase the natural aspect of the property and could increase the value of adjacent property.

Medium-Low Intensity, Indirect. Long-term minor beneficial impacts would be expected. The increase in open space on the property at this level of reuse could increase its value to wildlife, increase the acreage of public open space in the city, and improve on-site traffic circulation.

Low Intensity, Direct. Long-term minor beneficial and adverse impacts would be expected. At an FAR of 0.05, 156,618 square feet of floor space would be present on the property. This would entail removal of 90 percent of the existing floor space or redevelopment to 10 percent of the existing floor space. This would represent a dramatic change in the land use aspect of the property. For an aesthetic perspective, reuse to only 10 percent of existing floor space would be positive; however, from an economic view of land use, it would be considered adverse. Impacts similar to but greater than those mentioned for the MLIR scenario would result.

Low Intensity, Indirect. Long-term minor beneficial impacts would be expected. Impacts similar to but greater than those mentioned for the MLIR scenario would result.

5.4.3 Climate

No direct or indirect impacts would be expected under the MIR, MLIR, or LIR scenarios.

5.4.4 Air Quality

Medium Intensity, Direct. Long-term minor beneficial impacts would be expected. Under the MIR scenario, emissions of NAAQS pollutants would likely be less than those under baseline conditions because land use would shift from industrial to office use and the number of employees would be approximately unchanged. Any new direct emissions related to reuse would be reviewed and permitted by the state, which would ensure the emissions do not unacceptably affect local and regional air quality.

Transfer of property to support rerouting of Main Street would result in minor beneficial effects on air quality by allowing vehicles smooth traffic flow along Main Street. Maintenance of nearly constant driving speeds and avoidance of braking, stopping and idling at stoplights, and acceleration reduce engine fluctuations and, hence, additional air emissions.

Medium Intensity, Indirect. No impacts would be expected. Construction activities would create temporary sources of fugitive dust and vehicular emissions, but common methods for controlling fugitive dust would keep total emissions to low levels and limit them to the immediate project area.

Medium-Low Intensity, Direct. Long-term minor beneficial impacts would be expected. Under the MLIR scenario, emissions of NAAQS pollutants would likely be less than those under baseline conditions because land use would shift from industrial to office use and the number of employees would be approximately 20 percent of the number under baseline conditions.

Medium-Low Intensity, Indirect. No impacts would be expected.

Low Intensity, Direct. Long-term minor beneficial impacts would be expected. Under the LIR scenario, emissions of NAAQS pollutants would likely be less than those under baseline conditions because the land would shift from industrial to office use and the number of employees would be approximately 10 percent of the number under baseline conditions.

Low Intensity, Indirect. No impacts would be expected.

5.4.5 Noise

Medium Intensity, Direct. No impacts would be expected. Relocation of Runway 6-24 to the northeast would produce a concomitant shift in noise to the northeast. The FAA projects that overall noise in the future would be reduced due to a change in the mix of aircraft using the Sikorsky Memorial Airport. According to modeled noise contours, the line representing a 65-decibel day-night average would change only imperceptibly, if at all, in relationship to the SAEP property. Construction activities would create temporary new noise sources, but common methods for controlling noise would keep it at low levels and limit it to the immediate project area.

Medium Intensity, Indirect. No impacts would be expected.

Medium-Low Intensity, Direct. No impacts would be expected.

Medium-Low Intensity, Indirect. No impacts would be expected.

Low Intensity, Direct. No impacts would be expected.

Low Intensity, Indirect. No impacts would be expected.

5.4.6 Geology

Medium Intensity, Direct. No impacts would be expected. Both demolition and construction activities proposed for future reuse would result in disturbance of the existing surficial geologic and soil conditions on SAEP. However, almost all of the buildable areas on SAEP have been disturbed by past construction activities and fill has been placed over most of the site. No adverse impacts on previously undisturbed areas would be expected.

Medium Intensity, Indirect. No impacts would be expected.

Medium-Low Intensity, Direct. No impacts would be expected.

Medium-Low Intensity, Indirect. No impacts would be expected.

Low Intensity, Direct. No impacts would be expected.

Low Intensity, Indirect. No impacts would be expected.

5.4.7 *Water Resources*

Medium Intensity, Direct. Short-term minor adverse impacts would be expected. Under the preferred reuse plan, extensive demolition of existing structures would occur, having short-term adverse effects on the area's water resources. The demolition and construction activities would increase erosion in the area, resulting in increased loads of suspended sediments in storm water runoff, as well as increased contaminants from construction traffic.

The potential effects on water quality caused by demolition and construction, as well as future use of the SAEP site, would be controlled through adherence to the state's storm water general permit program. The Connecticut Coastal Management Act requires that proposed activities minimize adverse water quality impacts. This objective is partially accomplished through the use of best management practices (BMPs) for storm water. In general, appropriate storm water BMPs include on-site retention of the first flush (1 inch) of rainfall in any given storm event and the treatment of any remaining discharge to remove oils, greases, and sediment. A significant part of the state's program to institute BMPs is through the storm water general permit program. Due to the size of the SAEP site (in excess of 5 acres) and the intended reuse (substantially commercial and industrial uses), this program would apply to redevelopment, both during and after construction.

Medium Intensity, Indirect. Long-term minor beneficial impacts would be expected. The reuse plan proposes an increase in open space and a corresponding decrease in impervious area. Implementation of the reuse plan would have long-term minor beneficial impacts on water quality and aquatic resources due to the decrease of impervious areas and the resulting decrease in storm water runoff and in contaminant loads transported by the runoff.

Medium-Low Intensity, Direct. Short-term minor adverse and long-term minor beneficial impacts would be expected. As indicated in Table 3-2, the number of employees associated with the MLIR scenario is 473, which is 76 percent fewer than the baseline of 2,000 employees. This substantial decrease in employees would have beneficial impacts on the area's water resources due to decreases in vehicle use and the associated contaminants transported in storm water runoff.

As discussed under the MIR scenario, short-term minor adverse impacts would result from construction activities, and long-term minor beneficial impacts would result from the decrease in impervious surfaces.

Medium-Low Intensity, Indirect. Long-term minor beneficial impacts would be expected. The substantial decrease in employees and the corresponding decrease in use of the area would decrease the contaminant loads delivered in storm water, thereby decreasing the long-term threat to aquatic resources downstream.

Low Intensity, Direct. Short-term minor adverse and long-term minor beneficial impacts would be expected. As indicated in Table 3-2, the number of employees associated with the LIR scenario is 207, only 10 percent of the baseline 2,000 employees. The significant decrease in employee use of the area would have long-term minor beneficial impacts on water resources, similar to those discussed under the MLIR scenario but to a greater degree.

Long-term minor beneficial impacts would result from a decrease in impervious area, and short-term minor adverse impacts would result from construction activities, as discussed under the MIR scenario.

Low Intensity, Indirect. Long-term minor beneficial impacts would be expected. The significant decrease in employee use in the area would beneficially affect downstream aquatic resources, as discussed under the MLIR scenario, but to a slightly greater degree.

5.4.8 Infrastructure

Medium Intensity, Direct. Long-term minor beneficial and minor adverse impacts would be expected. At an FAR of 0.30 and floor space of 993,168 square feet, which is 45 percent of the floor space under baseline conditions, there would be a reduced demand for electricity and gas. With 2,000 employees under the MIR scenario, which is similar to the baseline level, demands placed on the sewer and water utilities would be similar to those at baseline. These levels of use would represent no additional demands on the infrastructure above baseline.

Transfer or conveyance of property in the south parking lot to non-LRA parties and imposition of an avigation easement would result in minor beneficial effects on aviation safety. Transfer or conveyance of property to facilitate rerouting of Main Street would produce a minor adverse effect on vehicular transportation because the driving time for Stratford Point Peninsula residents and workers would increase.

Medium Intensity, Indirect. No impacts would be expected.

Medium-Low Intensity, Direct. Long-term minor beneficial impacts would be expected. Development under the MLIR scenario would result in a decreased demand on utilities and surrounding infrastructure.

Medium-Low Intensity, Indirect. No impacts would be expected.

Low Intensity, Direct. Long-term minor beneficial impacts would be expected. Development under the MLIR scenario would result in a decreased demand on utilities and surrounding infrastructure.

Low Intensity, Indirect. No impacts would be expected.

5.4.9 Hazardous and Toxic Materials

Medium Intensity, Direct. No impacts would be expected. As discussed in Section 5.3.9, the Army would take necessary remedial action to protect human health and the environment in the transfer of property. Reuse activities associated with industrial, commercial, or mixed use might involve hazardous materials/substances, which would have to be permitted in accordance with federal and state requirements. Permitting and enforcement mechanisms would provide assurance against contamination of environmental media and would be protective of human health and the environment.

Medium Intensity, Indirect. No impacts would be expected.

Medium-Low Intensity, Direct. No impacts would be expected. Conditions in an MLIR scenario would be similar to those in the MIR scenario.

Medium-Low Intensity, Indirect. No impacts would be expected.

Low Intensity, Direct. No impacts would be expected. Conditions in an LIR scenario would be similar to those in the MIR scenario.

Low Intensity, Indirect. No impacts would be expected.

5.4.10 Permits and Regulatory Authorizations

Medium Intensity, Direct. No impacts would be expected. Operating permits and regulatory authorizations for activities in an MIR scenario would be required for infrastructure systems and specific activities by reuse entities. Where feasible and allowed by regulatory agencies, the Army may transfer existing permits and authorizations to new owners. For operational matters not now covered, future owners and operators would be required to obtain permits and authorizations independently. Transfer or conveyance of property supporting improvements at Sikorsky Memorial Airport could affect locations at the SAEP site, requiring project proponents under the purview of FAA regulations to provide notice to the FAA before construction or alteration of buildings or other structures. Existing permitting and enforcement mechanisms would provide assurance against contamination of environmental media and would be protective of human health and the environment.

Medium Intensity, Indirect. No impacts would be expected.

Medium-Low Intensity, Direct. No impacts would be expected. Conditions in an MLIR scenario would be similar to those in the MIR scenario.

Medium-Low Intensity, Indirect. No impacts would be expected.

Low Intensity, Direct. No impacts would be expected. Conditions in an LIR scenario would be similar to those in the MIR and MLIR scenarios.

Low Intensity, Indirect. No impacts would be expected.

5.4.11 Biological Resources and Ecosystems

Medium Intensity, Direct. Short-term and long-term minor adverse impacts would be expected. Both demolition and construction activities proposed for future reuse could create a short-term disturbance to wildlife in the intertidal flats area. This habitat could become temporarily unsuitable as the noise and human presence associated with construction persisted. Increased sediment runoff, caused by demolition and construction, could adversely affect aquatic vegetation in the intertidal flats by increasing turbidity and inhibiting photosynthetic ability if adequate erosion and sediment controls were not implemented and maintained. Increased turbidity might also adversely affect other aquatic habitat, as well as fish.

The MIR would not be expected to have adverse effects on federally listed threatened or endangered species because none have been observed using the site (Bartlett, personal communication, 1997; von Oettingen, personal communication, 1998). State-listed bird species have been observed to forage in the vicinity of the SAEP intertidal flats. However, in light of better habitats at other locations along the Housatonic River, potential effects on such species occurring at SAEP would be expected to be minor.

Long-term adverse impacts on wildlife and vegetation could also occur if development activities were to interfere with Housatonic River tidal regimes. Interfering with existing tidal flows could harm vegetation in the inlets, pools, and wetlands that depend on cyclical inundation.

Medium Intensity, Indirect. Long-term minor adverse impacts would be expected. The construction of a road to the Housatonic River and the creation of a public access corridor and associated public park along the river could disturb wildlife using this area. The increased human presence could serve to dissuade wildlife (in particular nesting and foraging bird species) from using the intertidal flats. Currently, access to the intertidal flats is restricted as a result of the presence of SAEP. The placement of a road and parking lots along the waterfront could also adversely affect water quality and habitat in the intertidal flats as a result of increased vehicle-related pollutants in storm water runoff.

Medium-Low Intensity, Direct. Short-term and long-term minor adverse impacts would be expected. Considerations relevant to the MIR scenario would also apply to the MLIR scenario, though to a lesser degree.

Medium-Low Intensity, Indirect. Long-term minor adverse impacts would be expected. Considerations relevant to the MIR scenario would also apply to the MLIR scenario, but to a lesser degree.

Low Intensity, Direct. Short-term minor adverse impacts would be expected. Although fewer employees are envisioned under this scenario, demolition and construction activities associated with the LIR would still create a short-term disturbance to wildlife feeding on the intertidal flats.

Low Intensity, Indirect. Long-term minor adverse impacts would be expected. Although fewer employees are expected under the LIR scenario than current conditions, the plan to provide easy public access to the waterfront would likely increase the number of people in that area. The increased human presence could reduce the habitat value of the installation's intertidal flats for wildlife.

Decreased use of parking lots in the economic development zone under the LIR could result in lower concentrations of pollutants such as lubricants, fuels, and antifreeze in storm water runoff, resulting in minor beneficial impacts on water quality in the adjacent intertidal flats. However, the placement of a roadway and parking lots along the waterfront would likely offset any beneficial impacts of decreased use in the economic development zone.

5.4.12 Cultural Resources

Medium Intensity, Direct. Long-term minor adverse impacts would be expected. If the encumbered disposal alternative were used to dispose of SAEP properties, those properties would be protected through the use of a preservation covenant. The covenant that would be used is a part of the SAEP MOA executed between the Army, the Connecticut SHPO, and the ACHP for the BRAC disposal of SAEP historic properties. (See Appendix B for a copy of the MOA and the preservation covenant; also see Section 5.3.12 for a discussion of deed restrictions.) If the unencumbered disposal alternative were used to dispose of SAEP properties, the Army, the Connecticut SHPO, and the ACHP would consult in accordance with Section 106 of the NHPA to determine appropriate measures for treating the loss of these properties. Recordation of the historic properties, to a standard agreed upon during the Section 106 consultations, would mitigate the adverse impacts to a minor level. Therefore, adverse

impacts could either be avoided through the use of deed restrictions or mitigated to a minor level through recordation measures.

Medium Intensity, Indirect. No impacts would be expected.

Medium-Low Intensity, Direct. Long-term minor adverse impacts would be expected. The impacts on SAEP historic properties under this scenario would be similar to those described for the MIR scenario.

Medium-Low Intensity, Indirect. No impacts would be expected.

Low Intensity, Direct. Long-term minor adverse impacts would be expected. The impacts on SAEP historic properties under this scenario would be similar to those described for the MIR scenario.

Low Intensity, Indirect. No impacts would be expected.

5.4.13 Economic Development

Methodology. To determine the socioeconomic secondary impacts of the implementation of the reuse scenarios, the Economic Impact Forecast System (EIFS) model (USACERL, 1994) was used. The EIFS model is a computer-based economic tool that calculates multipliers to estimate the direct and indirect impacts resulting from a given action. The model requires the following input data: name of counties composing the ROI, number of civilian and military personnel affected by the scenario, their salaries, and the change in local procurement resulting from the action. Changes in employment and spending represent the direct impacts of the action. Based on the input data and calculated multipliers (see Table 5-1 for input parameters), the model estimates ROI changes in sales volume, employment, income, population, housing, and school enrollments, accounting for the direct and indirect impacts of the action. Due to the urban location of SAEP, no employees would be expected to relocate for any of the reuse scenarios. EIFS model output data for the reuse scenarios are shown in Tables 5-2 through 5-4. Appendix J describes the EIFS model in more detail and presents the model input and output tables.

The impact analysis uses the social and economic indicators presented in Sections 4.13 through 4.15. The EIFS model output for each reuse scenario represents net changes in sales volume, employment, income, population, housing, and schools from baseline levels.

For the purposes of this analysis, a change can be considered significant if it falls outside the normal range of ROI variation. To determine historical variability, the EIFS model calculates a rational threshold value (RTV) profile for the ROI. This analytical process uses historical data for the ROI and calculates fluctuations in sales volume, employment, income, and population patterns. The historical extremes for the ROI become the threshold of significance for social and economic change. If the calculated impact of a reuse scenario falls outside the RTVs, the impact could be considered significant. Appendix J discusses this methodology in more detail and presents the model output tables developed for this analysis.

Table 5-1
EIFS Model Input Parameters

Reuse Intensity	Employee Population[1]	Change in Employee Population[2]	Total Expenditure Per Employee	Change in Total Expenditure[3]
MIR	1,986	86	$72,831	$6,263,435
MLIR	473	-1,427	$72,831	-$103,929,327
LIR	207	-1,693	$72,831	-$123,302,278

[1]See Table 3-2 for derivation of employee populations for reuse scenarios.
[2]Projected reuse population minus change of employment as a result of the realignment (1,900).
[3]Total expenditure per employee multiplied by the change in employee population.

Medium Intensity, Direct. Long-term minor beneficial impacts would be expected. The MIR scenario assumes use of the property for office space and research and development with 1,986 employees on the reused site. About 34 jobs would be created as a result of direct expenditures associated with reuse activities, generating increases in local income and spending (Table 5-2). ROI income would increase by approximately $781,000 as a result of direct jobs generated by reuse activities. Sales volume increases directly attributable to reuse would total over $7.1 million.

Medium Intensity, Indirect. Long-term minor beneficial impacts would be expected. Reuse activities would generate secondary jobs and additional income in the region. Secondary jobs created, in combination with the direct employment, would boost total employment in the ROI by 205 jobs. Additional income generated from indirect expenditures would increase ROI income by a total of approximately $6.3 million. Total sales volume (direct and indirect) would increase by more than $24.9 million. Net government revenues would increase approximately $92,000. These increases fall within historical fluctuations and would be considered minor.

Medium-Low Intensity, Direct. Long-term minor adverse impacts would be expected. Under this scenario, 473 employees would work on the reused site, 1,427 fewer employees than baseline. About 567 jobs would be lost as a result of decreased direct expenditures, generating decreases in income and spending (Table 5-3). ROI income would decrease by almost $13.0 million due to the loss of direct jobs. The decline in sales volume directly attributable to a smaller site workforce would total more than $118.4 million.

Medium-Low Intensity, Indirect. Long-term minor adverse impacts would be expected. Because reuse activities would require fewer employees than baseline activities, the number of secondary jobs and associated income in the region would decline. Secondary jobs, in combination with direct jobs lost, would decrease total employment by 3,406 jobs. Additional income lost as a result of a decline in direct and indirect expenditures would decrease ROI income by a total of approximately $105.4 million. Total sales volume (direct and indirect) would fall by more than $413.2 million. Net government revenues could decrease by approximately $1.5 million. These decreases would fall within historical fluctuations and would be considered minor.

Table 5-2
EIFS Standard Model Output for SAEP MIR

Indicator	Projected Change	Percentage Change	RTV Range
Direct Sales Volume	$7,138,000	NA	NA
Total Sales Volume	$24,904,000	0.031	-5.759% to 8.285%
Direct Employment	34	NA	NA
Total Employment	205	0.021	-3.056% to 3.648%
Direct Income	$781,000	NA	NA
Total Income	$6,349,000	0.014	-3.812% to 7.837%
Local Population	0	0	-0.415% to 0.589%
Local Off-Base Population	0	NA	NA
Number of School Children	0	NA	NA
Demand for Housing	0	NA	NA
Rental	0	NA	NA
Owner-Occupied	0	NA	NA
Total Housing Demand Increase	0	NA	NA
Government Expenditures	$252,000	NA	NA
Government Revenues	$344,000	NA	NA
Net Government Revenues	$92,000	NA	NA
Civilian Employees Expected to Relocate	0	NA	NA
Military Employees Expected to Relocate	0	NA	NA

Note: NA = not applicable.
Source: EIFS model.

Table 5-3
EIFS Standard Model Output for SAEP MLIR

Indicator	Projected Change	Percentage Change	RTV Range
Direct Sales Volume	-$118,434,000	NA	NA
Total Sales Volume	-$413,234,000	-0.522	-5.759% to 8.285%
Direct Employment	-567	NA	NA
Total Employment	-3,406	-0.352	-3.056% to 3.648%
Direct Income	-$12,959,000	NA	NA
Total Income	-$105,351,000	0.225	-3.812% to 7.837%
Local Population	0	0%	-0.415% to 0.589%
Local Off-Base Population	0	NA	NA
Number of School Children	0	NA	NA
Demand for Housing	0	NA	NA
Rental	0	NA	NA
Owner-Occupied	0	NA	NA
Total Housing Demand Increase	0	NA	NA
Government Expenditures	-$4,187,000	NA	NA
Government Revenues	-$5,708,000	NA	NA
Net Government Revenues	-$1,521,000	NA	NA
Civilian Employees Expected to Relocate	0	NA	NA
Military Employees Expected to Relocate	0	NA	NA

Note: NA = not applicable.
Source: EIFS model.

Table 5-4
EIFS Standard Model Output for SAEP LIR

Indicator	Projected Change	Percentage Change	RTV Range
Direct Sales Volume	-$140,511,000	NA	NA
Total Sales Volume	-$490,263,000	-0.619	-5.759% to 8.285%
Direct Employment	673	NA	NA
Total Employment	4,041	-0.418	-3.056% to 3.648%
Direct Income	-$15,375,000	NA	NA
Total Income	-$127,989,000	-0.267	-3.812% to 7.837%
Local Population	0	0	-0.415% to 0.589%
Local Off-Base Population	0	NA	NA
Number of School Children	0	NA	NA
Demand for Housing	0	NA	NA
Rental	0	NA	NA
Owner-Occupied	0	NA	NA
Total Housing Demand Increase	0	NA	NA
Government Expenditures	-$4,698,000	NA	NA
Government Revenues	-$6,772,000	NA	NA
Net Government Revenues	-$1,805,000	NA	NA
Civilian Employees Expected to Relocate	0	NA	NA
Military Employees Expected to Relocate	0	NA	NA

Note: NA = not applicable.
Source: EIFS model.

Low Intensity, Direct. Long-term minor adverse impacts would be expected. About 207 employees would work on the reused site under this scenario, 1,693 fewer employees than the baseline workforce. Approximately 673 jobs would be lost in the ROI as a result of direct expenditures associated with reuse. ROI income would decrease by approximately $15.4 million due to loss of direct jobs. The decline in sales volume directly attributable to a smaller site workforce would total over $140.5 million.

Low Intensity, Indirect. Long-term minor adverse impacts would be expected. Because reuse activities would generate fewer jobs than baseline activities, the number of secondary jobs and associated income in the region would decline. Secondary jobs, in combination with direct jobs lost, would decrease total employment by 4,041 jobs. Additional income lost as a result of a decline in direct and indirect expenditures would decrease ROI income by a total of approximately $125 million. Total sales volume (direct and indirect) would fall by over $490.3 million. Net government revenues could decrease by almost $1.8 million. These decreases would fall within historical fluctuations and be considered minor.

5.4.14 Sociological Environment (Including Environmental Justice and Protection of Children)

Medium Intensity, Direct. No impacts on demographics, housing, public services, or homeless and other special programs would be expected.

Reuse of the SAEP LRA areas would not create disproportionately high or adverse human health or environmental impacts on minority or low-income populations of the surrounding community. Unemployed persons could benefit from any creation of jobs associated with implementation of this scenario.

The proposed action does not involve activities that would pose any disproportionate environmental health risks or safety risks to children. Future risks to children potentially present at the site would be addressed by remedial measures to cleanup sites contaminated by hazardous substances.

Medium Intensity, Indirect. Long-term minor adverse impacts would be expected. Transfer or conveyance of property in support of Sikorsky Memorial Airport safety improvements would include property that would enable the rerouting of Main Street. The rerouting of Main Street would increase the amount of time needed for fire department and ambulance services to reach residences and places of business located on the Stratford Point Peninsula. Such increased response times would adversely affect the efficiency and, possibly, the efficacy of emergency public services.

Medium-Low Intensity, Direct. No impacts would be expected.

Medium-Low Intensity, Indirect. No impacts would be expected.

Low Intensity, Direct. No impacts would be expected.

Low Intensity, Indirect. No impacts would be expected.

5.4.15 Quality of Life

Medium Intensity, Direct. Long-term minor beneficial impacts would be expected. The reuse of the facility would create more open space and provide greater access to the river, increasing the options for recreation in the area and improving the aesthetic values.

Medium Intensity, Indirect. No impacts would be expected.

Medium-Low Intensity, Direct. Long-term minor beneficial impacts would be expected. The reuse of the facility would create more open space and provide greater access to the river, increasing the options for recreation in the area and improving the aesthetic values.

Medium-Low Intensity, Indirect. No impacts would be expected.

Low Intensity, Direct. No impacts would be expected.

Low Intensity, Indirect. No impacts would be expected.

5.4.16 Cumulative Effects

Medium Intensity Reuse. Much of the planned future development within the ROI involves the redevelopment or revamping of existing structures. Since no major new development is planned within the ROI in the immediate future, an MIR scenario would result in some minor beneficial contributions to infrastructure and air quality at SAEP. However, the size and resource diversity of the ROI make it unlikely that an MIR would contribute to the cumulative effects in the region, even if the MIR level were ultimately reached at the conclusion of the build-out period.

Adaptive reuse of the SAEP site in the initial period of redevelopment would tend to resemble present circumstances and therefore would result in minimal cumulative effects. Over the longer term, and depending on the specific land uses chosen by the LRA for the SAEP property, land use changes on the facility would likely influence land uses only in the area in close proximity to SAEP. More distant land use patterns within the ROI would remain unchanged or perhaps would change in response to other development factors. Public funding required for the redevelopment of SAEP, especially under the MIR scenario, could have some effect on or be affected by the available funding for other development projects in the ROI. The redevelopment at SAEP, however, is somewhat restricted to specific types of development because of the nature of the existing facilities and, currently, because of the LRA redevelopment plan. Therefore, SAEP redevelopment at the MIR level is not expected to interfere economically with redevelopment of other sites.

Short-term adverse impacts on both biological and water resources would occur due to the redevelopment of the SAEP property. Because this would be only a temporary condition and no other large redevelopment projects are occurring within the general area, there would be no adverse cumulative impacts.

Cumulative impacts on economic development, socioeconomic conditions, and quality of life could occur as a result of regional redevelopment projects if more jobs were created and the tax base increased. Proposed safety improvements at Sikorsky Memorial Airport would contribute to these ends. The additional jobs and tax base would affect public services, schools, housing, and infrastructure in the town of Stratford and elsewhere within the ROI. Whether these effects would be individually or collectively beneficial or adverse over the long term cannot be determined at present.

Medium-Low Intensity Reuse. Cumulative effects under this scenario would be similar to those described for the MIR scenario, but on a lesser scale.

Low Intensity Reuse. Cumulative effects under this scenario would be similar to those described for the MLIR scenario, but on a lesser scale.

5.5 MITIGATION SUMMARY

No Action Alternative. As discussed in Section 5.2, the no action alternative could, or in some areas would be expected to, result in adverse impacts on land use, infrastructure, cultural resources, economic development, and the sociological environment.

The longer SAEP were to remain in caretaker status, the greater would be the potential for the predicted adverse impacts to affect various resources. The Army would implement the following mitigation measures to reduce or avoid adverse impacts associated with caretaker status as they might occur:

- Continue to work with the SAEP LRA to ensure that, to the maximum extent feasible, encumbered disposal transactions are consistent with the community reuse plan.

- Until final disposal, maintain installation buildings, infrastructure, and natural resources in caretaker status to the extent provided by Army policy and regulations.

- Identify clean or remediated portions of the installation for disposal and reuse and prioritize restoration and cleanup activities to ensure timely disposal and reuse of remaining portions. Recycle solid wastes and debris where practicable.

- Actively support interim leasing arrangements, where environmental restoration efforts permit, to provide for job creation, habitation and maintenance of structures, and rapid reuse of the installation.

- Ensure that interim leasing documents notify future lessees of the property of particular obligations concerning natural and cultural resources that would be imposed as a result of the Army's determination of the applicability of an encumbrance. Interim leasing documents would also identify past hazardous waste activities at each site, as required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

- Provide caretaker maintenance for historic buildings as required by the MOA dated July 1996.

Disposal. To avoid, reduce, or compensate for adverse impacts that might occur as a result of disposal, the Army would do the following:

- Impose in transfer or conveyance of BRAC property appropriate encumbrances to avoid potential adverse impacts on a variety of environmental resource areas. The encumbrances would include those pertaining to asbestos-containing materials, lead-based paint, groundwater use restriction, historical resources, remedial activities, wetlands, easements and rights-of-way, easement for public park, easement for avigation, easement for public access, land use restrictions, and floodplains. With respect to historical resources, preservation covenants would be used for the disposal of historic properties as required by the MOA dated July 1996.

- Continue to work with the SAEP LRA to ensure that, to the maximum extent feasible, encumbered disposal transactions are consistent with the community reuse plan.

- Before final disposal, maintain installation buildings, infrastructure, and historic and natural resources in caretaker status in accordance with Army policies and regulations.

Conveyance documents would notify future owners of the property of particular obligations concerning natural and cultural resources that would be imposed as a result of the Army's determination of the applicability of an encumbrance. Conveyance documents would also identify past hazardous substance activities at each site, as required by CERCLA.

Reuse. The Army does not propose the implementation of specific mitigation actions for intensity-based reuse scenarios. This is appropriate because reuse planning and execution of redevelopment actions are a responsibility of non-Army entities. The following are general mitigation actions that could be implemented by other parties for the reduction, avoidance, or compensation of impacts resulting from their actions. Potential mitigation actions are suggested for those resource areas most likely to be affected by adverse impacts as a result of reuse.

- *Land use.* Adverse impacts associated with development of SAEP to an MIR level could be at least partially reduced through sound site planning and design and creation of appropriate buffer zones. Town officials could also evaluate the desirability of establishing land use zoning mechanisms to provide for orderly growth throughout the ROI.

- *Air quality.* The permit process established in the Clean Air Act provides effective controls over potential stationary air emissions sources. Adherence to the State Implementation Plan's provisions for mobile sources could address that source category. Additional mitigation mechanisms, such as application of best management practices to control fugitive dust during construction, could be used to control airborne contaminants.

- *Water resources.* Application of best management practices to reduce sediment loading to surface waters could aid in reducing impacts on water quality. Such practices could be required by state permits and local ordinances and would be expected to comply with Connecticut's Coastal Zone Management Program. Construction of storm water retention systems could help mitigate impacts associated with storm water runoff from impervious surfaces.

- *Biological resources.* Adverse impacts on biological resources could occur, especially as a result of new construction. Two principal measures for conservation of significant biological resources are ensuring consultation with natural resources experts and regulatory agencies before initiating actions and implementing best management practices in association with approved construction projects. Operational controls could also be applied to minimize any adverse effects of noise and light on sensitive biological resources.

5.6 CUMULATIVE EFFECTS SUMMARY

As defined in Section 5.2.16, cumulative effects are considered those which result from the incremental effects of an action when considering past, present, or reasonably foreseeable future actions, regardless of the agencies or parties involved. In other words, cumulative impacts can result from individually minor, but collectively significant, factors taking place over time as they may relate to the entire installation and ROI. As stated in Section 5.2.16, current and proposed development activities within the ROI are limited compared to those proposed for SAEP. The following section

summarizes the potential cumulative impacts for each action, and within each resource area, where appropriate.

No Action. No cumulative impacts would be expected.

Encumbered Disposal. Long-term beneficial impacts would be expected. Use of the air navigation easement for avigation encumbrance, in conjunction with proposed improvements to enhance safety at Sikorsky Memorial Airport, would result in beneficial effects on transportation safety and economic development related to the airport. Continued protection of historic properties at SAEP through transfer of the installation with a historic properties encumbrance would have a positive cumulative effect on the architectural history of the ROI.

Unencumbered Disposal. Long-term minor adverse impacts would be expected. Loss of historic properties at SAEP through unencumbered disposal could represent a negative cumulative effect on the architectural history of the ROI. If SAEP National Register-eligible historic properties were subject to unencumbered disposal, the Army would consult with the Connecticut SHPO and the ACHP in accordance with Section 106 of the NHPA to determine appropriate measures for treating the potential loss of these properties. Mitigation measures undertaken as a result of SHPO and ACHP consultations would reduce the adverse effects on these properties to an insignificant level.

Medium Intensity Reuse. Much of the planned future development within the ROI involves the redevelopment or revamping of existing structures. Since no major new development is planned within the ROI in the immediate future, an MIR reuse scenario would result in some minor beneficial contributions to infrastructure and air quality at SAEP. However, the size and resource diversity of the ROI make it unlikely that an MIR scenario would contribute to the cumulative effects in the region, even if the MIR level were ultimately reached at the conclusion of the build-out period.

Adaptive reuse of the SAEP site in the initial period of redevelopment would tend to resemble present circumstances and therefore would result in minimal cumulative effects. Over the longer term, and depending on the specific land uses chosen by the LRA for the SAEP property, land use changes on the facility would likely influence land uses only in the area in close proximity to SAEP. More distant land use patterns within the ROI would remain unchanged, or perhaps change in response to other development factors. Public funding required for the redevelopment of SAEP, especially under the MIR scenario, could have some effect on or be affected by the available funding for other development projects in the ROI. The redevelopment at SAEP, however, is somewhat restricted to specific types of development because of the nature of the existing facilities and, currently, because of the LRA redevelopment plan. Therefore, SAEP redevelopment at the MIR level is not expected to interfere economically with redevelopment of other sites.

Short-term adverse impacts on both biological and water resources would occur due to the redevelopment of the SAEP property. Because this would be only a temporary condition, and no other large redevelopment projects are occurring within the general area, there would be no adverse cumulative impacts.

Cumulative impacts on economic development, socioeconomic conditions, and quality of life could occur as a result of regional redevelopment projects if more jobs were created and the tax base increased. This would affect public services, schools, housing, and infrastructure in the town of

Stratford and elsewhere within the ROI. Whether these effects would be individually or collectively beneficial or adverse over the long term cannot be determined at present.

The FAA's *Sikorsky Memorial Airport Draft Environmental Impact Statement/Environmental Impact Evaluation for the Proposed Improvements to Runway 6-24* (May 1998) identifies a potential source of cumulative impacts affecting the SAEP site, the Stratford Point Peninsula, and Fairfield County. The FAA's preferred alternative for obtaining safety improvements at the airport would involve construction of improved runway safety areas on Runway 6-24, reconstruction of the existing runway pavement, and installation of an approach light system with sequenced flashers on Runway 6. The FAA's preferred alternative would relocate Runway 6-24 some 875 feet to the northeast. To establish a 1,000-foot by 500-foot runway safety area at the northeastern end of the runway, partial relocation of Main Street or rerouting onto a portion of Sniffens Lane would also be required.

Projections contained in the FAA draft EIS indicate that these safety improvements would contribute to increased annual aircraft operations at the airport. According to the FAA's draft EIS, in 1993 there were 118,660 aircraft operations. In 2003 the airport could have between 172,540 aircraft operations (constrained forecast) and 191,040 aircraft operations (unconstrained forecast). The FAA draft EIS also indicates desired future improvements to Runway 11-29. These would include provision of an extended runway safety area at the easterly end of Runway 11-29, which would necessitate further relocation of Main Street to the east.

The sum of the proposed actions at the SAEP site and the Sikorsky Memorial Airport, as well as the potential for future development of various parcels throughout the Stratford Point Peninsula, indicates a likelihood of increased human presence and activity. Whether historical levels of human presence, such as occurred when the SAEP operated at full capacity, would be reached is speculative. As levels of human presence and activity increase, along with increased numbers of aircraft operations, an adverse cumulative effect on wildlife could occur.

5.7 *ENVIRONMENTAL JUSTICE SUMMARY*

On February 11, 1994, the President issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The order requires that federal agencies conduct their programs, policies, and activities that substantially affect human health or the environment so that there are not disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.

The Army's proposed action is not designed to create a benefit for any group or individual. As part of the screening process, entities may express interest in installation assets to provide assistance to homeless persons. Upon completion of the screening process, there may be expression of interest by individuals or groups to purchase by competitive bid or negotiated sale parts or all of the installation. In either of these cases, the disposal method itself would not create disproportional environmental impacts on any group.

Disposal of SAEP, therefore, would not create disproportionately high or adverse human health or environmental impacts on minority or low-income populations of the surrounding community.

5.8 CLEAN AIR ACT CONFORMITY

Section 176(c) of the CAA requires that no federal agency may engage in, support, or provide financial assistance for a license or permit, or approve any activity that does not conform to an approved or promulgated State Implementation Plan. Conformity to an implementation plan means conformity to a plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. It further refers to conducting activities so that they will not cause or contribute to any new violation of any standard in any area, increase the frequency or severity of an existing violation of any standard in any area, or delay timely attainment of any standard or any required interim emission reductions or other milestones in any area. These requirements apply regardless of an area's attainment status.

Under CAA regulations at 40 CFR Part 93, Subpart B, conformity determinations must be made for actions occurring in nonattainment areas and maintenance areas for NAAQS for sulfur dioxide, carbon monoxide, ozone, nitrogen oxides, lead, and particulates (matter less than 10 microns in diameter). The proposed action occurs in an area in severe nonattainment for ozone and moderate nonattainment for carbon monoxide. The General Conformity Rule exempts actions that include the transfer of ownership, interests, and titles in land, facilities, and real and personal properties, regardless of the form or method of transfer (40 CFR 51.853). Because the Army's proposed disposal action will involve the sale or other title transfers of federal property, it has been determined that the action is exempt from preparing a Conformity Determination. The Record of Non-Applicability Concerning the General Conformity Rule is provided in Appendix I.

5.9 UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

The following paragraphs identify major adverse environmental impacts that cannot be avoided in connection with the no action, encumbered disposal, and unencumbered disposal alternatives.

No Action. Notwithstanding Army efforts to maintain the installation's assets, deterioration of SAEP facilities would occur as a function of age. Loss of jobs and attendant adverse impacts on socioeconomics in the ROI would occur as a result of congressional approval of the BRAC Commission's recommendation for closure of the installation.

Encumbered Disposal. Several encumbrances applicable to SAEP, taken together, would impede redevelopment of the installation. Removal of many of these encumbrances ultimately would occur (e.g., the Army would eventually be able to certify that certain parcels have been remediated in accordance with CERCLA/CERFA). Predictions are not available for how quickly the SAEP LRA would be able to redevelop the installation in the absence of such encumbrances.

Unencumbered Disposal. Without encumbrances, transfer of the property would involve no deed-recorded limitations to reuse, although new property owners would still be subject to laws and regulations at the federal, state, and local levels. Based on the adopted SAEP LRA reuse plan, the proposed reuse scenarios could involve adverse impacts. Whether such impacts would be unavoidable cannot be determined at present because the future reuse actions would be by non-Army entities in ways not currently defined to the degree necessary to quantify impacts. The presentation of suggested mitigation actions in Section 5.5 serves as a starting point so that subsequent owners can avoid generating adverse impacts during reuse.

5.10 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES

Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that use of these resources will have on future generations. Irreversible effects primarily result from use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species).

The no action alternative and disposal alternatives would not result in any irreversible or irretrievable commitment of resources. Reuse, however, could result in irreversible or irretrievable commitments of resources if subsequent secondary impacts from land development resulted in defilement of natural or cultural resources either directly on the property or immediately adjacent to committed developed areas.

5.11 SHORT-TERM USES OF MAN'S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

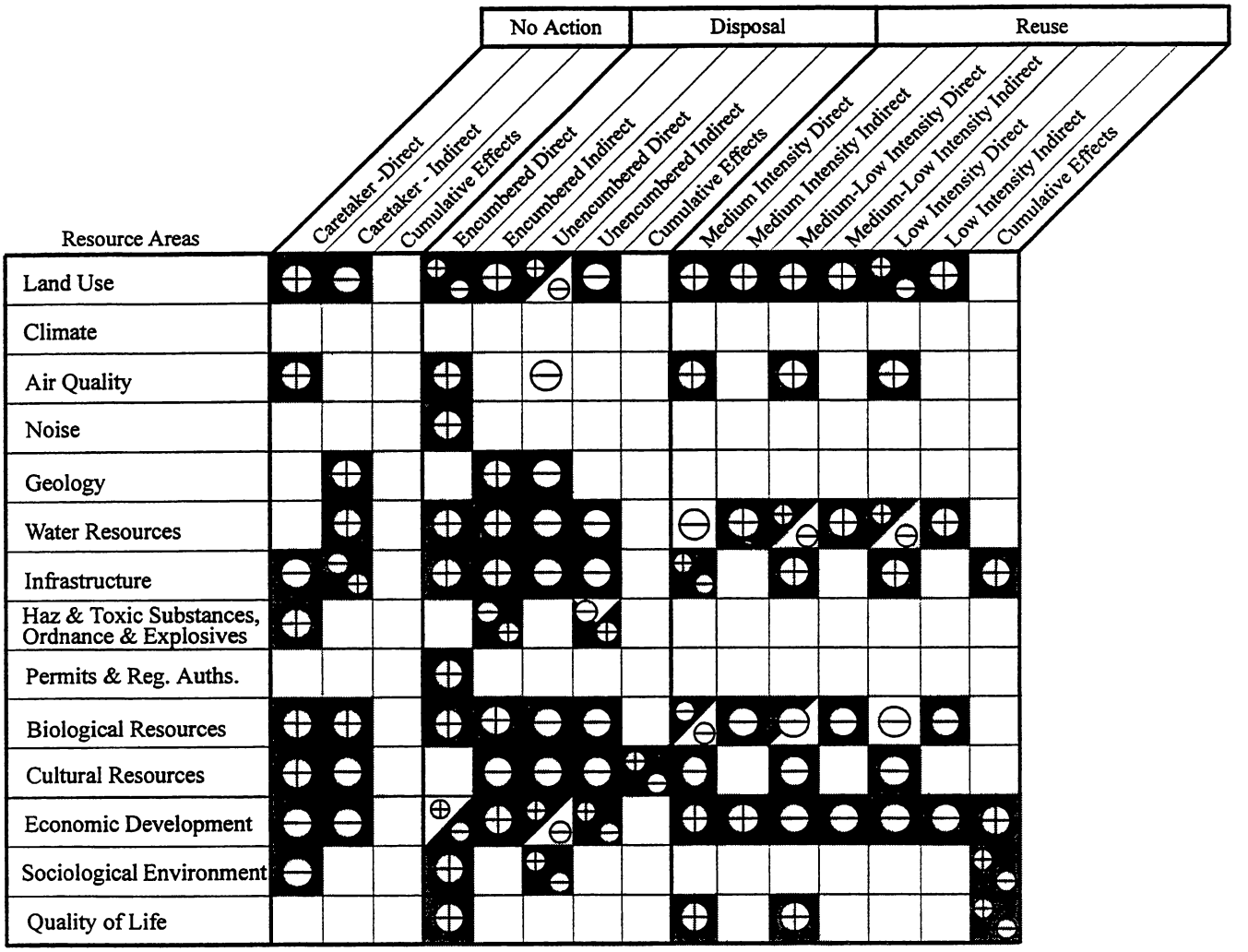
Short-term uses of the biophysical components of man's environment include direct construction-related disturbances and direct impacts associated with an increase in population and activity that occurs over a period of less than 5 years. Long-term uses of man's environment include those impacts occurring over a period of more than 5 years, including permanent resource loss.

Several kinds of activities could result in short-term resource uses that compromise long-term productivity. Filling of wetlands or loss of other especially important habitats, conversion of prime or unique farmlands to nonagricultural use, and consumptive use of high-quality water at nonrenewable rates are examples of actions that affect long-term productivity.

Disposal of SAEP, encumbered or unencumbered, would facilitate long-term productivity by allowing future economically beneficial reuse of the property. The no action alternative would hinder long-term economic productivity by restricting future development. Under all the reuse scenarios, future construction would have temporary effects on air quality, storm water runoff, noise, traffic circulation and roadways, energy consumption, and aesthetics. Short-term disturbances of previously undisturbed sensitive biological habitats resulting from the future construction of new facilities for reuse could cause long-term reductions in the biological productivity in the intertidal flats area. Since reuse plans are not completely known, impacts on long-term productivity cannot be precisely quantified.

Table 5-5 provides a graphic summary of impacts on each resource area associated with implementation of each disposal and reuse alternative.

Table 5-5
Impacts Summary



Impacts Legend

- Long-term Minor Beneficial Effect
- Short-term Minor Beneficial Effect
- Long-term Minor Adverse Effect
- Short-term Minor Adverse Effect
- Long-term Significant Beneficial Effect
- Short-term Significant Beneficial Effect
- Long-term Significant Adverse Effect
- Short-term Significant Adverse Effect
- No Effects Expected

SECTION 6.0: LIST OF PREPARERS

Paula Bienenfeld
Ph.D., Anthropology, SUNY-Binghamton
M.S., Anthropology, SUNY-Binghamton
B.S., Anthropology, University of Michigan
Years of Experience: 21

Wendy Brown
M.E.M., Conservation Biology, Duke University
B.S., Biology, Bucknell University
Years of Experience: 6

Shannon Cauley
B.S., Geology, Ricker College
Years of Experience: 15

John Craig
M.S., University of Maryland
B.S., Towson State University
Years of Experience: 11

Sean Donahoe
M.S., Biology, West Virginia University
B.S., Biology, Fairmont State College
B.S., Mathematics, Fairmont State College
Years of Experience: 12

Elizabeth Hiett
B.S., Biology, Virginia Polytechnic Institute and State University
Years of Experience: 8

Alan Karnovitz
M.S., Public Policy, University of Pennsylvania
B.S., Biology of Natural Resources, Berkeley University
Years of Experience: 15

Tom Magness
M.S., Geography, University of Wisconsin
B.S., Engineering, United States Military Academy
Years of Experience: 36

Martha Martin
B.A., English, Capital University
Years of Experience: 20

Sara McQueen
B.A., Economics, Wittenberg University
Years of Experience: 3

Sam Pett
M.S., Environmental Science, University of Massachusetts-Boston
B.S., Wildlife Biology/Zoology, Michigan State University
Years of Experience: 10

Kathy Rogovin
M.S., Toxicology, University of Washington
B.A., Zoology, Miami University
Years of Experience: 8

Kristin Shields
B.A., Environmental Science, Sweetbriar College
Years of Experience: 8

Jonathan Simpson
M.S., Water Resources, Michigan State University
B.S., Fisheries/Wildlife, Michigan State University
Years of Experience: 17

Patrick Solomon
M.S., Geography, University of Tennessee
B.A., Geography, Geneseo State University
Years of Experience: 4

John Swanson
M.S., Environmental Engineering, The Pennsylvania State University
B.S., Environmental Engineering, The Pennsylvania State University
Assoc. Biology, Dutchess Community College
Years of Experience: 11

Victoria Tanga
B.A., Anthropology, Dickinson College
Environmental Studies Certificate, Dickinson College
Years of Experience: 5

Paul Wilbur
J.D., Environmental Law, Wayne State University Law School
B.A., English, University of Michigan
Years of Experience: 26

SECTION 7.0: DISTRIBUTION LIST

The Honorable Terry Backer
121 District
State House of Representatives
125 Jefferson Street
Stratford, CT 06497

Mr. Mark S. Barnhart
Town Manager
Stratford Town Hall
Stratford, CT 06497

The Honorable J. Vincent Caruso
126 District
State House of Representatives
208-B Beechmont Avenue
Bridgeport, CT 06606

Ms. Megan Cassady
US EPA Region I
Mail Code HBT
90 Canal Street
Boston, MA 02203-9654

The Honorable Jacqueline M. Cocco
127 District
State House of Representatives
93 Heppenstall Drive
Bridgeport, CT 06604

The Honorable Rosa L. DeLauro
U.S. House of Representatives
Rm. 436, Cannon House Office Bldg
Washington, DC 20510-0703

Mr. John P. DeVillars
Regional Administrator
U.S. EPA - Region I
JFK Federal Building
Boston, MA 02203

The Honorable Christopher J. Dodd
U.S. Senate
Rm. 444, Russell Senate Office Bldg
Washington, DC 20510-0702

Mr. Brian J. Emerick
Connecticut Department of Environmental Protection
Office of Environmental Review
79 Elm Street
Hartford, CT 06106

Mr. Kenneth Feathers
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

The Honorable Edna I. Garcia
128 District
State House of Representatives
Redacted - Privacy Act

Ms. Laurie Goodsell
Council Clerk
Stratford Town Council
Redacted - Privacy Act

The Honorable George L. Gunther
128 District
State Senate
Redacted - Privacy Act

Ms. Margarita Hartley-Moore
Restoration Advisory Board Co-chairperson
Redacted - Privacy Act

The Honorable Robert T. Keeley
125 District
State House of Representatives
Redacted - Privacy Act

Mr. Robert E. Lambertson
Regional Director
U.S. Fish and Wildlife Service
300 Westgate Center Drive
Hadley, MA 01035

The Honorable Joseph I. Lieberman
U.S. Senate
Rm. 316, Hart Office Bldg
Washington, DC 20510-0703

Mr. Terrance Martin
Office of Policy and Compliance
Room 2340
1849 C Street, NW
Washington, DC 20240

The Honorable Lawrence G. Miller
122 District
State House of Representatives
Redacted - Privacy Act

Mr. Robert Moore
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

Mr. Rick J. Norris
Project Coordinator, SAEP LRA
Stratford Town Hall
2725 Main Street
Stratford, CT 06497

The Honorable T.R. Rowe, elect
123 District
State House of Representatives
Redacted - Privacy Act

Governor John G. Rowland
Governor of Connecticut
State Capitol
210 Capitol Avenue
Hartford, CT 06106

The Honorable Angelina Scarpetti
22 District
State Senate
Redacted - Privacy Act

Mr. John W. Shannahan
State Historical Preservation Office
59 South Prospect Street
Hartford, CT 06106

The Honorable Christopher Shays
U.S. House of Representatives
Rm. 1502, Longworth House Office Bldg
Washington, DC 20515-0704

Mr. John Silva
Federal Aviation Administration, ANE-600
12 New England Executive Park
Burlington, MA 01803

Ms. Donna R. Witte
Federal Aviation Administration, Airports Division
12 New England Executive Park
Burlington, MA 01803

Stratford Library Association
2203 Main Street
Stratford, CT 06497

The Honorable Paul Martin Tymniak
133 District
State House of Representatives
P.O. Box 1051
Fairfield, CT 06130

Mr. August Castellucci
Redacted - Privacy Act

Ms. Janet Carlucci
Redacted - Privacy Act

Mr. Kent Miller
Redacted - Privacy Act

Mr. Bob Sammis
Waterfront Harbor Management Commission
Redacted - Privacy Act

Mr. Richard Miron
Redacted - Privacy Act

Ms. Marcia Stewart
Redacted - Privacy Act

Ms. Elaine O'Keefe
Director of Health and Welfare
Town of Stratford Health Department
2730 Main Street
Stratford, CT 06497

Mr. Barry Steinberg
1101 Connecticut Avenue
Suite 1000
Washington, DC 20036

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APPENDIX A

Public Comments on the Draft EIS and Army Responses

The Army held a Public Meeting on June 4, 1998, in Stratford, Connecticut, to receive comments on the Draft Environmental Impact Statement. Verbal comments were presented at the meeting by six people. A verbatim transcript of those comments is provided as part of this appendix. Written comments were received from 10 different entities. All comments received on the Draft EIS and the Army's responses are included in this appendix.

VERBATIM PROCEEDINGS

DEPARTMENT OF THE ARMY

PUBLIC MEETING

RE: STRATFORD ARMY ENGINE PLANT

STRATFORD TOWN HALL
STRATFORD, CONNECTICUT
JUNE 4, 1998

POST REPORTING SERVICE
HAMDEN, CT (800) 262-4102

MEETING RE: STRATFORD ARMY ENGINE PLANT
JUNE 4, 1998

. . . Verbatim Proceedings of a public meeting of the Department of the Army re the Stratford Army Engine Plant, held at the Stratford Town Hall, Stratford Connecticut, on June 4, 1998 at 7:30 p.m. at which times the parties were heard as hereinbefore set forth . . .

MR. PETE SZYMANSKI: Ladies and gentlemen, my name is Pete Szymanski. I'm the Installation Manager for the Stratford Army Engine Plant.

For those of you who don't know it, the Stratford Army Engine Plant belongs to the U.S. Army Tank, Automotive and Armaments Command in Warren, Michigan. That's our higher headquarters. And below that -- or above that is the Army Command in Washington.

As you all know, the plant is closing and as part of the process -- this one of the steps in the process -- we're required by law to do what is called an "Environmental Impact Statement."

The draft statement has been out for a while. We're soliciting comments on it, and this is

part of the process for that. Generally, tonight's conversations are limited -- should be limited to the plan itself, the Environmental Impact Statement.

If you have a question or something that comes up that is more appropriate to be answered by me, as a representative for the Army or by the LRA, if it's an issue that belongs to them, we'd probably ask you to see us before, after or during the meeting if you have to or send us something else. We just wanted to deal with the impact statement tonight.

But along that lines, it's been a long process and we will keep working on it. The Army is committed to doing the closure of Stratford Army Engine Plant in an environmentally responsible manner and this is part of that process.

I'd like to turn the podium over to John Simpson from Tetra Tech. They're the architectural engineering firm that we hired to do the study for us. Are there any questions of me before I sit down?

MR. JONATHAN SIMPSON: Good evening and welcome to this public meeting regarding the draft environmental impact statement for the disposal and reuse of the Stratford Army Engine Plant.

As Pete said, my name is Jonathan

Simpson. I work for a company called Tetra Tech. Tetra Tech is an environmental science and engineering firm. It has about 70 offices all around the country. We happen to be out of an office in Fairfax, Virginia.

And as Pete said, our office has been contracted by the Army through the Corps of Engineers Mobile District to assist in this preparation of an environmental impact statement.

This is a little bit of a homecoming for me. If there's any inland boaters or fisherman out there, you're probably familiar with Candlewood Lake. And I served as a first executive director of Candlewood Lake Authority starting about 1984 to about 1990, '91.

And on behalf of myself and my Tetra Tech colleagues, Paul Wilbur, Liz Hyatt and Christen Shields, I wanted to make sure we thanked the people at the engine plant here and also at town hall for their hospitality and graciousness in helping us set up this public meeting.

Now we're here tonight really because of the 1990 defense base closure and realignment act or BCRA, for short. And this act provided for a series of commissions to recommend installations for realignment

and closure.

One was set up in '91. Another was set up in '93. And finally, it was the last one that was set up in 1995 that recommended the closure of the Stratford Army Engine Plant.

Now if you might imagine, closure of an installation involves several complicated processes and this meeting actually is one step in one of these processes. Can I have the slide, please?

We have a very clear purpose for this meeting tonight. We're here to obtain comments pertaining to this draft document called the environmental impact statement for disposal and reuse of Stratford Army Engine Plant.

In this document we want to know has the Army adequately addressed environmental impacts. And the second purpose is to obtain comments on the merits of the alternatives that are evaluated in this document. Now please note that both purposes are key on the phrase obtain comments.

Now the focus of this meeting is on your thoughts and, therefore, I'm going to keep my remarks rather brief and really aimed at providing some background information about the environmental impact

statement process.

And when I'm through talking we'll have about a ten minute break and then we'll reconvene and then dive into the most important part of this meeting, your comments.

Now where did all this environment impact statement business come from? Well it comes from a federal law that was passed in 1969 called the National Environmental Policy Act, or NEPA for short.

This act requires the identification and analysis of potential environmental effects of certain proposed federal actions and alternatives before those actions take place. In a nutshell this law says think things through before you act.

NEPA is a full disclosure law with provisions for public access to and public participation in the federal decision making process. In another nutshell, this means don't make decisions in a vacuum. Ask the people who live and work and recreate in the area for their thoughts and advise.

And really that's why we're here tonight. We're asking for your thoughts and advice on this draft environmental impact statement.

And the Army really wants to get things

right and we want to get your comments on the record correctly. And that's why we've engaged the services of a transcribing reporter and that's also why we asked everybody who came tonight to sign if, and if you hadn't signed in, when I'm done talking on a break, please do sign in.

And we want to have your name and address and especially we need the names and addresses, contact information for the people who want to make comments because we want to be able to follow up or clarify your comments if need be.

Now this slide is the basic steps and timeline for preparing this draft environmental impact statement. Now back on December 4th, 1996 we held what we call a scoping meeting in this very same room for the purpose of identifying environmental impact issues. And perhaps some of you here tonight attended that meeting about a year and a half ago.

And we received some thoughtful and insightful comments at that time and all of them have been addressed in this draft environmental impact statement.

Since that cold December night back in 1996 we've been assembling environmental data and

analyzing impacts, considering mitigation and preparing this draft environmental impact statement.

And in this timeline we're now at the point at the public meeting and we're ready to receive your comments.

Now in July and August we'll address those comments and promulgate a full, final environmental impact statement for review and in September prepare and promulgate a record of decision and then initiate action.

Now installation closure, at least from the environmental impact statement perspective, is really a two-part action. First, being the disposal of the surplus property and the second is reuse of that property by others.

On the disposal side alternative one is to dispose of the property with certain encumbrances attached to it.

Now what's an encumbrance? Well an encumbrance is some aspect of the property that limits its reuse. The existence of a utility easement, for example, a sewer pipe is an example of an encumbrance. It limits the use of the property.

The second alternative the army looks at

is unencumbered disposal. What are the impacts if the property disposed of with no encumbrances?

And the last alternative is a no action or caretaker status. Now the Army can't dictate somebody take this property off their hands. Therefore, the no action alternative identifies situations where the property is held by the Army as a caretaker.

Now the secondary action is reuse. Now in most cases it means redevelopment of the installation property and its assets and we look at reuse in terms of intensity based scenarios.

Now Army protocols have developed five scenarios. Low, medium low, medium, medium high and high. Now given the setting in Stratford the Army focused in on three of those scenarios, low, medium low, and medium intensity because theses were identified as the most probable scenarios for reuse.

Now with respect to the primary action, the disposal of the property, the Army prefers the incumbered disposal alternatives. That is when we can -- all environmental effects are looked after.

But with respect to the secondary action, reuse of the property, the Army doesn't state a

preference. That's the community's role.

So what is analyzed in this environmental impact statement? Well what is analyzed is the effects of these different alternatives. Now we break these down into direct, indirect and cumulative effects.

Now as the slide shows in this report we looked at the no action alternative and analyzed that in terms of direct, indirect and cumulative effects. And we looked at the approach of -- the encumbered and unencumbered alternatives. Again, direct, indirect, cumulative effects. And we did the same approach with the three reuse scenarios.

Well if you haven't become familiar with this draft environment impact statement you're probably wondering by now what effects are we actually covering.

And the Army has identified several resource areas to be covered in the EIS. And we have these 14 resource areas listed right here and I don't need to read them to you but you see familiar environmental terms up there. In this report we've covered each one of them.

Well now we've come to the most difficult part of my little short presentation, how to

present all this environmental impact information about Stratford Army Engine Plant on one slide and make it clear enough that somebody in the back of the room can make sense of it.

Well I think I've concluded, and probably you have to, that it can't be done but we sure tried with this slide. What we have here is our 14 resource areas. We have our no action, our disposal alternatives, reuse scenarios and direct, indirect effects across the board here.

And what we've done with each line of resource areas is made a call on what kind of effects would be anticipated.

Now basically this chart presents a variety of what we've deemed minor, positive and negative effects that will occur both in short and long-term timeframes.

Now the actually document itself presents in pretty good detail the rationale for each and every one of these conclusions.

And if you hadn't had a chance to review the draft environmental impact statement, please if you want to get into that detail, please go to the public library here in Stratford and there's a copy of it on

file there.

Now this really concludes my basic part of the background information that I'd like to present. I'd like to reiterate that it's you all that are really the stars of this meeting tonight.

But what we've tried to do is actually set up a few ground rules and procedures to make sure we -- one, make sure everybody gets a chance to make a comment, and we've done that in a couple of alterative ways.

The first alternative is actually coming up after our break and giving oral comments. Now we have at the front table here a sign up sheet in bright yellow. What we're going to do is take the speakers as they sign up.

And what we'd like to do is limit each speech or comment to about five minutes. Now this is a goal. We don't have a stop watch up here. But please try and organize your thoughts and limit your comments to five minutes.

We're going to ask that you clearly state your name and address for our recording reporter here because we want to make sure we do have your comments on record accurately.

And you have a second choice -- is perhaps you can't or don't feel like making an oral comment. And that is to make written comments.

In the package that hopefully everybody picked up on the way in, on the back page we have something called a comment card. And you have two choices here.

You could either fill it out here tonight and leave it in the box here on the table or we've included an address and the address is repeated up here, so you can mail in your written comments to Mr. Hand here in Mobile, Alabama. We do request your comments to be submitted and received by June 22nd.

So that concludes my initial part of the meeting here. And as I said, we're going to take a ten minute break, reconvene and get set up for some oral comments.

Now before I sign up here for the break I want to stress that the public comment period is not really set up -- is not set up to be a question and answer session or a public debate.

Our purpose here tonight is to gather up your thoughts and advice. And also I wanted to make it clear that I'm a contractor and I'm not an Army

spokesperson.

We do have some Army Corps of Engineers representatives here that expressed a willingness to stick around at the end of the meeting and perhaps you can ask an informal question or two.

We have Shirley Barnett here and Mr. Joe Hand. And they expressed a willingness to stick around. So indeed if you have some specific questions we can -- ask them at that time. But coming up right now is a period for public comment and we're ready to listen And with that --

SEN. GIL "DOC" GUNTHER: (INAUDIBLE -- NOT USING MICROPHONE.)

MR. SIMPSON: Sure. I won't answer the bigness of that question. We are, as I mentioned -- there are a lot of processes going in at the same time.

And we're actually working on a very narrow focus with the draft environmental impact statement and at this time gathering up public comments. Pete, maybe you might have a --

MR. SZYMANSKI: Going to your question about the reuse scenario that we went with the town's preferred reuse scenario which is actually a combination, it's not complete demolition and it's not

100 percent reuse. It's a variable scenario.

That is discussed in the EIS and these gentlemen or this gentlemen and his staff are not here -- I don't think they're ready to get down and argue about the actual reuse scenarios themselves.

That's an issue more appropriate to the town LRA activity if that's where you want to go with that though we would solicit your comments if you want to make some along that line.

SEN. GUNTHER: (INAUDIBLE -- NOT USING MICROPHONE.)

MR. SZYMANSKI: We looked at the impact and what we did was hit the middle road on that. We didn't go with either extreme. And so that's where the result of the plan came up, understanding there would probably be some demolition but not entire. So it's a compromise.

MR. JOHN BURLESON: (INAUDIBLE -- NOT USING MICROPHONE.)

MR. SZYMANSKI: For those of you who don't know, this is John Burleson. He's the base environmental coordinator. He's the person that's overseeing the cleanup program for me.

SEN. GUNTHER: It's difficult for me,

especially to react at an environmental hearing here to go from let's say a clean up for reuse and the expenditure of a hell of a lot less money than demolition (INAUDIBLE).

MR. JOHN BURLESON: But I think the problem we're faced with, at the present time we do not have sufficient information to be able to put dollar figures. Whoever said $150 million perhaps may be right. They may be right. But then again it's the standard to which you clean it up. In an industrial, commercial standard that everybody seems to be driving towards, all of the proposed alternatives in the plan -- (INAUDIBLE).

We don't have sufficient information at this time to be able to say what is the cost associated.

SEN. GUNTHER: (INAUDIBLE -- NOT USING MICROPHONE.)

MR. SZYMANSKI: Doc, the Army's official stance on the plan right now is that we are going along with the town's reuse scenario which has not as of yet been told to us that they want to demolish the whole place, that's the only scenario they're going with. They're exploring a whole spectrum of scenarios.

The Army has as part of its program told them that we will do a -- correction. We will do a remediation of the property to meet state standards with the buildings as existing now.

That does not preclude the demolition scenario. However, it does not support the demolition scenario. There has been no decision made for that process.

That will all depend -- and again, we will be going along with what the LRA's reuse scenario is also consistent with what funding is available, what time constraints we may have on the issue and all the other factors that go into it.

But that's way outside the scope of this meeting here. These -- Tetra Tech just basically worked out, here's the scenarios, here's the impact of the scenarios and they're soliciting comments on the various individual impacts themselves.

I don't think they got into the funding, whether or not the Army would fund something or some other source of funding would exist or whether things -- just the general impacts and we need to keep that to it or we can turn this into a five hour meeting which --

MS. SHIRLEY BARNETT: Pete, you said those decisions aren't made.

MR. SZYMANSKI: They're not locked. There's no decisions made for that. That's a broad scope of actions we have to look at and that's what they tried to address.

Nothing was eliminated. Everything was addressed. But there's no formal decision on exactly where we'll end up three years down the road.

SEN. GUNTHER: Pete, I find it a little difficult to react to an environmental cleanup that's recommended in this book. Frankly, I did not read the whole thing. I read the summary. And I find it very difficult to react on the cleanup and the proposals without having some idea as to exactly what is doable.

MR. SZYMANSKI: And they address the scenarios and that's about the best we can do at this time, Doc, and that's pretty much it.

SEN. GUNTHER: I don't want to prolong it. I just have a lot of questions about everything.

MR. SZYMANSKI: Then that would be a good candidate -- probably if you have a lot of them just to write them down and send them all in because they have to be addressed.

MR. BURLESON: This question may have been answered. My understanding is that the Army has looked at the environmental impact study under all scenarios presented by the consultant and primarily, the Army is still going by what the last decision was with regards to that parcel?

MR. SZYMANSKI: Yes. John, that's a fair statement. The Army's looking at -- we looked at all the scenarios underneath the study and we are assessing but we're going along with the main --

MR. BURLESON: (INAUDIBLE -- NOT USING MICROPHONE.)

MR. SZYMANSKI: No matter which way they go we've adapted it to.

MR. SIMPSON: All right. With that let's take our ten minutes and reconvene.

(Recess)

MR. SIMPSON: Okay. We're ready to start the second and most important part of our meeting tonight. I'd like to make one quick housekeeping note. That our court reporter informed me that side conversations -- well not side conversations, but conversations that are not directly spoken into one of these microphones are impossible to pick up.

So we are going to have a gap in the public recorded record of this meeting. I wanted you to be aware of that. So anybody who perhaps was making a point that you wanted to certainly get on the record, please make that point in the public comment period.

We do have our microphones set up here in the middle of the aisle. And what I have -- we've got a total of four names on our speaker sign up list. After we've gone through this four I'll ask if anybody else has any comments and you can feel free to add yourself on this.

But please when you do get up to the microphone state your name and address and please try very hard to organize your thoughts so that we can limit public comment to about five minutes total.

Certainly, you can make oral comments, but please, if you have more to say, please make written comments too. And we will be addressing each and every comment that we receive, oral or written, in the final environmental impact statement.

With that we do have an order here and I'm just going to call off the first name. Is Bob Sammis from Redacted - Privacy Act here?

MR. BOB SAMMIS: My name is Bob Sammis.

I reside at Redacted - Privacy Act . I'm a member of the Waterfront Harbor Management Commission and also president of Connecticut's Harbor Management Association.

One of the things that is of particular importance to both groups, and particularly the one here in Stratford, is the fact that the waterside aspect of this property has received minimis attention.

We think, obviously, that the water side is particularly important for any economic development of this size and scope. First of all, the land mass along the river is something on the order of a half a mile.

(1) Now in terms of available waterfront property in the State of Connecticut that is either developable either for public access or for commercial or industrial usage doesn't come in those size parcels but once in a lifetime.

We think that it ought to be an integral part of this environmental impact statement as well as the development program itself.

Just recently, if you will, in the past couple of months, the Waterfront Harbor Management Commission has undertaken two major studies. One is

called the waterfront vision for the Town of Stratford and the second is the plan addendum and update of the Stratford Harbor Management plan.

Both of these highlight this particular parcel of property because of its unique characteristics. One is that it abuts the Housatonic River which, of course, is the main water course through out community.

Number two is that if it is developed properly and the remediation which is probably necessary from the environmental point of view is taken with an enlightened point of view it opens an opportunity for massive, proper, reasonable environmentally sensitive development for this community which translates into jobs, jobs and more jobs.

(2) We have an opportunity to address excursion boats. We have an opportunity to address the fin fish and shell fish industry. We have an opportunity to develop mooring grids. We have an opportunity to develop bike ways and green ways and we have an opportunity to make the quality of life for all of the people who will subsequently occupy this property greatly enhanced.

We think that it's about time that somebody take notice of the fact that this whole property is on the Housatonic River. Period. Thank you very much.

MR. SIMPSON: Thank you, Mr. Sammis. Senator Gunther, you're up next.

SEN. GUNTHER: If I may I'd like to back up, Bob, there. And, in fact, in your reference that you've printed up here I see very little reference to the water side of the environmental problem down there.

I have asked Dr. Hove (PHONETIC) of the University of Connecticut to come down to confer to with our DEP with some of the statistics. I've been trying to get him. He's all over a ten acre lot. But I do think that you have a golden opportunity to go in there and mitigate the pollution.

3 I think it's almost mandated, as far as I'm concerned, that the Army before they leave this site that the water side of that should be mitigated in toto.

Now I know that the Town of Stratford owns the old Coltern McKenzie property which abuts this. But I think that most of the pollution that needs to be mitigated is probably coming from the Avco,

Allied Signal or the engine plant or whatever you want to call it.

That that whole -- that's in Crimbo Bay there, I think you'll find out has been impacted by that. Not only that area but I do think that some of the pollution that's come down through the Raybestos situation and that is also in there.

I know there has not been feasiblities, there has not been the analysis necessary in these areas to find out what we're all talking about mitigating.

But actually, if you let that pollution lay in there it will take another century or two for it, if ever, to get out of that area.

And I think that there's a golden opportunity for a pilot program. I've seen some recent studies on how they've mitigated areas by doing containment, do all the mitigation behind the containment and that area, if you'll take a look at the Crimbo Point breakwater and you take a look at the service area that we had for launching the sea planes and that you can almost put a curtain across there or even bulk head that.

Do all your mitigation behind that and

it would make available just in that area -- and I have some designs that we designed over 12 years ago for the use of that. An over 500 boat marina, access by the general public, fishing peers on Crimbo Point. Fairly extensive. I'd love to submit it to you to have you see the potentials.

But again, I think it's the responsibility of the clean up to spend a little bit more time and to take a damn good look at that.

There also incidentally is a second area, which is south of that that was put out there by Sikorsky way back when they were building the flying boats that also would lend itself to cleanup.

And if you ever want to hear any dialogue just listen to the boat clubs all over this area. They're looking for sites and access to the water. And here are two major areas that would be a tremendous thing for the economy.

And I think Bob has mentioned the high speed ferries, passenger ferry services there, would be immediately available right off the main navigational channel and that sort of thing. So this is of major importance.

I am very concerned over the preferred

listing. And I know there's four listings. And I know that there's a modification of anything from complete demolition of building to the demolition of selective sites on this site.

4a I am very, very concerned that the complete demolition of building two would be a very, very bad act both for the Town of Stratford and for the economy of the whole darn area.

Right now if you go to any broker who's looking for sites for industrial sites with 30 to 50 foot bays you'll find out there ain't no animal like that in the State of Connecticut except the Army plant.

I think that even consideration of demolition for the cost of it and the mitigation that would have to take place because in talking to people that are knowledgeable of the circular, they tell me that once you start to demolish that plant you'd end up with an obligation that if the town, the state and the rest of us couldn't do it, then the federal government will take over, do the job and finish it and bill you for it.

Now I don't see that the money's available. And some of the figures I've heard I think are ludicrous to think that it could be done for 10 to

$15 million. I think the figures of anywhere between 50 and 100 is more reasonable.

Talk to your brokers. We have less than three percent vacancy in industrial sites. I can tell you that since we got the index plant in there my phone has not stopped ringing with people that are interested in going down there and seeing that plant and seeing about getting in there.

And they're not talking about waiting about from four to six years that we've been told in some of the public meetings that would be necessary if we actually demolish the major building, which is number two.

If we demolish that we've got a long-term program and I have visions of Raybestos all over again. I think the plan that was drawn -- it's beautiful. The preferred plan with a park and office buildings.

If we go into an office building development all I can tell you is Lake Success has got hundreds of offices going up there. And by the time they're built we wouldn't be finished demolishing that site.

Plus some of the impacts of anybody

building on that site. I've been told that they would have to go to 85 foot pilings in order to support buildings of that nature.

(4b) So I think at this point, the building two especially, should be cleaned to a reuse level. I think we ought to be getting people in there and I've just got correspondence today when I arrived home here today that says that the plan is that we have no occupancy in there until the year 2000.

I know that's a local plan and I've just become aware that those are some of the stipulations they're putting on that. Now that's another two years with no earnings, with no tax return, with no new jobs and that type of thing in here.

So I think we ought to be concentrating on a clean up and a reuse of that there in the plant and especially in building two. There are other buildings I know right now we could take and get rid of them and demolish them and it would be in the plan and that sort of thing. And it will cost money but those are things that are expendable.

But the rest of it, I know that building six is almost ready for occupancy. I know it could be occupied. Building ten. There's several of them that

the clean up has been sufficient right now and we have dozens of people that are out there begging to get in there and get that reused.

Incidentally, we passed two laws in the past session. One of them is on the cluster development under the economic develop and there's some very definite advantages to this town and even to the federal government that we set up these cluster developments and this is on a machine tool basis. It will be an ideal cluster in that particular category.

The other bill that was sponsored by Larry Miller Harkins -- I have to watch out how I call him -- Backer and myself that would set up by October 1st the Economic Development Department of the State of Connecticut can designate that an enterprise zone with many advantages to the town, such as payment in lieu of taxes and that type of thing, that is going to be on board.

(4c) And I say it's time to get that plant back up with jobs, with tax earnings for the Town of Stratford. And I think to try to mitigate that or put that into a plan which is going to cost the Army, and the federal government and some other people who I can't identify at this point, that they can spend that

kind of money to do the clean up.

The main building two, I think with the exception of the -- I believe the plating and the metal heat treating area have been pretty much cleaned up for occupancy.

So that I think that this is where we ought to be designating this. I don't think if effects to the environmental cost and the whole environmental plan that you should be considering.

MR. SIMPSON: Thank you, Senator. You've done your homework. I appreciate your coming out tonight. Number three on the list is Richard Miron.

MR. RICHARD MIRON: My name is Richard Miron. I live at Redacted - Privacy Act in Redacted - Privacy Act. I'm sure this isn't the first time that I've disagreed with the esteemed Doc but I do agree with a lot of what Bob Sammis said.

The LRA last year on a very bipartisan measure worked very hard along with the developers on coming up with a plan for reuse of that particular parcel.

5a It is a waterfront parcel. It is a very necessary thing that the United States Army owes to

this town to make sure that that environmental impact and property is cleaned up.

Also, I think in the long range, unlike what Doc Gunther had indicated, I don't think we should be in such a hurry to look to fill those buildings for the Town of Stratford.

In the long range plan the town will be better with higher taxes and more jobs by going along with what the LRA suggested and recommended to the Army last year.

5b I strongly urge the Army to look at that plan very carefully. A lot of hours were put in by an awful lot of people to come up with that decision. But I do think that the Army owes the Town of Stratford a very good clean up before that progress can be made. Thank you.

MR. SIMPSON: Thank you, Mr. Kiron. And fourth and last on our written list Ms. Stewart.

MS. MARCIA STEWART: My name is Marcia Stewart, Redacted - Privacy Act. I'm president of Protect Your Environment.

I'd like to refer you to water resources number 4.7.1 where it talks about draining into Long Island Sound by way of the Housatonic River. And also

talks about the current status of this area, which is an SB and an SC classification that reflects the state goal of returning these waters to a more recreational use but indicates the shell fish harvesting for human consumption might not be a reasonable use in the title flat area adjacent to the Army plant.

(62) But there are title flats within the site boundary and they happen to be 48 acres along the Housatonic River. And it's these title flats that I believe we should urge the government to clean to the greatest extent possible.

In other sections of your environmental impact statement you indicate that there's a great deal of bird life and other wildlife in this area that use these title flats for feeding. And that this point those birds and other wildlife are getting contaminated food.

There was recently on TV a very interesting study about how animals are being studied to learn of the effects of contamination and they are the early indicators, the early warning system for human beings.

There are fish in that area. I believe it could be a really good fish farm and that's the kind

of thing that seems to be happening in the fishing industry all over the world. That we're depleting the ocean of their fish and we're developing the fish in areas where there is water conducive.

To that end there was a program recently in the Bridgeport Post about how Long Island Sound is being used in that way by students of the Bridgeport Regional Vocational Agricultural Center.

And they lowered some thousand baby bay scallops into the sound. And that's the kind of exciting future that I think the title flat area could be for Stratford.

6b And so again, I urge that the environmental clean up of this area be as thorough as possible. That state guidelines could be exceeded by the Army and they could do a really good job here and restore those title flats to almost their original value for habitat.

7a The other thing I'd like to mention is page 4-21 of your book where it lists air travel. And the manager of Sikorsky Airport has apparently mentioned that they hope to -- they hope to extend the road across Main Street into some of the property that belongs to the Army engine plant.

And it's just stated there. However, there's no indication that there's been any rebuttal to that hope. And I'd just like to point out that several things have happened. In '96 there's a planning and zoning ordinance that suggests the town has some say in what happens there.

I believe this was in 1995 3,000 signatures were collected by the late Vinnie Beaula (PHONETIC) indicating that area residents opposed any expansion of the Bridgeport Sikorsky Memorial Airport into the other regions outside the current footprint.

And at a public scoping informational hearing held in '96 where there were 45 speakers or people who wrote comments, 42, which is 93 percent of the 45, opposed expansion at Sikorsky.

(76) So just for the record, I think there could be an asterisk, a little note placed at the bottom of page 4-21 indicating there is some opposition. Thank you.

MR. SIMPSON: We've now come to the end of our speaker sign up list. At this time I'd like to open it up if there's anybody who perhaps did not have a chance or has come up with a comment or two they'd like to make. Raise a hand and we'll -- it looks like

we have one person here. Yes, sir. Please state your name and address.

MR. KENT MILLER: My name is Kent Miller. I'm Stratford's Councilman at Large. I live at [redacted] Redacted - Privacy Act .

8a My questions basically are first will the environmental impact study address the economic impacts of the remediation?

And then my second concern is we had some buildings over at the Raymark site stand for a 8b long period of time and my concern would be that the final environmental impact study should address whether or not the site can be properly remediated with the buildings standing.

I think that some attention should be given to waste that may be lying beneath the buildings and whether or not that can be property remediated if the buildings are not removed. Thank you.

MR. SIMPSON: Thank you. Is there anyone else that might want to make a comment? Yes, sir.

REP. JOHN HARKINS: John Harkins. I'm a state representative for the 120th Assembly District here in the Town of Stratford. My address is [redacted] Redacted - Privac

Redacted - Privacy Act .

I just have a few concerns that I want to go on the record for. Quite simply, I think the town has experienced a lot with environmental questions and situations. Of course, with the Raymark site and some other areas in town. If I go to school again I think it will be for environmental studies or law because I'd probably understand more of this.

But the one concern I have is there's just a lot of unanswered questions and it just seems to be hard to make comments on something when we don't know if there's going to be a cost cap on remediation, if there's going to be a cost cap on any type of redevelopment. Will the final reuse plan be implemented or are we going to do something else?

9 And it just seems like there's a lot of what if's. But I just want to make sure that the government is going to clean this site up to a level where it's going to be reusable for the citizens of the town and for the region where we're going to get some tax dollars out of the site.

Whether it's passive use along the river, industrial or some type of research and development on site. We'll decide that down the road.

But we just don't want to be sitting here in a couple of years with the proverbial white elephant and waiting for some type of conclusion to be reached and some type of remediation to be done especially with this piece along the river which is so desirable.

The town's economy is turning. Fairfield County's doing great economically. The state's starting to reap the benefits. We don't want to miss the train on this one.

So hopefully, we'll do it as quick as possible and I hope there'll be some conclusions shortly. Thank you.

MR. SIMPSON: Thank you. Is there anybody else in the audience that would like to make a comment?

Again, I reiterate, written comments, either on a comment card or a separate piece of paper. You have the address with your handout packet. Please feel free if you think of something in the next few days that you'd like to provide a written comment for it will be addressed.

Before I close I'd like to make special recognition of our elected officials that came out

tonight.

Certainly, Senator Gunther, thank you and Representative John Harkins. And I know Congressman Rosa DeLauro was represented here by Jennifer Emra and we appreciate the coming out tonight. Is there any other elected official that I'm missing that I'd like to get on record?

MR. MILLER: Three members of the town council are here.

MR. SIMPSON: Three members of the town council. Okay. We do have you on the sign up list and thank you for coming out tonight. If there are no other comments, I'd like to go ahead and close the meeting. And again, thank you all for coming out tonight.

(Whereupon the public meeting was adjourned at 8:40 p.m.)

CERTIFICATE

I, Paul Landman, a Notary Public in and for the State of Connecticut, and President of Post Reporting Service, Inc., do hereby certify that, to the best of my knowledge, the foregoing record is a correct and verbatim transcription of the audio recording made of the proceeding hereinbefore set forth.

I further certify that neither the audio operator nor I are attorney or counsel for, nor directly related to or employed by any of the parties to the action and/or proceeding in which this action is taken; and further, that neither the audio operator nor I are a relative or employee of any attorney or counsel employed by the parties thereto, or financially interested in any way in the outcome of this action or proceeding.

In witness whereof I have hereunto set my hand and do so attest to the above, this 17th day of June , 19 98

Paul Landman,

President

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DEIS Public Meeting Responses

Mr. Bob Sammis

(1) The Town of Stratford, through its Local Redevelopment Authority, has prepared a comprehensive plan for reuse of the SAEP property. The plan's provision for waterfront access by the public indicates that waterside values were taken into account.

(2) Comments noted. Redevelopment of the SAEP property is within the Town of Stratford's discretion, as expressed in its evolving reuse plan.

Senator Gil Gunther

(3) The Army continues to evaluate the condition of the SAEP property. Inadequate information currently exists to determine the potential cleanup requirements of waterside areas adjacent to the SAEP.

(4a) The Town of Stratford's originally adopted reuse plan called for the demolition of Building 2 to permit new development of the SAEP site. By letter of September 30, 1998, to the Army Materiel Command, the Town announced its intention to reexamine its alternatives with a view toward adaptive reuse. Such a revised approach would likely include continued use of Building 2 for the foreseeable future.

(4b) In consultation with appropriate federal and state regulatory authorities, the Army will undertake cleanup of Building 2, as well as other SAEP locations, to render it usable for the purposes proposed in the community's reuse plan.

(4c) Comment noted.

Mr. Richard Miron

(5a) As indicated in Section 2.3.2 of the DEIS, contaminated sites will be remediated in accordance with CERCLA.

(5b) As shown in Section 3.4 of the DEIS, the Army evaluated the reuse plan as the primary factor in developing its proposed action and alternatives. In light of the Town of Stratford's intentions to reevaluate its reuse plan with a view toward redevelopment based on Alternative 1 (adaptive reuse), communicated to the Army by letter dated September 30, 1998, the Army has modified its description of the reuse plan in Section 3.4 and its evaluation of potential environmental impacts in Section 5.4.

Ms. Marcia Stewart

(6a) Please see the responses to Comments 3 and 5a, preceding.

(6b) Please see the preceding response.

(7a) The Federal Aviation Administration, on behalf of the city of Bridgeport (owner and operator of Sikorsky Memorial Airport), proposes to relocate Runway 6-24 to the northeast. The relocation and provision of runway safety areas would necessitate rerouting of Main Street onto property owned by the airport and Sniffens Lane. At the request of the FAA, the Army is reviewing possible transfer of portions of SAEP to the City of Bridgeport for runway safety area requirements. The Army is also considering a request by the FAA for a small parcel of SAEP property at the intersection of Main Street and Sniffens Lane. Transfer of this parcel would allow construction of a curve from Main Street to Sniffens Lane, which would result in a roadway preferable to the present right-angle intersection.

(7b) Comment noted.

Mr. Kent Miller

(8a) Costs of remediation and the duration of cleanup efforts are not sufficiently known at the present time.

(8b) As discussed in the response of Comment 5a, all contaminated sites, regardless of location, will be cleaned up and contaminated materials will be disposed of in accordaince with CERCLA and in consultation with federal and state regulatory agencies. These matters are addressed through the Army BRAC Installation Restoration Program. Past studies of contamination at SAEP and the ongoing Remedial Investigation and Feasibility Study are expected to provide sufficient information to permit the Army to decide on the most appropriate courses of action. Whether the presence of buildings on the site will pose special obstacles to remedial action depends on the extent of contamination and the methods chosen to restore the property. These are matters which are not yet sufficiently known for inclusion in the EIS.

Representative John Harkins

(9) The determination of cleanup standards will be reached jointly by the Army and the State of Connecticut, after full consideration of contamination present, the community's proposed reuses, and the means available for cleanup.

1205 CANNON BUILDING
WASHINGTON, DC 20515-0703
(202) 225-3661

57 ELM STREET
SECOND FLOOR
NEW HAVEN, CT 06510
(203) 562-3718

KILLINGWORTH/CLINTON
(203) 669-1181

STRATFORD
(203) 378-8005

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AGRICULTURE, RURAL DEVELOPMENT, FOOD AND DRUG ADMINISTRATION AND RELATED AGENCIES

June 19, 1998

Mr. Joe Hand
U.S. Army Corps of Engineers District, Mobile
P.O. Box 2288
Mobile, AL 36628-0001

Dear Mr. Hand:

Thank you for the opportunity to comment on the April 1998 Draft Environmental Impact Statement (DEIS) for the Stratford Army Engine Plant (SAEP).

After review of the DEIS, I am very concerned that the characteristics of the site -- large industrial-use buildings that are rapidly becoming obsolete, costly heating plans, industrial waste, significant flooding, and the presence of lead-based paint and asbestos -- will not allow the economic needs of the town of Stratford to be best met if the Army carries out the DEIS recommendation to maintain the SAEP buildings in caretaker status until it transfers them to Stratford.

The closure of the SAEP has brought difficult economic times to the men and women who dedicated years of hard work to producing high-quality Army engines. It is estimated to have a cumulative impact on the community over the next ten years of $1.8 billion -- more than $180 million each year. To counter the effects of the base closure, it is essential that the community be able to completely reshape the site for R&D and corporate office use as soon as possible.

According to the DEIS, in an appropriate case demolition of the site by the Army "could occur if required for health, safety, or environmental reasons or if it were *economically justified* in lieu of continued maintenance." According to U.S. Army Corps of Engineers calculations, the costs to the Army of demolishing the SAEP totals $28.7 million. Attached is a breakdown of these costs.

I would appreciate a summary of the costs to the Army of maintaining the SAEP buildings in caretaker status, and a summary of how this plan benefits the best interests of both the Army and the town of Stratford. The town supported SAEP for many years. It should be rewarded with the most efficient and productive reuse of the site possible. Thank you for your attention to this important matter.

Sincerely,

Rosa L. DeLauro
Member of Congress

Enclosure

SAEP DEMOLITION AND ENVIRONMENTAL REMEDIATION COST SUMMARY

Facility Demolition Cost Estimate
Stratford Army Engine Plant
Stratford, Connecticut

Job No: 62147-00
Date: 9/29/97

DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL
I. DEMOLITION				
A. Demolition to Slab	1,698,789	sf	$ 1.87	$ 3,176,735
B. Debris Disposal	55,776	cy	$ 11.50	$ 641,424
C. Concrete/Brick Disposal	36,620	tons	$ 10	$ 366,200
D. Asbestos Abatement	113	N/A	N/A	$ 2,554,730
E. Demolition of Slabs & Foundation	72,914	cy	$ 75	$ 5,468,550
F. Transformer Transport & Disposal	17	each	$ 5,500	$ 93,500
G. Scrap Credit	9,803	tons	$ (50)	$ (490,150)
H. Aboveground Storage Tank Removal & Disposal	214	tons	$ 90	$ 19,260
I. Underground Storage Tank Removal & Disposal	2	each	$ 10,000	$ 20,000
J. Chemical Waste Line Removal & Disposal	1	lump sum	$ 7,500	$ 7,500
K. Cap Water & Sewer Lines at Property Limits	20	each	$ 3,000	$ 60,000
L. Asphalt Removal & Recycling	30814	tons	$ 24.00	$ 739,536
M. Interim Erosion Control Measures	1	lump sum	$ 63,000	$ 63,000
N. USACE/SAEP Office Rental	4	year	$ 25,000	$ 100,000
O. Site Security	104	week	$ 7,000	$ 728,000
P. Legal, Admin, Permitting [Items A-O * 5%]			5%	$ 677,411
Q. Design [Items A-O * 10%]			10%	$ 1,354,821
R. Demolition Oversight [Items A-O * 10%]			10%	$ 1,354,821
S. USACE Project & Technical Mgmt. [Items A-O, R * 8%]			8%	$ 1,192,248
T. USACE Project & Demolition Mgmt. [Items P-O * 10%]			10%	$ 203,224
DEMOLITION SUBTOTAL				$ 18,330,780
II. ADDITIONAL ENVIRONMENTAL REMEDIATION AS A RESULT OF DEMOLITION				
A. Remedial Investigation	139	boring	$ 6,748	$ 937,985
B. Feasibility Study	24	ls	$ 4,000	$ 96,000
C. Soil Excavation to the Groundwater Table	24415	cy	$ 5	$ 122,074
D. Confirmation Sampling w/ 48 hr turn-around				
a. TCL-VOC	308	sample	$ 440	$ 135,297
b. TCL-SVOC	308	sample	$ 830	$ 255,220
c. TCL -Pest/PCB	308	sample	$ 350	$ 107,623
d. TAL-Metals	308	sample	$ 340	$ 104,548
e. SPLP PCBs & Metals	308	sample	$ 930	$ 285,969
E. Off-Site Disposal of Contaminated Soil				
1. Characterization Sampling w/ 7day turn-around				
a. Full Suite TCLP	269	sample	$ 1,600	$ 430,421
b. TCL-Pest/PCB	269	sample	$ 270	$ 72,634
2. RCRA-Haz. Trans. & Disposal (10% of excavated volume)	3356	ton	$ 300	$ 1,006,838
3. Non-Hazardous Trans. & Disposal (90% of excavated volume)	30205	ton	$ 85	$ 2,567,436
F. Backfill	26849	cy	$ 12	$ 322,188
G. Top Soil & Seed	122752	sf	$ 0.50	$ 61,376
H. Site Costs [Items C-G *25%]			25%	$ 1,367,906
I. Legal, Admin, Permitting [Items C-H * 5%]			5%	$ 341,977
J. Design [Items C-H * 10%]			10%	$ 683,953
K. Remedial Activities Oversight [Items C-H * 10%]			10%	$ 683,953
L. USACE Project & Technical Mgmt. [Items A-H, K * 8%]			8%	$ 684,598
M. USACE Project & Remedial Activities Mgmt. [Items I-J * 10%]			10%	$ 102,593
ENVIRONMENTAL REMEDIATION SUBTOTAL				$ 10,370,589
TOTAL COST:				$ 28,701,379

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SUMMARY

10/9/97

Congresswoman Rosa DeLauro

(1) The Army responded directly to Congresswoman DeLauro on July 8, 1998. A copy of that letter is provided.

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
INSTALLATIONS LOGISTICS AND ENVIRONMENT
110 ARMY PENTAGON
WASHINGTON DC 20310-0110

July 8, 1998

The Honorable Rosa L. DeLauro
United States House of Representatives
Washington, DC 20515

Dear Congresswoman DeLauro:

This replies to your letter to the Honorable Robert M. Walker, former Acting Secretary of the Army, concerning the reuse of Stratford Army Engine Plant and the associated caretaker costs.

On several occasions, Army representatives have spoken with the Town of Stratford officials, including the Town Manager as well as representatives of the Local Reuse Authority (LRA) concerning this issue. The information provided during these discussions has been that it's Army policy not to expend funds to make improvements at closing installations. As you indicated, a study of the potential demolition costs was conducted by the Army in October 1997. The study was undertaken to confirm assumptions being made by the Army; and the information was provided to the LRA to assist them in their reuse planning. These cost estimates were based on the best information available at that time. Additionally, the initial cost estimate for the care and maintenance of the facility prior to final disposal was based on existing information. Since that time further data has been collected, a portion of the facility has been leased to the LRA, and the caretaker costs have been reduced. Moreover, a Request for Proposal (RFP) to acquire a caretaker contract for the facility was prepared and bids are expected by late July 1998. The ultimate caretaker costs will be determined when the contract is awarded in late August 1998.

The LRA submitted four options in their Reuse Plan ranging from very limited demolition to almost total demolition of the site. If the LRA determines that extensive demolition is the option they will pursue, the Army will offset those costs against the acquisition cost of the property. The offset would apply under an Economic Development Conveyance (EDC) application or in the appraisal for an Army sale of the property.

The Army recognizes the significant contributions made by the local community during the long life of the Stratford Army Engine Plant. The recent efforts by both the Army and the town representatives to lease portions of the property represent the beginning of a positive reuse for the plant. We look forward to continuing this cooperative and mutually beneficial approach.

Your interest in this matter is appreciated.

Sincerely,

Mahlon Apgar, IV
Assistant Secretary of the Army
(Installations, Logistics and Environment)

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

REPLY TO
ATTENTION OF:

10 AUG 1998

Coastal Environment Section
Planning and Environmental Division

Honorable Rosa L. DeLauro
House of Representatives
Washington, DC 20515

Dear Ms. DeLauro:

Please reference your letter dated June 19, 1998, to Mr. Joe Hand of my staff concerning the April 1998 Draft Environmental Impact Statement (DEIS) for the Disposal and Reuse of the Stratford Army Engine Plant (SAEP), Stratford, Connecticut. A copy of your letter is enclosed for your ease of reference.

The SAEP was recommended for closure by the 1995 Base Realignment and Closure (BRAC) Commission and the closure subsequently approved by Congress. The U.S. Army proposes to dispose of the SAEP and transfer the property title and all Army interests to the SAEP Local Redevelopment Authority (LRA) who would be responsible for future reuse of the facility.

The proposed action evaluated in the DEIS is the disposal and reuse of the SAEP land and facilities. Two disposal alternatives (encumbered and unencumbered) and three reuse scenarios with varying intensities are also evaluated. In addition to the proposed action, a no action alternative, with the property remaining in caretaker status, is evaluated.

As mentioned in your letter, some of the structures at SAEP contain lead-based paint (LBP) and asbestos-containing materials (ACM). As stated in the DEIS, it is Department of Defense (DoD) policy with regard to LBP and ACM to manage these materials in a manner protective of human health and the environment. DoD will manage LBP at SAEP in accordance with the provisions of the Residential Lead-Based Paint Hazard Reduction Act of 1992. LBP hazards and the results of an inspection will be provided to prospective purchasers or transferees. Residential information pertaining to ACM on the property will be provided to prospective purchasers or transferees, and where property is determined to be in such condition as to pose a threat to human

health at the time of transfer, it will be remediated. Any additional remediation by future changes in reuse would be the responsibility of the new landowner.

The Army is under a mandate to characterize contamination, define the appropriate remediation in coordination with regulatory agencies, and conduct required remediation. As required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), before the property is transferred, necessary remedial actions must be completed or remedial action must be in place, proven to be operating effectively, and approved by the Environmental Protection Agency Regional Administrator. If additional remediation is needed beyond the date of transfer, the federal government will be responsible only for remediation that is attributable to activities of the federal government prior to transfer. CERCLA also requires that on properties where hazardous materials were stored, released or disposed of, the type and quantity of material and time at which release or disposal occurred must be disclosed in the deed.

Information you requested regarding costs to the Army of maintaining the SAEP buildings in caretaker status is not available at this time. However, the enclosed letter dated July 8, 1998, from Mahlon Apgar IV, Assistant Secretary of the Army (Installations, Logistics and Environment) to you indicates that "caretaker costs will be determined when a caretaker contract is awarded in late August 1998."

Your request for information on how caretaker status benefits the best interests of both the Army and the town of Stratford is detailed below. As presented in the DEIS, consultation by the Army with the LRA to establish specific care-taking plans for each structure and facility has occurred. The Army and LRA have agreed to discuss maintenance levels for facilities on a case-by-case basis as reuse opportunities are identified. When these discussions occur, the Army and LRA will be guided by provisions of the Base Reuse Implementation Manual and its delineation of actions during the initial maintenance period. Maintenance during this initial period would involve keeping buildings and machinery in as good a condition as possible. Typical maintenance activities that would continue prior to conveyance of property to the LRA include: maintenance of fenced areas to ensure adequate security; mowing and weed control on grounds for aesthetics and fire protection; and trimming and maintenance of trees and brush to avoid interference with roadways, fences, or buildings.

These initial maintenance activities involved with caretaker status, as described above, should keep the property in an orderly state thereby facilitating reuse and redevelopment opportunities for the LRA. If applicable, caretaker status should promote economic reuse of the SAEP.

If property was not transferred within an agreed-to period of time and the LRA were not actively seeking reuse opportunities for the available facilities, the Army would reduce maintenance levels to the minimum level for surplus government property. Maintenance during this period would consist of minimal activities intended primarily to ensure security and to avoid deterioration. This reduced level of maintenance would continue indefinitely until disposal.

If you have any questions or require additional information concerning the DEIS, please contact Mr. Joe Hand or Dr. Susan Rees at 334/694-3881 or 334/694-4141, respectively.

Sincerely,

J. David Norwood
Colonel, Corps of Engineers
District Engineer

Enclosures

Copies Furnished:

Honorable Rosa L. DeLauro
Representative in Congress
59 Elm Street, Second Floor
New Haven, Connecticut 06510

Commander, U.S. Army Materiel Command
ATTN: AMC-SO (Ms. Shirley Vance)
5001 Eisenhower Avenue
Alexandria, VA 22333-0001

CECW-P
CECW-ZA
CESAD-ET-PR
DX

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

July 23, 1998

Mr. Joe Hand
U.S. Army Corps of Engineers
Mobile District Office
Mobile, AL 36628-0001

OFFICE OF THE
REGIONAL ADMINISTRATOR

Dear Mr. Hand:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, we have reviewed the U.S. Department of the Army's (Army's) Draft Environmental Impact Statement (DEIS) for the proposed disposal and reuse of the Stratford Army Engine Plant (SAEP) in Stratford, Connecticut.

According to the DEIS, SAEP is located on the Stratford Point Peninsula in the northeast corner of Fairfield County. Of the total 124 acres that comprise the site, 48 are intertidal flats of the Housatonic River, which borders the SAEP property to the East. Currently, developed property within vicinity of the SAEP is zoned for light industrial use. As stated in the DEIS, under the Defense Base Closure and Realignment Act, closure is required "no later than the end of the 6-year period beginning on July 13, 1995."

As with other Base closure and reuse EISs, the Army has adopted Stratford's Local Reuse Authority's (LRA) redevelopment plan as the preferred alternative in its DEIS. Under this proposal, redevelopment of the Base would be "comprehensive," involving the demolition of all major structures "in order to create a series of independent parcels to facilitate redevelopment for corporate office and R&D use." (DEIS, p. 2-4) Under the LRA plan, the SAEP site is further divided in three areas: an Economic Development Zone (52 acres); a Waterfront Open Space Zone (16 acres); and a Special Use/Museum Zone (7 acres). Finally, the DEIS indicates that the Army will consider the application of a number of "encumbrances" to the eventual disposal and reuse of the SAEP sight that would focus on development restrictions to protect, e.g., wetlands, historic resources, endangered species, utility easements, and hazardous waste remedial activities.

Based on our review of the DEIS, we offer the following comments with regard to hazardous waste remediation activities, wetlands, and secondary/cumulative impacts.

Hazardous Waste Issues

(1) As the DEIS indicates, the SAEP land areas are being evaluated under the BRAC Installation Restoration Program (IRP) and RCRA for possible groundwater contamination. Of the 33 parcels of land under investigation at the site, all are suspected to have potential groundwater

contamination. EPA concurs with the characterization of the issues covered under the IRP and RCRA program and endorses the proposed encumbrance measures identified in the DEIS to maintain appropriate remedial activities at the base. (e.g., DEIS, p. 5-12)

Biological Resources/Secondary and Cumulative Impacts

(2) As referenced in our 12-19-96 scoping comments for this EIS, the 48 acres of intertidal flats and tidal marshes located on SAEP property are considered special aquatic sites and are thus regulated under Section 404 of the Clean Water Act (CWA). According to the DEIS, the proposed reuse of the SAEP under the LRA has the potential to adversely affect this important resource area as well as the substantial wildlife that depends on it for survival. In particular, the LRA would open up to public access valuable and previously undisturbed habitat on SAEP property through the immediate construction of an access road, parking lots, and public park facilities. The FEIS should more fully address not only the near-term impacts of these activities on the 48-acre habitat area, but also evaluate impacts on the Housatonic River tidal regimes overall, as well as the potential adverse impacts of future development on the river that is likely to occur as a result of creating public access. This discussion should include further detail about the existing biological, physical, and chemical characteristics of the Housatonic River, its uses, and the cumulative impacts that may occur as a result of developing the LRA's reuse plan.

(3) Further, in terms of cumulative impacts, we note that the DEIS was commendably explicit about the substantial loss of wetland and wildlife habitat that has occurred in the immediate vicinity of the SAEP. Particularly noteworthy is the 75% loss of salt marsh area and associated wildlife values that was part of the original system now known as the Great Meadows Salt Marsh. As stated in the DEIS, Great Meadows is noted for its extremely high habitat value along with high plant and animal species diversity. This loss clearly represents a significant cumulative impact to the resource since the 1920's and argues strongly in favor of applying protective encumbrances upon reuse that will prevent any further loss. [In this regard, we also urge the Army to consider the recent request of the U.S. Fish and Wildlife Service to acquire this area as an addition to the Great Meadows National Wildlife Refuge (see 6-8-98 USFWS comments on DEIS)]

(4)

(5) At a minimum, however, the Army should impose special obligations, in accordance with Executive Order 11990 for the protection of wetlands, to avoid the loss of wetlands. As stated in our 12-19-96 scoping letter, EO 11990 mandates that when federally owned wetlands are proposed for lease, easement, right-of-way or disposal to non-federal public or private parties, the federal agency must: (a) reference in the conveyance those uses that are restricted under federal, state or local wetlands regulations; (b) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law; or (c) withhold such properties from disposal.

(6) Finally, as you are aware, the Federal Aviation Administration (FAA) has recently issued a draft EIS for proposed runway improvements at Sikorsky Memorial Airport, located in the vicinity of the SAEP. While the Army's DEIS makes some mention of the FAA's proposal, it defers any analysis of the indirect effects that the proposed airport improvements may have on and nearby

the SAEP property. We believe, however, that more information is available in the FAA's EIS for Sikorsky than is indicated in the Army's EIS, and that the Army's final EIS should incorporate this information into an analysis of how both these projects may effect each other, along with any potential cumulative impacts on environmental resources in the project area.

Conclusion

For the reasons discussed above, EPA has rated this EIS "EC-2 - Environmental Concerns-Insufficient Information," in accordance with EPA's national rating system, a description of which is attached. Please feel free to contact me, Patience Whitten (617/565-3413) or Tim Timmermann (617-565-3279) should you have any questions or comments.

Sincerely,

John P. DeVillars
Regional Administrator

cc: Mr. John Silva
Federal Aviation Administration
New England Office
12 New England Executive Park
Burlington, Massachusetts 01803

Mr. Andrew L. Raddant
Regional Environmental Officer
U.S. Fish & Wildlife Service
P.O. Box 307
Charlestown, Rhode Island 02813

POLICY AND PROCEDURES

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION

Environmental Impact of the Action

LO–Lack of Objections
The EPA review has not identified any potential environmental impacts recurring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC–Environmental Concerns
The EPA review has identified environmental impact that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO–Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU–Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this potential will be recommended for referral to the CEQ.

Adequacy of the Impact statement

Category 1–Adequate
EPA believes that draft EIS adequately sets forth the environmental impact(s) of the preferred alternatives and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2–Insufficient Information
The draft EIS does not contain sufficient information for EPA to full assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data,. analyzes or discussion should be included in the final EIS.

Category 3–Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussion are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purpose of the NEPS and or/ Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

U.S. Environmental Protection Agency, Region I

(1) Comment noted.

(2) Section 5.4.11 recognizes the potential for adverse impacts on biological resources and ecosystems adjacent to the SAEP site. Such impacts would, in large part, be controlled effectively by adherence to BMPs and other measures under the state's stormwater general permit program. Army disposal of the property would not create impacts on the Housatonic River tidal regimes. Under the Connecticut Coastal Management Act, the Army is to ensure that future use of the SAEP site is consistent with enforceable policies regarding the placement of water-dependent uses on waterfront sites. Water-dependent uses include general public access to marine or tidal waters. Given the extent of intertidal flats along the SAEP waterfront, which limits the potential for water-dependent uses that are reliant upon significant in-water structures, general public access is the most appropriate water-dependent use for the site. The Army agrees that in some circumstances creation of additional access to sensitive or high-value ecological sites may have undesired consequences, many types of which are controllable by existing state mechanisms (e.g., the Connecticut Tidal Wetlands Act and the stormwater general permit program).

(3) The Army's use of encumbrances necessarily takes into account several types of obligations shouldered by the Army during the property disposal process. Among these is the obligation to render the Army's action consistent with the state's coastal zone management program, which, among other goals, seeks to provide for public access to the Housatonic River. Consistent with the President's Program to Revitalize Base Closure Communities (Section 1.5.1), the Army renders assistance to local communities in their efforts to replace jobs lost as a result of base closure. Under these guiding principles, there will be (in much the same manner as at present) some effects on wildlife and habitat along the Houstonic River. In deference to the community's reuse plan and existing state regulations for protection of the natural resource values inherent in the Housatonic River, the Army has considered but rejected creation of additional encumbrances designed to maintain the nearby ecological status quo.

(4) Section 2.3.4 (Real Estate Disposal Process) has been updated to acknowledge the U.S. Fish & Wildlife Service's desire for transfer of the riparian areas. Since the request is untimely, it cannot be honored. Upon disposal of the SAEP property, the Army will transfer its riparian rights along with the upland waterfront property.

(5) As noted in Section 3.3.1 (Encumbrances), upon disposal the Army would impose what is referred to as the wetlands encumbrance. This is a notice to the property recipient of his obligations to consult with appropriate authorities prior to taking actions that could affect wetland areas. This notice, placed in conveyance documentation, meets natural resource conservation goals and satisfies the requirements of Executive Order 11990.

(6) The Army's EIS has been revised to address both resource-specific impacts and cumulative impacts associated with the FAA's proposal to relocate Runway 6-24 at Sikorsky Memorial Airport.

U.S. Department of Transportation
Federal Aviation Administration

New England Region

12 New England Executive Park
Burlington, Massachusetts 01803

June 19, 1998

Mr. Joe Hand
Corps of Engineers, Mobile District
(ATTN: TD-EC)
109 St. Joseph Street
P. O. Box 2288
Mobile, Alabama 36628-0001

Dear Mr. Hand:

1 The Federal Aviation Administration (FAA) has reviewed the Draft Environmental Impact Statement for Disposal and Reuse of the Stratford Army Engine Plant, Stratford, Connecticut (DEIS). We have substantial concerns with its sufficiency as a National Environmental Policy Act (NEPA) document. Further, we believe that transfer of the property, as recommended in the proposed action, could lead to a hazard to aviation in violation of Federal Aviation Regulation, Part 77, Objects Affecting Navigable Airspace. Finally, the Surplus Property Act requires that the Department of the Army consult with the FAA prior to release of property so that we can provide a reasoned opinion of the impact of such transfer on aviation. Such consultation was not conducted as part of this DEIS process and thus foreclosed reasonable alternatives to the proposed action from being assessed.

We are particularly concerned because over the past three years we have repeatedly advised the Department of the Army, the Corps of Engineers, and your consultant, Tetra Tech, Inc., of these concerns and the need for us to participate as a NEPA-defined cooperating agency. The DEIS makes minor acknowledgments but does not resolve them.

2 We would have preferred to become a more active part of the Army's production of the DEIS, similar to the process that we established for the production of our EIS. As you may be aware, the Corps of Engineers and the Local Reuse Agency have participated meaningfully and substantially over the last three years in the recent production of our DEIS for Proposed Improvements to Runway 6-24 at Sikorsky Memorial Airport, attending numerous meetings and reviewing preliminary DEIS material. A parallel effort on the part of the Corps could have done much to prevent this letter.

Our detailed comments are as follows:

3 Section 4.2.3 of the DEIS is entitled "Surrounding Land and Airspace Use" but does not describe the use of airspace.

4 Section 4.8.6, "Traffic and Transportation", inaccurately describes proposed improvements to Runway 6-24 at Sikorsky Memorial Airport. Our DEIS does not review an extension of the airport boundary at both ends of the runway. The runway needs reconstruction, not re-paving (There is a substantial difference since reconstruction is what triggers the establishment of Runway Safety Areas). A runway extension is not part of the preferred alternative. Finally, the Runway Safety Areas under study do not require any property east of Main Street not already owned by the airport. An accurate description of the DEIS projects may be obtained from the frontispiece of our DEIS.

5 Section 5.0 does not assess the impact of the proposed disposal and reuse on transportation resources, particularly Sikorsky Memorial Airport. Sikorsky is in FAA's National Plan of Integrated Airport Systems, recognition of its important role in providing general aviation and air carrier access to the National Airspace System. The DEIS nevertheless acknowledges that during the scoping process "The Town of Stratford requested consideration of comments and findings regarding the Sikorsky Memorial Airport EIS..." (page 1-3, lines 37-39).

6 The preferred alternative, encumbered disposal, would transfer the property without standard aeronautical assurances (page 3-5) addressing the height of structures, smoke and light emissions, and electromagnetic interference to navigational aids. To the extent that the property is transferred to the Local Reuse Agency (LRA) without such assurances and developed in accordance with their Reuse Plan, such development could create a hazard to aviation.

7 The Army should have requested that FAA conduct an airspace review as part of the DEIS in order to more realistically portray the encumbered disposal alternative. If transfer of the property occurs prior to such airspace review, such action would not be in compliance with the Surplus Property Act and FAA would presume the property to be a hazard to aviation. Such

8 designation could unfairly restrict marketing and development efforts by the LRA. These effects need to be considered as potential transportation impacts and to the extent that the encumbered disposal alternative is revised to include aeronautical encumbrance the DEIS needs to disclose any differences in environmental impact.

9 Section 5.1.4, "Proponency", and other similar areas of the DEIS assume transfer of the entire property to the LRA. The FAA, however, has requested a Public Benefit Conveyance to the Sikorsky Memorial Airport (acknowledged on page 2-12 of the DEIS) of a small southern portion of the large parking lot at the southeast corner of Main Street and Sniffens Lane. This land is important to the airport achieving standard Runway Safety Areas to Runway 6-24 and an Approach Light System to Runway 6. These projects are the subject of an EIS that FAA has been pursuing since 1993 They are important safety enhancements to FAA and recommendations of the National Transportation Safety Board following a fatal airline accident in 1994.

10 FAA recommends that this land not be transferred to the LRA, since there would be no assurance that it would be re-transferred to the airport (owned by the City of Bridgeport),

especially given past opposition to airport development on the part of Stratford. FAA is concerned that transfer to the LRA could lead to the construction of obstructions to air navigation, in conflict with Federal Aviation Regulation, Part 77, Objects Affecting Navigable Airspace. FAA aeronautical opinions are advisory and may not preclude the LRA or subsequent developers from taking such action.

11 Sections 5.3.16, "Cumulative Effects", and 5.6, "Cumulative Effects Summary", do not address potential cumulative impact of Army disposal and reuse actions when added to those addressed in FAA's DEIS of proposed improvements to Runway 6-24. Federal agencies are responsible for considering other related actions, including those of other agencies.

12 The last paragraph of Section 5.6 should be revised to change the word "extending" in line 24 to "relocating" (referring to runway pavement).

13 The sentence on lines 25 and 26 should be revised to indicate that the preferred alternative relocates Main Street to onto what is presently airport property and Sniffens Lane.

14 Line 28 should be corrected to indicate that the preferred alternative would not extend the runway.

15 We disagree with the second part of this sentence that "the effects of the expansion [constructing Runway Safety Areas and an Approach Light System] cannot yet be assessed because no decisions have been reached on any of the various alternatives. We defined our preferred alternative for the Study Resource Committee (including representatives of the Corps and LRA) almost two years ago.

While this alternative should still be characterized as a plan, it is appropriate to base cumulative impact on the plans of other agencies. We do not agree with the definition of cumulative effects used in the DEIS since it restricts the Counsel on Environmental Quality's definition to those actions "which have been approved for implementation" (page 5-7, lines 21-23). In accordance with this definition, the Disposal and Reuse EIS would not be responsible for assessing the cumulative effect of reasonably foreseeable FAA actions until the time that FAA funded such actions. In practice, this would be an unworkable definition.

Thank you for the opportunity to comment. As stated above, these comments could have been avoided with earlier coordination. We regret that this did not occur. We look forward, however, to resolving these issues with you.

Sincerely,

John C. Silva
Manager, Environmental Programs

cc: John Ricci, Sikorsky Memorial Airport
Mike Steer, URS Greiner, Inc.
Jim Mottley, FAA HQ

Federal Aviation Administration, Mr. John Silva

(1) Comments noted. The issues raised are addressed by specific responses, following.

(2) The Army Materiel Command (AMC) has been designated by the Assistant Secretary of the Army (Installations, Logistics and the Environment) to be the lead agency responsible for BRAC 1995 NEPA documentation for the SAEP Disposal and Reuse EIS. AMC received no correspondence requesting cooperative agency status. This is a formal process, in which AMC has required a Memorandum of Agreement to establish and record agreed-upon principles of mutual support, cooperation, and responsibilities in the preparation of the EIS. We agree it would have been preferred for your agency to have entered into the process earlier. It is in the interest of all parties to participate and identify their needs for property and details associated with the planning.

(3) Section 4.2.3 has been revised to include identification of airspace use.

(4) Section 4.8.6 has been revised to more accurately describe the proposed actions regarding Runway 6-24.

(5) Section 5.0 has been revised to include analysis as requested.

(6) Evaluation of an encumbrance, in the nature of an avigation easement, has been added to the EIS.

(7) Title 14 CFR Part 77 requires submission of FAA Form 7460/1 ("Notice of Proposed Construction or Alteration") to allow the FAA to evaluate potential obstructions to air navigation in the vicinity of an airport. Since the Army's proposed action does not involve either construction or alteration of structures, submission of the form is not required.

(8) An encumbrance in the nature of an avigation easement has been added to the analysis of disposal and reuse of the SAEP property.

(9) Evaluation of environmental effects associated with transfer of property pursuant to the PBC has been added to address FAA concerns.

(10) The matter of reuse of the excess property is a local decision between the cities and the LRA. Enforcement of FAA regulations on proposed redevlopment by any entity should satisfy FFA's concerns about affects upon navigable airways.

(11) Evaluation of proposed improvements to Runway 6-24 is now more fully addressed in the Army's analysis of cumulative effects.

(12) Text at Section 5.6 has been revised as indicated.

(13) Text at Section 5.6 has been revised.

(14) Text at Section 5.6 has been revised.

(15) The Army's EIS now characterizes the relocation of Runway 6-24 as the FAA's preferred

alternative.

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
408 Atlantic Avenue - Room 142
Boston, Massachusetts 02210-3334

June 22, 1998

ER 98/0281

Mr. Joseph H. Hand
U.S. Army Corps of Engineers
Mobile District
Attn: CSAM-PD-EC(J. Hand)
P.O. Box 2288
Mobile, AL 36628-0001

Dear Mr. Hand:

This is the response of the U.S. Department of the Interior to the Draft Environmental Impact Statement (DEIS) for Disposal and Reuse of the Stratford Army Engine Plant, Stratford, Connecticut.

(1) The eastern section of the Stratford Army Engine Plant contains approximately 48 acres of intertidal flats and associated tidal marshes. The Fish and Wildlife Service has an interest in obtaining the intertidal areas with riparian rights situated along the Housatonic River. This area would provide valuable feeding grounds for many species of birds and would be a good addition to the Salt Meadows National Wildlife Refuge. To discuss this further, please contact Mr. Greg Mannesto at the Rhode Island office of the U.S. Fish and Wildlife Service at 401-364-9124.

The DEIS contains a Memorandum of Agreement signed by the Advisory Council on Historic Preservation (ACHP), which stipulates certain measures to assure that the U.S. Army Material Command (USAMC), in its act to dispose of the Stratford Army Engine Plant, would secure protection of two historic structures eligible for listing on the National Register of Historic Places, specifically Buildings 2 and 16, and an area of potential archeological sensitivity, during the process of property disposal through consultation with the State Historic Preservation Officer and the ACHP. Thereafter, the USAMC would be relieved of cultural resource protection responsibilities.

(2) We understand that there are proposals to demolish Buildings 2 and 16 by at least one party to which the property could be transferred. As it would seem very possible for transfer conditions to stipulate preservation of Buildings 2 and 16, we urgently recommend that adaptive use of the interiors of these historic buildings be required, and that the preservation of

their exteriors be accomplished, for public understanding and appreciation of their historic resource significance. In this way all parties of interest would be reasonably well served and a total loss impact of cultural resource values would be avoided. If you have questions concerning our comments in this regard, please contact Mr. Dave Clark, National Park Service, at (617) 223-5141.

We appreciate the opportunity to comment on this project.

Sincerely,

Andrew L. Raddant
Regional Environmental Officer

(1) The request for transfer is untimely and cannot be honored. Upon disposal of SAEP, the Army proposes to transfer its interests in the riparian rights along with the upland waterfront property.

(2) As noted in Sections 3.3.1 and 4.12.3, the Army's Memorandum of Agreement with the Connecticut SHPO and ACHP requires the Army's inclusion of a preservation covenant for historic resources in any conveyance document. The negotiated Memorandum of Agreement provides for caretaking of the facilities and standard controls (prior approvals) over changes for Buildings 2 and 16. The buildings have been leased to a commercial entity, with general building maintenance, security, and fire protection being provided by the Army's on-site caretaker contractor.

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF ENVIRONMENTAL REVIEW
79 ELM STREET, HARTFORD, CT 06106
Tel. 860/424-4109 Fax - 424-4053

June 18, 1998

Mr. Joseph H. Hand
Attn: CESAM-PD
U. S. Army Corps of Engineers
Mobile District
109 St. Joseph Street
Mobile, Alabama 36602

Re: Draft Environmental Impact Statement
Disposal and Reuse of the Stratford Army
Engine Plant, Stratford, Connecticut

Dear Mr. Hand:

This is a coordinated Departmental response to the subject document that was distributed under a cover letter signed by Kristin J. Shields, Project Manager, dated April 24, 1998 and received on May 4, 1998. These comments first address the general adequacy of the Draft Environmental Impact Statement (DEIS) and are followed specific topical comments.

The Department understands the legislative constraints and mandates that have been established regarding the alternatives that can be evaluated in disposing of the subject property. Given this situation, as well as site conditions, the Army's selection of encumbered disposal as the preferred action, conceptually, is a reasonable choice. However, there remains a need to more thoroughly document, describe and evaluate the specific encumbrances that would be placed on this property.

1

The DEIS discusses encumbrances in a generic manner without specifically identifying the location of various encumbrances or how these limitations relate to potential reuse of the property. Unless more detail is presented regarding the preferred alternative, the DEIS will be inadequate in its description of the proposed action. As stated in the Base Realignment and Closure Manual for Compliance With the National Environmental Policy Act, "The description of the proposed action is the foundation for the entire environmental analysis. It should be carefully and concisely defined. A poorly defined proposed action leads to an inadequate impact identification and analysis."

The DEIS clearly defines the Army's primary action to be property disposal with the

secondary action of property reuse the result of others and presumably the Stratford Army Engine Plant Local Redevelopment Authority (SAEP LRA). The preferred reuse plan that has been adopted by SAEP LRA and described in the DEIS envisions the property being redeveloped for three purposes (Waterfront Open Space, Economic Development and Special Use/Museum). There is a clear link between the primary and secondary action as established in the above referenced Manual. The DEIS presents a formatted analysis of the primary and secondary actions but does not answer the basic question regarding the relationship of the primary action (encumbered disposal) to the secondary action (property reuse). The DEIS should describe how encumbered disposal will aid the reuse of this property as envisioned by the SAEP LRA or others.

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It is also unclear whether the lack of specific information regarding site contamination has influenced the omission of a detailed analysis of the relationship between the primary and secondary actions. As noted in the DEIS (page 3-6), "details of specific remedial actions remain to be determined" and this information is not expected to be available until next year, as stated on page 4-27. "Presently, there is insufficient data to describe the quantity and nature of constituents in the groundwater and the potential plumes at the site. This detailed information will not be available until completion of the RI/FS, expected by summer 1999."

FEDERAL COASTAL CONSISTENCY

The subject property is within Connecticut's coastal boundary and the proposed disposition meets the definition of a "federal development activity" found in 15 CFR 930.31(b). According to 15 CFR 930.33(b), all federal development activities within the coastal boundary are activities directly affecting the coastal zone. Consequently, disposal of this property by the Army requires a federal coastal consistency determination pursuant to 15 CFR 930.37, with the State review and concurrence or denial the responsibility of the Department's Office of Long Island Sound Programs (OLISP) In several sections, the DEIS acknowledges that a consistency determination must be made; however, there are misstatements in the DEIS regarding why this must be done (most notably page 1-11, lines 6-8 and page 5-2. lines 30-34). Instead, it should be clear that proposed actions at the site which constitute federal activities, in accordance with 15 CFR 930.31(b), require a federal coastal zone consistency determination by the Army and concurrence by the State. Moreover, such a determination must include an evaluation of any enforceable policies beyond those that apply to intertidal flats and tidal wetlands as indicated in the DEIS. To be correct, in all instances, the accurate statement found on page 4-4, lines 5-7 should be used to explain why federal coastal consistency applies.

4

As noted in Margaret Welch's memo in response to the Army's Notice of Scoping for this document dated December 11, 1996, coastal management issues at this site are complex and numerous. The DEIS summarizes the areas of concern from a coastal management perspective as: 1.) the possible contamination of a tidal creek leading to the Marine Basin

and, if contamination is present, the Army's responsibility to clean it up; 2.) details regarding compliance with Federal Emergency Management Agency (FEMA) standards and with the National Flood Insurance Program (NFIP); and 3.) the lack of clear title to the filled public trust lands (page 4-5, lines 21-25). Of these three items, the first and third accurately convey the coastal management issues identified in the above memo, but the second concern regarding flood hazard areas is somewhat mischaracterized. In addition, several other previously identified issues have been omitted.

5 In fact, the flood related issue we identified was the need to promote appropriate development in the coastal flood hazard area. Based on the standards and policies of the CCMA, development in coastal flood hazard areas may, in some circumstances, be required to meet standards that go beyond the minimum required to comply with FEMA and NFIP. Thus, any discussion in the DEIS of development in the coastal flood hazard area should also reflect the applicable enforceable policies of the CCMA contained in Connecticut General Statutes (CGS) Sections 22a-92(b)(2)(F), 22a-92(b)(2)(J), and 22a-92(c)(2)(B).

The other concerns previously identified by the Department include: 1.) the preservation and protection of intertidal flats and tidal wetlands; 2.) the provision of an appropriate water-dependent use during redevelopment; 3.) adequate measures to promote proper stormwater management at the site; and 4.) clarification as to what is conveyed as riparian rights. While these items are briefly mentioned on page 4-4 (lines 20-26) of the DEIS, analysis of these issues is not provided in Section 4.2.5, Connecticut Coastal Management Program Consistency. The following comments relate to whether the DEIS satisfactorily addresses each of the applicable coastal consistency concerns at this site.

RIPARIAN RIGHTS AND PUBLIC TRUST LANDS

The description of the SAEP site offered in the DEIS raises issues regarding riparian rights and public trust lands. These two topics are closely linked and to some extent need to be discussed together.

Riparian Rights

6 We have previously expressed concern that the site description provided by the Army included "39 acres of riparian rights" (now identified in the DEIS as 48 acres), and we questioned the source of this information. A response to this concern has not been provided and the description we question is consistently carried through the DEIS in various sections.

7 Moreover, there are implications in the DEIS (page 5-10, lines 32-34) that these so-called riparian acres could perhaps be developed. Based on the legal definition of riparian rights and the State's public trust responsibilities, as described below, this is an unlikely scenario.

Riparian rights are limited property rights regarding the right of a waterfront property

owner to access deep or navigable water. They do not necessarily include the right to develop the area waterward of mean high water. They are generally not measured in acres, and, in Connecticut, the formal limits of riparian rights can only be determined by adjudication and court order. We are unaware of any such action with respect to this site. Thus, we continue to question the Army's basic description of the property at SAEP as including numerous acres of riparian rights.

(8) While it is possible to own and transfer riparian rights in this state, such rights are not only limited, but are exercised through filling, dredging or wharfing out subject to permitting requirements of this Department. In the Army's transferring or otherwise conveying these rights, there should be no implication that "ownership" of the riparian rights grants any privilege beyond reasonable access to navigable water, subject to Departmental permits. We recommend the property desciption be modified to delete reference to the Army's ownership of the intertidal flats.

Public Trust Lands

The entire area identified in the DEIS as riparian rights are public trust lands and the DEIS acknowledges that this area is comprised of intertidal flats. In accordance with the Public Trust Doctrine, the State of Connecticut holds all bottom lands of tidal, coastal and navigable waters in trust for its citizens. Thus, the Army is not authorized to sell, transfer, or otherwise convey or purport to sell, transfer or otherwise convey, any public trust lands waterward of mean high water. Therefore, while the riparian rights of access may be conveyed, the actual ownership of the intertidal and subtidal lands remains with the State of Connecticut.

(9) An important concern at this site is the area of public trust lands that were formerly filled to create dry land. Much of this fill occurred pursuant to a letter from the Connecticut Flood Control & Water Policy Commission dated September 15, 1943, a copy of which was previously provided to the Army in response to the Notice of Scoping for this project. Although that letter authorized the placement of dredged materials to make dry land, the letter clearly states that property rights were not conveyed in any lands of the State. The State of Connecticut has not abandoned its interest in the filled area that was formerly waterward of historic mean high water. Thus, the Army does not currently have clear title to this area. Therefore, prior to conveyance of the property, this issue must be addressed. Appendix E of the DEIS erroneously states that the State of Connecticut will "waive" interest in this area. This is not an action that we can take. This Department has committed to assist in assuring that clear title is conveyed by the Army. Perhaps the easiest and most appropriate resolution would be the granting of a public access easement to and over the formerly filled public trust lands such that the general public would retain the right to access these public trust lands, in perpetuity. Since all the filled lands are abutting the current shoreline and appear to be included in the proposed public waterfront park that is part of the redevelopment

plan created by the LRA, an easement of this type could dovetail with the statutory requirement to ensure the provision of a water-dependent use on the site (see detailed comments below). The use of an easement or similar mechanism to clarify the title to the formerly filled public trust lands is not discussed in the DEIS.

10 It is strongly recommend that an easement or other legal mechanism be developed with our assistance and filed in the land records of the Town of Stratford to allow the general public to access and enjoy the formerly filled public trust lands. The specific area covered by the easement should be the area of public trust lands filled pursuant to the 1943 approval, the entire seaplane access area, other filled public trust areas that can be documented, and appropriate access routes of sufficient width to support two-way vehicular traffic to and from Main Street (State Route 130) and Sniffens Lane. We are currently working with the Army to determine the extent of filled public trust lands on this site. All of the easement components could be designed to fall within the planned development of this area as a public waterfront park.

11 As a final note regarding riparian rights/public trust issues, Section 4.12.3, Archeological Resources (page 4-38, line 27) states that "the riparian rights will be excessed as part of this proposed action, and the adjacent areas have been identified as a location where two archeological sites might exist." It is unclear what is meant by "the riparian rights will be excessed," nor is it clear where the adjacent areas are that might contain archeological sites. We would appreciate an opportunity to discuss the riparian rights issues with Army staff or their consultants prior to the next step in the environmental review process.

FUTURE WATER-DEPENDENT USE

Previous comments identified issues related to the Army's responsibility to ensure that future use of the site is consistent with enforceable policies regarding the placement of water-dependent uses on waterfront sites [CGS Sections 22a-92(a)(3) and 22a-92(b)(1)(a)]. Water-dependent uses are statutorily defined, in part, as "those uses and facilities which require direct access to, or location in, marine or tidal waters and which therefore, cannot be located inland...." Included in this definition is the provision of general public access to marine or tidal waters. The presence and extent of intertidal flats along the waterfront of the SAEP property limits the potential for water-dependent uses that are reliant upon significant in-water structures. Thus, it appears that general public access is the most appropriate water-dependent use for this site, with the possible exception of other water-dependent use of the

12 area at the eastern end of the sea plane ramp. In order for the disposition of this site by the Army to be consistent with the water-dependent use enforceable policies of the CCMA, the Army must ensure that the future use of this site will be water-dependent.

13 The tentative redevelopment plan recommended by the LRA anticipates the establishment of a public access corridor and associated open space along the waterfront. Such a proposal is most appropriate from a coastal management perspective and is both

supported by and furthers the intent of the CCMA. However, it is unclear what the link is between the Army's disposition of the site and the LRA's redevelopment proposal. Provision of an easement to and over the formerly filled public trust lands, as discussed above, would best meet the water-dependent use policies of the CCMA, resolve the issue regarding clear title to filled lands, and lend support to the LRA's plan.

14 As a related issue, in the absence of an identified potential water-dependent user, it is impossible to determine whether Building #19 is suitable for such use as stated in the DEIS (page 4-5, lines 10-18). In general, given the expanse of intertidal flats between Building #19 and the navigable water of the Housatonic River, use of this building to support any water-dependent use that requires significant in-water structures is questionable. Its location could, however, provide some form of support to public access use of the waterfront area.

PRESERVATION AND PROTECTION OF INTERTIDAL FLATS AND TIDAL WETLANDS

The DEIS is confusing regarding the proposed method of protecting and preserving intertidal resources, specifically tidal wetlands and intertidal flats. The alternative of including an encumbrance on the transfer is mentioned in several sections, yet it is unclear exactly what form this type of encumbrance might take. The clearest description is in Section 5.3.10 (page 5-13, lines 13-16 and 21-24), which indicates that a resource protection encumbrance would amount to a "notification that owners would have to adhere to Section 404 permitting requirements for activities in or related to wetlands...."

15 The implementation of such an encumbrance would not serve a significant function at this site. Moreover, transfer of the site without a wetlands encumbrance would not result in a measurable indirect adverse impacts as stated in Section 5.3.11 (page 5-14, lines 1-3). In Connecticut, activities affecting intertidal resources are not only subject to Section 404 permitting requirements, but also to permitting requirements of the State of Connecticut. Thus, an encumbrance that notifies future property owners of the applicability of Section 404 permitting requirements is unnecessary.

16 A tidal lands encumbrance may be of significant value, however, if it also limits either specific activities or their resource impacts (e.g., performance standards) within an upland buffer area adjacent to the intertidal area. This concept is raised in Section 5.3.11 of the DEIS (page 5-13, lines 27 and 28), but there is no in-depth discussion regarding the potential for a protective buffer. If properly planned and implemented, a buffer area could provide significant resource protection and could also coincide, at least in part, with the recommended public access easement. Again, staff is available and interested in discussing this concept further with the Army.

17 If additional site characterization (as discussed below) indicates that disturbance of the

intertidal resources is necessary to accomplish required remediation, please be advised that such disturbance will require prior authorization from this Department. Authorization for intertidal remediation activities may be approved provided that the intertidal resources that are disturbed are restored in their entirety.

18 The DEIS is inconsistent with its use of terms identifying intertidal resources on the site. In various places the terms jurisdictional wetlands, salt marsh, intertidal wetlands, tidal mud flats, tidal wetlands and intertidal flats are used, seemingly interchangeably. The Connecticut General Statutes defines tidal wetlands and intertidal flats (see attached). None of the other terms has clear meaning. Thus, only the two defined terms should be used in the DEIS to make specific reference to each resource area.

19 The description of applicable state regulatory programs that affect activities in the intertidal area (page 5-11, lines 3-9 and others) is incorrect and misleading. The Tidal Wetlands Act (attached) does not apply to the unvegetated intertidal flat, but only to resource areas that meet the definition found in CGS 22a-29(2). The intertidal flats are regulated by state statutes regarding structures, dredging and fill in tidal, coastal or navigable waters (attached). Permits issued under either of these programs must be consistent with the enforceable policies and standards of the CCMA. The Stream Channel Encroachment Line program does not apply because no encroachment lines have been established on the SAEP site. Finally, upland redevelopment at this site will qualify for the stormwater general permit program and appropriate registration will be required (see below).

STORMWATER MANAGEMENT

Although not directly related to the proposed action by the Army (i.e., the disposal of the SAEP), the DEIS, in various sections, discusses stormwater management. Stormwater has been determined to be a significant source of sediment and pollutants in coastal waters. The CCMA requires that proposed activities minimize adverse water quality impacts, which is partially accomplished through the use of best management practices (BMP's) for stormwater. In general, appropriate stormwater BMP's include on-site retention of the first flush (one-inch) of rainfall in any given storm event and the treatment of any remaining discharge to remove oils, greases and sediment.

20 A significant part of Connecticut's program to institute BMP's is through the stormwater general permit program. Due to the size of this site (over 5 acres) and the intended reuse (substantially commercial/industrial), this program will apply to redevelopment of the SAEP, both during and after construction, yet the stormwater general permit program is not identified in the DEIS. In fact, Section 5.5 Mitigation Summary (page 5-32, lines 9-13) of the DEIS recommends that BMP's to reduce sediment loading of surface waters could aid in reducing impacts on water quality and that appropriate measures could be required by state permits. While this is true, BMP's are also required by the stormwater

management permit program. We recommend that this oversight be corrected.

There is an existing Oil Abatement Treatment Plant (OATP) through which most dry weather flow due to infiltration and inflow and the first flush of stormwater is directed prior to discharge to the Housatonic River. This facility is designed to remove oils and greases from waste water. However, there is no apparent treatment measure, either in place or intended, to remove sediment from stormwater prior to discharge. Sediment control is an important part of Connecticut's non-point source pollution control program.

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The DEIS also lacks discussion of whether the Army intends to encumber the transfer of the property with a requirement that the existing OATP remain on-site and that it be utilized, operated and maintained by future land owners or users until it is no longer necessary due to changes in use of the site or changes in on-site stormwater management. Such an encumbrance would be appropriate to ensure long-term water quality protection, as required by the CCMA. Also, the description of caretaker status should more consistently include continued maintenance and operation of the stormwater OATP. The Department considers it important to maintain this stormwater treatment system during the transition of site ownership/use.

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The existing infrastructure of the plant and site will have substantial influence upon the effective implementation of reuse. Although the DEIS discusses some of the utility infrastructure in general, it does not adequately discuss the need to continue maintenance and operation of the OATP to treat stormwater from the site. Should the site be substantially redeveloped, with less runoff potential, discontinuance of the stormwater OATP would need to be discussed with the Department.

Finally with respect to stormwater, Section 5.2.8 of the DEIS (page 5-5, lines 21-23) identifies as a potential adverse impact the reduced need to widen Main Street due to a decrease in employee traffic. From an environmental perspective, the minimization of impervious cover (i.e., maintaining the existing road pavement width) is recommended to reduce potential adverse impacts from increased stormwater discharge. It is not clear how, from a land use perspective, it would be an adverse impact to not widen a road that has a reduced traffic demand due to the closing of the SAEP. This should be either clarified or deleted.

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SITE CONTAMINATION/REMEDIATION

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The DEIS does not address the actions to be taken, or the short term impacts associated with these action, in the areas (tidal flats and plating line) identified as Category 6 (Needing response action) in the CERFA report. The DEIS would be the place to discuss various mitigation options for the tidal flats. In addition, the DEIS only mentions radionuclides (page 4-32), but provides no analysis/evaluation of this topic. During development of the

DEIS, there have been some indications from the Nuclear Regulatory Commission's decommissioning studies that mixed waste (radiologic and hazardous) is present on the causeway. The implications this information has for reuse and cleanup should be discussed.

Detailed characterization of the degree and extent of pollution at SAEP is continuing, with implementation of the RI/FS work plan this summer, with results scheduled for next summer. Some of the details necessary for determining impacts and costs of pollution cleanup present at the site will not be available until after this activity is complete. Additional work on the environmental analysis for this project should be delayed until this information is available.

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In section 1.5, the DEIS should identify all the State's applicable, relevant and appropriate requirements, which will also govern actions at the site. A draft of these requirements was provided some time ago to the former Army site contact and another copy is enclosed for your convenience. The state statutory and regulatory framework should more specifically be discussed, including especially the property transfer program and the remediation standard regulations, along with how these impact the disposal process and remediation decision-making at the site.

29

The DEIS should indicate that property disposal will include filing under CGS 22a-134 et seq. (Property Transfer Program). An initial encumbered sale without such a transfer filing, in addition to being a potential statutory violation, may limit the ability of a developer to obtain financing to conduct redevelopment. In addition, if such a filing is made, under CGS 22a-134a (m) subsequent sale of the property by any developer may not require property transfer filings unless the property continues to be an establishment.

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The DEIS does not clearly present the nature of the encumbered disposal which will occur, and how it would, in effect, defer indefinitely the cleanup of inaccessible or environmentally isolated soil under the buildings. In addition, despite general statements (page 5-2) that the Army will be responsible for cleanup of all pollution which is a risk to human health, the use of encumbered disposal effectively means inaccessible/isolated pollution does not have an associated risk, as long as the encumbered structure remains. The Army in this situation could avoid cleanup responsibility. The net result could be to shift the substantial cost of cleanup to the party which accepts encumbered disposal and subsequently wishes to demolish the structures. Since the entire site is to be cleared for either parkland or redevelopment, remediation is a significant cost which is imposed on the reuse process by disposal. This is a significant issue that must be discussed thoroughly. Alternatively, the Army should provide assurance that they will fully fund all future cleanup requirements associated with site redevelopment for non-residential reuse.

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The DEIS does not discuss the need to establish a responsibility for maintenance and repair of the flood berm. If this site is transferred to a public/park agency, how will such an activity be funded, since the berm is present to benefit the entire site in terms of flood

protection? In addition, if the berm is not maintained, what is the long-term erosion potential to mobilize contaminated soils left on-site due to encumbered disposal?

(33) Although mentioned, the discussion of waste management de-emphasizes hazardous waste management at the former equalization basin and three sludge lagoons. These land disposal units are now closed with much of the sludge removed; however, they are closed as a RCRA landfill. Such landfills are subject to post-closure restrictions on use and monitoring, with an expectation that the care period will end in 16 years as reflected the current postclosure plan. It may be unrealistic to expect that the care requirements of these units, if their status is not modified, will not continue past the current regulatory requirement.

(34) The Department does not consider the need for well drilling permits to be a sufficient institutional control on use of groundwater (page 4-27). While the groundwater classification of GB indicates there is no expectation of construction of a drinking water well, and the local health office could limit this use, the Army may also wish to limit exploitation of polluted groundwater by process water wells not regulated as drinking water sources. The Department considers a right of possession the essential element in controlling use of groundwater at solid waste landfills, and a similar institutional control may be necessary at SAEP. This restriction would be an additional property transfer encumbrance.

POLYCHLORINATED BIPHENYLS (PCBs)

There are at least 17 PCB transformers located at this facility. As long as the Army retains ownership of the facility, they will have ownership responsibilities for the transformers, that includes marking, fire notification, quarterly leak inspections, preparation of the PCB Annual Document and Annual Document Log, spill reporting and cleanup, as well as, any necessary disposal.

The Army may decrease their liability for the transformers by leasing them or they may sell them outright. If the transformers are leased some responsibility is shifted to the lessor. however, the Army would retain ownership obligations. The prospect of selling the transformers is highly unlikely because the liability assumed by the purchaser would be substantial.

As long as the transformers remain on-site, the uses of the site will be severely limited. The use of PCB transformers at all but restricted access industrial locations was prohibited during a 1990 through 1993 phase-out of such equipment. There was a provision in the PCB regulations that allowed for the installation of enhanced electrical protection during this phase-out. Currently, any transformer that does not have such protection equipment can not be used at or near any commercial, residential or public facility of any kind. Further, enhanced electrical protection can not be added now to transformers that have not already been modified; they must be removed from the facility. Also, subdividing the site to isolate

the transformers will not necessarily resolve this issue because their use is prohibited within 30 meters of the facilities noted above.

It is incumbent upon the Army to address all transformer leaks and spillage within 24 hours of discovery. The DEIS describes the presence of berms and leak pans associated with the PCB transformers. If any stain, weep or drip is present or any PCB material is present on the external portion of the transformers, remediation must commence immediately. The DEIS fails to state whether drains are present in any of the bermed areas, which would heighten the environmental risk in the event of a leak.

35 The condition and fate of these on-site PCB transformers needs to be more fully documented. Another critical issue that was totally omitted in the DEIS and requires evaluation is the potential impact the presence of these transformers have on reuse of the site.

RESOURCE CONSERVATION RECOVERY ACT (RCRA)

The DEIS states (page 4-32) that the SAEP operates "under interim RCRA status as a large-quantity hazardous waste generator..." Our records indicate that SAEP is also a long-term hazardous waste storage facility and has several less than 90 day hazardous water generator storage areas. The DEIS should completely describe the RCRA status of the facility.

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37 In order to close the hazardous waste storage facilities in accordance with Subpart G of 40 CFR, a complete stand alone closure plan must be public noticed and approved by the Department prior to implementation of closure activities unless these activities are conducted "at risk." This closure plan should be updated to conform with the Department's draft "RCRA Closure Plan Guidance for Container Storage Areas and Tank Systems" dated November 1993. In addition, the generator storage areas, although not required to close in accordance with a closure plan, should be closed in accordance with the Department's "Draft RCRA Closure Guidance for Generators who store less than 90 days." All records of generator closure activities should be kept to facilitate status changes.

For RCRA corrective action activities, all identified solid waste management units and areas of concern should be addressed and determined not to pose a threat to human health and the environment for all 40 CFR, Section 261, Appendix VIII hazardous constituents present. In addition, consistency with Connecticut's Remediation Standard Regulations should be achieved. It is recommended that any corrective action proposed final remedy at the SAEP incorporate an ecological risk assessment.

FISHERIES

38 The DEIS includes a brief listing of fish present in the project area (page 4-33 and 4-44). Among those listed are northern kingfish, longhorn sculpin and yellowtail flounder. While

these fish may be occasional, seasonal migrants to the lower Housatonic River, they are not expected to be common. During a fisheries survey conducted in 1991 and 1992, seventy-two species of fish were found in the lower Housatonic River (Aarrestad and Jacobson 1995). Recreationally and commercially important species included: winter flounder (*Pleuronectes americanus*), summer flounder (*Paralichthys dentatus*), white perch (*Morone americana*), striped bass (*Morone saxatilis*), and bluefish (*Pomatomus saltatrix*). Other abundant species included Atlantic silverside (menidia menidia), mummichog and striped killifish (*Fundulus* spp.). Although not of direct commercial or recreational importance, these species are extremely valuable components of the marine food web and rely on shallow water habitats such as the tidal flats adjacent to the SAEP facility. The Housatonic River also supports several species of anadromous fish although dams upstream of the project area block access to historic spawning and nursery areas. Anadromous species include alewife (*Alosa pseudoharengus*), American shad (*Alosa sapidissima*), blueback herring (*Alosa aestivalis*) and rainbow smelt (*Osmerus mordax*). This survey also verified the presence of Atlantic sturgeon (*Acipenser oxyrhynchus*) in the Housatonic River. As noted in the DEIS, this species is listed as State threatened. A copy of the survey report can be obtained by contacting Linda Gunn Alexander of the Department's Fisheries Division at 860/434-6043.

(39) The DEIS should consider the effects (both beneficial and adverse) of any inwater remedial activities on the fisheries resources of the lower Housatonic River. Also, the opportunity to improve recreational fishing access at this site should be evaluated. Because it affords access to deep water, the seaplane ramp is the most apparent area to develop such access.

MISCELLANEOUS

Zoning

(40) The DEIS discusses zoning in several different sections, some of which are incorrect or misleading. As examples, page 4-2 (lines 6-13) implies that zoning regulations are identical on a statewide basis and page 5-32 (lines 1-3) implies that county officials are responsible for establishing appropriate zoning. In Connecticut, zoning is neither a state nor county land use control mechanism; but rather, zoning regulations are implemented by municipalities and, in some instances, by special zoning districts. The regulations of each zoning authority are separate and distinctive and do not necessarily include similar lists of allowed or restricted uses. For instance, when considering development or redevelopment proposals for waterfront sites, Stratford specifically requires a project to contain three of a list of several water-dependent use amenities. Among the listed amenities is the granting of an open space easement for a public park. This is not generally required by other zoning regulations in Connecticut. However, an easement designed to satisfy this requirement could be readily combined with the recommended public trust land easement, as discussed above, thereby reducing the number of additional amenities that would be required of future developers of this site.

Maps

41 Several of the specific discussions in the DEIS would have benefitted from accompanying maps to show what was being described in the narrative. In particular, a map showing the filled public trust lands is necessary. Also, the discussion of geologic structure and stratigraphy is hard to understand without a map. Finally, the map titled Wetlands (page 4-36, Figure 4-4) appears to be incomplete. While salt marsh and intertidal flats are listed in the legend, their respective symbols are not clearly shown nor are areas known to contain these resources clearly and completely identified on the map.

FEMA requirements

Section 4.2.2, Existing Land Use (page 4-1, line 37 and page 4-2, line 1) implies that FEMA requires commercial and industrial buildings be elevated above the base flood elevation (or as stated in the DEIS, the 100 year flood level). While commercial and industrial structures can be elevated to meet the minimum FEMA requirements, an acceptable alternative is to provide floodproofing. 42

General

43 Figure 4-5 seems to be a map of infrastructure buildings, not "notable" architectural buildings.

44 Page 4-16, line 1&2 should identify which Stratford landfill received the metal hydroxide sludge.

45 The description of stratigraphy and hydrogeology may be more optimistic than is supported by the base of knowledge on these subjects.

46 The DEIS in various sections discusses the responsibilities of county government. Since county government does not exist in Connecticut, all such references should be deleted.

SUMMARY

Addressing the basic and subject specific deficiencies of the DEIS, while collecting relevant site characterization information, in a Final Environmental Impact Statement (FEIS) would not be appropriate, because the opportunity for meaningful review/comment is foreclosed by the FEIS process. The most appropriate method of addressing these deficiencies, when all relevant information is available, would be to prepare a Supplemental EIS. Adhering to this approach, as authorized by Army Regulation 200-2, Chapter 6, Section 6-5, k and m (4), will accommodate a public review process that discloses critical information regarding the potential reuse of this site. Alternatively, another acceptable approach would be to prepare a preliminary FEIS, pursuant to Section 6-5, g of the above 47

regulations, if this process includes a public review/comment phase.

Any specific questions for the Department regarding coastal management, site remediation, RCRA, PCB's and fisheries issues should be directed to Margaret Welch (860/424-3034), Kenneth Feathers (860/424-3770), George Dews (860/424-3572) Lori Saliby (860/424-3329) and Linda Gunn Alexamder (860/434-6043), respectively. Also, if I can be of any further assistance regarding the preparation of your environmental analysis for this project, please give me a call. Please furnish me with six copies of any subsequent NEPA documents at the letterhead address, and I will provide internal agency distribution. Thank you.

Sincerely,

Brian J. Emerick

Brian J. Emerick
Supervising Environmental Analyst

Encls (4)
cc:wo/encls. M. Barnhart, Stratford/Town Mgr.
F. Hyatt, SAEP/Base Transition Coord.
A. Rocque, DEP/COMM
M. Welch, DEP/OLISP
K. Feather, DEP/PERD
G. Dews, DEP/WEED
L. Saliby, DEP/PCB Program
L. Alexander, DEP/FD
M. Sullivan, DEP/OCE

ATTACHMENT

STATUTORY DEFINITIONS OF TIDAL WETLANDS AND INTERTIDAL FLATS

Tidal wetlands means those areas which border on or lie beneath tidal waters, such as, but not limited to banks, bogs, salt marshes, swamps, meadows, flats, or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water; and upon which may grow or be capable of growing some but not necessarily all of the following: [list of specific wetland vegetation - see CGS Section 22a-29(2) for a complete list].

Intertidal flats means very gently sloping or flat areas located between high and low tides composed of muddy, silty and fine sandy sediments and generally devoid of vegetation [CGS Section 22a-93(7)(D)].

(1) For consistency and to avoid redundancy within its BRAC NEPA documents, Army procedures for identifying specific encumbrances are to place the bulk of the discussion on encumbrances, generic and specific, in Section 3.0, Alternatives. Cross-reference to this section is provided in Section 2.2. Reuse of the SAEP property would be subject to the encumbrances "expected to apply at the time of transfer or conveyance of the SAEP property." Language to this effect now appearing at lines 2-3 on page 3-5 has been added to the last paragraph of Section 2.2 (at lines 1-7 on page 2-6) to further link the Army's preferred disposal alternative (encumbered disposal) with the specific encumbrances identified for SAEP in Section 3.3.1 and how they would relate to potential reuse of the property.

(2) Section 3.3.1 describes how encumbered disposal is intended to protect resources and thereby aid in the reuse plan ultimately adopted for SAEP property.

(3) Lack of specific information regarding site contamination may influence implementation of the LRA's reuse plan. The uncertainties involving site contamination are presented in the DEIS to inform the LRA and the public of the status of remedial investigations and cleanup actions.

(4) Text at lines 6-8 on page 1-11 and at lines 30-34 on page 5-2 is amended to reflect that, since SAEP is located wholly within Connecticut's coastal boundary, the disposal and future reuse of the site is governed by the Connecticut Coastal Management Program as defined by the Connecticut Coastal Management Act.

(5) Future owners of the SAEP property should understand that standards contained in CZMA may be more stringent than those set by FEMA and the NFIP for development in flood-prone areas. As noted in Section 3.3.1, use of the floodplains encumbrance would ensure notification to future owners of all applicable regulations.

(6) The Army holds riparian rights in the Housatonic River adjacent to SAEP. If expressed as acreage, the area covered in riparian rights would be 48 acres, more or less. Upon disposal, the Army would tranfer these rights along with the upland, waterfront property. Text has been appropriately amended to reflect this information.

(7) The Army agrees that construction of buildings in wetlands poses an unlikely scenario. Construction of buildings could occur adjacent to wetlands, and construction of structures (levees, piers) could occur in wetlands. The nature of a project and its proximity would affect the applicability of regulations cited.

(8) The State of Connecticut holds title to lands comprising the intertidal flats. Text related to this point has been corrected throughout the EIS.

(9) The Army is working with the State of Connecticut to resolve issues related to title to the area adjacent to the intertidal flats that was filled circa 1943.

(10) The Army has now formulated an encumbrance to ensure its obligation to meet consistency requirements with the Connecticut Coastal Management Act. See Section 3.3.1.

(11) Relevant text at Section 4.12.3 has been amended to provide that "An archeological overview and

management plan were completed for SAEP in 1984. That study identified two archeological sites at SAEP and two archeological sites on territory adjacent to SAEP along the Housatonic River (Envirosphere Company, 1984, cited in ABB Environmental Services, Inc., 1996). However, extensive modification of shoreline areas, combined with the site's poor drainiage characteristics make it unlikely that any intact, unrecorded resources exist on the on-shore portion of SAEP (Envirosphere Company, 1984, cited in ABB Environmental Services, Inc., 1996)."

(12) Screening of SAEP property has resulted in the LRA's request for a public benefit conveyance, to be sponsored by the Department of Interior, for 15.7 acres of land for use as a park. The Army has not finally determined the recipients of SAEP property. To ensure water-dependent use (through public access) the Army has developed a "public use" encumbrance to achieve the desired end. That is, the Army would include in any conveyance document, as a condition of the transfer, a requirement that the recipient grant an easement for public access. See revised Section 3.3.1.

(13) As demonstrated by the LRA's letter of September 30, 1998, the reuse planning process is dynamic and subject to revision based on numerous factors, including availability of capital. Development of the public access encumbrance is designed to ensure stability to this aspect of disposition of the SAEP property.

(14) The LRA's plan for Building 19 recognizes the reuse constraints imposed by the CCMA.

(15) The Army believes that Executive Order 11990 (discussed in Section 1.5.2) supports its practice of imposing wetlands encumbrances when such resources occur at installations subject to disposal.

(16) The Army is satisfied that the encumbrance related to wetlands which it would impose upon conveyance is sufficient to protect those resources. Additional measures such as creation of a buffer zone that would affect the types or characteristics of activities in adjacent areas does not appear appropriate, especially in light of the planned redevelopment by the LRA. The redevelopment plan attempts to strike an appropriate balance between concerns for enjoyment of and affording protections for natural resources and economic development.

(17) Comment noted. Appropriate State agencies will be consulted with respect to remedial actions.

(18) The text will be modified to replace "intertidal mud flats" with "intertidal flats." The remaining terms used in the text to describe wetland habitats are correct. *Tidal marshes* are a type of tidal wetland, *jurisdictional wetlands* refers to wetlands that meet the three criteria defined in the USACE 1987 Wetland Delineation Manual, and *intertidal wetlands* refers to the vegetated areas that occur in the intertidal flats.

(19) Text at Section 5.3.7 has been amended consistent with the comment.

(20) Consideration of the State's stormwater general permit program is now incorporated into analysis of reuse at Section 5.4.7.

(21) The Army operates the OATP under a permit issued by the State. The OATP is not designed to remove sediment from stormwater prior to discharge. Effluent from the OATP is discharged from outfall-007 which, under the permit, requires quarterly sampling and analysis. No known violations of the permit have been reported since 1994.

(22) The Army would not encumber property conveyance with a requirement for continued operation of the OATP. Such a requirement could constitute an undue burden on the LRA to redevelop the property in a manner most advantageous to the community. Based on concerns for CCMA compliance generally evident in the LRA's reuse plan, the Army believes future management of the site will include those measures necessary and appropriate for the abatement of pollution associated with stormwater.

(23) Please refer to the preceding response.

(24) The state's observation is correct. Text will be amended accordingly.

(25) This DEIS addresses potential environmental impacts associated with disposal and reuse of SAEP. Army remediation or cleanup of contaminated sites is accomplished under the BRAC Installation Restoration Program (IRP). The Army BRAC IRP program is separate from the NEPA process, although the actions usually occur simultaneously during disposal of installation property. This EIS recognizes sites undergoing or pending remediation by describing the nature and extent of the contamination in an overall environmental context and identifying their remedial status (Section 4.0). Insufficient information currently exists to address remedial measures or mitigation appropriate to the areas identified as Category 6. As that information develops, the public will be kept informed through the measures the Army has in place for implementing the BRAC IRP program. Among these are formal opportunities for public participation through document review and public meetings. The public will be kept informed about additional studies as they become available and will be invited to participate in public meetings for those actions.

(26) Consistent with the Army's policy to disclose all relevant information known, the DEIS advises the public that studies are ongoing to accurately characterize the nature of any contaminants that may be present at SAEP. Studies in 1998 demonstrate the continuing nature of these efforts. Implications deriving from the results of those studies for reuse and cleanup, however, are not yet known.

(27) The Army must diligently proceed with both closure and disposal of the installation and accomplishment of cleanup. Postponement of closure and disposal actions in order to allow greater knowledge of the quality and quantity of contamination adversely affects the community's economic welfare. The Army is satisfied that the types of additional information, as suggested, will materially aid cleanup but more likely will not materially aid decision making concerning disposition of SAEP real property.

(28) Under the BRAC IRP program, the Army continues to coordinate with the State to characterize and resolve issues related to cleanup of contamination resulting from past hazardous waste practices. At some future point in time, the Army will reach decisions concerning cleanup. Those decisions will be based, with State assistance and guidance, on appropriate standards such as the property transfer program and the remediation standards regulations. Inclusion of the suggested regulatory information in the present document would not materially aid decisions to be made related to the Army's present proposed action.

(29) Comment acknowledged. It is expected that the Corps of Engineers will prepare and execute disposal conveyance documents consistent with state law requirements.

(30) As discussed in Section 3.3.1, upon conveyance of the SAEP property, the Army will retain a right

to reenter the property to continue any previously initiated cleanup effort or to address any newly discovered requirement for cleanup. Section 3.3.1 has been expanded to indicate more fully the land use restriction encumbrance (new) and its relationship to the question of whether the Army would or would not return to the site to perform additional cleanup.

(31) Costs of cleanup at SAEP will depend principally on the nature and extent of contamination and the degree of cleanup required. Cleanup sufficient to protect human health and the environment in a reuse scenario involving nonresidential use, such as is contemplated by the Town of Stratford, would be less costly than cleanup enabling residential use. Pursuant to DoD policy, upon disposal the Army would impose an encumbrance (now included in the EIS as the "land use restrictions encumbrance") to preclude future use for residential purposes unless the future owner conducted any additional remedial actions that might be needed. Cleanup costs associated with converting land use to the higher residential use would be borne by the party proposing residential use.

(32) The Army proposes to dispose of all its interests in the SAEP property. This extends to all interests in real property, including improvements. As the berm is not part of a specific, Congressionally authorized flood control project, future owners of the property would be responsible for its maintenance and repair. The Army would expect such future owners to act in their own best interest by ensuring proper maintenance and repair of the structure.

(33) Comment acknowledged. Management of the lagoons is subject to a consent order. The Army agrees that the period of post-closure care may extend beyond that currently reflected in the post-closure plan.

(34) The Army agrees that in some circumstances the groundwater use prohibition encumbrance, as expressed in Section 3.3.1, could prove inadequate. Accordingly, the encumbrance has been amended to remove the word "consumptive," resulting in a prohibition on all use of groundwater at the site until concurrence by regulatory authorities in the completion of remedial actions required in connection with final disposal.

(35) The Army intends that all PCB transformers, prior to disposal of the SAEP property, will be either replaced or reclassified (by draining and refilling with non-PCB fluids). Any remedial action found necessary as a result of transformers during the Army's ownership of the plant will be addressed in the BRAC IRP process described in the EIS.

(36) SAEP's RCRA permit will be closed out prior to disposal of the installation. The Remedial Investigation/ Feasibility Study, now underway and scheduled for completion in December 1999, will include consideration of all RCRA waste management areas to ensure full consideration of matters which will be included in the closure plan for the RCRA permit.

(37) Comment noted. The Army is committed to compliance with all relevant regulatory requirements, such as those recited, prior to property disposal. Requirements related to those mentioned are now addressed in Section 4.9.1.

(38) Information noted.

(39) Attempts to evaluate effects of inwater remedial activities on fisheries resources in the lower Housatonic River is premature. The Army is not yet adequately aware of the extent of contamination and the actions necessary to remediate the site. Whether inwater remedial actions

will be required is unknown; attempts to gauge potential effects of such actions would be speculative.

(40) Text has been amended to reflect information provided.

(41) The following maps—preferred land use and wetlands— have been edited for clarity. Maps showing surficial deposits have been added as figures 4-1 and 4-2.

(42) Text amended as suggested.

(43) The referenced figure was misplaced and has been deleted from the cultural resources section.

(44) The Army is without sufficient information to provide a reply. Manifests maintained since 1986 indicate proper disposal of metal hydroxide sludges as hazardous wastes. There are no known records prior to 1986 concerning disposal of metal hydroxides.

(45) Comment noted.

(46) Text amended as suggested.

(47) Execution of the Army BRAC IRP is underway. Issues connected to site remediation will be addressed in their appropriate context. The Army does not currently believe supplementation of this EIS, to include future remediation matters, is warranted.

STATE OF CONNECTICUT

CONNECTICUT HISTORICAL COMMISSION

May 26, 1998

Mr. Joseph H. Hand
Attn: CESAM-PD
Corps of Engineers
109 St. Joseph Street
Mobile, AL 36602

Subject: Stratford Army Engine Plant
Stratford, CT

Dear Mr. Hand:

The State Historic Preservation ~~Office has~~ reviewed the *Draft Environmental Impact Statement for Disposal and Reuse of the Stratford Army Engine Plant, Stratford, Connecticut*, prepared by the Corps of Engineers Mobile District and Tetra Tech Inc. This office notes its extensive prior coordination with the U.S. Army Materiel Command concerning historic and archaeological resources located at the Stratford Army Engine Plant.

The State Historic Preservation Office notes that the *Draft EIS* includes the Memorandum of Agreement ratified by the Advisory Council on Historic Preservation concerning the Stratford Army Engine Plant. This office encourages the adaptive reuse of historic structures 2 and 16 and believes that the encumbered disposal alternative is consistent with the preservation covenant provisions of the Memorandum of Agreement. Furthermore, we note that the Connecticut Coastal Management Program requires coordination with our professional staff concerning the state's cultural resources pursuant to Connecticut General Statutes Section 22a-90(1)(J).

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In light of the Town of Stratford's adopted comprehensive reuse plan that incorporates demolition of Buildings 2 and 16, the State Historic Preservation Office strongly encourages the Corps of Engineers and the Town of Stratford to initiate coordinated consultation with our professional staff. In particular, the identification and implementation of suitable mitigative measures that would be consistent with the extant Memorandum of Agreement for the closure action at the Stratford Army Engine Plant need to be examined.

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For further information please contact Dr. David A. Poirier, Staff Archaeologist.

Sincerely,

Dawn Maddox

Dawn Maddox
Deputy State Historic
Preservation Officer

cc: CDEP/OLIS

TEL: (860) 566-3005 e-mail: cthist@neca.com FAX: (860) 566-5078
59 SOUTH PROSPECT ST. - HARTFORD, CONN 06106 - 1901
AN EQUAL OPPORTUNITY EMPLOYER

Connecticut Historical Commission

(1) Comment noted.

(2) The Army has been requested to undertake its Coastal Zone Management Act compliance through coordination with the Department of Environmental Protection, Office of Long Island Sound Programs.

(3) It is the Army's understanding that the Town of Stratford has reexamined a number of the original proposals presented in the comprehensive reuse plan and now has no immediate plans to demolish Buildings 2 and 16. Therefore, the Army believes that these two buildings will be adequately protected by the deed preservation covenants that will be applied in accordance with the Memorandum of Agreement concluded between the Army, the Advisory Council on Historic Preservation, and the Connecticut Historical Commission before proceeding with the action.

TOWN OF STRATFORD

Mark S. Barnhart
Town Manager

2725 MAIN STREET
CONNECTICUT 06497

203-385-4001

June 19, 1998

Mr. Joe Hand
U.S. Army Corps of Engineers District, Mobile
P.O. Box 2288
Mobile, AL 36628-0001

Dear Mr. Hand:

Attached please find a list of comments, issues, and questions that were raised as a result of the Local Redevelopment Authority's (LRA) review of the Draft Environmental Impact Statement for the Stratford Army Engine Plant (SAEP). The LRA wishes to have these items addressed in the final Environmental Impact Statement.

(1) A major concern of the LRA remains the transfer of the property from the Army with as few encumbrances as possible, thereby making the site as attractive as possible to developers for economic redevelopment. This, coupled with the Army's continued commitment to complete the NEPA process expeditiously, will allow for rapid redevelopment of the site.

We look forward to completion of the final EIS, and an opportunity to review the document.

Sincerely,

Mark S. Barnhart,
Town Manager

MSB/RJN/pb

Attachment

"COUNCIL-MANAGER GOVERNMENT SINCE 1921"

DISTRIBUTION LIST:

Diane C. Toolan, Director Economic/Community Development
Rick J. Norris, Project Coordinator SAEP LRA
John Burleson, Base Environmental Coordinator, SAEP
Jeff Donohoe, RKG Associates Inc.
Toby Halliday, Project Manager, OEA
Fred Hyatt, Base Transition Coordinator, SAEP
Pete Syzmanski, Installation Manager, SAEP
Phil Katz, Chairman, LRA Environmental Subcommittee
Bill McCann, Conservation Administrator, Town of Stratford

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STUDY
Stratford Army Engine Plant
Stratford, CT

Specific Comments:

2 Pg. ES-1, Line 37
Public benefit discount conveyance not described. Add definitions for various conveyances to the glossary.

3 Pg. ES-2, Line 21
The LRA's preferred alternative entails demolition of "most' structures and not just "major" ones.

4 Pg. ES-2, Line 39
The direct adverse impact on economic development for the no action alternative should be considered as "major" and not "minor."

5 Pg. ES-5
Table ES1 is confusing. It does not provide clear distinction between advantages or disadvantages of options.

6 Pg. 1-4, Lines 21-23
What is current status of 1993 PCB consent agreement?

7 Pg. 2-12, Line 36
"sponsor" misspelled

8 Pg. 2-12, Line 38
"will" misspelled

9 Pg. 3-5, Lines 19-24
The contaminated groundwater poses additional encumbrances beyond use prohibition. It affects the ability to freely excavate within the area. Additionally, if the buildings or pavements are removed, it may cause the ground water to migrate, thus requiring additional remediation.

10 Pg. 3-6, Line 21
"wastewater" misspelled

11 Pg. 4-6, Lines 17-18
Over what period of time has the air quality region been in attainment?

12 Pg. 4-7, Lines 21-22
What representatives of the state agreed to the normal air emissions permit application not being processed by SAEP? Why is this application not required?

C:\MY DOCUMENTS\ENVIRONMENTAL\COMMENTS ON DEIS.DOC

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STUDY

Stratford Army Engine Plant
Stratford, CT

13 Pg. 4-16, Section 4.8.5, Lines 26-32
Indicates that ashes were disposed of on the site, but recollections of personnel do not agree. Where did this ash and cinders go? Are there disposal records?

14 Pg. 4-19, Line 24
The Fairfield train station has more than three (3) daily trains.

15 Pg. 4-25, Table 4-5, Line 7
What were the concrete and soil contaminants?

16 Pg. 4-25, Table 4-5, Line 12
Describe PCB articles.

17 Pg. 4-27, Lines 15-16
This conclusion does not necessarily follow, because there is insufficient data to make a determination.

18 Pg. 4-28, 29, Table 4-6
Does no entry mean that there is no material, or that there is no information?

19 Pg. 4-36
The legend for Figure 4-4 is incomplete.

20 Pg. 4-46, Line 17
Short Beach Park is a recreational park, just down the street from SAEP.

21 Pg. 5-5, Lines 8-17
As the level of maintenance decreases to that minimum required to maintain surplus government property, the infrastructure will be adversely impacted. The buildings will degrade without use, particularly interior spaces, which normally require HVAC use. Not having daily human activity within a building is more damaging than the wear and tear of that activity on the building.

22 Pg. 5-6, Line 21
The economic impact of no action is "major", not "minor" from the foregone economic development.

23 Pg. 5-6, Line 27
The sociological impact of the no action alternative is "major" not "minor".

24 Pg. 5-8, Lines 18-29
See the comment on page 3-5 lines 19-24. This would apply similarly to this section.

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STUDY
Stratford Army Engine Plant
Stratford, CT

(25) Pg. 5-19, Lines 28
The demolition of existing structures will have a major effect on water resources, particularly groundwater. The removal of impermeable surface will allow more surface water into the ground, causing groundwater migration, affecting the tidal flats and river.

(26) Pg. 5-32, Line 1
There are no county officials in Connecticut. This action would be taken by the Town.

(27) Appendix A
Covenant B requires revision

(28) Appendix B
The Master/Redevelopment Plan and Implementation Strategy was completed in June 1997, and should replace the draft used.

(29) General Comments:
Maps depicting the airport show three (3) runways. There are only two (2) active runways.

(1) The Army understands the importance of minimizing encumbrances on property in order to support the President's and Congress' objectives to replace jobs lost as a result of BRAC actions. The basis for encumbrances that are imposed is provided at Section 3.3.1.

(2) The public benefit discount conveyance is described on page 2-11 in Section 2.3.4, Real Estate Disposal Process. In that same section, information is provided on transfers to another federal agency, economic development conveyance, negotiated sale, and competitive sale. These definitions have been added to the glossary.

(3) he Town of Stratford's letter of September 30, 1998, indicates potential reconsideration of widespread demolition and a revised approach to redevelopment (i.e., adaptive reuse).

(4) The Army has analyzed the impact of leaving an installation in caretaker status under the no action alternative and concluded there will be foregone economic opportunities for that property. Based on the rational thresholds developed for the model employed by the Army, the economic benefits of reuse are minor. Loss of those benefits (loss of economic opportunity) by not reusing the property is similarly deemed minor.

The Army uses the word "minor" to describe all impacts which do not exceed significance criteria for each resource. Using a variety of adjectives such as "major," "minor," and "minimal" would not be consistently quantifiable and possibly could be misleading. Therefore, impacts are described only as "significant" or "minor." While the economic impacts of leaving the installation in caretaker status may rightfully be considered major by some members of the community, they do not exceed the rational threshold value to be deemed significant.

(5) The impact summary matrix table is not intended, nor can it provide, a quantitative comparison of alternatives. The impacts summary table provides a visual representation of the resource areas impacted by the various actions and the extent of the impact. Section 5.0, Environmental Consequences, provides in-depth analyses of impacts on each resource area resulting from the proposed action and alternatives.

(6) The comment appears to be in reference to *In the Matter of AVCO Corporation, Textron Lycoming, Docket No. TSCA-I-91-1080, RCRA-I-91-1078*, a Consent Agreement and order based on recordkeeping and reporting violations. The Order also addressed the replacement of vapor degreasers with spray wash methods for cleaning of finished product parts. AVCO Corporation fully complied with the terms of the agreement and order and the matter is closed.

(7) Text corrected.

(8) Text corrected.

(9) Remedial actions with respect to groundwater contamination have not yet been identified. Until completion of remediation, use of the groundwater encumbrance (see response to State, # 24) is protective of human health and the environment.

(10) Text corrected.

(11) The New Jersey-New York-Connecticut Interstate Air Quality Control Region has never been out of attainment for nitrogen oxides, and has been in attainment for sulfur dioxides and particulate matter for more than 20 years. The AQCR has never achieved attainment status for ozone in the 25 years during which monitoring has been undertaken. Fairfield has technically been in attainment status for the past 8 years; however, the AQCR as a whole is classified as being nonattainment. A ruling has not been issued on Connecticut's application for attainment status for carbon monoxide in Fairfield.

(12) SAEP has a general air permit (CTDEP 178-007-GPLPL) that expires in June 1999. Connecticut's approved state implementation plan allows for issuance of general permits. The requests for general permits are reviewed by CTDEP technical and legal staff prior to issuance.

(13) During the 1950's and early 1960's, the Department of the Air Force conducted activities at SAEP which included use of classified documents. Such documents were incinerated and the ashes buried on site. Record keeping of waste generation was not required at that time. Information concerning the practice, revealed during compilation of the Environmental Baseline Survey by ABB Environmental Services, was obtained from recollections of employees who were present at the time. It does not appear that the fate of the ash residue is material to considerations related to hazardous waste.

(14) Text has been revised to "33" trains from Fairfield.

(15) Any waste that is listed either in the Connecticut Remediations Standards Regulations or 40 CFR Subpart C and D would require manifesting. As to the specific hazardous substances on a particular manifest, a review of all manifests would be required to identify all the hazardous substances. The identification of hazardous substances on manifests is to assure that proper disposal facilities receive the waste. The Remedial Investigation and Feasibility Study will identify the extent and character of contamination at the facility. The requested information is not relevant to the decisions for which this EIS is being prepared.

(16) All items containing polychlorinated biphenyls must be identified on manifests for transport and disposal of hazardous wastes. The majority of items noted in Table 4-5 were in all likelihood rags or absorbent materials used in maintenance and cleaning which were required to be manifested prior to transport and disposal as hazardous wastes. More detailed records such as would address specific items within the category of "PCB Articles" are not available.

(17) The conclusory sentence in question has been removed from text.

(18) Blank spaces in Table 4-6 indicate that a parcel has not been fully investigated. Each row of information concludes with the parcel's DoD Environmental Classification (DODECs are explained in the table notes). Assignment of DODEC category 7 to most SAEP parcels indicates that they either are unevaluated or require further investigation.

(19) Figure 4-4 *Wetlands* has been corrected.

(20) Short Beach Park has been added to Section 4.15.4, Recreation.

(21) The observation is correct. Text at Section 5.2.8 has been changed accordingly.

(22) See response to LRA comment #4.

(23) The Army's analysis of impacts classifies them as significant or minor. For the reasons provided in text at Section 5.2.14, caretaker impacts on the sociological environment would be minor.

(24) The Army believes it has objectively identified relevant impacts on land use that would be attributable to encumbered disposal.

(25) Comment noted. The intention of the town of Stratford to re-evaluate its selection of Alternative 4 in its reuse plan indicates an awareness of the issue cited.

(26) "County" has been changed to "Town."

(27) Appendix A contains the signed Attachment B: Conditions for Preservation of Engine Assembly Plant (Buildings 2), Its Addittiona, and the Aircraft Engine Test Cells Building (Building 16)

(28) A copy of the summary and overview from the *Master/Redevelopment Plan and Implementation Strategy* final document has been provided at Appendix B.

(29) The maps show the general configuration of Sikorsky Memorial Airport as shown in the *FAA and Connecticut Department of Transportation EIS for Improvements to Runway 6-24*. The maps are intended to show the general space the airport occupies. The Army concurs that only 2 of the runways are active.

TOWN OF STRATFORD

HEALTH DEPARTMENT
2730 Main Street
Stratford, CT 06497

Elaine O'Keefe, MSPH
Director of Health
and Welfare

PH: (203) 385-4090
FAX: (203) 381-2048

Mr. Joe Hand
U.S. Army Corps of Engineers
Mobile District
P.O. Box 2288
Mobile, AL 36628-0001

July 8, 1998

Dear Mr. Hand:

Please accept the following comments as a supplement to the critique of the draft "Environmental Impact Statement for Disposal and Reuse of the Stratford Army Engine Plant, Stratford, Connecticut", that was previously submitted on behalf of the Town. By way of introduction you should know that I sit on the SAEP Regional Advisory Board (RAB) as the Town's representative. Other RAB members have also submitted individual comments on the EIS which you should have received prior to this date.

Per the Department of the Army's directive, my comments are framed in response to the "adequacy of the Environmental Impact Statement (EIS)" and the "merits of the alternatives" presented in the document. Regarding the latter consideration, the "No Action Alternative" is inimical to the goal of economic revitalization and in my estimation will definitely have a deleterious impact on the quality of life of Stratford residents and the region. The health of a community is inextricably linked to economic prosperity. The "No Action" option translates into a missed opportunity to bolster the local economy and the negative consequences for the welfare of the Stratford community surely outweigh the "minor beneficial impacts" noted in the EIS. By contrast, the disposal and reuse alternatives permit development while affording the necessary protections of the environment and public health. The issue at hand is the scope and type of remediation that will be required to suit the envisioned use of the property in perpetuity, and who will be accountable for cleanup actions that are necessary for the desired redevelopment but do not clearly fall within the Army's realm of responsiblity. Fully "Unencumbered Disposal" per the EIS "...would pose human health and safety risks" and would thus appear to be a less desireable proposal from a public health perspective. However, disposal with too many encumbrances from the Army may hinder development unnecessarily. Ultimately, human health and the environment must be protected and carefully considered in any restoration and reuse plan. With or without Army imposed encumbrances, the CT Department of Environmental Protection (DEP) will presumably impose the same cleanup standards and land use restrictions on the SAEP property as would apply to other contaminated industrial sites in CT, and these standards are protective of human health.

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2

"COUNCIL-MANAGER GOVERNMENT SINCE 1921"

Regarding the "adequacy of the EIS", I found the document to be lacking sufficient data in several areas. Some of my comments echo those of my associates but I am compelled to reiterate because all of the issues that I identify have potential public health implications.

3 • The CT DEP requested a report on PCBs on the site and there is reference to violations of PCB regulations. More data is needed to describe the level of PCB contamination and any related risks to the environment and human health.

4 • The report states that all underground tanks were removed and replaced by above ground receptacles. The present contents/use of these receptacles should be described.

5 • The section on hazardous and toxic substances (section 4.9) is limited to current practices and "baseline conditions". What does baseline mean in this context? Are the authors referring to the baseline environmental survey that was released in December of 1996? According to the "preliminary investigations", hazardous and toxic substances used at SAEP were all contained and properly disposed of and recent/current practices comply with all regulations for the release, management and disposal of such substances. But it is unclear if past practices have been thoroughly investigated; available data from retrospective studies would be useful to present a thorough assessment.

6

7 • There is mention of historical "storage lagoons", some of which were "unlined". More information should be supplied on the location of these former lagoons and the condition of subsurface soil where this storage occured. Is this data contained in Table 4-6? Similarly, the ash and cinder from incineration that was disposed of on site must be located (as was also suggested by several others who reviewed the EIS).

• According to the report there is extensive groundwater contamination on the site. Since the groundwater is not a potable supply this is not an imminent issue however restrictions must be assured for the longterm. There is also some concern that the groundwater may be migrating to the tidal flats affecting environmental habitat and possibly humans who wade in the area. Moreover, there are a number of instances in the EIS where the authors describe the various proposed actions on site as having a "minor impact" on groundwater. It is my view that the impact is being understated. Excavation of the buildings will surely alter groundwater conditions to a larger extent than the EIS suggests and this is no small consideration. Since the preferred reuse plan involves major demolition activities, this should be further explored in continuing environmental studies of the property and in the development of plans for future use. Will the remedial investigation and feasibility study that is ongoing and due in the summer of 1999 address these issues? Can the authors elaborate on any hydrogeology surveys that may have been performed in the area of concern?

8

9 • There are two issues concerning air quality. The first is the unexplained emissions permit exclusion that was granted to SAEP (again, noted by others who have commented on the EIS). More information regarding the conditions of this waiver is warranted.

10 Second, the air quality in Fairfield county is problematic in several regards and the DEP projects that we will not be able to comply with the new EPA standards for particulate matter or ozone. While this is not an immediate concern for the SAEP site, future remediation and development plans could be impacted by these new standards.

11 • The report states that an asbestos survey was completed in early 1998. Existing data indicates that a "large portion of SAEP's 124 acres are impacted by asbestos containing materials". The results of this survey are essential particularly since the presence of friable asbestos is one of the two acute health concerns that must be addressed on the SAEP site.

12 • As noted in the report, no lead survey is planned since the age of the buildings presumes the presence of lead. Lead in soil could be an issue under a reuse scenario that involves demolition of the buildings if there was any contamination of soil from lead contained on these structures.

13 • The actual report on the radon survey that was conducted by the State and Textron-Lycoming should be presented, including the location of the testing and the results.

14 • It is encouraging that the preliminary findings regarding radiological isotopes on site do not exceed "background levels". Will the comprehensive radiological survey that is referenced be completed before the end of 1998? The questions that were raised on this subject in response to the 1996 SAEP environmental baseline survey remain unanswered. This information is obviously critical to complete the profile of the environmental condition of the SAEP property and the type of remediation that will be required for the planned reuse.

15 • Finally, the absence of data on the contamination that exists under the buildings is a large issue. The preferred land use for this site entails significant demolition that may cause the release of contaminants. Contamination beneath the buildings will have to be addressed in the final cleanup plan and it behooves us to be considering this part of the property, even at this stage, to the extent possible.

16 Concerning the organization of the report, I suggest that it would be far more readable if the information was better integrated. It seems that the data could be presented in shorter form, and in a less redundant and disjointed fashion. Also, to echo the comments of my associates, the chart on ES-5 is near impossible to decipher without tremendous effort on the part of the reader, which defies the very purpose of using graphical displays. This particular chart is very important however, and it is well worth another attempt to fashion one that will present the pros and cons of the various alternatives in a more coherent format, if possible.

17 I recognize that the authors of the EIS were constrained by the limitations of available data and I can appreciate the challenge of producing such a document in the absence of more complete information. I am also aware that some of my comments may transcend

the intended scope of the EIS. However, the environmental characterization of the property, the remediation design, and the redevelopment plans for SAEP clearly overlap and it is impractical to demarcate these stages so I offer these more wholistic comments now for whatever value they may have to the present and future assessment of the SAEP site.

In closing, you are surely aware that the Stratford Local Reuse Authority's (LRA) preferred reuse plan is multipurpose and entails economic development, recreation, waterfront open space and museum or special use. This vision encompasses ample public access and thus it is paramount that all who are involved in the disposal and restoration of this property remain mindful of the need to balance protection of the environment with economic development, as environmental quality is essential for the provision of both a healthy ecological and human environment.

Thank you for allowing me to submit these supplemental comments. I look forward to the release of the final EIS and ensuing studies that will further characterize the SAEP site and expedite the return of the property to productive use.

Yours,

Elaine O'Keefe
Director of Health

cc M Barnhart, Town Manager
R Norris, SAEP, LRA Project Coordinator
K Feathers, CT DEP
M Hartley-Moore, SAEP RAB Community Co-Chairperson
J Burleson, SAEP BRAC Office
P Katz, SAEP Environmental Committee Chairperson

(1) In carrying out actions pursuant to BRAC Commission recommendations, one of the guiding principles for the Army has been the President's Program to Revitalize Base Closure Communities (described at Section 1.5.1 of the DEIS). The Army recognizes the importance of the community's timely redevelopment and replacement of jobs lost to installation closure. The Army must also recognize the possibility of caretaker status being implemented for some period of time. Please also see LRA response #4.

(2) The Army understands the importance of minimizing encumbrances on property in order to support the President's and Congress' objectives to replace jobs lost as a result of BRAC actions. The bases for encumbrances that are imposed is provided in Section 3.3.1. The Army would expect cleanup standards and land use restrictions at SAEP to be similar to those applicable to any other contaminated industrial site in the state.

(3) Detailed information on the presence and condition of PCB-related equipment is a matter properly within the purview of studies for the remediation of the SAEP property. The RI/FS report is currently expected to be completed in December 1999. Such information is relevant to the cleanup process, a matter that is not the subject of this evaluation.

(4) Since the 1995 baseline period, SAEP has reduced to three its inventory of aboveground storage tanks. These remaining tanks contain diesel fuel to power back-up generators.

(5) Baseline refers to the general level of activity at SAEP in July 1995, the time of the announcement of the BRAC Commission recommendations.

(6) The suggested additional information, such as analyses of the reliability or thoroughness of past studies, represents a level of detail that would not aid in the decisions to be made with respect to this EIS. Such information may be relevant to portions of the cleanup process, a matter that is not the subject of this evaluation.

(7) Table 4-6, reporting the results of classifying SAEP parcels in accordance with DoD criteria, does not identify contaminants known or suspected to occur at the storage lagoons or other locations/parcels. Inclusion of further information on the storage lagoons and ashes from incineration operations would result in a level of detail that would not aid in the decisions to be made with respect to this EIS. Such information is relevant to the cleanup process, a matter that is not the subject of this evaluation. Matters of the type requested may be expected to be addressed in the RI/FS report, due to be completed in December 1999.

(8) Army imposition of encumbrances related to land use restrictions and groundwater use prohibition, in combination with the installation's ongoing remediation actions, would preclude there being significant impacts to groundwater.

(9) Connecticut's approved state implementation plan allows for issuance of general permits. The requests for general permits are reviewed by CTDEP technical and legal staff prior to issuance.

(10) The effects of evolving air quality standards on the Army's remedial actions and one reuse of the SAEP cannot be forecast. The Army would not expect adoption of more stringent air quality

standards to affect the Army's obligation to remediate the SAEP property and to protect human health. Future effects of evolving air quality standards on redevelopment are equally speculative.

(11) A two-volume report dated April 1998 indicates the results of survey for the presence of asbestos-containing materials of all buildings at SAEP. The survey shows that asbestos-containing materials are presence in every building at the installation. During the survey, the presence of damaged friable asbestos-containing materials were documented and, since completion of the survey, those locations have been remediated. A copy of the report of survey is available for review at SAEP. In addition, a full copy of the report has been provided to the town of Stratford's LRA.

(12) Section 4.9.5 presents the Army's procedures for notifying future owners of the presence of lead-based paint at the SAEP property. Workplans for demolitions of structures would have to address procedures for removal of surfaces having lead-based paint. As indicated in Section 3.3.1, the Army would impose an encumbrance on the property with respect to lead-based paint that is present.

(13) The cited survey did not detect radon at SAEP. Inclusion of the complete contents of a report having negative findings would result in a level of detail that would not aid in the decisions to be made with respect to this EIS.

(14) Government contractor operations at SAEP have required issuance of a license by the Nuclear Regulatory Commission. That license is now being decommissioned by the Nuclear Regulatory Commission, with action expected to be completed in 1999.

(15) Comment noted.

(16) In preparing its evaluation of disposal and reuse of SAEP, the Army must make many choices pertaining to which information to include and how best to present that information which is deemed relevant to the decisions to be made. In September 1995, the Army published its *Base Realignment and Closure Manual for Compliance with the National Environmental Policy Act* to guide preparation of environmental documentation related to BRAC. That manual, which generally prescribes the information for inclusion and arrangement of environmental documentation, was provided to other federal agencies for their concurrence. The DEIS follows the prescriptions for form and content set forth in the manual. Even so, to a wide audience there will be occasions when it is desired that even clearer presentations be achieved. The Army shares the general objective of communicating efficiently and effectively and believes that it has done so with a topic that involves a great deal of related information. The table on ES-5 is a fine example of the need to express a large volume of information in a compact medium. The table is, however, only a summary of the analyses that are presented in Section 5.0. Readers are urged to refer to Section 5.0 for specific details on the predicted effects of the Army's proposed action and alternatives.

(17) Comment noted.

Janet Carlucci
Redacted - Privacy Act

June 19, 1998

Mr. Joseph H. Hand, U.S. Army Corps of Engineers, Mobile District
ATTN CESAM-PD-EC (J. Hand)
P.O. Box 2288
Mobile, AL 36628-0001

Re: Written Comments and Questions on the Draft Environmental Impact Statement

Dear Mr. Hand,

For the record, I am responding in writing to the *Draft* Environmental Impact Statement My comments and questions are as follows

1. Please define in the Executive Summary "encumbrance." The dictionary states " a lien or claim on an estate, for the discharge of which the estate is liable."??? **Please clarify the Army's definition.**
2. Encumbrance as a concept needs to be better defined for the disposal alternatives.
3. Credibility of this document is low, based on the extensive use of "personal communication".
4. Page ES-1, **Disposal Process, line 37:** "public benefit discount conveyance,..." **What is a public discount conveyance?**
5. Page ES-5, **Table ES-1 Impacts Summary: This table makes it seem that reuse and disposal are mutually exclusive.**
6. Page 1-4, **1.3.3 Scoping Process, line 22:** "The CTDEP also asked that the EIS include information and current status on a 1993 consent agreement and order issued. ." **I didn't realize there was an outstanding consent order for PCB's!**
7. Page 1-8 through 1-12, **1.5.2 Relevant Statutes and Executive Orders: This is a good section for the public to have on file for easy reference.**
8. Page 4-2, **4.2.2 Existing Land Use, line 3:** " SAEP approximately 3,000 parking spaces, .." **This sentence needs a verb... has/is?**
9. Page 4-3, **4.2.4 Future Land Use, line 17:** "redevelopment of the Raymark facility and the former DuPont property." **DuPont is not the best reference. It should be referred to as Remington Arms or Lake Success Business Park.**
10. Page 4-3, **4.2.4 Future Land Use, lines 23 - 27,** "This land is scheduled for remediation. .In addition, Harbor Yards,...that would include a minor league baseball park..." **These references should be updated to "This land has been remediated...In addition Harboryard,...that includes...".**
11. Page 4-6, **4.4.1 Ambient Air Quality Conditions, lines 14 through 18:** "SAEP is located in the...and particulate matter." **Answer over what time period?**
12. Page 4-7, **4.4.2 Air Pollutant Emissions at SAEP, line 15:** "The emission sources listed above are operating under a proposed permit,..." **Was this a past permit or is this a current permit for the present?**

Mr. Joseph H. Hand, U.S. Army Corps of Engineers, Mobile District
ATTN: CESAM-PD-EC (J. Hand)
P.O. Box 2288
Mobile, AL 36628-0001

Written Comments and Questions on the Draft Environmental Impact Statement Continued

13. Page 4-7, **4.4.1 Ambient Air Quality Conditions, line 22:** ". .SAEP, as agreed to by representatives of the state..." **Who?**
14. Page 4-7, **4.4.1 Ambient Air Quality Conditions, line 28:** "...Region 1 has not approved the state SIP for.. " **What does SIP stand for?**
15. Page 4-16, **4.8.4 Landfills through 4.8.5 Incinerators, lines 23 - 32:** line 24 "There are no landfills on the SAEP property " Line 29 "1996a) reports that ash and cinders from incineration were disposed of on site..." **There are no landfills on site, but ash and cinders were disposed of on-site?**
16. Page 4-25, **Table 4-5 Manifested Hazardous Wastes Generated at SAEP...: "Contaminated Oil, Contaminated Soil and Concrete" Contaminated by what? "PCB Articles..." I've never seen "PCB Articles" referenced. What does it mean...clothing, bricks, wood?**
17. Page 4-27, **4.9.4 Contaminated Sites, Soils, and Groundwater, line 11 through 16:** "All 33 parcels are suspected to have potential groundwater contamination. .Thus it is expected that no significant risk to human health or the environment should be present." **Which shouldn't preclude the need to cleanup!**
18. Page 4-28 through 4-30, **Table 4-6 Land Parcel Classification: This chart is hard to follow. If a Parcel has no reference marks under the Hazardous/ Toxic Condition Indicators does that mean that no hazards or toxins were found or does it mean that that parcel area has yet to be tested? (Example parcel 19).**
19. Page 4-31, **4.9.3 Special Hazards, lines 13 - 16:** "Radon. In 1989 - 1990, a radon survey was completed...(ABB Environmental Services, Inc., 1996a)." **No radon whatsoever was found?**
20. Page 4-37 through 4-39, **4.12 Cultural Resources: Thank you for providing such a good history!**
21. Page 5-11, **5.3.9 Hazardous and Toxic Materials:** " The presence of hazardous substances .. prior to transfer " **This is a very important statement! Good section.**
22. Page 5-12, **5.3.9 Hazardous and Toxic Materials, Encumbered Disposal, Indirect.:** "Long term minor adverse...to the local tax base." **This could be assuming a lot.**

Thank you for taking my comments and questions under consideration for the final EIS document If you have any questions, please don't hesitate to call me at (203) 377-2903.

Sincerely,

Janet Carlucci

Janet Carlucci,
Environmental Subcommittee Member of the LRA
RAB Committee Member

Ms. Janet Carlucci, LRA Environmental Subcommittee

(1) The definition of "encumbrance" is provided in the glossary. A detailed discussion of encumbered disposal is provided in Section 3.3.1, Encumbered Disposal. As the executive summary is meant only to be a brief summary of the findings of the EIS, the Army generally chooses not to include there definitions of terms and or extensive explanatory matter.

(2) The Army's use of the term encumbrance is explained in Section 3.3.1.

(3) Some of the information provided in this EIS is the result of direct communication with personnel at SAEP and appropriate federal state and local agencies. Information provided as personnel communications by experts or knowledgeable people typically is necessary information not otherwise obtainable from existing documents. Each time a personal communication is referenced in text a full reference is provided in Section 8.0, References, in the same manner as documents are referenced. All personal communications are also backed by detailed phone conversation records which are maintained as part of the Army's administrative record. Use of personal communications is a widely accepted, and often necessary, practice in preparing a NEPA document.

(4) Public benefit discount conveyance is described in Section 2.3.4, Real Estate Disposal Process. In that same section, definitions are also provided for transfer to another federal agency, economic development conveyance, negotiated sale, and competitive sale. These definitions have been added to the glossary. As stated in the response to comment #1, the executive summary is not the appropriate place to provided definitions and other lengthy explanatory matter.

(5) Disposal of property and its reuse are distinctly different actions. Each is evaluated for the impacts they might have on resources.

(6) The comment appears to be in reference to *In the Matter of AVCO Corporation, Textron Lycoming, Docket No. TSCA-I-91-1080, RCRA-I-91-1078*, a Consent Agreement and order based on recordkeeping and reporting violations. The Order also addressed the replacement of vapor degreasers with spray wash methods for cleaning of finished product parts. AVCO Corporation fully complied with the terms of the agreement and order and the matter is closed.

(7) Comment noted.

(8) The word "has" is now added to the sentence.

(9) The words "former DuPont property" have been replaced with "the Lake Success Business Park."

(10) Text has been updated to reflect comment.

(11) See response to LRA Comment #11.

(12) SAEP has a general air permit (CTDEP 178-007-GPLPL) that expires in June 1999.

(13) Connecticut's approved state implementation plan allows for issuance of general permits. The requests for general permits are reviewed by CTDEP technical and legal staff prior to issuance.

(14) SIP is the acronym for"state implementation plan" and is provided in the acronym list. The text has

been edited and the acronym is now spelled out.

(15) See response to LRA Comment #13.

(16) See response to LRA Comments #15 and #16.

(17) The Remedial Investigation and Feasibility Study is ongoing and will determine the extent of contamination and alternatives for cleanup.

(18) Blank spaces in Table 4-6 indicate that a parcel has not been fully investigated. Each row of information concludes with the parcel's DoD Environmental Classification (DODECs are explained in the table notes). Assignment of DODEC category 7 to most SAEP parcels indicates that they either are unevaluated or require further investigation.

(19) According to the *Final Environmental Baseline Survey Report, December 1996* prepared by ABB Environmental Services, a radon survey was completed by the Textron Lycoming environmental department in 1989-90 in cooperation with the State of Connecticut. No radon was detected. It is not considered to be a contaminant present at SAEP.

(20) Comment noted.

(21) Comment noted.

(22) Comment noted.

Mr Hand

a time ago I read an article in the newspaper that Allied Signal Claims that Thorium was a Harmless Chemical I worked at Lycoming Textron the last the plant before Allied signal that made the same engine
I worked in Lab machine shop that prepared tests for all parts there was five of us that worked together, we were never told about the danger of Thorium after a while one of our employees named Sigmund Sokolowske developed Cancer and passed away Later on another employee named Ralph Solemn developed Cancer and passed away then another Employee named Gilbert Rains developed Cancer and passed away Often I thought something has to be wrong so a list of all the metals we worked with and went to the safety department, that is when a friend out about Thorium it is a rare grayish, radioactive chemical element occurring in monazite Thorite symbol Thatomic weight 232,12 Atomic number 90 that will Cause Cancer Later on I retired after a few years I went to the Hospital for an Xray they found that I had a Cancerous tumor the size of a Pineapple on my left Kidney after a different operations and lost of a Kidney I pulled through I feel I was Luckier then the Others because my Cancer did not spread like theirs (1) there must be Thorium Chemicals laying around the plant thankyou

August Castellucci

(1) Thank you Mr. Castellucci for your interest in this matter. The Army will be performing remedial investigations to fully define the nature and extent of contamination at the Stratford site and also methods of cleanup. During the investigation, groundwater, surface water, soil, sediment, and biological samples are collected and analyzed to determine the type and concentration of each contaminant. Samples are collected at different areas and depths to help determine the spread of contamination. We will look into it and ensure that the facility in question is studied and risk free from thorium contamination as part of the BRAC process.

APPENDIX B

No Adverse Effect Determination for the Lease of SAEP Historic Properties and Memorandum of Agreement for the Disposal of Historic Properties at SAEP, CT

DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND
5001 EISENHOWER AVENUE, ALEXANDRIA, VA 22333 - 0001

REPLY TO ATTENTION OF

AMCEN-R

16 JUN 1995

MEMORANDUM FOR Commander, U.S. Army Aviation and Troop Command, ATTN: SAVAI-Z, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798

SUBJECT: AlliedSignal Aerospace Lease of Stratford Army Engine Plant (SAEP), Stratford, CT

1. The U.S. Army Materiel Command (AMC) has negotiated a no adverse effect determination with the Connecticut Historical Commission for the leasing of facilities at SAEP, Stratford, Connecticut to AlliedSignal. This determination was contingent on AMC and the lessee (Alliedsignal) conforming to the historic preservation conditions set forth in the enclosure to this letter of transmittal.

2. AlliedSignal Aerospace will provide general building maintenance, security and fire protection for the Engine Assembly Plant (Building 2), its additions, and the Aircraft Engine Test Cells Building (Building 16) at SAEP through a lease agreement between the Government and AlliedSignal Aerospace. All maintenance and rehabilitation for Buildings 2 and 16 must be carried out in accordance with the regulations and procedures set forth in Attachment B to the enclosure.

3. Point of contact for this action is Mr. Joe Goetz, AMCEN-R, (703) 274-9899.

4. AMC -- America's Arsenal for the Brave.

FOR THE COMMANDER:

for

MARK W. POTTER
Colonel, GS
Deputy Chief of Staff for
Engineering, Housing,
Environment, and Installation
Logistics

Encl

CF:
Commander, U.S. Army Corps of Engineers, New York District, ATTN: CENAN-RE, Jacob K. Javitz Federal Building, New York, NY 10278-0090
(CONT)

AMCEN-R
SUBJECT: AlliedSignal Aerospace Lease of Stratford Army Engine Plant (SAEP), Stratford, CT

CF: (CONT)
COMMANDER
U.S. Army Corps of Engineers, Fort Worth District, ATTN: CESWF-PL (Mr. Stephen P. Austin), P.O. Box 17300, Fort Worth, TX 76102-0300
U.S. Army Tank-Automotive and Armaments Command, ATTN: AMSTA-XE, Warren, MI 48397-5000

Advisory Council on Historic Preservation, ATTN: Ms. Valerie DeCarlo, 1100 Pennsylvania Avenue, Room 809, Washington, D.C. 20004

Administrative Contracting Officer, Defense Contract Management Area Operations Stratford, 550 South Main Street, Building 1, 3rd Floor, Stratford, CT 06497-7574

ATTACHMENT B
CONDITIONS FOR PRESERVATION OF
ENGINE ASSEMBLY PLANT (BUILDING 2), ITS ADDITIONS,
AND THE AIRCRAFT ENGINE TEST CELLS BUILDING (BUILDING 16)

The Army Material Command (AMC) will see that the following preservation guidelines are followed:

A. AlliedSignal Aerospace will provide general building maintenance, security, and fire protection for the Engine Assembly Plant (Building 2), its additions, and the Aircraft Engine Test Cells Building (Building 16) at Stratford Army Engine Plant, Stratford, Connecticut, through a lease agreement between the Government and AlliedSignal Aerospace.

B. The U.S. AMC will ensure that the historic significance of Building 2 and Building 16 will be identified to AlliedSignal Aerospace personnel and that said personnel understand that all rehabilitation and maintenance for Building 2 and Building 16 must be carried out in consultation with the Connecticut State Historical Preservation Officer (SHPO) and according to guidelines for preservation as found in the Army Technical Manual (TM) 5-801-2 (*Historic Preservation: Maintenance Procedures*), the *Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitation of Historic Buildings* (U.S. Department of the Interior, National Park Service, 1992), and in the National Park Service's technical series on preservation and repairs for historic buildings, *Historic Buildings Preservation Briefs Series* 1-14, as appropriate.

C. The Army will not separately sell, transfer, or dispose of Building 2 or Building 16 until AMC confirms with the SHPO that the action will not constitute an adverse effect under 36 CFR § 800.

D. Activities regarding Building 2 or Building 16 that will require no consultation with the Connecticut State Historic Preservation Officer shall include:

1. Interior

a. Plumbing rehabilitation and replacement: including pipes and fixtures.

b. Heating system rehabilitation and replacement: including furnaces, pipes, radiators or other heating units.

c. Electrical wiring: including wiring and receptacles.

d. Restroom improvements for handicapped access: provided that the work is contained within an existing restroom.

e. Interior treatments (floors, walls, ceilings, woodwork): provided the work is limited to painting, refinishing, repapering or laying carpet or other suitable flooring material. Construction of temporary walls (timber or steel framed with drywall finish) is permitted. No removal of existing exterior doors, permanent interior walls, floors, or support columns will be permitted.

f. Insulation: provided it is restricted to ceilings and attic spaces.

2. Exterior

a. Caulking, weatherstripping, reglazing.

b. Sidewalk and curbing replacement.

c. Gutters and downspout replacement.

d. Roof repair or replacement that uses in-kind mate

what about 2c.? [illegible] replacement in-kind materials, i.e. copper gutters - [illegible]

e. Storm windows: provided they conform to the original shape and size of the historic windows and that the meeting rail coincides with that of the existing sash. Color should match existing windows and trim.

f. In-kind replacement: this is understood to mean that the new features or replacement items will duplicate the material, dimensions and detailing of the original.

1. Porches and loading platforms: stairs, railings, posts and columns, brackets, cornices, and flooring.

2. Roofs.

3. Siding.

4. Exterior architectural details and feature: including but not limited to brickwork, lintels, and trim.

5. Windows: includes both trim and the sash.

6. Doors.

g. Clean and seal treatments that do not include sand blasting or the use of chemicals that have not been approved for use by the Connecticut SHPO.

E. The Connecticut State Historic Preservation Officer shall be permitted at all reasonable times to inspect Building 2 or Building 16 Stratford Army Engine Plant to ascertain if the above conditions are being observed.

MEMORANDUM OF AGREEMENT

among

THE UNITED STATES ARMY MATERIEL COMMAND,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
and
THE CONNECTICUT STATE HISTORIC PRESERVATION OFFICER

for the

BASE CLOSURE AND DISPOSAL OF
THE STRATFORD ARMY ENGINE PLANT, STRATFORD, CONNECTICUT

1996

WHEREAS the U.S. Army Materiel Command (a Major Army Command (MACOM) of the United States Department of the Army) is responsible for the implementation of applicable provisions of the Defense Closure and Realignment Act of 1990 (P.L. 101-510), 1995 authorized action; and

WHEREAS the U.S. Army Materiel Command is proceeding with realignment of functions and units, closure of installations, and disposal of excess and surplus property in a manner consistent with the Defense Base Closure and Realignment Commission Report; and

WHEREAS the U.S. Army Materiel Command has determined that interim leasing, licensing and the subsequent disposal of Stratford Army Engine Plant will have an effect upon historic properties that are eligible for listing in the National Register of Historic Places, and has consulted with the Connecticut State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (Council) pursuant to 36 CFR § 800, regulations implementing Section 106 (16 U.S.C. § 470f) of the National Historic Preservation Act as amended through 1992 (NHPA) (16 U.S.C. 470 *et seq.*), Section 110 of the same Act (16 U.S.C. § 470h-2), and Section 111 of the same Act (16 U.S.C. § 470h-3); and

WHEREAS inventories of historic properties at Stratford Army Engine Plant have been completed and are known to include the Engine Assembly Plant (Building 2), its additions, and the Aircraft Engine Test Cells Building (Building 16), identified as historically important because of their association with WW II and because of their design work, and which are, by consensus determination, considered eligible for the National Register of Historic Places; and

WHEREAS the inventory of historic properties at Stratford Army Engine Plant also includes an area considered to have potential archeological sensitivity located in the riparian rights area controlled by the Stratford Army Engine Plant; and

WHEREAS the U.S. Army Materiel Command has determined in consultation with the SHPO and in accordance with 36 CFR § 800.4 that existing information is adequate to identify all significant buildings, structures, objects, or archeological properties for the purpose of Section 106 of the NHPA and will not undertake further installation specific field surveys for identification for that purpose and that no other buildings, structures, sites, or objects at Stratford Army Engine Plant are considered eligible for the National Register of Historic Places; and

WHEREAS the area of potential effect for this agreement consists of the area within the installation boundaries only; and

WHEREAS interested members of the public, including the Governor's office of Connecticut, the Stratford Mayor's office, and others through public hearings, consultation meetings, and other means have been provided opportunities to comment on the effects that this installation closure and disposal may have on historic properties at the Stratford Army Engine Plant;

NOW, THEREFORE, the U.S. Army Materiel Command, the SHPO, and the Council agree that the undertaking shall be implemented in accordance with the following stipulations to take into account the effect of the undertaking on historic properties at Stratford Army Engine Plant, therefore satisfying the U.S. Army Materiel Command's Section 106, 110 and Section 111 responsibilities under the NHPA (16 U.S.C. 470 *et seq.*) at Stratford Army Engine Plant.

STIPULATIONS - The U.S. Army Materiel Command will ensure that the following measures are carried out:

1. **Disposal of Stratford Army Engine Plant Properties**

A. The U.S. Army Materiel Command will dispose of the entire Stratford Army Engine Plant property, including the historic properties described as the: 1942 Engine Assembly Plant (Building 2) and its additions, the Office Extension (1943-44), the Assembly Plant Addition (1944), and the North Factory Extension (1944); the Aircraft Engine Test Cells Building (Building 16) completed in 1952; and will potentially reassign the riparian rights area adjacent to the facility (see Attachment A).

B. In accordance with the provisions of the contract between the U.S. Army Materiel Command and the current contractor, AlliedSignal Aerospace, AlliedSignal Aerospace will

continue to provide caretaker building maintenance, security, and fire protection at Stratford Army Engine Plant until the identified historic properties are assigned to another tenant activity or transferred from U.S. Army possession. These caretaker activities shall be conducted in accordance with Public Works Bulletin 420-10-08 (17 March 1993), Facilities Operation, Maintenance, and Repair Guidance for Base Realignment and Closing Installations (and subsequent revisions).

C. The U.S. Army Materiel Command proposes to offer the Stratford Army Engine Plant *in toto* to prospective buyers, including the historic properties described in 1.A. A preservation covenant for the National Register eligible buildings identified at Stratford Army Engine Plant has been previously developed by the U.S. Army Materiel Command in consultation with the SHPO and is included as Attachment B to this agreement. This covenant will be included in the instrument of transfer. The U.S. Army Materiel Command will notify the recipient of Stratford Army Engine Plant of this preservation covenant and their responsibilities under this agreement prior to final transfer of Stratford Army Engine Plant.

D. The riparian rights area is a use only area and may be assigned to the recipient of the property for in-kind use. Any action which could have the potential to modify the existing shore boundary or the land surface underlying the water use area shall require a Connecticut Department of Natural Resources Permit or a U.S. Army Corps of Engineers Clean Water Act permit before such action occurs as applicable. The U.S. Army Materiel Command will notify the recipient of the riparian rights area at Stratford Army Engine Plant of this stipulation and their responsibilities under this agreement prior to final transfer of the area.

E. If the marketing of Stratford Army Engine Plant fails to produce an *in toto* transfer of the property, the U.S. Army Materiel Command will offer the facility as separate parcels. Successful bidders for any of the historic properties identified in 1.A will be made aware of the preservation covenants described in 1.D and their responsibilities under this agreement prior to final transfer of any portion of Stratford Army Engine Plant.

F. The U.S. Army Materiel Command will ensure that all real property within Stratford Army Engine Plant is transferred subject to the recipient's formal agreement and acceptance of any preservation covenants associated with said real property. The formal agreement and acceptance of covenant restrictions shall be made part of the instrument transferring the ownership of the real property and shall be recorded in the real estate records of Fairfield County, Connecticut, and that the instrument transferring the property will incorporate the preservation covenant(s) as part of the legal document.

G. The U.S. Army Materiel Command will ensure that the historic properties identified at Stratford Army Engine Plant will be identified to the recipient and that the recipient

further understands all rehabilitation and maintenance for said historic properties must be carried out in accordance with the *Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitation of Historic Buildings* (U.S. Department of the Interior, National Park Service, 1992), in consultation with the SHPO

2. Environmental Remediation

A. The U.S. Army Materiel Command may treat historic properties at Stratford Army Engine Plant in accordance with the procedures for emergency undertakings under 36 CFR § 800.12 that are an imminent threat to health and safety and require an emergency response due to contamination by hazardous, toxic, and radiological substances. In situations where remediation must proceed without taking steps to preserve historic properties, due to immediate risks to health, safety, or the environment, the remediation will be fully described and justified.

B. Where there is not an immediate threat to health, safety, or environment, and additional environmental hazard testing or remediation is being considered at Stratford Army Engine Plant by the U.S. Army, the Stratford Army Engine Plant Base Environmental Coordinator (BEC) will coordinate with the U.S. Army Materiel Command to develop action plans which will provide descriptions of any potential conflicts between remediation and the preservation of historic properties. Where feasible, recommendations about how to resolve such conflicts will be included in the action plan. The U.S. Army Material Command will coordinate the development of environmental remediation action plans with the SHPO. The SHPO will be permitted to review and comment on the potential effects of remediation to the historic properties and any proposed recommendations.

3. Dispute Resolution

A. Should any party to this agreement object within thirty (30) days to any plans or documents provided by the U.S. Army Materiel Command or others for review pursuant to this agreement, or to any actions proposed or initiated by the U.S. Army Materiel Command at Stratford Army Engine Plant that may pertain to the terms of this agreement, the U.S. Army Materiel Command shall consult with the objecting party to resolve the objection. If the U.S. Army Materiel Command determines that the dispute cannot be resolved, the U.S. Army Materiel Command shall forward all documentation relevant to the dispute to the Council. Within thirty (30) days of receipt of all pertinent documentation, the Council will either:

1. Provide the U.S. Army Materiel Command with recommendations, which the U.S. Army Materiel Command will take into consideration in reaching a final decision regarding the dispute; or

2. Notify the U.S. Army Materiel Command that it will comment pursuant to 36 CFR § 800.6(b), and prepare the comment. Any Council comment provided in response to a request for comment will be taken into account by the U.S. Army Materiel Command in accordance with 36 CFR § 800.6(c)(2) with reference to the dispute.

B. Any recommendation or comment provided by the Council pursuant to the above will be understood to pertain only to the subject of the dispute; the U.S. Army Materiel Command's responsibility to carry out all actions under this agreement that are not the subjects of the dispute will remain unchanged.

C. At any time during the implementation of the measures stipulated in this agreement, should an objection to any such measure or its manner of implementation be raised by interested persons, the U.S. Army Materiel Command shall take the objection into account and consult as needed with the objecting party, the SHPO, and the Council to attempt to resolve the objection.

4. Amendments

A. Any party to this agreement may request that it be amended, whereby the parties will consult in accordance with 36 CFR § 800.13 to consider such revision.

B. If it is determined that revisions are necessary, the parties shall consult pursuant to 36 CFR § 800.5(e)(5) to make such revisions. The U.S. Army Materiel Command will prepare the language for any proposed revisions and submit it to the other parties for review. Reviewing parties must comment on or signify their acceptance of the proposed changes to the MOA within thirty (30) days of receipt of the U.S. Army Materiel Command submission.

5. Status Reports

Six (6) months after this agreement is executed and every six (6) months thereafter, if required, until Stratford Army Engine Plant properties described in 1.A. have been transferred from U.S. Army Materiel Command control, in accordance with the terms of this agreement, the U.S. Army Materiel Command will provide status reports to the Council and Connecticut SHPO to review implementation of the terms of this agreement and determine if amendments are needed. If amendments are needed, the parties will consult in accordance with Stipulation 8 of this agreement to make such revisions.

6. Termination of Agreement

A. Any party to this MOA may terminate it by providing thirty (30) days notice to the other parties, providing the other parties consult during the period prior to termination to

seek agreement on amendments or other actions that would avoid termination. In the event of termination prior to completing the transfer of all or any portion of Stratford Army Engine Plant to prospective purchasers, the U.S. Army Materiel Command will comply with 36 CFR § 800.4 through 800.6 with regard to individual undertakings covered by this MOA.

B. After the transfer of the historic properties described in 1.A has taken place and the covenants properly recorded with the record of transfer, the U.S. Army Materiel Command will consider the terms of this agreement fulfilled and no further consultation with the SHPO or Council will be required.

7. Execution

Execution and implementation of this Memorandum of Agreement evidences that the U.S. Army Materiel Command has afforded the Connecticut State Historic Preservation Officer and the Advisory Council on Historic Preservation a reasonable opportunity to comment on the disposal of Stratford Army Engine Plant, and that the U.S. Army Materiel Command has taken into account the effects of the undertaking on any historic properties in accordance with Sections 106, 110 and Section 111 of the National Historic Preservation Act (16 U.S.C. 470 *et seq.*).

DEPARTMENT OF THE ARMY
U.S. ARMY MATERIEL COMMAND

By: Billy K Solomon Date: 22 Jul 96
MAJOR GENERAL BILLY K. SOLOMON
Chief of Staff, U.S. Army Materiel Command

ADVISORY COUNCIL ON HISTORIC PRESERVATION

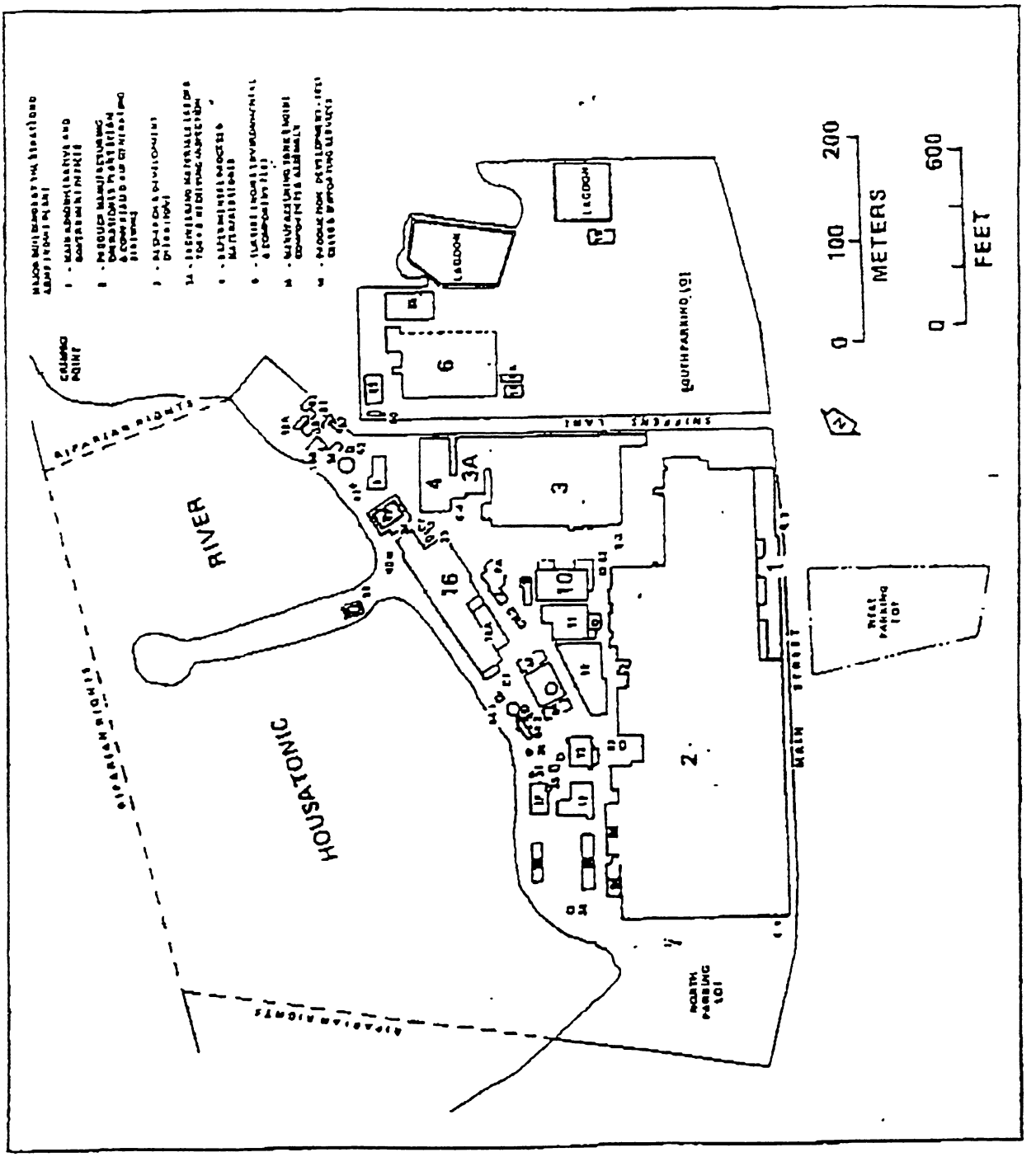
By: [signature] Date: 10/25/96
for ROBERT D. BUSH
Executive Director
Advisory Council on Historic Preservation

CONNECTICUT HISTORICAL COMMISSION

By: _____ Date: 7/29/96
~~DAWN MOODY~~ JOHN W. SHANAHAN
~~Deputy~~ Connecticut State Historic Preservation Officer

ATTACHMENT A: MAP A-1

AREA MAP OF STRATFORD ARMY ENGINE PLANT SHOWING BUILDINGS



ATTACHMENT B:

PRESERVATION COVENANT FOR HISTORIC BUILDINGS

In Consideration of the conveyance of certain improved real property, hereinafter referred to as Stratford Army Engine Plant, located near the City of Stratford, Fairfield Counties, State of Connecticut, which is more fully described as:

[Insert legal description]

The **[Recipient of property]** hereby covenants on behalf of **[him/her/it/self]** and assigns at all times to the United States Army Materiel Command and the Connecticut State Historic Preservation Officer to maintain and preserve the: Engine Assembly Plant (Building 2) and its additions, the Office Extension, the Assembly Plant Addition, and the North Factory Extension; and the Aircraft Engine Test Cells Building (Building 16), in a manner that preserves the structure of Stratford Army Engine Plant, the exterior facades, the fenestration, scale, color, use of material, mass, immediate landscape, and views from, to and across the referenced structures, which are attributes that contribute to defining the character of the historic period which they represent, as follows:

1. The **[Recipient of property]** shall preserve and maintain the buildings identified above in accordance with the recommended approaches found in the *Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitation of Historic Buildings* (U.S. Department of the Interior, National Park Service, 1992), and in the National Park Service's technical series on preservation and repairs for historic buildings, *Historic Buildings Preservation Briefs Series* 1-14, as appropriate, in order to preserve and enhance those qualities that make portions of Stratford Army Engine Plant eligible for inclusion in the National Register of Historic Places.

2. No construction, modifications, alterations, remodeling, or any other thing (except as defined in Part 3 of this covenant), shall be undertaken or permitted to be undertaken on Building 2 and its additions or Building 16 at Stratford Army Engine Plant which would affect the integrity or the appearance of those structures without the express prior written permission of the Connecticut State Historic Preservation Officer, signed by a fully authorized representative thereof.

3. Activities regarding Building 2 or Building 16 which will require no consultation with the Connecticut State Historic Preservation Officer shall include:

A. Interior:

1. Plumbing rehabilitation and replacement: including pipes and fixtures.
2. Heating system rehabilitation and replacement: including furnaces, pipes, radiators or other heating units.
3. Electrical wiring: including wiring and receptacles.
4. Restroom improvements for handicapped access: provided that the work is contained within an existing restroom.
5. Interior treatments (floors, walls, ceilings, woodwork): provided the work is limited to painting, refinishing, repapering or laying carpet or other suitable flooring material. Construction of temporary walls (timber or steel framed with drywall finish) is permitted. No removal of existing interior doors, permanent interior walls, floors, or support columns, original to the period of significance, will be permitted.
6. Insulation: provided it is restricted to ceilings and attic spaces.

B. Exterior:

1. Caulking, weatherstripping, reglazing.
2. Sidewalk and curbing replacement.
3. Gutters and downspout replacement.
4. Roof repair or replacement which uses in-kind materials.
5. Storm windows: provided they conform to the original shape and size of the historic windows and that the meeting rail coincides with that of the existing sash. Color should match existing windows and trim.
6. In-kind replacement: this is understood to mean that the new features or replacement items will duplicate the material, dimensions and detailing of the original. No removal of existing exterior doors, enlarging or filling in of door and window openings, or removal of permanent exterior walls, original to the period of significance, will be permitted.
   a. Porches and loading platforms: stairs, railings, posts and columns, brackets, cornices, and flooring.
   b. Roofs.
   c. Siding.
   d. Exterior architectural details and feature: including but not limited to brickwork, lintels, and trim.
   e. Windows: includes both trim and the sash.
   f. Doors.
7. Clean and seal treatments which do not include sand blasting or the use of chemicals which have not been approved for use by the Connecticut SHPO.

4 The Connecticut State Historic Preservation Officer shall be permitted at all reasonable times to inspect Building 2 or Building 16 at Stratford Army Engine Plant in order to ascertain if the above conditions are being observed.

5. In the event of a violation of this covenant, and in addition to any remedy now or hereafter provided by law, the Connecticut State Historic Preservation Officer may, following reasonable notice to [**Recipient of property**], notify the Advisory Council on Historic Preservation of said violations.

6. The [**Recipient of property**] agrees that the Connecticut State Historic Preservation Officer may at its discretion, without prior notice to the [**Recipient of property**], convey and assign all or part of its rights and responsibilities contained herein to a third party.

7. This covenant is binding on the [**Recipient of property**], [**his/her/its**] successors, and assigns, in perpetuity. Restrictions, stipulations, and covenants contained herein shall be inserted by the [**Recipient of property**] verbatim or by express reference in any deed, lease, or other legal instrument by which it divests itself of either the fee simple title or any other lesser estate in Stratford Army Engine Plant or any part thereof.

8. The failure of the Connecticut State Historic Preservation Officer to exercise any right or remedy granted under this instrument shall not have the effect of waiving or limiting the exercise of any other right or remedy or the use of such right or remedy at any other time.

The covenant shall be a binding servitude upon Stratford Army Engine Plant and shall be deemed to run with the land. Execution of this covenant shall constitute conclusive evidence that the [**Recipient of property**] agrees to be bound by the foregoing conditions and restrictions and to perform to obligations herein set forth.

APPENDIX C

Summary of Local Redevelopment Authority's Reuse Plan for Stratford Army Engine Plant

Town of Stratford

Department of Community/Economic Development

Office of Project Coordinator – Stratford Army Engine Plant LRA

2725 Main Street, Room 1, Stratford, CT 06615

203-381-2045
Fax: 203-381-6940

September 30, 1998

Mr. Daryl H. Powell
Chief Base Alignment and Closure Office
Headquarters, U.S. Army Material Command
5001 Eisenhower Avenue
Alexandria, VA 22333-0001

Dear Mr. Powell:

In reference to your letter of September 25, 1998, the LRA has not altered the reuse plan it adopted and submitted to the Army in July 1997. However, the LRA because of the cost of implementing their preferred alternative, has chosen to reevaluate an adaptive reuse alternative contained in the redevelopment plan. The LRA will not change their selection of the preferred alternative until this analysis is complete.

The discussion of alternatives at the September 22, 1998 meeting was meant to inform the Army of some of the problems encountered during the analysis of Alternative 4, particularly the high cost of demolition. The LRA is reevaluating an option closer to Alternative 1, adaptive reuse of most major structures, to determine if a more viable business plan can be developed. Also as stated at the meeting, market conditions have changed and developer interest has increased. The LRA wants to take advantage of these changes, and intends to test the market by distributing a Request for Qualifications for developers. Any change in the LRA's preferred reuse option would not occur until this is complete, early in 1999, at which time the LRA will submit an EDC application, if appropriate.

It is also important to note that the Reuse Alternatives 1-3 represent less intensive uses of the site than Alternative 4. The predominant economic use in Alternative 1 would be a combination of assembly, light manufacturing, and warehousing and distribution, while Alternative 4 outlines the use for office space and research and development. The two (2) remaining alternatives, 2 and 3, fall somewhere in between. The DEIS reiterates the general nature of reuse and the possibility of market-driven changes, which are being experienced. Also, even though the LRA may begin with Alternative 1, the ultimate use of the site can more closely resemble Alternative 4 at the end of the twenty- (20) year planning horizon.

Regarding the question of obstructions, the Town has no independent knowledge of physical obstructions to aviation located on the SAEP. However, it is our understanding that the airspace study that the Army is requesting from the FAA should identify any areas of concern.

I regret any confusion that may have been caused during the LRA status report on the business plan and EDC application. Should you require additional information please contact me at 203-381-2045.

Sincerely yours,

Rick J. Norris,
Project Coordinator SAEP LRA

RJN/pb

cc: Mark S. Barnhart, Town Manager
Diane C. Toolan, Director, Community/Economic Development
Toby Halliday, Project Manager, Office of Economic Adjust
Maria Anglada, U.S. Army Corps of Engineers, NY District
Fred Hyatt, BTC SAEP

Stratford Army Engine Plant

Redevelopment Plan and Implementation Strategy

Executive Summary

June 1997

Submitted by the
Stratford Army Engine Plant Local Redevelopment Authority
Stratford, Connecticut

INTRODUCTION

The Redevelopment Plan and Implementation Strategy for the Stratford Army Engine Plant (SAEP) is the result of an eight month comprehensive planning process designed to prepare an implementable reuse strategy for the site. The Plan was prepared between November, 1996 and June, 1997, and was officially adopted by the Stratford Town Council, the recognized Local Redevelopment Authority (LRA), on June 16, 1997.

The preparation of the Redevelopment Plan and Implementation Strategy involved six separate but interrelated tasks.

- Task 1 - Facilities Assessment
- Task 2 - Socio-Economic Analysis
- Task 3 - Market Analysis
- Task 4 - Community Reuse Vision and Community Consensus
- Task 5 - Preparation of Alternative Reuse Plans
- Task 6 - Identification of Redevelopment Plan

LOCATION

The Stratford Army Engine Plant is located in southwestern Connecticut, in Fairfield County. The Plant enjoys excellent locational access from Interstate 95, which is less than two miles away. In addition, the site is well located with respect to the major Northeast Corridor consumer market, which includes New York City and Boston. New York City is located approximately 60 miles south on Interstate 95, while Boston is approximately 200 miles to the north.

REDEVELOPMENT GOALS

During the preparation of the Redevelopment Plan and Implementation Strategy, more than 25 local residents, business leaders and politicians were interviewed to help define the primary and secondary goals for the redevelopment of the Stratford Army Engine Plant. The primary redevelopment goals included:

- Expansion of employment opportunities;
- The stabilization and diversification of the town's tax base; and
- Redevelopment that can be accomplished in a fiscally responsible manner.

In addition to these primary goals, several secondary goals were viewed as desirable in the context of SAEP redevelopment. These included increased public access to the Housatonic River, land uses consistent with existing neighborhood conditions, and protection of the natural/coastal environment.

THE PLANNING PROCESS

One of the key elements of the planning process for creation of the SAEP Redevelopment Plan was public participation. During the planning process more than sixteen public meetings were held with members of the Local Redevelopment Authority Planning Advisory Committee, the Stratford Town Council and members of the public. In addition, meetings were also held with neighborhood and business organizations, including the Old Stratford Neighborhood Association and the Chamber of Commerce. The recommendations contained in this Plan are, in large part, based on comments and suggestions made during these meetings.

The planning process began with an evaluation of the facilities at the Stratford Army Engine Plant, including the existing buildings and utility systems. A review of natural, environmental and historic conditions was also included. The next step in the process was an evaluation of the socio-economic impacts of the closure of the Stratford Army Engine Plant (SAEP) on the regional economy. A market analysis was also conducted in order to identify potential target markets that could benefit from the assets at SAEP. Once these steps were completed, four alternative redevelopment concepts were identified for the site. After a careful public review of these redevelopment concepts, a Preferred Land Use Plan was selected by the Local Redevelopment Authority.

EXISTING CONDITIONS AT SAEP

- The Stratford Army Engine Plant (SAEP) has a diversified inventory of 57 buildings containing more than 1.72 million square feet (SF). A majority of the space (71%) is within three mixed use buildings (B-2, B-3 and B-6). In addition, 26 buildings, which represent less than 2% of the building space inventory, are small utility-related (19) or miscellaneous (7) buildings.

- The locations of existing buildings limits internal circulation, especially for trucks and tractor trailers. In addition, direct vehicular access to many of the larger and potentially adaptable buildings, is impacted by the proximity of other buildings and/or storage tanks. Selected demolition may be required to improve vehicular access and movement within the site.

- Nearly 88% of the buildings at SAEP were constructed and/or expanded prior to 1946. As a result, many of the structures do not meet modern industrial building standards and/or codes, which have evolved significantly over the past 50 years.

- The heat source for nearly all the buildings (97% or 1.67 million SF) is generated by a central steam plant. Converting the heat source to individual building heating units may require a significant capital expenditure. Conversely, operating the central steam plant to provide heat to idle buildings for a prolonged marketing period could be equally costly.

- Another code issue is that the buildings do not conform to existing federal and state building and/or site standards required to qualify for flood insurance. This presents a major obstacle if potential renovation investments exceed 50% or more of the current building value. Assuming renovations/improvements exceed this threshold, then ground floor elevations must be at (or above) the 100 year flood level.

Alternatively, "dry flood-proofing" to an elevation one foot higher could be considered. Due to these conditions insurance costs may be significant, and potential users could be reticent about making investments at the site if flood insurance is not available.

- The Stratford Army Engine Plant, primarily operated as an aircraft and engine manufacturing facility, has evolved significantly over nearly 67 years. During this period public and private utilities serving the site, and utility systems on the site, have been designed and installed specifically for the processes, equipment and operations unique to the Plant. As manufacturing practices and technology have changed, utility services have been modified to ensure that the critical production capabilities at SAEP were not jeopardized by insufficient infrastructure.

- The setting of the plant, on low-lying ground adjacent to the Housatonic River, has also created unique utility requirements. For instance, all stormwater at the site must be pumped to prevent flooding of the property. Flooding that occurred in the past has severely impacted production and manufacturing operations.

- The uniqueness of SAEP's utility systems presents special challenges for redeveloping the site. The ample capacities of the utility components and their proper design and care over the years offers opportunity for similar industrial and manufacturing uses at SAEP. However, these same utility systems also limit alternative uses for the site.

- Industrial and chemical wastewater systems that serve current electroplating and corrosion resistance processes are integral to the site. These systems offer benefits to certain users, but if they are not required for redevelopment purposes the cost for operation or removal/cleanup could be substantial.

- Private utilities such as electricity, water and natural gas, are currently fed, metered and distributed to serve a single user on a 76 acre site with 57 buildings. Substantial costs will likely be incurred in the event that the design and installation of these systems are modified for multiple tenant use.

- As noted earlier, SAEP is located within the 100-year floodplain. An extensive stormwater runoff collection, treatment and discharge system exists which requires costly and continuous operation. This system is relied upon to prevent flooding of the grounds and will impact all internal (building) and external storm drain components if not maintained or operated.

- Up to 22 PCB transformers exist at SAEP as part of the electrical system. It is not clear whether their removal would be required any time soon. However, their eventual removal could be very costly due to their size and, in some instances, inaccessible location.

THE SAEP PREFERRED LAND USE PLAN

The Preferred Land Use Plan for the Stratford Army Engine Plant represents a new vision for the site that supports job creation and an expansion of the town's tax base together with major open space and waterfront improvements along the Housatonic River. Proposed uses include research and development (R&D), office and light industrial (referred to as flex space), public open space, and a museum/exhibit facility. This vision for the future of SAEP has emerged from a process that has included an evaluation of the site and environmental constraints, research concerning market conditions, and the identification of community goals. The Preferred Plan includes proposed land uses; outlines site planning, development and design guidelines necessary to shape site development; identifies road and utility upgrades needed to support development; and proposes a phased approach for implementing the redevelopment plan. It should be emphasized that the Town of Stratford must remain flexible in preparing for the reuse of the Stratford Army Engine Plant.

- The site has the capacity to accommodate a development program of approximately 900,000

square feet (SF) within a high quality office/research and development park environment.

- Extensive demolition of existing structures will be needed to create a site that is capable of attracting significant private sector investment and to create new jobs. Due to extremely high flood-proofing costs for the site and the large inventory of similar space available on the market, existing buildings at SAEP represent a liability for future redevelopment rather than an asset.

- Demolition of existing structures must be undertaken before transfer of the property to private sector users. If this demolition is not undertaken, the only viable use of the site would be as a low intensity industrial operation that involves short-term investment in the site and minimal job creation. Over the long term, this type of development would most likely be detrimental to the Town of Stratford.

- The site, after demolition, is suitable for subdivision that would provide for the needs of several medium sized businesses. Alternatively, the site could be marketed to one or more large users depending on market interest.

- The Preferred Plan, as illustrated in the parcelization Plan on the next page, presents a significant opportunity to improve waterfront access and visibility. Consequently, waterfront and open space along the Housatonic River should be an integral part of site reuse and development. This type of approach will also will enhance the visibility and attractiveness of the site to neighbors and potential office, R&D, light manufacturing and other possible users.

- Public water access should be provided through improvements to the existing seaplane ramp that extends out beyond the intertidal flats into the Housatonic River.

- One structure, Building 6, should be retained and dedicated for museum or exhibit space use such as a proposed Aviation Hall of Fame, after a review of its structural soundness.

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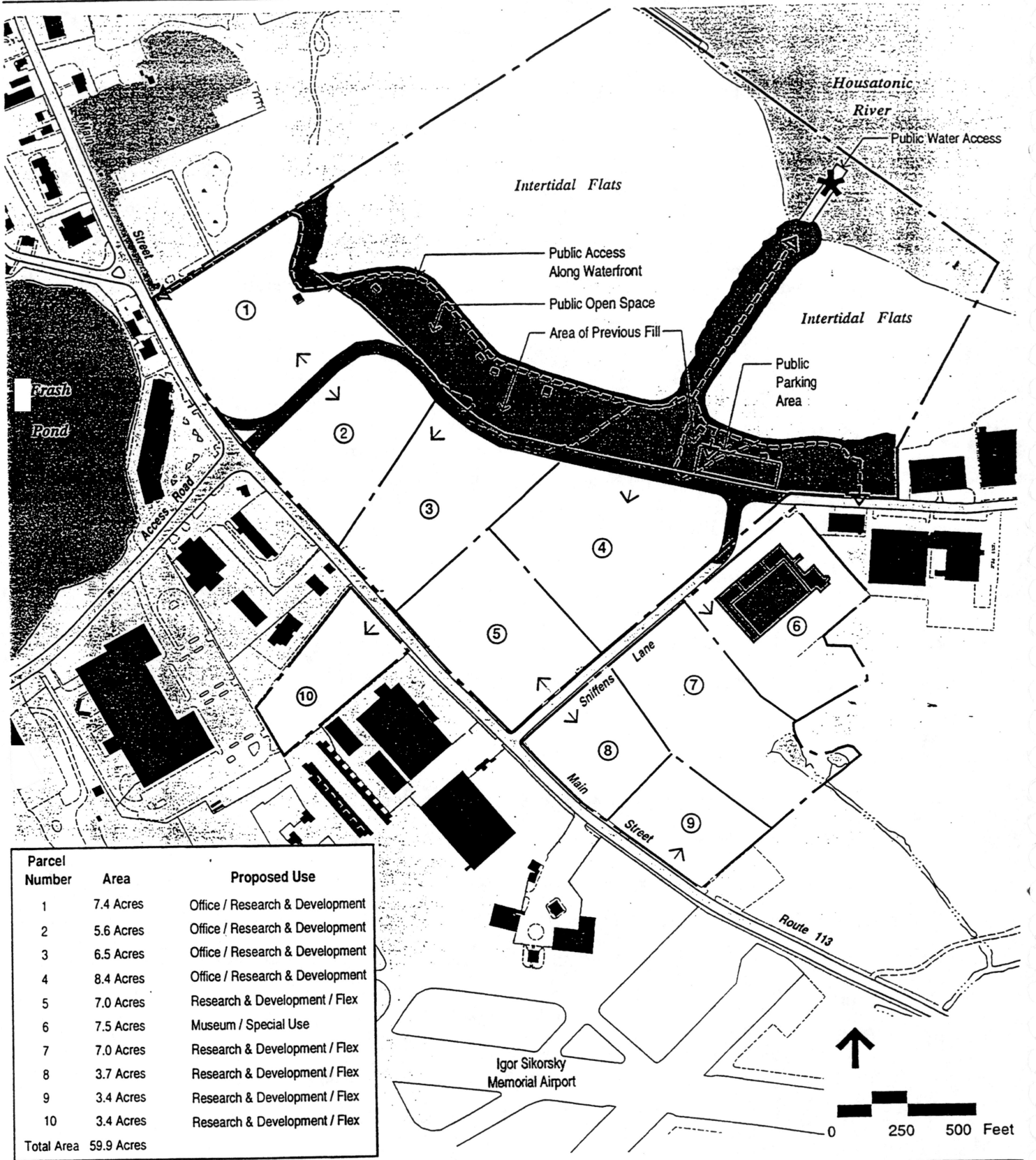

Parcel Number	Area	Proposed Use
1	7.4 Acres	Office / Research & Development
2	5.6 Acres	Office / Research & Development
3	6.5 Acres	Office / Research & Development
4	8.4 Acres	Office / Research & Development
5	7.0 Acres	Research & Development / Flex
6	7.5 Acres	Museum / Special Use
7	7.0 Acres	Research & Development / Flex
8	3.7 Acres	Research & Development / Flex
9	3.4 Acres	Research & Development / Flex
10	3.4 Acres	Research & Development / Flex
Total Area	59.9 Acres	

Existing Building to be Retained

Public Access Area

Prepared by Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

Stratford Army Engine Plant

Reuse Plan Town of Stratford, Connecticut

Parcelization Plan

RKG Associates, Inc.

VHB/Vanasse Hangen Brustlin, Inc.

1997

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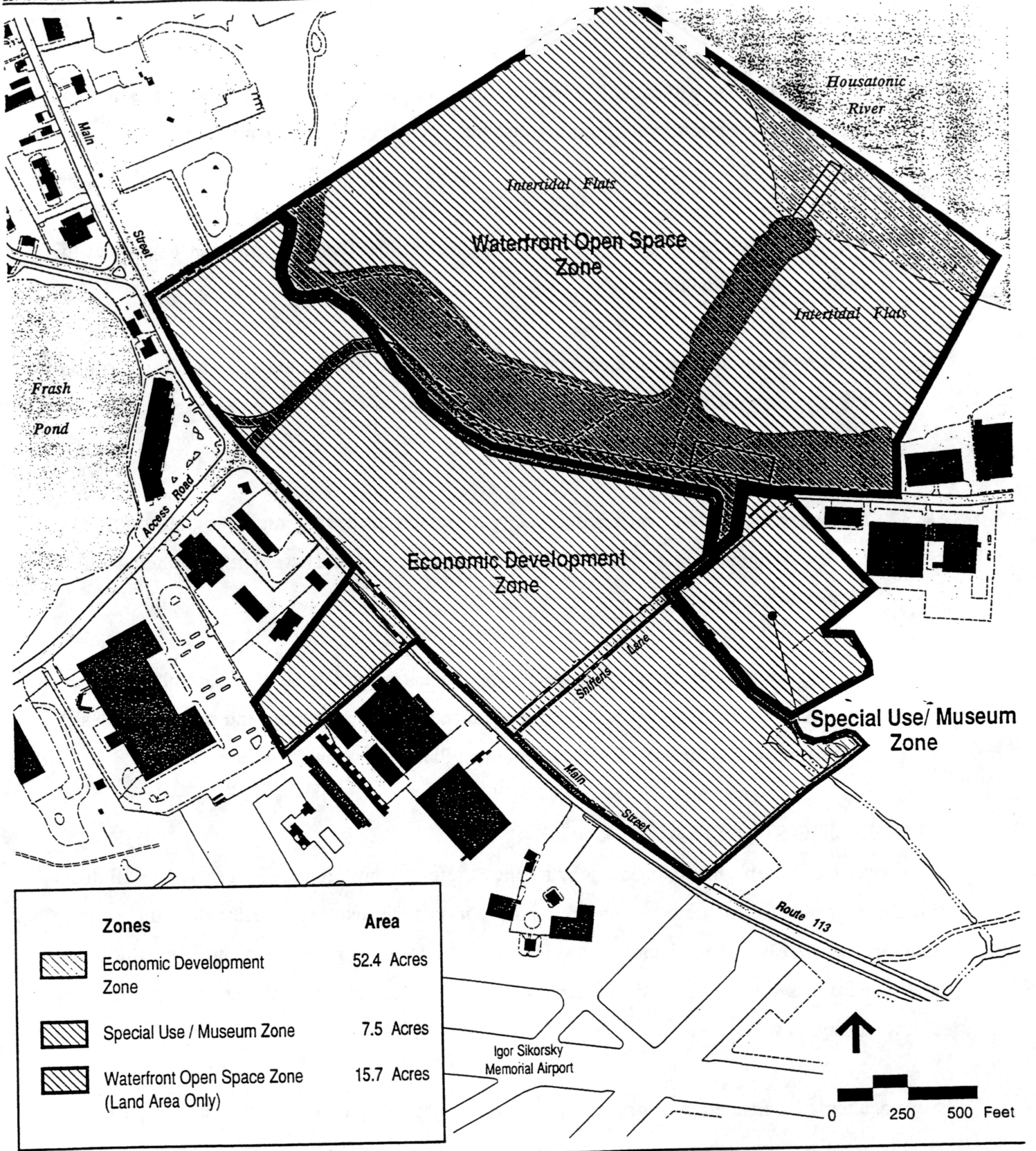


Zones	Area
Economic Development Zone	52.4 Acres
Special Use / Museum Zone	7.5 Acres
Waterfront Open Space Zone (Land Area Only)	15.7 Acres

Stratford Army Engine Plant

Reuse Plan Town of Stratford, Connecticut

Preferred Land Use Plan

RKG Associates, Inc.

VHB/Vanasse Hangen Brustlin, Inc.

1997

Prepared by Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

- The site is located within the 100 year floodplain and all new structures will need to be flood-proofed; in general this will require that first floor levels be elevated above the 100-year flood elevation.

- No development activity should occur in the intertidal flats area in order to protect this sensitive natural habitat.

- Existing water, sewer, gas, electricity, and stormwater systems have the capacity to support the proposed development program. Every effort should be made to reuse existing on-site systems where possible.

- Off-site roadways have sufficient capacity to support the development program outlined in the Redevelopment Plan. However, roadway signalization and access improvements will be needed adjacent to the site.

- Existing zoning does not provide the Town with an appropriate level of control over future site development. Consequently, it is recommended that new zoning and supporting design standards, consistent with the Redevelopment Plan, be prepared for the site.

MARKETING STRATEGY

The creation of a viable marketing strategy for the Stratford Army Engine Plant (SAEP) will differ from many competing properties in the region, since it is anticipated that virtually all of the existing structures at SAEP will be demolished. This means that the property, and therefore the target audience for reuse, will focus on developers, build-to-suit users and companies seeking to construct a new facility.

Several alternative marketing strategies can be pursued, depending on the level of involvement that the organization responsible for implementing the Redevelopment Plan desires. The Implementing Organization (IO) that will succeed the existing Local Redevelopment Authority, which is primarily focused on planning activities, could use a variety of approaches for marketing the site ranging from

complete in-house marketing to marketing by the brokerage community. It is recommended that the community market the individual redevelopment sites through a Requests for Proposal process. This strategy should minimize marketing cost for the IO, while offering flexibility in seeking developers for the site.

PHASING PLAN

Conceptually, the redevelopment of the SAEP site will be driven by how quickly existing facilities can be demolished, as well as the completion of environmental remediation activities by the U.S. Army. Assuming that remediation will require a minimum of three years to complete (1998 to 2000), and demolition is completed in one year, the property could be marketed for redevelopment beginning in early 2002, starting with lots 2 and 3. (See Parcelization Plan). Lots 4 and 5 could be marketed the following year, followed by lots 7, 8 and 9. Lots 1 and 10 should be the last to be marketed, in order to capitalize on expected appreciation of values resulting from development activity on other lots at the site.

It is important to understand that some reuse of the site could be initiated earlier. In particular, the west parking lot and most of the south parking lot, as well as the museum space, could potentially be marketed for reuse as early as 1998, given their generally low indicated levels of contamination. However, marketing efforts for these development parcels may be hampered by the presence of the existing facilities awaiting demolition. Although the development parcels might be sold, they may generate lower levels of interest and lower selling prices. As such, the consultants recommend that the Implementing Organization consider withholding these parcels from the market until existing facilities are demolished.

ACQUISITION STRATEGY

It is recommended that the waterfront park area be acquired from the U.S. Army under a Public Benefit Conveyance that would be sponsored by the U.S. Department of the Interior. This strategy will allow this portion of the property to be acquired at no cost, so long as it is used as parkland. It is also recommended that Building 6, which is designated for an Aerospace Museum, or similar facility, be acquired through a Public Benefit Conveyance, that is sponsored by either the U.S.

Department of Education or the U.S. Department of the Interior.

The remainder of the property, approximately 52 acres, is targeted for economic development activities. It is recommended that this parcel be acquired under a Economic Development Conveyance. However, this recommendation is predicated on the availability of funding to demolish structures on the site. If funding can not be obtained to demolish the structures at SAEP, it is recommended that the community enact zoning regulations which ensure that any reuse of the site will meet the town's goals for the property. Once the zoning regulations have been enacted, the town should permit the Department of Army to sell the property directly to the private sector.

IMPLEMENTING ORGANIZATIONS

The waterfront/open space area involves the creation of parkland and sites for passive recreation, as well as improved access to the waterfront. The development of this site will require extensive cooperation between State of Connecticut and Town of Stratford officials. Responsibility for property maintenance, after development, will also probably be assigned to either a state and/or local organization. Due to the extensive involvement of local government in the redevelopment of this portion of the site, it is recommended that the Town of Stratford be directly responsible for the management of all activities relating to the development of the waterfront/open space area. In a similar vein, it is recommended that the organization that acquires the museum/special use area, be responsible for the management of this seven acre parcel.

The redevelopment of the 52-acre economic development portion of SAEP site will require a great deal of effort and oversight in order to accomplish the goals identified in this Plan. The Implementing Organization will also have to be creative and flexible in order to manage the demolition and development of new structures at the site. Although a large staff will not be required, if the site is developed under a request for proposals process, a board of directors with experience in real estate development and financing would be very helpful. It is felt that the best organizational structure to undertake this type of redevelopment would be an economic development corporation established under Section 501(c)(3) of the Internal Revenue Code. Members would be appointed by the Stratford Town Council and the corporation would be responsible for job creation at the site

and development activities that would expand the local tax base. Although this quasi-public organization would operate as an independent business, it should be required to issue an annual report regarding progress in site development, as well as hold one public meeting per year.

FINANCIAL ISSUES

The total cost for redeveloping SAEP is projected to be more than $21 million. Capital improvements, such as demolition, infrastructure improvements and creation of the waterfront park represent the largest portion of these costs, at more than $19.1 million. Demolition, the major capital cost, is budgeted at $15 million.

It is recommended that the community work with the Army to have caretaker costs reallocated to demolition of the facilities at SAEP. Based on the Army's estimated caretaker cost of $13 million for the first year, it would require less than two years of caretaker funding to complete the entire proposed redevelopment of the SAEP site. If the community cannot reach an agreement with the Army to fund demolition, and no other source of funding can be obtained for the demolition of facilities, the community should be prepared to walk away from direct involvement in project redevelopment activities.

APPENDIX D

Lead-based Paint and Asbestos Provisions for BRAC Leases and Deeds

Appendix D:
Lead-based Paint and Asbestos Provisions for BRAC Leases and Deeds

I. BRAC LEASE PROVISIONS WHERE LEASED PREMISES INCLUDE NO RESIDENTIAL HOUSING:

Lead-based Paint Warning and Covenant:

a. The Leased Premises do not contain residential dwellings and are not being leased for residential purposes. The Lessee is notified that the Leased Premises contains buildings built prior to 1978 that contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Such property may present exposure to lead from lead-based paint that may place young children at risk of developing lead poisoning. Lead poisoning in young children may produce permanent neurological damage, including learning disabilities, reduced intelligence quotient, behavioral problems, and impaired memory. A risk assessment or inspection for possible lead-based paint hazards is recommended prior to lease.

b. Available information concerning known lead-based paint and/or lead-based paint hazards, the location of lead-based paint and/or lead-based paint hazards, and the condition of painted surfaces is contained in the Environmental Baseline Survey, which has been provided to the Lessee. Additionally, the following reports pertaining to lead-based paint and/or lead-based paint hazards have been provided to the Lessee:
Additionally, the Lessee has been provided with a copy of the federally-approved pamphlet on lead poisoning prevention. The Lessee hereby acknowledges receipt of all of the information described in this subparagraph.

c. The Lessee acknowledges that it has received the opportunity to conduct a risk assessment or inspection for the presence of lead-based paint and/or lead based paint hazards prior to execution of this Lease.

d. The Lessee shall not permit use of any buildings or structures on the Leased Premises for residential habitation without first obtaining the written consent of the Army. As a condition of its consent, the Army may require the Lessee to: (I) inspect for the presence of lead-based paint and/or lead-based paint hazards; (ii) abate and eliminate lead-based paint hazards by treating any defective lead-based paint surface in accordance with all applicable laws and regulations; and (iii) comply with the notice and disclosure requirements under applicable Federal and state law. The Lessee agrees to be responsible for any future remediation of lead-based paint found to be necessary on the Leased Premises.

e. The Army assumes no liability for remediation or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessees or to any other person, including members of the general public, arising from or incident to possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. The Lessee further agrees to indemnify and hold harmless the Army, its officers, agents and employees, from and against all suits, claims, demands or actions, liabilities, judgments, costs and attorneys' fees arising out of, or in any manner predicated upon, personal injury, death or property damage resulting from, related to, caused by or arising out of the possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. This section and the obligation of the Lessee hereunder shall survive the expiration or termination of this Lease and any conveyance of the Leased Premises to the Lessee. The Lessee's

obligation hereunder shall apply whenever the United States of America incurs costs or liabilities for actions giving rise to liability under this section.

II. BRAC MOA AND DEED PROVISIONS:

Notice of the Presence of Lead-Based Paint and Covenant Against the Use of the Property for Residential Purposes:

a. The Grantee is hereby informed and does acknowledge that all buildings on the Property, which were constructed or rehabilitated prior to 1978, are presumed to contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Every purchaser of any interest in Residential Real Property on which a residential dwelling was built prior to 1978 is notified that such property may present exposure to lead from lead-based paint that may place young children at risk of developing lead poisoning. Lead poisoning in young children may produce permenent neurological damage, including learning disabilities, reduced intelligence quotient, behavioral problems, and impaired memory. Lead poisonong also poses a particular risk to pregnant women. The seller of any interest in residential real property is required to provide the buyer with any information on lead-based paint hazards from risk assessments or inspections in the seller's possession and notify the buyer of any known lead-based paint hazards. A risk assessment or inspection for possible lead-based paint hazards is recommended prior to purchase. "Residential Real Property" means any housing constructed prior to 1978, except housing for the elderly (households reserved for and composed of one or more persons 62 years of age or more at the time of initial occupancy) or persons with disabilities (unless any child who is less than 6 years or age resides or is expected to reside in such housing) or any 0-bedroom dwelling.

b. Available information concerning known lead based paint and/or lead-based paint hazards, the location of lead-based paint and/or lead-based paint hazards, and the condition of painted surfaces is contained in the Environmental Baseline Survey, which has been provided to the Grantee. Additionally, the following reports pertaining to lead-based paint and/or lead-based paint hazards have been provided to the Grantee:

_____

_____. All purchasers must also receive the federally-approved pamphlet on lead poisoning prevention. The lessee hereby acknowledges receipt of all of the information described in this subparagraph.

c. The Grantee acknowledges that it has received the opportunity to conduct a risk assessment or inspection for the presence of lead-based paint and/or lead based paint hazards prior to execution of this deed.

d. The Grantee covenants and agrees that it shall not permit the occupancy or use of any buildings or structures as on the Property as Residential Real Property without complying with this section and all applicable federal, state, and local laws and regulations pertaining to lead-based paint and/or lead-based paint hazards. Prior to permitting the occupancy of the Property where its use subsequent to sale is intended for residential habitation, the Grantee specifically agrees to perform, at its sole expense, the Army's abatement requirements under Title X of the Housing and Community Development Act of 1992 (Residential Lead-Based Paint Hazard Reduction Act of 1992) (hereinafter Title X). The Grantee shall, after consideration of the guidelines and regulations established pursuant to Title X and after consultation with the appropriate state environmental agency: (1) inspect for the presence of lead-based paint and/or lead-based paint hazards; (2) abate and eliminate lead-based paint hazards; and (3) comply with all

applicable notice and disclosure requirements under Title X and applicable state law. In complying with these requirements, the Grantee covenants and agrees to be responsible for any abatement or remediation of lead-based paint or lead-based paint hazards on the Property found to be necessary as a result of the subsequent use of the property for residential purposes.

e. The Grantee further agrees to indemnify and hold harmless the Army, its officers, agents and employees, from and against all suits, claims, demands or actions, liabilities, judgments, costs and attorneys' fees arising out of, or in any manner predicated upon personal injury, death or property damage resulting from, related to, caused by or arising out of lead-based paint or lead-based paint hazards on the Property if used for residential purposes. [In the MOA add: This section and the obligations of the Grantee hereunder shall survive the expiration or termination of this MOA and any conveyance of the Property to the Grantee. The Grantee's obligation hereunder shall apply whenever the United States of America incurs costs or liabilities for actions giving rise to liability under this section.]

III. ASBESTOS PROVISION

Notice of the Presence of Asbestos and Covenant:

a. The Transferee/Lessee is hereby informed and does acknowledge that friable and non-friable asbestos or asbestos-containing materials ("ACM") has been found on the Premises, as described in the final base-wide EBS. Except as provided for ion c. Below, the ACM on the Premises does not currently pose a threat to human health or the environment. All friable asbestos that posed a risk to human health has either been removed or encapsulated.

b. The Transferee/Lessee covenants agrees that its use and occupancy of the Premises will be in compliance with all applicable laws relating to asbestos: and that the Transferor/Lessor assumes no liability for future remediation of asbestos or damages for personal injury, illness, disability, or death, to the Transferee/Lessee, its successors or assigns, sublessees, or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with asbestos on the Premises described in this Transfer/Lease, whether the Transferee/Lessee, its successors or assigns have properly warned or failed to properly warn the individual(s) injured. The Transferee/Lessee agrees to be responsible for any future remediation of asbestos found to be necessary on the Premises.

c. The buildings listed in Exhibit ___ to this Deed/Lease contain asbestos which may pose an unacceptable risk to human health. The transferee/Lessee agrees not to use or occupy said buildings without identifying and remediating any asbestos hazards therein in accordance with all applicable legal requirements, at Transferee/Lessee's sole expense. This deed is granted based upon the Transferee/Lessee's representation that it will comply with this subparagraph c.

d. The Transferee/Lessee further agrees to indemnify and hold harmless the Army, its officers, agents and employees, from and against all suits, claims, demands or actions, liabilities, judgements, costs and attorneys' fees arising out of , or in any manner predicted upon, personal injury, death or property damage resulting from, related to, caused by or arising out of the possession and/or use of any portion of the Premises containing asbestos.

APPENDIX E

Technical Support

Appendix E:
Technical Support

Table 1. Buildings at SAEP

Building Number	Building Use	Square Feet	Year Built	Notes
B-2	Manufacturing operations; steam plant	874,334	1929; expanded in 1942, 1944	NRHP eligible Average
B-3	Research and Development Engineering	237,801	1930; modified in 1943, 1944	Code issues: ADA, fire Below average
B-6	Engine Environmental and Component Test	107,496	1944	Code issues: ADA, egress, fire. Average
B-16	Production and Development Test Cells	68,928	1953	Water puddling on floor due to plugged floor drains; NRHP eligible
B-19	Component Test Facility	36,008	1988, as an encapsulation of 4 other buildings	Good
B-3A	Engineering Laboratories	30,517	1930	Structurally unsound second floor
B-5	Fuel System Test	5,363		Fair
B-6A	Engine Mechanical Component	2,183		"
B-7	Engine Fuel System Test	3,652		"
B-7A	Engine Fuel System Test	3,050		"
B-58	Quality and Testing/Missile Assembly	5,447		"
B-59	Engineering Storage/Missile Storage	3,220		"

Table 1. Buildings at SAEP

Building Number	Building Use	Square Feet	Year Built	Notes
B-61	Refrigeration Plant	6,211		"
B-10	General Stores and Recuperator Manufacture	44,361	1940	Code issues: ADA, fire, egress Average
B-65	Material Storage Facility	43,157	1991	Good
B-4	Stores, AGT Repair and SSE	26,013	1945	Code issues: ADA, insulation, fire Ground water and soil contamination Average/fair
B-53	Surplus Equipment Storage	12,694	1961	Lacks water/sewer hookups, insulation Fair
B-67	General Stores	5,033	1985	Average
B-52	Production Material Warehouse	4,928	1962	Lacks insulation Fair
B-17	Engineering Storage	2,397		Poor
B-8	Paint and Solvent Storage	1,869		Poor
B-1	Main Administrative and Government Offices	88,353	1929	Code issues: ADA, fire, egress NRHP eligible Good
B-69	Resident Engineer	1,500		Fair
B-77	RMOB Office	14,890		Roof leak Fair
B-79	SSE Office Building	2,100		Fair

Table 1. Buildings at SAEP

Building Number	Building Use	Square Feet	Year Built	Notes
B-12	Maintenance Department	24,911	1942	Code issues: ADA, fire Average/good
B-15	Oil, Lubrication Storage and Fire House	12,288		Average
B-13	Scrap Metal and Material Reclamation	7,803		Average
B-44	Engine Container Rebuild and Riggers	4,107	1961	Fair
B-48	Paint and Carpenter Shop	4,107	1961	Fair
B-9	Automotive Maintenance	2,754	1943	Average
B-64-1 B-64-2	Oil Abatement/Storm water Facility	616 3,547		
B-18 B-71	Chemical Waste Treatment Plant	5,820 3,272		
B-42	Pumping Stations for Wet Sprinkler System	497		
B-34 B-43 B-72	Fuel System Buildings	1,388 516 4,401		
B-36 B-37 B-38 B-40 B-41	Storm Drain Pumping Stations	390 390 390 390 390		

Table 1. Buildings at SAEP

Building Number	Building Use	Square Feet	Year Built	Notes
B-68	Emergency Generator	388		
B-80	Covered Storage Shed	3,279		

Source: AlliedSignal, No date.

Table 2
Summary of Actual Emissions (Tons per Year)

Source Description	VOCs	NO_x	CO	PM_{10}	SO_x	Lead
Emergency Diesel Generator	0.057	0.061	0.131	0.042	0	0
Boiler CB DL -52E Boiler (#1)	0.21	3.41	4.9	1.918	0.08	0
Boiler BIGELOW H+L (#3)	0.085	4.12	10.91	0.286	0.872	0
Boiler BIGELOW H+L (#2)	0.045	1.99	2.65	0.045	0.271	0.001
Test Cell P1	0.82	4.456	9.733	0.249	0.028	0
Test Cell P2	0.784	4.258	9.296	0.237	0.028	0
Test Cell P3	0.223	1.212	2.65	0.068	0.008	0
Test Cell P4A	0.376	2.042	4.46	0.114	0.013	0
Test Cell P4B	0.280	1.514	3.32	0.085	0.010	0
Test Cell P7B	0.210	1.142	2.49	0.664	0.027	0
Test Cell P8A	0.036	0.192	0.43	0.011	0.001	0
Test Cell T11	0.002	0.001	0.014	0	0	0
Test Cell T12	0.087	0.474	1.035	0.026	0.003	0
Test Cell T13	0.537	2.918	6.37	0.163	0.98	0
Test Cell T14	0.060	0.326	0.712	0.018	0.002	0
Test Cell F2	0.404	2.187	4.797	0.123	0.014	0
Test Cell D3	0.003	0.017	0.038	0.001	0	0
Test Cell D4	0.063	0.343	0.748	0.019	0.002	0
Test Cell D5	0.010	0.053	0.115	0.003	0	0
Test Cell D6	0.017	0.091	0.199	0.005	0.021	0
Test Cell D7	0.069	0.375	0.824	0.021	0.002	0
Test Cell P5A	0.123	0.668	1.457	0.057	0.004	0
Test Cell P5B	0.011	0.388	0.848	0.022	0.002	0
Test Cell P6A	0.093	0.563	1.099	0.028	0.003	0
Test Cell P6B	0.045	0.247	0.539	0.014	0.002	0
Unregulated Misc. Metal Parts	1.3	0	0	0	0	0

Source Description	VOCs	NO_x	CO	PM_{10}	SO_x	Lead
Unregulated Thin Solvent: Acetone	0.15	0	0	0	0	0
Unregulated Thinning Solvent: Genera	0.022	0	0	0	0	0
Unregulated Vapor Degreaser: 111-Trichloroethane	4.5	0	0	0	0	0
1995 Totals for Annual Emissions (Tons/yr)	**10.62**	**33.05**	**69.75**	**4.22**	**2.37**	**0.001**
1993 Totals for Annual Emissions (Tons/yr)	**22.10**	**73.06**	**115.13**	**3.15**	**2.14**	**0.0**

Source: CTDEP, 1995.

APPENDIX F

Connecticut's Coastal Management Program Consistency Determination

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

December 21, 1998

REPLY TO
ATTENTION OF:

Coastal Environment Section
Planning and Environmental Division

Ms. Margaret L. Welch, Senior Coastal Planner
State of Connecticut, Department of Environmental Protection
Office of Long Island Sound Programs
79 Elm Street
Hartford, Connecticut 06106-5127

Dear Ms. Welch:

Please reference previous communication with Mr. Joe Hand of my staff concerning the Coastal Zone Consistency (CZC) process for the disposal and reuse of the Stratford Army Engine Plant (SAEP) Stratford, Connecticut. This letter represents our final determination that the proposed actions (disposal of the SAEP by the U.S. Army and future reuse as determined by the SAEP Local Redevelopment Authority) are consistent with the long-term goals and policies of the Connecticut Coastal Management Program.

The SAEP was recommended for closure by the 1995 Base Realignment and Closure (BRAC) Commission and the closure was subsequently approved by Congress. The U.S. Army proposes to dispose of the SAEP and transfer property title and all Army interest to the Stratford Army Engine Plant Local Redevelopment Authority who would be responsible for future reuse of the facility. The SAEP is situated along the Housatonic River in Stratford, Connecticut (Figures 1 & 2). The exact acreage being transferred is unknown at this time but is being determined in coordination with your office and SAEP personnel.

The SAEP Local Redevelopment Authority (LRA) is comprised of the Stratford Town Council with advice from: Connecticut Department of Environmental Protection; Connecticut Department of Economic and Community Development; local citizens, businesses, and industries. The community is responsible for establishing an LRA to act as the legal entity for participation by the community in reuse actions. The LRA is responsible for developing and obtaining community approval of a reuse plan for excess Army property. The LRA developed a reuse plan which was subsequently adopted by the Stratford Town Council and approved on June 16, 1997.

The primary redevelopment goals included: expansion of employment opportunities; stabilization and diversification of the town's tax base; and redevelopment which could be accomplished in a fiscally responsible manner. In addition to these primary goals, secondary goals included: increased public access to the Housatonic River; land uses consistent with existing neighborhood conditions; and protection of the natural/coastal environment.

In developing this plan, a number of alternatives were considered ranging from industrial reuse of existing structures to comprehensive site redevelopment (demolition of all major structures). Several elements were common to all plans including: (1) addressing the goals and policies of the Connecticut Coastal Management Act, Stratford Zoning, and Connecticut Department of Environmental Protection, (2) a public access corridor along the waterfront and public parking to facilitate access to the water's edge, (3) waterfront open space to enhance public use and enjoyment of the waterfront, and (4) dedication of Building 19 as a water dependent use or facility intended to enhance public use access and enjoyment of the waterfront (Enclosure 1).

The preferred land use plan, developed by the LRA, provides a framework for the development of approximately 800,000 square feet of building space for office, research and development and flex space. In addition, 100,000 square feet of museum space and almost 16 acres of parkland along the Housatonic River waterfront would be developed. The development concept revolves around creation of a high quality waterfront and open space environment that enhances the site's attractiveness to office users and serves as a resource for surrounding neighborhoods and the town as a whole. The proposed land use plan involves demolition of approximately 1.5 million square feet in major structures and removal of some subsurface utility systems. The plan also incorporates roadway improvements, most notably the extension of Access Road across Main Street, and creates fully serviced sites that would be developed by private sector users in accordance with guidelines established in the reuse plan.

The Town of Stratford enforces a set of Coastal Area Management Regulations to achieve the policies of the Connecticut Coastal Area Management Act and to promote and encourage public access to the coast. These regulations are particularly significant to redevelopment of the SAEP site because of its immediate proximity to and length of shoreline along the Housatonic River. The SAEP site lies entirely within the coastal boundary as defined by Section 22a-94 of the Connecticut General Statutes. Therefore, all new development on the SAEP site is subject to the coastal site plan review requirements and procedures in Sections 22a-105 through 22a-109 of the Connecticut General Statutes.

Stratford's Plan of Development, *Stratford Visions: 2001,* sets forth goals and policies to guide governmental decision making in the Town. The Plan of Development seeks to encourage development and access to suitable sections of the Housatonic River for marinas, parks, and beaches. The Plan also seeks to preserve and improve the shoreline's environmental quality. By meeting the letter of the coastal area management regulations described in the Zoning Regulations and the spirit of these goals, the redevelopment of SAEP could provide valuable recreational and environmental amenity to the Town of Stratford.

Regarding the LRA's reuse plan and activities within the Army's purview we offer the following concerning coastal zone consistency.

Water-Dependent Use. As stated in the LRA Redevelopment Plan, *"The preferred plan presents a significant opportunity to improve waterfront access and visibility. Consequently, waterfront and open space along the Housatonic River should be an integral part of site reuse and development. This type of approach will also enhance the visibility and attractiveness of the site to neighbors and potential office, R&D, light manufacturing and other possible users. Public water access should be provided through improvements to the existing seaplane ramp that extends out beyond the intertidal flats into the Housatonic River".* As noted earlier, each alternative considered included a provision for water dependent use (Building 19) as well as a provision of public waterfront access.

The preferred land use alternative designated Building 19 for reuse to meet the needs of a water dependent use. This was done, in part, to address an existing state mandate, under the Connecticut Coastal Management Act, to include water dependent uses on coastal sites such as SAEP. Based on a review of the redevelopment alternatives, the LRA was concerned that this building was of such poor quality that its retention at such a key waterfront location could detract from the marketability and viability of the overall redevelopment program. In addition, Connecticut Department of Environmental Protection officials raised questions concerning the viability of this location to support a water dependent use. As a result, it was decided to eliminate this use from the redevelopment plan and instead recommend the demolition of Building 19. However, in the event that an appropriate water dependent user were to come forward with an economically and environmentally viable plan that was consistent with state and local policies regarding waterfront uses, the LRA would endeavor to accommodate such a user within the reuse plan. Such a user would best be accommodated either within Building 19 or in a new building constructed on the site of Building 19 using the same foundation slab and utilities.

Easement for Public Access. The Army's disposal action would be undertaken in a manner that would ensure consistency with the Connecticut Coastal Management Program. An important aspect of that program is the assurance of water-dependent uses of waterfront properties, and a principal means of achieving water-dependent use is through the provision of public access. The Army recognizes that the community's reuse plan envisions a waterfront park along the SAEP's frontage on the Housatonic River. To meet the Army's obligation for consistency with the State's program the Army would include in conveyance documents, as a condition of acceptance of title, an affirmative obligation on the part of the transferee to provide public access to the Housatonic River. The Army would further require that the public access granted by the property recipient meet the regulatory standards established by the State of Connecticut for public use of waterfront property.

Easement for Public Park. In the event the Town of Stratford withdrew its request for a public benefit conveyance of 15.7 acres for a park, or other federal agencies failed or declined to sponsor a public benefit conveyance enabling establishment of a park, the Army would include in its conveyance document a requirement for establishment of a public park of not less than 15 acres along the Housatonic River. The Army has no reason to expect that the Town of Stratford's request for a public benefit conveyance would not be approved and carried into execution. The Army recognized its independent obligation to assure consistency with the Connecticut Coastal Management Program and, thus, would resort to this encumbrance as a reserve mechanism to ensure compliance.

Stormwater Management. Currently, runoff at SAEP is collected by a network of six storm drainage systems. Each of the storm drain systems is equipped with a pumping station because of the low elevation of the plant and proximity of the Housatonic River and Long Island Sound. Effluent from the storm drainage systems is pumped through the Oil Abatement Treatment Plant and is discharged to the Housatonic River through outfall-007.

The OATP has recently been redesigned to bring it into compliance with new toxicity performance standards. Several problems were noted during a 1990 design investigation, including: the continuous or intermittent presence of oil, copper, 1,1,1 -TCA, and ammonia to the waste collection stream; and inadequate pump capacities to prevent localized flooding with resulting direct discharge to the Housatonic River caused by a two-year return frequency storm event.

SAEP's NPDES permit (No. CT0002984), originally issued by the Connecticut Department of Environmental Protection (CTDEP) in 1991, allows direct discharge to the Housatonic River from all eight outfalls, (OFs) 001 through 008. Connecticut has the authority to administer all Clean Water Act (CWA) programs, including the NPDES permit program, the industrial pretreatment program, and the storm water discharge permit program. The NPDES permit requires quarterly sampling and analysis of effluent from OF-007 and OF-008 for acute and chronic aquatic toxicity. No known violations of the NPDES permit have been reported since November 1994.

Stormwater runoff from the site would likely be decreased over current conditions as a result of expanded waterfront open space. The preferred land use alternative may provide an opportunity to improve the quality and reduce the quantity of stormwater runoff at the site. Future reuse of SAEP by others would have to consider stormwater management and conform to applicable Federal, State and Local programs. For this reason, the Army does not deem further actions on its part to ensure compliance by future users.

Coastal Flood Hazard Area. The SAEP property is located within coastal flood hazard zones as determined by the Federal Emergency Management Agency (FEMA). The Local Reuse Authority recognizes this and all construction within those zones will comply with FEMA regulations and the National Flood Insurance Program. Flood-proofing of new structures will be required and in general first floor elevations will be above the 100-year floodplain. The Stratford Zoning Regulations require that all building elevations shall conform to the national flood damage prevention ordinance (amended April 17, 1991). The Zoning Regulations also prohibit the construction of any new building or impervious surface within 50 feet of the mean high water line of any watercourse or within 50 feet of any freshwater inland wetland or within 75 feet of a State defined sensitive coastal resource. Prohibited construction includes additions to existing buildings, accessory buildings, tennis courts, driveways, parking areas, or terraces. Exceptions to these setback requirements include structures or surfaces for water dependent uses or access to coastal amenities, as provided for in the State and Local coastal area management regulations.

Cleanup of Contaminated Sites. Under Department of Defense and Army policy, the Army's environmental restoration efforts for SAEP will attempt to facilitate the land use and redevelopment needs, to the extent reasonably practicable, as stated by the community's reuse plans approved prior to the remedy selection process. It is the Army's expectation that the community at-large, and in particular the LRA's redevelopment plan, will take the environmental condition of the property, planned remedial activities, and

technology and resource constraints into consideration in developing their reuse plan. For SAEP, the LRA's redevelopment plan, specifically the land use plan, is the basis for the land use assumptions the Army will consider during the remedy selection process. After considering these reuse assumptions, the Army will select an appropriate remedy and take all remedial action necessary to protect human health and the environment in accordance with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300).

The Army is obligated in the event of a transfer by deed of the property to abide by Section 120(h)(3) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) which requires that: (A)(ii) *A covenant warranting that all remedial action necessary to protect human health and the environment with respect to any such substances remaining on the property has been taken before the date of transfer...* Therefore, with these requirements, the Army is obligated and will conduct remedial action if contamination is found on portions of the SAEP property.

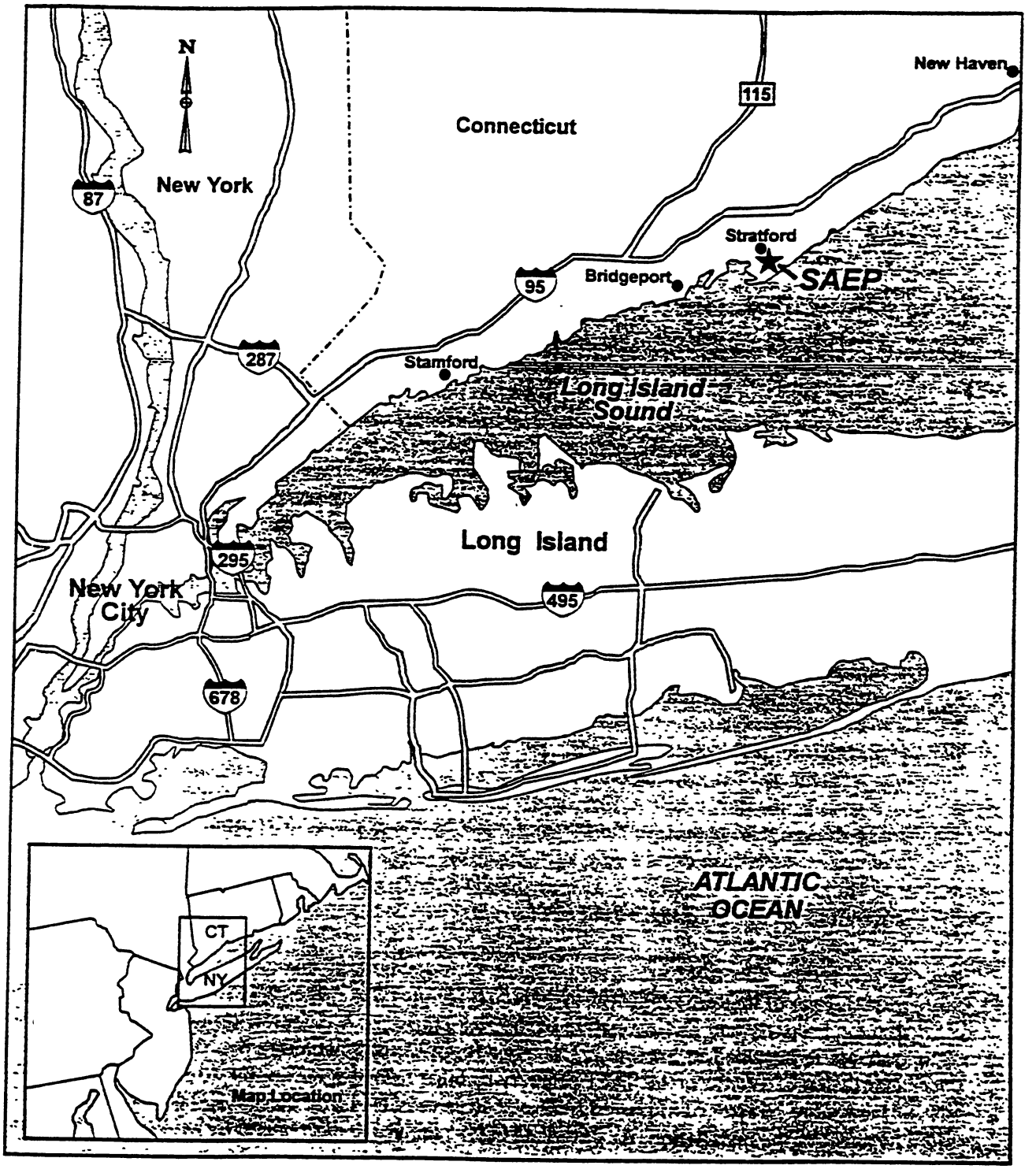
Based on our review of the Connecticut Coastal Management Program we have determined that the proposed actions (disposal of the SAEP by the U.S. Army and future reuse as determined by the SAEP LRA) are consistent with the long-term goals and policies of the Connecticut Coastal Management Program. We have carefully reviewed the LRA's reuse plan and have incorporated easements within the Army's authority to insure consistency. We have no authority to enforce the LRA but existing regulations would ensure their redevelopment is consistent. We request your concurrence with this determination as soon as possible in order that the proposed disposal of the Stratford Army Engine Plant may proceed to completion.

Should you have any questions, please contact Mr. Joe Hand or myself at telephone numbers (334) 694-3881 or (334) 694-4141, respectively. Thank you very much for your assistance in this matter.

Sincerely,

for Susan Ivester Rees
Chief, Coastal Environment
Section

Enclosures

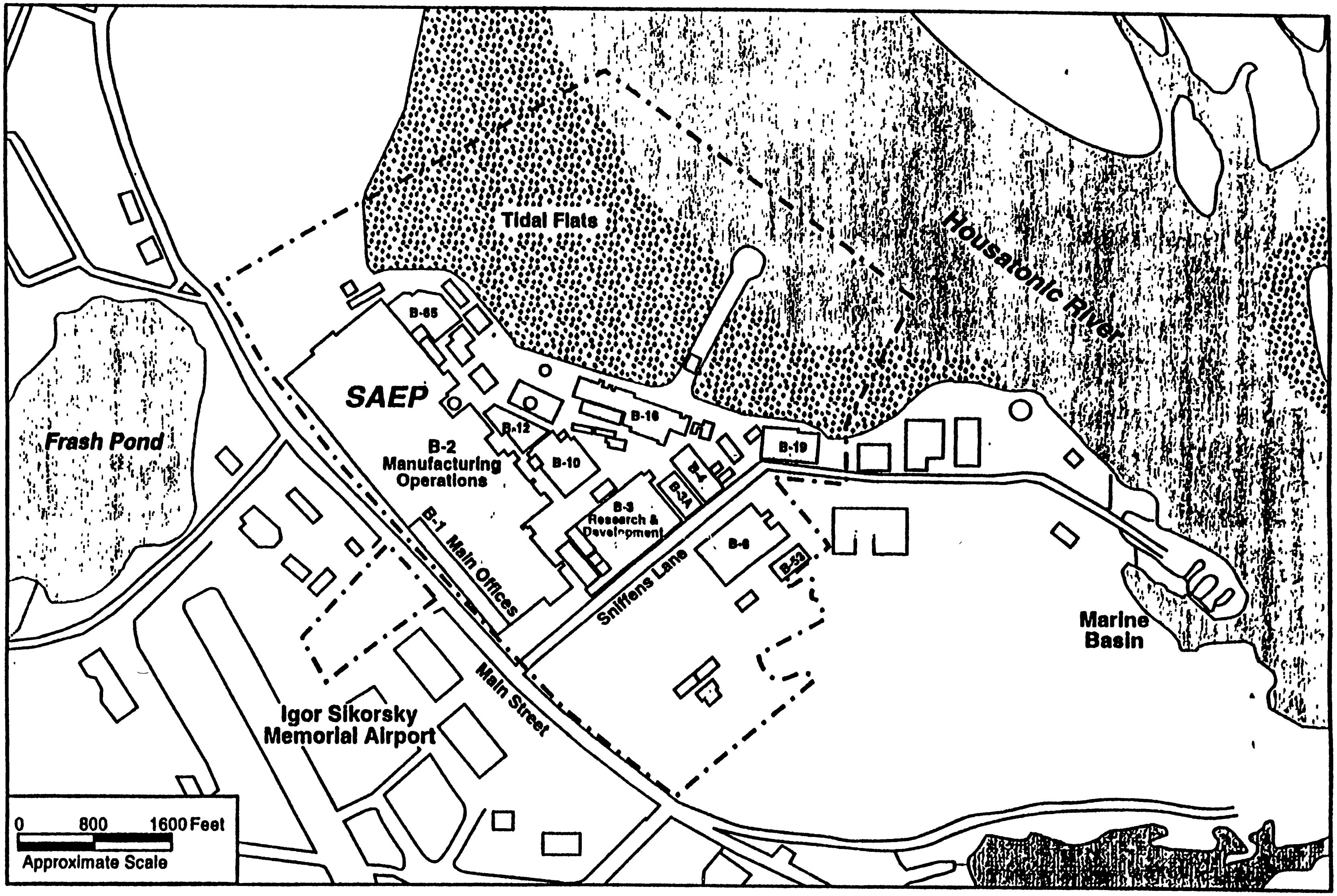


Note. This map is not drawn to scale.

Location Map

Stratford Army Engine Plant
Stratford, Connecticut

Figure 1



LEGEND

SAEP Installation Boundary

B-1 Building and Number

Site Map

Stratford Army Engine Plant
Stratford, Connecticut

Figure 2

STRATFORD ARMY ENGINE PLANT
REDEVELOPMENT PLAN AND IMPLEMENTATION STRATEGY
AND
HOMELESS ASSISTANCE SUBMISSION

SUBMITTED TO

THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)
AND
THE DEPARTMENT OF DEFENSE (DOD)

June 1997

BY:

STRATFORD ARMY ENGINE PLANT LOCAL REDEVELOPMENT AUTHORITY
2725 MAIN STREET
STRATFORD, CONNECTICUT 06497

Enclosure 1

C. COMMON ELEMENTS

There are several areas where the four different Alternatives share common development themes. These similarities primarily involve the waterfront nature of the site and the town's desire to improve access to the river and waterfront area.

1. Response to Coastal Area Regulations/Policies.

a. Connecticut Coastal Management Act/Stratford Zoning

Future redevelopment of the SAEP site will occur within the framework of Stratford's zoning as well as state and local coastal regulations, including the Connecticut Coastal Management Act (CCMA). The goals and policies of the CCMA set a framework for development and use of the state's coastal area and promotes public access to and use of the waters of Long Island Sound and the Housatonic River. Key goals of the Act relate to the preservation of intertidal flats and coastal wetlands, discouraging dredging and promoting appropriate stormwater management, and the provision of appropriate water dependant uses. Stratford's zoning statutes incorporate specific regulations that are intended to support the goals and policies of the CCMA. These regulations set specific requirements including, but not limited to, public access along the water edge for the entire width of the property, provisions that allow water views from public streets, provision for public parking, and a vehicular access easement. Where a use is defined as water dependent only "by virtue of providing general public access to marine and tidal waters" additional waterfront amenities are required. These amenities include open space easements to create a public park, conservation easements for natural preservation, canoe or boat ramps, fishing pier/public viewing walkways, public docking facilities, upland winter boat storage, and boat rental facilities. In addition the Connecticut Department of Environmental Protection (CTDEP) has identified specific filled portions of the SAEP site as subject to the Public Trust Doctrine with the implication that public access will have to be provided to these portions of the property.

Each of the proposed Alternatives include a framework for redeveloping SAEP while addressing the goals and policies of the CCMA, Stratford zoning and CTDEP.

b. Public Access to the Waterfront

Each of the Alternatives incorporates a public access corridor along the waterfront and opens up views of the waterfront from public streets and from within buildings. Public parking is also provided in each Alternative to facilitate access to the water's edge. Each Alternative assumes that public access to the water would be provided from the end of the existing seaplane causeway which extends out beyond the area of the intertidal flats.

c. **Waterfront Open Space**

Waterfront open space is a common element of each of the Alternatives. Such open space serves to enhance public use and enjoyment of the waterfront and serves as an important amenity for potential users. In Alternative 1 this open space is confined to a waterfront access corridor and use of the seaplane causeway. In each of the other Alternatives this concept is expanded to include the creation of extensive open space. The open space created coincides with the areas of fill that have been identified by CTDEP as subject to the Public Trust Doctrine, where public access must be provided.

d. **Water Dependent Use**

Each Alternative assumes that Building 19 would be dedicated as a water dependent use or facility intended to enhance public use access and enjoyment of the waterfront. Potential uses might include recreational or commercial fishing or boating facilities, finfish or shellfish processing plants, waterfront dock facilities, shipyard or boat building facilities, water-based recreational uses and industrial uses dependent on water borne transportation of similar uses.

2. **Special Use/Museum or Exhibit Space**

Under Alternatives 1, 2, and 3, Building 6 is dedicated as a special use facility such as an exhibit space. The existing building is generally suitable for this use with appropriate modifications. Such a publicly accessible use at this location has the potential to contribute to the vitality and amenity of the waterfront.

D. DESCRIPTIONS OF THE ALTERNATIVES

This section provides a detailed review of each of the four development Alternatives prepared for the SAEP site. The description of each Alternative includes information relative to the square footage of buildings, required demolition, building uses, parking, site circulation and utility systems.

1. Industrial Reuse of Existing Structures - Alternative 1

a. **General Description** - This Alternative focuses on taking maximum advantage of existing structures and utility systems to meet the needs of possible future industrial users. As indicated in Map 14-1, Alternative 1 incorporates approximately 1,480,000 square feet of primarily industrial space in eight major structures.

Since the likelihood of finding a single industrial user for the almost 900,000 square feet of space in Building 2 (Main Manufacturing Building) is low, this Alternative proposes demolition of several smaller structures behind Building 2 to facilitate

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET HARTFORD, CONNECTICUT 06106
PHONE: (860) 424-3001

Arthur J. Rocque, Jr.
Commissioner

February 3, 1999

Ms. Susan Ivester Rees
Chief, Coastal Section
Department of the Army
Mobile District, Corps of Engineers
P.O. Box 2288
Mobile, Alabama 36628-0001

Subject: Federal coastal consistency determination concurrence for proposed disposition of the Stratford Army Engine Plant, Stratford

Dear Ms. Ivester Rees:

Pursuant to Section 307 of the Federal Coastal Zone Management Act and 15 CFR 930, Subpart C - Consistency for Federal Activities, we have reviewed the Department of the Army's consistency determination for proposed activities at the site noted above. Specifically, the proposed activities include the disposal of waterfront property known as the Stratford Army Engine Plant for reuse by others. We have reviewed the materials you provided in a submittal received by this office on December 23, 1998 and also reviewed other information regarding the subject property previously received by this Department from the Army, including the Draft Environmental Impact Statement (April 1998). Based on our evaluation of these materials, we concur with your determination that the activity proposed, specifically the disposal by the Army of the Stratford Army Engine Plant property, is consistent with Connecticut's federally approved Coastal Management Program.

Please be advised that this concurrence only applies to the project as specifically described in the federal consistency determination concurrence request submitted to this Office by the Army. There are two particular items of concern from a coastal management perspective. The first is ensuring that, as stated in the Department of the Army's consistency determination, the ± 15.7 acres of filled public trust lands are either conveyed through a public benefit conveyance for the establishment of a public park or that conveyance of this acreage is otherwise restricted for public park use, consistent with the State's public trust responsibilities. The second is ensuring that the Department of the Army will complete proper environmental remediation prior to the

transfer of the Stratford Army Engine Plant property in accordance with the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Although a specific remediation plan has not yet been developed, we have determined that such remediation will be consistent the State's Coastal Management Program. This determination is appropriate since the site remediation plan will meet the Connecticut Remediation Standard Regulations (Section 22a-133k 1 through 3 of the Connecticut State Regulations) as Applicable or Relevant and Appropriate Requirements (ARARs) under CERCLA with due consideration for the Local Reuse Authority's preferred alternative. This redevelopment alternative specifically includes public recreational use of the filled public trust lands on the site.

Should this project proceed in a manner other than described in the materials submitted to this Department by the Army, the Department's Office of Long Island Sound Programs should be notified as soon as practicable in the decision-making process. If substantive changes are made in the plans, especially pertaining to the issues identified above, an additional federal coastal zone management consistency review will likely be required. Finally, we would be interested in any opportunity the Army can provide us to review and comment on draft language for the proposed real estate covenants regarding public access at this site.

Should you have any questions regarding this matter, please contact Margaret Welch of the Department's Office of Long Island Sound Programs at 860-424-3034. Thank you

Sincerely,

Arthur J. Rocque, Jr.
Commissioner

AJR/MLW/w

cc: Dwight Reynolds, OCRM
Rick Norris, Stratford Army Engine Plant LRA Coordinator
Ken Feathers, DEP-Water Management Bureau

APPENDIX G

Biological Resources Data and Agency Correspondence

Connecticut's Endangered, Threatened and Special Concern Species

State of Connecticut
Department of Environmental Protection
Revised 1993

T **Horned lark**
Eremophila alpestris

E **Peregrine falcon +**
Falco peregrinus

T **Common moorhen**
Gallinula chloropus

SC **Common loon**
Gavia immer

SC **American oyster-catcher**
Haematopus palliatus

E **Bald eagle +**
Haliaeetus leucocephalus

E **Yellow-breasted chat**
Icteria virens

T **Least bittern**
Ixobrychus exilis

T **Black rail**
Laterallus jamaicensis

E **Red-headed woodpecker**
Melanerpes erythrocephalus

SC **Eskimo curlew* +**
Numenius borealis

SC **Yellow-crowned night-heron**
Nyctanassa violacea

SC **Black-crowned night-heron**
Nycticorax nycticorax

SC **Osprey**
Pandion haliaetus

SC **Northern Parula**
Parula americana

SC **Savannah sparrow**
Passerculus sandwichensis

SC **Ipswich sparrow**
Passerculus sandwichensis ssp. *princeps*

SC **Glossy ibis**
Plegadis falcinellus

E **Pied-billed grebe**
Podilymbus podiceps

E **Vesper sparrow**
Pooecetes gramineus

SC **Purple martin**
Progne subis

T **King rail (nesting populations only)**
Rallus elegans

T **Least tern**
Sterna antillarum

E **Roseate tern +**
Sterna dougallii

SC **Common tern**
Sterna hirundo

T **Barn owl**
Tyto alba

SC **Golden-winged warbler**
Vermivora chrysoptera

* Extirpated
\+ Federally Endangered
^ Federally Threatened

REPTILES

T **Loggerhead ^**
Caretta caretta

T **Atlantic green turtle ^**
Chelonia mydas

E **Bog turtle**
Clemmys muhlenbergii

E **Timber rattlesnake**
Crotalus horridus

E **Leatherback +**
Dermochelys coriacea

T **Five-lined skink**
Eumeces fasciatus

SC **Eastern hognose snake**
Heterodon platirhinos

E **Atlantic ridley +**
Lepidochelys kempii

SC **Eastern ribbon snake**
Thamnophis sauritus

\+ Federally Endangered
^ Federally Threatened

AMPHIBIANS

SC **Jefferson salamander "complex"**
Ambystoma jeffersonianum

SC **Blue-spotted salamander "complex"**
Ambystoma laterale

T **Blue-spotted salamander (diploid populations)**
Ambystoma laterale

T **Northern Spring salamande**
Gyrinophilus porphyriticus

T **Northern Slimy salamande**
Plethodon glutinosus

E **Eastern spadefoot**
Scaphiopus holbrooki

FISH

E **Shortnose sturgeon +**
Acipenser brevirostrum

T **Atlantic sturgeon (in freshwater)**
Acipenser oxyrhynchus

SC **American brook lamprey**
Lampetra appendix

SC **Burbot**
Lota lota

\+ Federally Endangered

INVERTEBRATES

SC **Albarufan dagger moth***
Acronicta albarufa

SC **Noctuid moth***
Acronicta lanceolaria

SC **Noctuid moth***
Agrotis stigmosa

E **Dwarf wedge mussel +**
Alasmidonta heterodon

SC **Brook floater**
Alasmidonta varicosa

SC **Salt-and-pepper skipper**
Amblyscirtes hegon

E **Noctuid moth**
Anarta luteola

SC **New Jersey tea inchworm**
Apodrepanulatrix liberaria

SC **Lilypad clubtail**
Arigomphus furcifer

SC **Tawny emperor**
Asterocampa clyton

SC **Tabanid fly***
Atylotus ohioensis

SC **Ground beetle**
Bembidion quadratulum

E **Northern metalmark**
Calephelis borealis

SC **Herodias underwing***
Catocala herodias gerhar

SC **Precious underwing moth***
Catocala pretiosa

SC **Noctuid moth***
Chaetaglaea cerata

SC **Northeastern beach tiger beetle* ^**
Cicindela dorsalis dorsal

E **Puritan tiger beetle ^**
Cicindela puritana

SC **Red-bellied tiger beetle**
Cicindela rufiventris

SC **Regal moth***
Citheronia regalis

SC **Mystic Valley amphipod**
Crangonyx aberrans

SC **Sea-beach amaranth***
Amaranthus pumilus

Roundleaf shadbush
Amelanchier sanguinea

Bog rosemary
Andromeda glaucophylla

C **Canada anemone**
Anemone canadensis

SC **Field pussytoes***
Antennaria neglecta ssp. *petaloidea*

SC **Puttyroot***
Aplectrum hyemale

E **Dwarf mistletoe**
Arceuthobium pusillum

Smooth mountain sandwort
Arenaria glabra

E **Large-leaved sandwort**
Arenaria macrophylla

E **Arethusa**
Arethusa bulbosa

SC **Green dragon**
Arisaema dracontium

Beach needlegrass
Aristida tuberculosa

T **Virginia snakeroot**
Aristolochia serpentaria

E **White milkweed**
Asclepias variegata

SC **Green milkweed***
Asclepias viridiflora

T **Mountain spleenwort**
Asplenium montanum

T **Wallrue spleenwort**
Asplenium ruta-muraria

E **Blake's aster**
Aster X blakei

T **Bog aster**
Aster nemoralis

SC **Crooked-stem aster***
Aster prenanthoides

E **Rough-leaved aster**
Aster radula

T **Showy aster**
Aster spectabilis

E **Narrow-leaved glade fern**
Athyrium pycnocarpon

SC **Swamp birch**
Betula pumila

SC **Eaton's beggar-tick**
Bidens eatonii

SC **Hairy woodmint**
Blephilia hirsuta

SC **Little grape fern***
Botrychium simplex

E **Side-oats grama-grass**
Bouteloua curtipendula

SC **Sweet-scented indian-plantain***
Cacalia suaveolens

SC **Reed bentgrass**
Calamagrostis stricta ssp. *inexpansa*

SC **Purple cress**
Cardamine douglassii

SC **Bronze sedge***
Carex aenea

SC **Summer sedge***
Carex aestivalis

E **Broadwing sedge**
Carex alata

SC **Foxtail sedge***
Carex alopecoidea

SC **Sedge**
Carex aquatilis var. altior

SC **Bailey's sedge***
Carex baileyi

SC **Barratt's sedge***
Carex barrattii

E **Brown bog sedge**
Carex buxbaumii

T **Chestnut-colored sedge**
Carex castanea

SC **Collins sedge***
Carex collinsii

E **Crawe's sedge**
Carex crawei

SC **Crawford sedge***
Carex crawfordii

SC **Clustered sedge***
Carex cumulata

E **Davis' sedge**
Carex davisii

T **Handsome sedge**
Carex formosa

SC **Sedge**
Carex hirsutella

SC **Hitchcock's sedge**
Carex hitchcockiana

E **Sedge**
Carex limosa

SC **False hop sedge**
Carex lupuliformis

SC **Sedge***
Carex magellanica

SC **Troublesome sedge***
Carex molesta

SC **Black-edge sedge***
Carex nigromarginata

SC **New England sedge***
Carex novae-angliae

E **Eastern few-fruited sedge**
Carex oligocarpa

SC **Few-seeded sedge***
Carex oligosperma

SC **Few-flowered sedge***
Carex paucifiora

E **Variable sedge**
Carex polymorpha

T **Prairie sedge**
Carex prairea

E **Cyperus-like sedge**
Carex pseudo-cyperus

T **Schweinitz's sedge**
Carex schweinitzii

SC **Dioecious sedge**
Carex sterilis

SC **Rigid sedge**
Carex tetanica

E **Little green sedge**
Carex viridula

SC **Willdenow's sedge***
Carex willdenowii

SC **Pretty sedge**
Carex woodii

SC **Wild senna**
Cassia hebecarpa

E **Indian paintbrush**
Castilleja coccinea

SC **American bittersweet**
Celastrus scandens

SC **Eastern redbud***
Cercis canadaensis

E **Devil's-bit**
Chamaelirium luteum

E **Hairy lip-fern**
Cheilanthes lanosa

E **Sickle-leaved golden aster**
Chrysopsis falcata

E **Sea-coast angelica**
Coelopleurum lucidum

T **Early coralroot**
Corallorhiza trifida

T **Yellow corydalis**
Corydalis flavula

SC **Pygmyweed**
Crassula aquatica

SC **Elliptical rushfoil***
Crotonopsis elliptica

E **Slender cliff-brake**
Cryptogramma stelleri

SC **Hazel dodder***
Cuscuta coryli

SC **Wild comfrey***
Cynoglossum virginianum

SC **Ram's-head lady's-slipper***
Cypripedium arietinum

E **Showy lady's-slipper**
Cypripedium reginae

E **Dew-drop**
Dalibarda repens

SC **Dillen's tick-trefoil**
Desmodium glabellum

E **Trailing tick-trefoil**
Desmodium humifusum

SC **Sessile-leaf tick-trefoil***
Desmodium sessilifolium

T **Squirrel corn**
Dicentra canadensis

SC **Panic grass**
Dichanthelium ovale var. *addisonii*

E **Panic grass**
Dichanthelium scabriusculum

SC **Panic grass***
Dichanthelium sphaerocarpon var. *isophyllum*

SC **Warty panic grass***
Panicum verrucosum

E **Field paspalum**
Paspalum laeve

SC **Bead grass***
Paspalum setaceum
var. *psammophilum*

E **Smooth cliff-brake**
Pellaea glabella

T **Sweet coltsfoot**
Petasites frigidus
var. *palmatus*

SC **Wild kidney bean***
Phaseolus polystachios
var. *aquilonius*

SC **Red spruce**[X]
Picea rubens

E **Red pine**[X]
Pinus resinosa

E **White-fringed orchid**
Platanthera blephariglottis

T **Yellow-fringed orchid**
Platanthera ciliaris

SC **Tall white bog orchid***
Platanthera dilatata

SC **Pale green orchid**
Platanthera flava

SC **Hooker's orchid***
Platanthera hookeri

SC **Large round-leaved orchid***
Platanthera orbiculata

SC **Threadfoot**
Podostemum ceratophyllum

SC **Clammy-weed***
Polanisia dodecandra

E **Nuttall's milkwort**
Polygala nuttallii

E **Seneca snakeroot**
Polygala senega

SC **Seabeach knotweed***
Polygonum glaucum

E **Small-flowered leafcup**
Polymnia canadensis

E **Swamp cottonwood**
Populus heterophylla

SC **Pondweed***
Potamogeton confervoides

SC **Water-thread pondweed***
Potamogeton diversifolius

SC **Fries' pondweed***
Potamogeton friesii

E **Hill's pondweed**
Potamogeton hillii

SC **Capillary pondweed***
Potamogeton pusillus
var. *gemmiparus*

E **Straight-leaved pondweed**
Potamogeton strictifolius

SC **Vasey's pondweed***
Potamogeton vaseyi

E **Three-toothed cinquefoil**
Potentilla tridentata

SC **Alleghany plum***
Prunus alleghaniensis

E **Grave's beach plum**
Prunus maritima
var. *gravesii*

E **Long-beaked bald rush**
Psilocarya scirpoides

SC **Goose grass***
Puccinellia langeana
ssp. *alaskana*

E **Basil mountain-mint**
Pycnanthemum clinopodioides

E **Torrey mountain-mint**
Pycnanthemum torrei

E **Bur oak**
Quercus macrocarpa

E **Water-plantain spearwort**
Ranunculus ambigens

E **Seaside crowfoot**
Ranunculus cymbalaria

SC **Creeping spearwort***
Ranunculus reptans

SC **Cursed crowfoot**
Ranunculus sceleratus

SC **White water-crowfoot**
Ranunculus subrigidus

SC **Fragrant sumac***[X]
Rhus aromatica

E **Capillary beak-rush**
Rhynchospora capillacea

E **Beaked rush**
Rhynchospora macrostachya

SC **Skunk currant**
Ribes glandulosum

SC **Swamp black currant***
Ribes lacustre

SC **Wild currant***
Ribes rotundifolium

SC **Wild red currant***
Ribes triste

SC **Shining rose**
Rosa nitida

E **Toothcup**
Rotala ramosior

SC **Sand bramble**
Rubus cuneifolius

SC **Sea-side dock***
Rumex maritimus
var. *fueginus*

SC **Large marsh pink***
Sabatia dodecandra

SC **Waputo***
Sagittaria cuneata

SC **Arrowleaf**
Sagittaria montevidensis
ssp. *spongiosus*

SC **Arrowleaf**
Sagittaria subulata

T **Sandbar willow**
Salix exigua

E **Bog willow**
Salix pedicellaris

SC **Slender willow***
Salix petiolaris

SC **Autumn willow**
Salix serissima

E **Lizard's tail**
Saururus cernuus

E **Pod grass**
Scheuchzeria palustris

SC **Purple oat**
Schizachne purpurascens

SC **Chaffseed*+**
Schwalbea americana

T **Hard-stemmed bulrush**
Scirpus acutus

SC **Salt marsh bulrush**
Scirpus cylindricus

SC **Georgia bulrush**
Scirpus georgianus

SC **Long's bulrush***
Scirpus longii

SC **Bayonet grass**
Scirpus paludosus
var. *atlanticus*

T **Torrey bulrush**
Scirpus torreyi

SC **Few-flowered nutrush***
Scleria pauciflora
var. *caroliniana*

E **Reticulated nutrush**
Scleria reticularis

E **Nutrush**
Scleria triglomerata

SC **Low nutrush***
Scleria verticillata

SC **Hyssop skullcap**
Scutellaria integrifolia

E **Small skullcap**
Scutellaria leonardii

SC **Ragwort***
Senecio pauperculus

T **Three-leaved Solomon's-seal**
Smilacina trifolia

SC **Bristly greenbriar***
Smilax tamnoides var. *hispi*

SC **Elliott's goldenrod**
Solidago elliottii

E **Prairie goldenrod**
Solidago ptarmicoides

E **Stiff goldenrod**
Solidago rigida

E **Early wrinkle-leaved goldenrod**
Solidago rugosa
var. *sphagnophila*

SC **Floating bur-reed**
Sparganium fluctuans

SC **Small bur-reed***
Sparganium minimum

T **Canada sand-spurry**
Spergularia canadensis

SC **Little ladies'-tresses***
Spiranthes tuberosa
var. *grayi*

SC **Dropseed**
Sporobolus asper

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Office
22 Bridge Street, Unit #1
Concord, New Hampshire 03301-4986

May 9, 1997

Wendy Brown
Tetra Tech, Inc.
10306 Eaton Place, Suite 340
Fairfax, VA 22030

Dear Ms. Brown:

This responds to your March 19, 1997 letter requesting information on the presence of federally-listed and proposed endangered or threatened species in relation to the Stratford Army Engine Plant in Stratford, Connecticut.

Based on information currently available to us, the federally-listed threatened piping plover (*Charadrius melodus*) is known to nest on Short Beach, immediately south of the Army Engine Plant. However, it is not known whether this species feeds in the intertidal flats adjacent to the Plant. Inasmuch as distributional information on many rare species is incomplete or imprecise, it is not always possible to definitively rule out the possibility of rare species presence in a project area. Therefore, in locations such as this, where rare species are known from similar habitats in the region, it is recommended that a biologist survey the area.

No other federally-listed or proposed threatened and endangered species under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area, with the exception of occasional transient bald eagles (*Haliaeetus leucocephalus*) or peregrine falcons (*Falco peregrinus*).

A list of federally-designated endangered and threatened species in Connecticut is included for your information. Thank you for your cooperation and please contact Susi von Oettingen of this office at (603) 225-1411 if we can be of further assistance.

Sincerely yours,

Michael J. Bartlett
Supervisor
New England Field Office

Enclosure

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN CONNECTICUT

Common Name	Scientific Name	Status	Distribution
FISHES:			
Sturgeon, shortnose*	Acipenser brevirostrum	E	Connecticut River & Atlantic Coastal Waters
REPTILES:			
Turtle, bog	Clemmys muhlenbergii	PT	Fairfield, Litchfield Counties
Turtle, green*	Chelonia mydas	T	Oceanic straggler in southern New England
Turtle, hawksbill*	Eretmochelys imbricata	E	Oceanic straggler in southern New England
Turtle, leatherback*	Dermochelys coriacea	E	Oceanic summer resident
Turtle, loggerhead*	Caretta caretta	T	Oceanic summer resident
Turtle, Atlantic ridley*	Lepidochelys kempii	E	Oceanic summer resident
BIRDS:			
Eagle, bald	Haliaeetus leucocephalus	T	Hartford, entire state-migratory
Falcon, American peregrine	Falco peregrinus anatum	E	No current nesting; entire state-migratory
Falcon, Arctic peregrine	Falco peregrinus tundrius	T	Entire state migratory-no nesting
Plover, Piping	Charadrius melodus	T	Atlantic coast
Roseate Tern	Sterna dougallii dougallii	E	Atlantic coast
MAMMALS:			
Whale, blue*	Balaenoptera musculus	E	Oceanic
Whale, finback*	Balaenoptera physalus	E	Oceanic
Whale, humpback*	Megaptera novaeangliae	E	Oceanic
Whale, right*	Eubalaena spp. (all species)	E	Oceanic
Whale, sei*	Balaenoptera borealis	E	Oceanic
Whale, sperm*	Physeter catodon	E	Oceanic
MOLLUSKS:			
Mussel, dwarf wedge	Alasmidonta heterodon	E	Hartford County
INSECTS:			
Beetle, puritan tiger	Cicindela puritana	T	Middlesex, Conn. River Valley
Beetle, northeastern beach tiger	Cicindela dorsalis dorsalis	T	Extirpated, coastal beaches
PLANTS:			
Small Whorled Pogonia	Isotria medeoloides	T	Hartford, New Haven, Fairfield, New London, Windham, Tolland, Middlesex, Litchfield Counties
Sandplain Gerardia	Agalinus acuta	E	Hartford

* Except for sea turtle nesting habitat, principal responsibility for these species is vested with the National Marine Fisheries Service

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF ENVIRONMENTAL REVIEW
79 ELM STREET, HARTFORD, CT 06106
Tel. 860/424-4109 Fax - 424-4053

December 17, 1996

Mr. Joe Hand
U.S. Army Corps of Engineers
Mobile District
P. O. Box 2288
Mobile, Alabama 36628-0001

RE: Notice of Scoping - Stratford Army Engine Plant

Dear Mr. Hand:

I am responding on behalf of the Department to the subject notice and would like to thank you for soliciting our comments at this early stage in the preparation of a NEPA document. The notice of this intended action by the Department of the Army has been widely circulated throughout the Department, which includes resource management and environmental quality disciplines, and these comments are a coordinated response.

The preparation of a NEPA document that adheres to the topics presented in the Base Realignment and Closure Manual for Compliance With the National Environmental Policy Act and thoroughly addresses the baseline conditions and resulting impacts of the contemplated action(s) should result in a thorough analysis. The issues that the Department will focus on during our review of the DEIS should generally be satisfied by this analysis, with one exception. The referenced manual is silent on how proposed action(s) comply with federal coastal consistency requirements, as prescribed by 15 CFR 930.37. The review of this coastal consistency determination by the State of Connecticut is the responsibility of the Department's Office of Long Island Sound Programs. I have enclosed a memorandum from Margaret Welch that further describes your coastal consistency responsibilities and the primary issues that must be addressed in this process.

The Natural Diversity Data Base (NDDB) maps and files for the subject property have been reviewed for the presence of Federally listed endangered or threatened species or species listed by the State, pursuant to section 26-306 of the Connecticut General Statutes, as endangered, threatened or special concern. This review has identified that there are State threatened Atlantic sturgeon (*Acipenser oxyrhynchus*) in the vicinity of subject property. Please contact Linda Gunn or Peter Aarrestad of the Department's Fisheries Division at 860/434-6043 (Marine Headquarters, Old Lyme) for further

information on the sturgeon.

The NDDB includes all information regarding critical biological resources available to Department. This information is a compilation of data collected over the years by the Department's Natural Resources Center and other cooperating units of the Department, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site specific field investigations. Consultation with the NDDB should not be substituted for on-site surveys, as required for environmental assessments. Current research projects and new contributors continue to identify additional species information, locations of habitats of concern, as well as, enhancing existing data. New information is incorporated into the NDDB as it becomes available.

The Department's PCB files have been reviewed for the subject property. Our records indicate that a $586,425 Consent Agreement and Order was issued to AVCO, Textron Lycoming by EPA in 1993. One of the subjects of this action was non-compliance with regulations regarding 19 PCB transformers present at the site. The status of any actions taken to comply with this Order and the continuing presence of such items should be reported. Also, any PCB contamination that may have occurred should be appropriately evaluated.

To facilitate the Department's review of subsequent documents related to this project, please forward six copies of these materials to this Office, and we will provide distribution to other disciplines within the agency. If I can be of any assistance regarding these comments as you proceed with the preparation of the NEPA document, please give me a call at the above number. Thank you.

Sincerely,

Brian J. Emerick

Brian J. Emerick
Supervising Environmental Analyst

Encls (3)
cc: K. Feathers, DEP/PERD
L. Saliby, DEP/PCB
D. McKay, DEP/NRC
M. Welch, DEP/OLISP
M. Sullivan, DEP/OCE
L. Gunn, DEP/FD
P. Aarrestad, DEP/FD
D. Leff, DEP/OAC

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

To: Persons requesting proposed amendments to list of Endangered, Threatened and Special Concern Species
From: Dale W. May, Director, Wildlife Division
Date: July 17, 1997

Attached please find proposed amendments to update the Department's listing of endangered, threatened, and special concern species. **ADDITIONS** are denoted by capitalization while **[deletions]** are denoted by brackets.

The proposed amendments are in response to a review conducted by the Department and by species advisory committees comprised of members appointed by the Commissioner based upon their experience and knowledge of Connecticut's plants and animals. Section 26-307 of the Connecticut General Statutes requires that the Department conduct such reviews at intervals not greater than 5 years. The current list was established in 1992.

All interested parties are invited to express their views on the proposed amendments at the public hearing which will be held on August 13, 1997 at 7:00 P.M. in the Fifth Floor Auditorium of the Department of Environmental Protection's Office at 79 Elm Street, Hartford, CT.

For further information, please contact the Wildlife Division at (860) 424-3011.

STATE OF CONNECTICUT
REGULATION
of

DEPARTMENT OF ENVIRONMENTAL PROTECTION

ENDANGERED AND THREATENED SPECIES, AND SPECIES OF SPECIAL CONCERN

Sections 26-306-4 through 26-306-6 of the Regulations of Connecticut State Agencies are amended as follows:

Section 26-306-4. List of endangered species.

(a) The following mammal species are determined to be endangered:

Cryptotis parva	Least shrew
MYOTIS SODALIS	INDIANA BAT

(b) The following bird species are determined to be endangered:

Ammodramus savannarum	Grasshopper sparrow
Asio otus	Long-eared owl
ACCIPITER STRIATUS	SHARP-SHINNED HAWK
Bartramia longicauda	Upland sandpiper
Botaurus lentiginosus	American bittern
Circus cyaneus	Northern harrier
Cistothorus platensis	Sedge wren
Falco peregrinus	Peregrine falcon
GALLINULA CHLOROPUS	COMMON MOORHEN
Haliaeetus leucocephalus	Bald eagle
Icteria virens	Yellow-breasted chat
LATERALLUS JAMAICENSIS	BLACK RAIL (NESTING POPULATION ONLY)
Melanerpes erythrocephalus	Red-headed woodpecker
Podilymbus podiceps	Pied-billed grebe
Pooecetes gramineus	Vesper sparrow
RALLUS ELEGANS	KING RAIL (NESTING POPULATION ONLY)
Sterna dougallii	Roseate tern
TYTO ALBA	COMMON BARN OWL

(c) The following reptile species are determined to be endangered:

Clemmys muhlenbergii	Bog turtle
Crotalus horridus	Timber rattlesnake
Dermochelys coriacea	Leatherback
Lepidochelys kempii	Atlantic ridley

Carex alata	Broadwing sedge
CAREX BACHII	SEDGE
CAREX BARRATTII	BARRATT'S SEDGE
Carex buxbaumii	Brown bog sedge
CAREX CASTANEA	CHESTNUT-COLORED SEDGE
[Carex crawei]	[Crawe's sedge]
CAREX CUMULATA	CLUSTERED SEDGE
Carex davisii	Davis' sedge
CAREX EXILIS	SEDGE
Carex limosa	Sedge
CAREX LUPULIFORMIS	FALSE HOP SEDGE
Carex oligocarpa	Eastern few-fruited sedge
CAREX PAUPERCULA	SEDGE
Carex polymorpha	Variable sedge
Carex pseudo-cyperus	Cyprus-like sedge
CAREX SCHWEINITZII	SCHWEINITZ'S SEDGE
Carex viridula	Little green sedge
Castilleja coccinea	Indian paintbrush
Chamaelirium luteum	Devil's-bit
Cheilanthes lanosa	Hairy lip-fern
Chrysopsis falcata	Sickle-leaved golden aster
CIRSIUM HORRIDULUM	YELLOW THISTLE
[Coelopleurum lucidum]	[Sea-coast angelica]
CRASSULA AQUATICA	PYGMYWEED
Cryptogramma stelleri	Slender cliff-brake
Cypripedium reginae	Showy lady's-slipper
Dalibarda repens	Dew-drop
[Desmodium humifusum]	[Trailing tick-trefoil]
[Dichanthelium scabriusculum]	[Panic grass]
Diplachne maritima	Saltpond Grass
DIPLAZIUM PYCNOCARPON	NARROW-LEAVED GLADE FERN
[Drosera filiformis]	[Thread-leaf sundew]
Dryopteris camplyoptera	Mountain wood-fern
Echinodorus tenellus	Bur-head var. parvulus
Eleocharis equisetoides	Horse-tail spike-rush
Eleocharis quadrangulata	Spike-rush var. crassior
EQUISETUM SCIRPOIDES	DWARF SCOURING RUSH
[Eriocaulon parkeri]	[Parker's pipewort]
ERIOPHORUM VAGINATUM VAR. SPISSUM	HARE'S TAIL
Eupatorium album	White thoroughwort
Eupatorium aromaticum	Small white snakeroot
Floerkea proserpinacoides	False mermaid-weed
Gentiana quinquefolia	Stiff gentian
Helianthemum propinquum	Low frostweed
HEMICARPA MICRANTHA	DWARF BULRUSH
[Heteranthera reniformis]	[Kidneyleaf mud-plantain]
Houstonia longifolia	Longleaf bluet
Hudsonia ericoides	Golden-heather
Hydrastis canadensis	Golden seal
HYDROCOTYLE UMBELLATA	WATER PENNYWORT
Isotria medeoloides	Small whorled pogonia

[Solidago rugosa var. sphagnophila]	[Early wrinkle-leaved goldenrod]
SPARGANIUM FLUCTUANS	FLOATING BUR-REED
Sporobolus cryptandrus	Sand dropseed
Sporobolus heterolepis	Northern dropseed
Stachys hyssopifolia	Hyssop-leaf hedge-nettle
TAENIDIA INTEGERRIMA	YELLOW PIMPERNELL
Trollius laxus	Spreading globe-flower
UTRICULARIA RESUPINATA	BLADDERWORT
Uvularia grandiflora	Large-flowered bellwort
Viola brittoniana	Coast violet
[Waldsteinia fragarioides]	[Barren strawberry]
Xyris montana	Northern yellow-eyed grass
Xyris smalliana	Small's yellow-eyed grass
Zizia aptera	Golden alexanders

Section 26-306-5. List of threatened species.

(a) The following mammal species are determined to be threatened:

NONE

(b) The following bird species are determined to be threatened:

Accipiter cooperii	Cooper's hawk
[Accipiter striatus]	[Sharp-shinned hawk]
ANAS DISCORS	BLUE-WINGED TEAL (NESTING POPULATION ONLY)
ARDEA ALBUS	GREAT EGRET
Asio flammeus	Short-eared owl (wintering populations)
[Casmerodius albus]	[Great egret]
[Catoptrophorus semipalmatus]	[Willet]
Charadrius melodus	Piping plover
CHORDEILES MINOR	COMMON NIGHTHAWK
Egretta thula	Snowy egret
Eremophila alpestris	Horned lark
[Gallinula chloropus]	[Common moorhen]
Ixobrychus exilis	Least bittern
[Laterallus jamaicensis]	[Black rail]
[Rallus elegans]	[King rail (nesting populations only)]
Sterna antillarum	Least tern
[Tyto alba]	[Barn owl]
VERMIVORA CHRYSOPTERA	GOLDEN-WINGED WARBLER

(c) The following reptile species are determined to be threatened:

CAREX CRAWEI	CRAWE'S SEDGE
Carex formosa	Handsome sedge
Carex prairea	Prairie sedge
Carex schweinitzii	Schweinitz's sedge
Corallorhiza trifida	Early coralroot
Corydalis flavula	Yellow corydalis
Dicentra canadensis	Squirrel corn
[Dryopteris goldiana]	[Goldie's fern]
[Equisetum scirpoides]	[Dwarf scouring rush]
ERIOCAULON PARKERI	PARKER'S PIPEWORT
[Eriophorum spissum]	[Hare's tail]
Gaultheria hispidula	Creeping snowberry
Gaylussacia dumosa var. bigeloviana	Dwarf huckleberry
HEPATICA ACUTILOBA	SHARP-LOBED HEPATICA
Hudsonia tomentosa	False beach-heather
Hypericum pyramidatum	Great St. John's-wort
Ilex glabra	Inkberry
Ledum groenlandicum	Labrador tea
MEGALODONTA BECKII	WATER-MARIGOLD
OPHIOGLOSSUM [VULGATUM] PUSILLUM	ADDER'S-TONGUE
Panicum amarum	Panic grass
Petasites frigidus var. palmatus	Sweet coltsfoot
Platanthera ciliaris	Yellow-fringed orchid
RHYNCHOSPORA MACROSTACHYA	BEAKED RUSH
Salix exigua	Sandbar willow
Scirpus acutus	Hard-stemmed bullrush
Scirpus torreyi	Torrey bulrush
[Smilacina trifolia]	[Three-leaved Solomon's-seal]
Spergularia canadensis	Canada sand-spurry
Streptopus amplexifolius var. americanus	White mandarin
Thuja occidentalis	Northern white cedar
Viola canadensis	Canada violet

Section 26-306-6. List of species of special concern.

(a) The following mammal species are determined to be species of special concern:

*Canis lupus	Gray wolf
*Felis concolor couguar	Eastern cougar
Halichoerus grypus	Gray seal
Lasionycteris noctivagans	Silver-haired bat
Lasiurus borealis	Red bat
Lasiurus cinereus	Hoary bat
[Martes pennanti]	[Fisher]
*Myotis leibii	Eastern small-footed Bat
[*Myotis sodalis]	[Indiana myotis]
*Neotoma floridana	Eastern woodrat

Ambystoma jeffersonianum	Jefferson salamander "complex"
Ambystoma laterale	Blue-spotted salamander "complex"
RANA PIPIENS	NORTHERN LEOPARD FROG

(e) The following fish species are determined to be species of special concern:

CATOSTOMUS CATOSTOMUS	LONGNOSE SUCKER
[Lampetra appendix]	[American brook lamprey]
[Lota lota]	[Burbot]

(f) The following invertebrate species are determined to be species of special concern:

*Acronicta albarufa	Albarufan dagger moth
*Acronicta lanceolaria	Noctuid moth
AGONUM DARLINGTONI	GROUND BEETLE
AGONUM MUTATUM	GROUND BEETLE
*Agrotis stigmosa	Noctuid moth
[Alasmidonta varicosa]	[Brook floater]
AMARA CHALCEA	GROUND BEETLE
[Amblyscirtes hegon]	[Salt-and-pepper skipper]
AMBLYSCIRTES VIALIS	ROADSIDE SKIPPER
ANTHOPOTAMUS VERTICIS	MAYFLY
APAMEA BURGESSI	NOCTUID MOTH
Apodrepanulatrix liberaria	New Jersey tea inchworm
[Arigomphus furcifer]	[Lilypad clubtail]
[Asterocampa clyton]	[Tawny emperor]
[*]Atylotus ohioensis	Tabanid fly
BADISTER TRANSVERSUS	GROUND BEETLE
BAETISCA LAURENTINA	MAYFLY
BEMBIDION PSEUDOCAUTUM	GROUND BEETLE
Bembidion quadratulum	Ground beetle
BEMBIDION SEMICINCTUM	GROUND BEETLE
*BRACHINUS CYANIPENNIS	GROUND BEETLE
CALOPTERYX AMATA	SUPERB JEWELWING
CALOPTERYX DIMIDIATA	SPARKLING JEWELWING
*CALOSOMA WILCOXI	GROUND BEETLE
*CARABUS SERRATUS	GROUND BEETLE
*CARABUS SYLVOSUS	GROUND BEETLE
*CARABUS VINCTUS	GROUND BEETLE
*Catocala herodias gerhardi	Herodias underwing
*Catocala pretiosa	Precious underwing moth
CELASTRINA NEGLECTAMAJOR	APPALACHIAN BLUE
*Chaetaglaea cerata	Noctuid moth
*Cicindela dorsalis dorsalis	Northeastern beach tiger beetle
CICINDELA HIRTICOLLIS	TIGER BEETLE
CICINDELA MARGINATA	TIGER BEETLE
*CICINDELA PURPUREA	TIGER BEETLE
[Cicindela rufiventris]	[Red-bellied tiger beetle]

*Mixogaster johnsoni	Syrphid fly
*Nicrophorus americanus	American burying beetle
*OMOPHRON TESSELATUM	GROUND BEETLE
*PANAGAEUS FASCIATUS	GROUND BEETLE
[*Papaipema cerina]	[Borer moth]
*Papaipema circumlucens	Borer moth
Papaipema duovata	Goldenrod stem borer
Papaipema leucostigma	Columbine borer
*Papaipema maritima	Borer moth
*Papaipema sciata	Borer moth
Papilio cresphontes	Giant swallowtail
PARALEPTOPHLEBIA ASSIMILIS	MAYFLY
*POLYGONIA PROGNE	GRAY COMMA
Pomatiopsis lapidaria	Slenderwalker
*Procambarus acutus	Whiteriver crayfish
[*]Psectraglaea carnosa	Noctuid moth
*Pyreferra ceromatica	Ceromatic noctuid moth
Rhodoecia aurantiago	Orange sallow moth
Sargus fasciatus	Soldier fly
SATYRODES EURYDICE	EYED BROWN
*SCAPHINOTUS ELEVATUS	GROUND BEETLE
*SCAPHINOTUS VIDUUS	GROUND BEETLE
Schinia spinosae	Noctuid moth
Sisyra fuscata	Spongillafly
SOMATOCHLORA ELONGATA	SKI-TAILED EMERALD
*Speyeria idalia	Regal fritillary
*Sphodros niger	Purse web spider
Stagnicola catascopium	Lymnaeid snail
Stonemyia isabellina	Tabanid fly
Stygobromus tenuis tenuis	Piedmont groundwater amphipod
STYLURUS AMNICOLA	RIVERINE CLUBTAIL
STYLURUS SPINICEPS	ARROW CLUBTAIL
SYNURELLA CHAMBERLAINI	COASTAL POND AMPHIPOD
Tabanus fulvicallus	Horse fly
TETRAGONODERUS FASCIATUS	GROUND BEETLE
*Tibicen auletes	Cicada
TOXORHYNCHITES RUTILUS	MOSQUITO
[*]Valvata sincera	Boreal turret snail
Valvata tricarinata	Turret snail
ZALE CUREMA	NOCTUID MOTH
[*Zale metatoides]	[Noctuid moth]
Zale obliqua	Noctuid moth
[Zale submediana]	[Noctuid moth]
ZANCLOGNATHA MARTHA	NOCTUID MOTH

*Believed Extirpated

(g) The following plant species are determined to be species of special concern:

*Acalypha virginica	Virginia copperleaf
Acer nigrum	Black maple
*Agastache nepetoides	Yellow giant hyssop

Carex woodii	Pretty sedge
[Cassia hebecarpa]	[Wild senna]
[Celastrus scandens]	[American bittersweet]
*Cercis canadensis	Eastern redbud
*CHENOPODIUM RUBRUM	COAST BLITE
COELOGLOSSUM VIRIDE VAR. VIRESCENS	LONG-BRACTED GREEN ORCHID
[*Crassula aquatica]	[Pygmyweed]
*Crotonopsis elliptica	Elliptical rushfoil
*CUPHEA VISCOSISSIMA	BLUE WAXWEED
*Cuscuta coryli	Hazel dodder
*Cynoglossum virginianum	Wild comfrey
*Cypripedium arietinum	Ram's-head lady's-slipper
CYPRIPEDIUM PARVIFLORUM	YELLOW LADY'S-SLIPPER
DESCHAMPSIA CAESPITOSA	TUFTED HAIRGRASS
*Desmodium glabellum	Dillen's tick-trefoil
DESMODIUM HUMIFUSUM	TRAILING TICK-TREFOIL
*Desmodium sessilifolium	Sessile-leaf tick-trefoil
[Dichanthelium ovale var. addisonii]	[Panic grass]
[*Dichanthelium sphaerocarpon var. isophyllum]	[Panic grass]
[*Dichanthelium xanthophysum]	[Panic grass]
Diospyros virginiana	Persimmon
Draba reptans	Whitlow-grass
*DROSERA FILIFORMIS	THREAD-LEAF SUNDEW
DRYOPTERIS GOLDIANA	GOLDIE'S FERN
*Eleocharis microcarpa var. filiculmis	Spike-rush
[*Elymus canadensis var. wiegandii]	[Wiegand's wild rice]
Elymus trachycaulus ssp. subsecundus	Slender wheatgrass
*ELYMUS WIEGANDII	WIEGAND'S WILD RICE
*Equisetum palustre	Marsh horsetail
*Equisetum pratense	Meadow horsetail
[*Eriophorum alpinum]	[Cotton bulrush]
*Galium labradoricum	Bog bedstraw
*Geranium bicknellii	Bicknell's borthern crane's-bill
*GNAPHALIUM PURPUREUM	PURPLE CUDWEED
*Goodyera repens var.ophioides	Dwarf rattlesnake plantain
*Helianthemum dumosum	Bush rockrose
[Hepatica nobilis var. acuta]	[Sharp-lobed hepatica]
*HETERANTHERA RENIFORMIS	KIDNEYLEAF MUD-PLANTAIN
Honkenya peploides	Seabeach sandwort
Hottonia inflata	Featherfoil
*Hybanthus concolor	Green violet
*HYDROCOTYLE VERTICILLATA	WHORLED PENNYWORT
Hydrophyllum virginianum	Virginia waterleaf
*Hypericum adpressum	Creeping St. John's-

PEDICULARIS LANCEOLATA	SWAMP LOUSEWORT
Phaseolus polystachyus var. aquilonius	Wild kidney bean
Picea rubens	Red spruce
PLANTAGO VIRGINICA	HOARY PLANTAIN
*Platanthera dilatata	Tall white bog orchid
Platanthera flava	Pale green orchid
*Platanthera hookeri	Hooker's orchid
*Platanthera orbiculata	Large round-leaved orchid
Podostemum ceratophyllum	Threadfoot
*Polanisia dodecandra	Clammy-weed
POLYGALA CRUCIATA	FIELD MILKWORT
*Polygonum glaucum	Seabeach knotweed
*Potamogeton confervoides	Pondweed
*Potamogeton diversifolius	Water-thread pondweed
*Potamogeton friesii	Fries' pondweed
*Potamogeton pusillus var. gemmiparus	Capillary pondweed
POTAMOGETON STRICTIFOLIUS	STRAIGHT-LEAVED PONDWEED
*Potamogeton vaseyi	Vasey's pondweed
POTENTILLA ARGUTA	TALL CINQUEFOIL
Prunus alleghaniensis	Alleghany plum
*Puccinellia langeana ssp. alaskana	Goose grass
*PYROLA SECUNDA	ONE-SIDED PYROLA
*RANUNCULUS FLAMMULA VAR. FILIFORMIS	CREEPING SPEARWORT
*RANUNCULUS PENSYLVANICUS	BRISTLY BUTTERCUP
[*Ranunculus reptans]	[Creeping spearwort]
Ranunculus scleratus	Cursed crowfoot
Ranunculus subrigidus	White water-crowfoot
*Rhus aromatica	Fragrant sumac
[*Ribes glandulosum]	[Skunk currant]
*Ribes lacustre	Swamp black currant
*Ribes rotundifolium	Wild currant
[*Ribes triste]	[Wild red currant]
Rosa nitida	Shining rose
Rubus cuneifolius	Sand Bramble
*Rumex maritimus var. fueginus	Sea-side dock
*Sabatia dodecandra	Large marsh pink
*Sagittaria cuneata	Waputo
[Sagittaria montevidensis ssp. spongiosus]	[Arrowleaf]
Sagittaria subulata	Arrowleaf
*Salix petiolaris	Slender willow
Salix serissima	Autumn willow
Schizachne purpurascens	Purple oat
*Schwalbea americana	Chaffseed
Scirpus cylindricus	Salt marsh bulrush
Scirpus georgianus	Georgia bulrush
*SCIRPUS HUDSONIANUS	COTTON BULRUSH
*Scirpus longii	Long's bulrush
Scirpus paludosus	Bayonet grass

RECORD OF TELEPHONE CONVERSATION

Stratford Army Engine Plant, Stratford, Connecticut

Date: 3/18/99 @ 11:00

Tetra Tech Staff Member: Shannon Cauley

Contact Name: Mike Ludwig

Agency: National Marine Fisheries Service, Habitat Conservation Division, Milford, CT

Phone Number: 203-579-7094

****

SUMMARY OF CONVERSATION

Contacted Mike Ludwig regarding potential NMFS concerns regarding the proposed action at the Stratford Army Engine Plant. Mr. Ludwig is familiar with the proposed action at the site and said that the Agency has no concerns regarding potential impacts to protected marine species in the area. He said that there are no species of concern present.

Mr. Ludwig said that this personal communication would satisfy NMFS requirements for correspondence regarding the proposed action at Stratford Army Engine Plant.

APPENDIX H

Definition of Key Terms

Appendix H:
Definition of Key Terms

Direct versus Indirect Impacts. The terms *impact* and *effect* are synonymous as used in this EIS. Impacts may be beneficial or adverse and may apply to the full range of natural, aesthetic, historic, cultural, and economic resources of the BRAC parcel and its surrounding area. Definitions and examples of direct and indirect impacts as used in this document are as follows:

- ***Direct Impact.*** A direct impact would be caused by implementation of the proposed action and occur at approximately the same time and place.

- ***Indirect Impact.*** An indirect impact would be caused by implementation of the proposed action and could occur later in time or farther removed in distance but still be a reasonably foreseeable outcome of the action. Indirect impacts may include induced changes in the pattern of land use, population density or growth rate, and related effects on air, water, and other natural and social systems.

- ***Application of Direct versus Indirect Impacts.*** For direct impacts to occur, a resource must be present. For example, if highly erodible soils were disturbed, there could be a direct impact on water quality through storm water runoff. This runoff could indirectly affect aquatic species through sedimentation downstream from the construction site.

Short-Term versus Long-Term Impacts. In addition to indicating whether impacts are direct or indirect, the impact matrix summaries included in this section also distinguish between short- and long-term impacts. In this context, short-term and long-term do not refer to any rigid time period and are determined on a case-by-case basis in terms of the environmental consequences of implementing the proposed action or alternatives.

Cumulative Effects. As stated in 40 CFR 1508.7 (Council on Environmental Quality Regulations), cumulative effects are defined as the "impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions."

Mitigation. Where adverse impacts are identified, this document describes measures that will or could be used to mitigate these effects. Mitigation generally includes:

- Avoiding the impact altogether by stopping or modifying an action.

- Minimizing the impact by limiting the degree or magnitude of the action and the activities associated with its implementation.

- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

- Compensating for the impact by replacing or providing substitute resources or environments.

Mitigation may be ensured through restrictive covenants in a deed, transfer document, or other legal agreements between the party implementing an action and the federal, state, or local government agencies.

Mitigation of adverse impacts associated with the reuse of SVADA BRAC property is generally the responsibility of the federal, state, and local agencies and private entities that implement reuse plans.

Mitigation by non-Army entities that could avoid or reduce adverse impacts caused by reuse, should they be undertaken, are expressed in the conditional (i.e., "could") throughout Section 5.0.

Significance. The term *significance* as used in NEPA requires consideration of both the context and intensity of the effect under consideration. For proposed actions, context may include consideration of effects on a national, regional, or local basis. Both short-term and long-term effects may be relevant.

Effects are also evaluated in terms of their intensity or severity. Factors contributing to an impact's intensity may include:

- The degree to which the action affects public health or safety.
- The proximity of the action to resources that are legally protected by various statutes (e.g., wetlands, regulatory floodplains, federally listed threatened or endangered species, or resources listed in the National Register of Historic Places).
- The degree to which the effects of the action on the human environment are likely to be highly uncertain or controversial.
- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.
- Whether the action threatens to violate federal, state, or local laws imposed for the protection of the environment.

Impact assessment is typically based on an assumption that the full effect of the predicted conditions would occur at once. In reality the projected conditions would likely be less intense than the maximum and would also be likely to happen incrementally rather than all at once. Thus, effects identified may well be less severe than those described here. A brief example of significance criteria for each resource area follows.

- ***Land Use.*** If an alternative would conflict with adopted plans and goals of the community or if it would result in a substantial alteration of the present or planned land use of an area, it could have a significant effect. If an alternative would result in substantial new development or prevent such development elsewhere, it could have a significant indirect impact.
- ***Climate.*** If an action had the effect of substantially altering the weather or climatic parameters of an area, it would be considered significant.
- ***Air Quality.*** An alternative could have a significant air quality impact if it would result in substantially higher air pollutant emissions or cause air quality standards to be exceeded.
- ***Noise.*** An alternative could have a significant noise impact if it would generate new sources of substantial noise, increase the intensity or duration of noise levels to sensitive receptors, or result in exposure of more people to high levels of noise.
- ***Geology.*** If an alternative would result in an increased geologic hazard or a change in the availability of a geologic resource, it could have a significant impact. Such geologic hazards would include, but not be limited to, seismic shaking, land subsidence, and slope instability. Geologic resources would include, but not be limited to, soils, mineral deposits, geothermal resources, and geomorphic features.

- ***Water Resources***. If an alternative were to result in a reduction in the quantity or quality of water resources for existing or potential future uses, it could have a significant impact. Based on existing water rights, a significant impact would occur if the demand exceeded the capacity of the potable water system. Such uses include, but are not limited to, human consumption, irrigation, recreation, protection of wildlife, and aesthetics.

  An alternative could have a significant impact on water resources if it would cause substantial flooding or erosion or subject people or property to flooding or erosion, if it would adversely affect a significant water body such as a stream or lake, or if it would substantially reduce surface water or groundwater quality or quantity. However, under controlled circumstances, flooding can have beneficial environmental impacts to water resources by increasing available wetland habitat for use by wildlife or fishery resources.

- ***Infrastructure***. An alternative could have a significant impact on infrastructure if it would increase demand over capacity, requiring a substantial system expansion, or if it would result in substantial system deterioration over the current condition. For instance, an alternative could have a significant impact on traffic if it would increase the volume of traffic beyond the existing road capacity, cause parking availability to fall below minimum local standards, or require new or substantially improved roadways or traffic control systems.

- ***Hazardous and Toxic Materials***. An alternative could have a significant impact if it would result in a substantial increase or decrease in the generation of hazardous substances, an increase or decrease in the exposure of persons to hazardous or toxic substances, or an increase or decrease in the possibility of release of hazardous or toxic materials to the environment.

- ***Permits and Regulatory Authorizations***. An alternative could have significant impacts on permits and regulatory authorizations if proposed activities or activity levels are not permissible. New permits or regulatory authorizations could be required for any additional activity.

- ***Biological Resources and Ecosystems.*** The effect of an alternative on biological resources and ecosystems could be significant if it would result in the disruption or removal of any federally listed endangered or threatened species, or its habitat, migration corridors, or breeding areas. The loss of a substantial number of individuals of any plant or animal species (sensitive or nonsensitive species) that could affect the abundance of a species or the biological diversity of an ecosystem beyond normal variability could also be considered significant. The measurable degradation of sensitive habitats, particularly wetlands, could be significant.

- ***Cultural Resources***. An alternative could have a significant impact on cultural resources if it would result in unauthorized artifact collecting or vandalism of identified important sites, or modifications to or demolition of a historic building or environmental setting, or if it would promote neglect, resulting in resource deterioration or destruction, audio or visual intrusion, or decreased access to traditional Native American resources. Impact assessment for cultural resources focuses on those properties which are listed in or are considered eligible for the National Register of Historic Places or that are National Historic Landmarks, and resources that are considered sensitive by Native American groups.

- ***Legacy Resources***. An alternative could have a significant impact on legacy resources if it would impair protection or program efforts designed to maintain those resources.

- ***Economic Development***. An alternative could have a significant impact if it would decrease or increase the employment levels in the ROI to a substantial extent.

- ***Socioeconomic Environment.*** If an alternative would alter substantially the location and distribution of the population within the geographic "region of influence," cause the population to exceed historical growth rates, decrease jobs so as to substantially raise the regional unemployment rates or reduce income generation, substantially affect the local housing market and vacancy rates. A need for new schools or other public services could be identified as significant due to a lack of funding for new construction or a lack of space.

- ***Quality of Life.*** An alternative could have a significant impact if it would substantially alter the quality of life in the surrounding area.

- ***Installation Agreements.*** An alternative could have a significant impact on installation agreements if it required any alterations in the current agreements. Such alterations would require the establishment of new Memoranda of Agreement/Memoranda of Understanding or similar interagency or intergovernmental agreements.

APPENDIX I

Record of Non-Applicability Concerning the General Conformity Rule

RECORD OF NON-APPLICABILITY CONCERNING THE GENERAL CONFORMITY RULE (40 CFR Part 51)

The Department of the Army is reducing its force structure in response to changing security requirements, resulting in a need for fewer installations Recommendations of the Defense Base Closure and Realignment Commission made in conformance with the provisions of the Defense Base Closure and Realignment Act of 1990 (1990 Base Closure Act), Public Law 101-510, as amended, require the closure of Stratford Army Engine Plant. The Commission findings stated the Army can sustain the tank engine and helicopter turbine base through Anniston and Corpus Christi Army Depots. The installation property is excess to Army need and will be disposed of according to applicable laws, regulations, and national policy. Pursuant to the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations, the Army has prepared this Environmental Impact Statement (EIS), which addresses the environmental and socioeconomic impacts of disposing of the property and reasonable, foreseeable reuse alternatives. The proposed disposal action requires that the Army complete a conformity review to determine whether the action is subject to the U.S. Environmental Protection Agency's General Conformity Rule (40 CFR Part 51).

SAEP is located in the New Jersey-New York-Connecticut Interstate Air Quality Region which is classified as being in severe nonattainment for ozone (O_3), and moderate nonattainment for carbon monoxide (CO). In addition SAEP resides within the Ozone Transport Region [CAA Section 184.(a)] which includes most of the northeast United States. The air quality region is currently classified as in attainment for nitrogen oxides, sulfur dioxides and particulate matter. The General Conformity Rule provides that actions proposed to occur within nonattainment or maintenance areas must, unless otherwise exempt, be accompanied by a Conformity Determination. Among the recognized exemptions, however, are "transfers of ownership, interests and titles in land, facilities, and real and personal properties, regardless of the form or method of transfer" (40 CFR § 51.853) Because the Army's proposed disposal action will involve the sale or other title transfer of federal property, it has been determined that the action is exempt from the General Conformity Rule requirement to prepare a full Conformity Determination. Impacts on air quality that might occur from reuse of the property do not fall under the General Conformity Rule because they will result from actions taken by the new landowners. It will be the responsibility of these new landowners to meet any requirements for ensuring conformity with federal or state air quality plans.

Proponent: U.S. Army Materiel Command.

Responsible Official: _____ 4 Dec 98
BRAC Environmental Coordinator [Date]
Stratford Army Engine Plant

APPENDIX J

Economic Impact Forecast System (EIFS) Model and Outputs

Appendix J:
Economic Impact Forecast System (EIFS) Model and Outputs

Socioeconomic Impact Assessment

Socioeconomic impacts are linked through cause-and-effect relationships. Installation payrolls and local procurement contribute to the economic base for the region of influence (ROI). In this regard, the reuse of the SAEP BRAC parcel will have a multiplier effect on the local and regional economy. With reuse, direct jobs will be created, generating new income and increasing personal spending. This spending generally creates secondary jobs, increases business volume, and increases revenues for schools and other social services. However, potential in-migration can reduce available housing. In contrast, if reuse is not implemented, jobs will not be created, and any negative economic effects from the realignment of SAEP would remain. This situation could lead to indirect effects, such as reduced income generation, reduced business volume, reduced housing demand, out-migration, and less funding for schools and other social services.

The Economic Impact Forecast System

The US Army, with the assistance of many academic and professional economists and regional scientists, developed the Economic Impact Forecast System (EIFS) to address the economic impacts of NEPA-requiring actions and to measure their significance. As a result of its designed applicability, and in the interest of uniformity, EIFS is mandated by ASA (IL&E) for use in NEPA assessment for Base Closure and Realignment. The entire system is designed for the scrutiny of a populace affected by the actions being studied. The algorithms in EIFS are simple and easy to understand, but still have firm, defensible bases in regional economic theory.

EIFS is included as one of the tools of the Environmental Technical Information System (ETIS) and is implemented as an on-line system supported by USACERL through the University of Illinois. The system is available to anyone with an approved login and password. It is available at all times through toll-free numbers, Telenet, and other commonly used communications. The ETIS Support Center at the university and the staff of USACERL are available to assist with the use of EIFS.

The databases in EIFS are national in scope and cover the approximately 3,700 counties, parishes, and independent cities that are recognized as reporting units by federal agencies. EIFS allows the user to "define" an economic region of influence (ROI) by simply identifying the counties to be analyzed. Once the ROI is defined, the system aggregates the data, calculates "multipliers" and other variables used in the various models in EIFS, and prompts the user for input data.

The EIFS Impact Models

The basis of the EIFS analytical capabilities is the calculation of multipliers that are used to estimate the impacts resulting from Army-related changes in local expenditures and/or employment. In calculating the multipliers, EIFS uses the economic base model approach, which relies on the ratio of total economic activity to "basic" economic activity. Basic, in this context, is defined as the production or employment engaged to supply goods and services outside the ROI or by federal activities (such as military installations and their employees). According to economic base theory, the ratio of total income to basic income is measurable (as the multiplier) and sufficiently stable so that future changes in economic activity can be

forecast. This technique is especially appropriate for estimating "aggregate" impacts and makes the economic base model ideal for the EA/EIS process.

The multiplier is interpreted as the total impact on the economy of the region resulting from a unit change in its basic sector; for example, a dollar increase in local expenditures due to an expansion of its military installation. EIFS estimates its multipliers using a "location quotient" approach based on the concentration of industries within the region relative to the industrial concentrations for the nation.

The user selects a model to be used from a menu of options. EIFS has models for three basic military activity scenarios: standard, construction, and training. The user inputs into the selected model those data elements which describe the Army action: civilian and military to be moved and their salaries, and the local procurement associated with the activity being relocated. Once these are entered into the system, a projection of changes in the local economy is provided. These are projected changes in sales volume, employment, income, and population. These four "indicator" variables are used to measure and evaluate socioeconomic impacts.

EIFS Input and Output Data for Reuse Scenarios

The standard EIFS Forecast Model requires that the user input estimated changes in employment, changes in total expenditures for services and supplies, average income of incoming workers, and the percent of workers expected to relocate from outside of the ROI.

Change in employment is calculated by subtracting the baseline worker population from the number of workers anticipated under each reuse intensity defined in Section 3.0. The average expenditure per employee is calculated from Bureau of Economic Analysis national inter-industry intermediate expenditures per employee that have been weighted to reflect county employment levels. The change in total expenditures for services and supplies is calculated for each reuse intensity by multiplying the expected change in number of workers by the average expenditure per employee for that reuse scenario.

The average income of workers is the average worker earnings for the county or counties in which the installation is located. Percent of workers expected to relocate from outside the ROI varies according to indicators such as unemployment, commuting patterns, etc.

The Significance of Socioeconomic Impacts

Once model projections are obtained, the Rational Threshold Value (RTV) profile allows the user to evaluate the "significance" of the impacts. This analytical tool reviews the historical trends for the defined region and develops measures of local historical fluctuations in sales volume, employment, income, and population. These evaluations identify the positive and negative changes within which a project can affect the local economy without creating a significant impact. The greatest historical changes define the boundaries that provide a basis for comparing an action's impact to the historical fluctuation in a particular area. Specifically, EIFS sets the boundaries by multiplying the maximum historical deviation of the following variables:

		Increase	Decrease
Business Volume	x	100%	75%
Personal Income	x	100%	67%
Total Employment	x	100%	67%
Total Population	x	100%	50%

These boundaries determine the amount of change that will affect an area. The percentage allowances are arbitrary, but sensible. The maximum positive historical is allowed with expansion because economic growth is beneficial. While cases of damaging economic growth have been cited, and although the zero-growth concept is being accepted by many local planning groups, military base reductions and closures generally are more injurious to local economies than are expansions.

The major strengths of the RTV are its specificity to the region under analysis and its basis on actual historical data for the region. The EIFS impact models, in combination with the RTV, have proven successful in addressing perceived socioeconomic impacts. The EIFS model and the RTV technique for measuring the intensity of impacts have been reviewed by economic experts and have been deemed theoretically sound.

The following are the EIFS input and output data for each SAEP reuse intensity scenario, and the RTV values for the ROI. These data form the basis for the socioeconomic impact analysis presented in Section 5.0.

STANDARD EIFS FORECAST MODEL

Project name: SAEP MIR

Default price deflators:
baseline year (ex. business volume) (CPI - 1987) = 100.0
output and incomes (ex b.v.) (CPI - 1993) = 126.3
baseline year (business volume) (PPI - 1987) = 100.0
local services and supplies (PPI - 1993) = 115.7
output and incomes (business volume)(PPI - 1993) = 115.7

(Enter decreases as negative numbers)
If entering total expenditures, enter 1
local expenditures, enter 2 : 1
Change in expenditures for services and supplies: $6,263,435
Change in expenditures for local services and supplies: 4,468,318.50 (calculated)
Change in civilian employment: 86
Average income of affected civilian personnel: $42,141
Percent expected to relocate (enter <cr> to accept default): (0.0) 0
Change in military employment:

********** STANDARD EIFS MODEL FORECAST FOR SAEP MIR **********

Export income multiplier: 3.4892
Change in local
Sales volume ..... Direct: $7,138,000
Induced: $17,766,000
Total: $24,904,000 (0.031%)
Employment ..... Direct: 34
Total: 205 (0.021%)
Income ..... Direct: $781,000
Total (place of work): $6,349,000
Total (place of residence): $6,349,000 (0.014%)
Local population .....: 0 (0.000%)
Local off-base population .....: 0
Number of school children .....: 0
Demand for housing ..... Rental: 0
Owner occupied: 0
Government expenditures.....: $252,000
Government revenues .....: $344,000
Net Government revenues .....: $92,000
Civilian employees expected to relocate: 0
Military employees expected to relocate: 0

STANDARD EIFS FORECAST MODEL

Project name: SEAP MLIR

Default price deflators:
baseline year (ex. business volume) (CPI - 1987) = 100.0
output and incomes (ex b.v.) (CPI - 1993) = 126.3
baseline year (business volume) (PPI - 1987) = 100.0
local services and supplies (PPI - 1993) = 115.7
output and incomes (business volume)(PPI - 1993) = 115.7

(Enter decreases as negative numbers)
If entering total expenditures, enter 1
local expenditures, enter 2 : 1
Change in expenditures for services and supplies: -$103,929,327
Change in expenditures for local services and supplies: -74,142,912.00 (calculated)
Change in civilian employment: -1427
Average income of affected civilian personnel: $42,141
Percent expected to relocate (enter <cr> to accept default): (0.0)
Change in military employment:

********** STANDARD EIFS MODEL FORECAST FOR SEAP MLIR **********

Export income multiplier: 3.4892
Change in local
Sales volume ..... Direct: -$118,434,000
Induced: -$294,800,000
Total: -$413,234,000 (-0.522%)
Employment ..... Direct: -567
Total: -3,406 (-0.352%)
Income ..... Direct: -$12,959,000
Total (place of work): -$105,351,000
Total (place of residence): -$105,351,000 (-0.225%)
Local population .....: 0 (0.000%)
Local off-base population .....: 0
Number of school children .....: 0
Demand for housing ..... Rental: 0
Owner occupied: 0
Government expenditures.....: -$4,187,000
Government revenues .....: -$5,708,000
Net Government revenues .....: -$1,521,000
Civilian employees expected to relocate: 0
Military employees expected to relocate: 0

STANDARD EIFS FORECAST MODEL

Project name: SAEP LIR

Default price deflators:
baseline year (ex. business volume) (CPI - 1987) = 100.0
output and incomes (ex b.v.) (CPI - 1993) = 126.3
baseline year (business volume) (PPI - 1987) = 100.0
local services and supplies (PPI - 1993) = 115.7
output and incomes (business volume)(PPI - 1993) = 115.7

(Enter decreases as negative numbers)
If entering total expenditures, enter 1
local expenditures, enter 2 : 1
Change in expenditures for services and supplies: -$123,302,278
Change in expenditures for local services and supplies: -87,963,528.00 (calculated)
Change in civilian employment: -1,693
Average income of affected civilian personnel: $42,141
Percent expected to relocate (enter <cr> to accept default): (0.0)
Change in military employment:

********** STANDARD EIFS MODEL FORECAST FOR SAEP LIR **********

Export income multiplier: 3.4892
Change in local
Sales volume ..... Direct: -$140,511,000
Induced: -$349,752,000
Total: -$490,263,000 (-0.619%)
Employment ..... Direct: -673
Total: -4,041 (-0.418%)
Income ..... Direct: -$15,375,000
Total (place of work): -$124,989,000
Total (place of residence): -$124,989,000 (-0.267%)
Local population .....: 0 (0.000%)
Local off-base population .....: 0
Number of school children .....: 0
Demand for housing ..... Rental: 0
Owner occupied: 0
Government expenditures.....: -$4,968,000
Government revenues .....: -$6,772,000
Net Government revenues .....: -$1,805,000
Civilian employees expected to relocate: 0
Military employees expected to relocate: 0

RATIONAL THRESHOLD VALUES

AREA: aggregated

BUSINESS VOLUME (using Non-Farm Income)

YEAR	Non-Farm income	adjusted income	change	deviation	%deviation
1969	5,394,321	15,959,530			
1970	5,693,472	15,903,553	-55,977	-504,447	-3.161 %
1971	5,889,624	15,789,877	-113,676	-562,147	-3.535 %
1972	6,402,216	16,586,052	796,175	347,705	2.202 %
1973	7,043,949	17,180,363	594,311	145,840	0.879 %
1974	7,583,920	16,667,956	-512,407	-960,878	-5.593 %
1975	7,870,809	15,836,638	-831,318	-1,279,789	-7.678 %
1976	8,633,747	16,445,232	608,595	160,124	1.011 %
1977	9,643,075	17,250,581	805,349	356,878	2.170 %
1978	10,843,373	18,012,247	761,666	313,196	1.816 %
1979	12,152,590	18,138,194	125,947	-322,524	-1.791 %
1980	13,519,653	17,765,642	-372,552	-821,023	-4.526 %
1981	14,779,661	17,615,805	-149,836	-598,307	-3.368 %
1982	15,714,754	17,676,888	61,083	-387,388	-2.199 %
1983	16,970,474	18,526,719	849,830	401,360	2.271 %
1984	19,152,271	20,202,817	1,676,098	1,227,628	6.626 %
1985	20,945,818	21,351,497	1,148,680	700,209	3.466 %
1986	22,743,987	23,568,898	2,217,402	1,768,931	8.285 %
1987	25,355,260	25,355,260	1,786,362	1,337,891	5.677 %
1988	28,385,141	27,293,405	1,938,145	1,489,674	5.875 %
1989	29,431,864	27,001,710	-291,695	-740,165	-2.712 %
1990	30,308,602	26,424,240	-577,471	-1,025,941	-3.800 %
1991	30,588,831	25,618,786	-805,453	-1,253,924	-4.745 %
1992	32,264,907	26,274,354	655,567	207,097	0.808 %

average yearly change:	448,471
maximum historic positive deviation:	1,768,931
maximum historic negative deviation:	-1,279,789
maximum historic % positive deviation:	8.285 %
maximum historic % negative deviation:	-7.678 %
positive rtv:	8.285 %
negative rtv:	-5.759 %

PERSONAL INCOME

YEAR	Personal income	adjusted income	change	deviation	%deviation
1969	7,848,144	23,219,361			
1970	8,293,083	23,165,037	-54,325	-763,060	-3.286 %
1971	8,683,550	23,280,295	115,259	-593,476	-2.562 %
1972	9,350,950	24,225,260	944,965	236,230	1.015 %
1973	10,165,039	24,792,778	567,518	-141,217	-0.583 %
1974	10,965,787	24,100,631	-692,147	-1,400,882	-5.650 %
1975	11,648,676	23,437,980	-662,651	-1,371,386	-5.690 %
1976	12,761,393	24,307,415	869,436	160,701	0.686 %
1977	14,138,463	25,292,420	985,004	276,270	1.137 %
1978	15,826,888	26,290,511	998,092	289,357	1.144 %
1979	17,860,559	26,657,551	367,039	-341,695	-1.300 %
1980	20,329,007	26,713,545	55,994	-652,741	-2.449 %
1981	22,787,590	27,160,417	446,872	-261,863	-0.980 %
1982	24,466,571	27,521,452	361,035	-347,700	-1.280 %
1983	26,155,112	28,553,616	1,032,164	323,430	1.175 %
1984	29,238,018	30,841,790	2,288,174	1,579,439	5.531 %
1985	31,458,178	32,067,460	1,225,670	516,935	1.676 %
1986	34,054,151	35,289,276	3,221,815	2,513,081	7.837 %
1987	37,043,993	37,043,993	1,754,717	1,045,982	2.964 %
1988	41,131,123	39,549,157	2,505,164	1,796,429	4.849 %
1989	43,646,881	40,043,010	493,853	-214,882	-0.543 %
1990	45,370,067	39,555,421	-487,589	-1,196,324	-2.988 %
1991	45,829,677	38,383,314	-1,172,108	-1,880,843	-4.755 %
1992	48,530,885	39,520,264	1,136,950	428,215	1.116 %

average yearly change:	708,735
maximum historic positive deviation:	2,513,081
maximum historic negative deviation:	-1,880,843
maximum historic % positive deviation:	7.837 %
maximum historic % negative deviation:	-5.690 %
positive rtv:	7.837 %
negative rtv:	-3.812 %

EMPLOYMENT

YEAR	Employment	change	deviation	%deviation
1969	707,998			
1970	705,592	-2,406	-11,732	-1.657 %
1971	692,083	-13,509	-22,835	-3.236 %
1972	704,710	12,627	3,301	0.477 %
1973	735,096	30,386	21,060	2.988 %
1974	747,016	11,920	2,594	0.353 %
1975	722,264	-24,752	-34,078	-4.562 %
1976	735,157	12,893	3,567	0.494 %
1977	763,654	28,497	19,171	2.608 %
1978	798,382	34,728	25,402	3.326 %
1979	826,155	27,773	18,447	2.311 %
1980	839,872	13,717	4,391	0.532 %
1981	851,036	11,164	1,838	0.219 %
1982	852,208	1,172	-8,154	-0.958 %
1983	862,341	10,133	807	0.095 %
1984	903,123	40,782	31,456	3.648 %
1985	927,916	24,793	15,467	1.713 %
1986	947,044	19,128	9,802	1.056 %
1987	967,565	20,521	11,195	1.182 %
1988	995,837	28,272	18,946	1.958 %
1989	984,340	-11,497	-20,823	-2.091 %
1990	963,373	-20,967	-30,293	-3.077 %
1991	934,080	-29,293	-38,619	-4.009 %
1992	922,495	-11,585	-20,911	-2.239 %

average yearly change:	9,326
maximum historic positive deviation:	31,456
maximum historic negative deviation:	-38,619
maximum historic % positive deviation:	3.648 %
maximum historic % negative deviation:	-4.562 %
positive rtv:	3.648 %
negative rtv:	-3.056 %

POPULATION

YEAR	Population	change	deviation	%deviation
1969	1,528,000			
1970	1,540,300	12,300	7,874	0.515 %
1971	1,549,800	9,500	5,074	0.329 %
1972	1,546,100	-3,700	-8,126	-0.524 %
1973	1,543,300	-2,800	-7,226	-0.467 %
1974	1,547,600	4,300	-126	-0.008 %
1975	1,554,200	6,600	2,174	0.140 %
1976	1,555,700	1,500	-2,926	-0.188 %
1977	1,568,300	12,600	8,174	0.525 %
1978	1,559,700	-8,600	-13,026	-0.831 %
1979	1,562,900	3,200	-1,226	-0.079 %
1980	1,570,400	7,500	3,074	0.197 %
1981	1,577,600	7,200	2,774	0.177 %
1982	1,580,800	3,200	-1,226	-0.078 %
1983	1,589,800	9,000	4,574	0.289 %
1984	1,599,300	9,500	5,074	0.319 %
1985	1,608,300	9,000	4,574	0.286 %
1986	1,622,200	13,900	9,474	0.589 %
1987	1,625,000	2,800	-1,626	-0.100 %
1988	1,630,300	5,300	874	0.054 %
1989	1,632,500	2,200	-2,226	-0.137 %
1990	1,632,700	200	-4,226	-0.259 %
1991	1,632,600	-100	-4,526	-0.277 %
1992	1,629,800	-2,800	-7,226	-0.443 %

average yearly change:	4,426
maximum historic positive deviation:	9,474
maximum historic negative deviation:	-13,026
maximum historic % positive deviation:	0.589 %
maximum historic % negative deviation:	-0.831 %
positive rtv:	0.589 %
negative rtv:	-0.415 %

Source: Bureau of Economic Analysis

GLOSSARY

A-Weighted Decibel (dBA)	A number representing the sound level that is frequency-weighted according to a prescribed frequency response established by the American National Standards Institute (ANSI-S1.4-1971) and accounts for the response of the human ear.
Affected Area(s)	Area(s) that have the potential for radioactive contamination (based on facility operating history) or known radioactive contamination (based on past or preliminary radiological survey/surveillance). These would normally include areas where radioactive materials were used and stored, where records indicate spills or other unusual occurrences that could have resulted in the spread of radioactive contamination, and where radioactive materials were buried. Areas immediately surrounding or adjacent to locations where radioactive materials were used or stored, spilled, or buried are included in this classification because of the potential for the inadvertent spread of radioactive contamination. Affected areas are further divided into those areas of elevated residual radioactivity in excess of the regulatory guideline levels and those in which such areas of elevated radioactivity would *not* be anticipated. (If there is any doubt, the area should be designated as an affected area.)
Affected/Non-Uniform Area	An affected area that has the potential for a non-uniform or spotty residual radioactivity pattern. Indoor survey units classified as affected/non-uniform generally consist of a single room. NOTE: Any area that has been remediated or decontaminated will be designated as affected/non-uniform. In general, all areas shall be treated as affected/non-uniform until substantial bases are provided to reclassify them as affected/uniform, unaffected, or non-impact area.
Affected/Uniform Area	An affected area with little or no potential for non-uniform or spotty residual radioactivity.
Ambient Air Quality Standards	Standards established on a state or federal level that define the limits for airborne concentrations of designated criteria pollutants (nitrogen dioxide, sulfur dioxide, carbon monoxide, ozone, lead), to protect public health with an adequate margin of safety (primary standards) and public welfare, including plant and animal life, visibility, and materials (secondary standards).
Artifact	Any product of human cultural activity; more specifically, any tool, weapon, artwork, etc., found in an archeological contexts.
Asbestos	A carcinogenic substance formerly used widely as an insulation material by the construction industry and often found in older buildings.
Attainment Area	An area that meets the National Ambient Air Quality Standards for a criteria pollutant under the Clean Air Act or meets state air quality standards.
Capacity (Transportation)	The maximum rate of flow at which vehicles can reasonably be expected to traverse a point or uniform segment of a lane or roadway during a specified time period under prevailing roadway, traffic, and control conditions.
Capacity (Utilities)	The maximum load a system is capable of carrying under existing service

	conditions.
Competitive Sale	Sale to the public would occur through either an invitation for bids or an auction.
Council on Environmental Quality (CEQ)	Established by the National Environmental Policy Act (NEPA), the CEQ consists of three members appointed by the President. CEQ regulations (40 CFR Parts 1500-1508, as of July 1, 1986) describe the process for implementing NEPA, including preparation of environmental assessments and environmental impact statements, and timing and extent of public participation.
Cultural History	The archeological sequence of cultural activity through time, within a defined geographic space or relating to a particular group.
Cultural Resource	Prehistoric or historic district sites, buildings, objects, or any other physical evidence of human activity considered important to a culture, subculture, or community for a scientific, traditional, religious, or other reason.
Cumulative Effects	Impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions.
Day-Night Average Sound Level (Ldn)	The 24-hour average-energy sound level expressed in decibels, with a 10-decibel penalty added to sound levels between 10.00 p.m. and 7:00 a.m. to account for increased annoyance due to noise during the night.
Decibel (dB)	A unit of measurement on a logarithmic scale that describes the magnitude of a particular quantity of sound pressure or power with respect to a standard reference value.
Developed	Said of land, a lot, a parcel, or an area that has been built upon, or where public services have been installed prior to residential or commercial construction.
Direct Impact	An impact caused by an action and occurring near the same time and place.
Disposal	Legal conveyance of Army property to other ownership.

Economic Development Conveyance	The 1994 Defense Authorization Act provides for conveyance of property to an LRA at or below fair market value using flexible payment terms. The EDC is designed to promote economic development and job creation in the local community. An EDC is not intended to supplant other federal property disposal authorities and cannot be used if the proposed reuse can be accomplished through another authority. If certain criteria are met for a rural installation, an EDC may be made at no cost. To qualify for an EDC, the LRA must submit a request to the Department of the Army describing its proposed economic development and job creation program
Encumbrance	Any Army-imposed or legal constraint on the future use or development of property to be disposed of. Encumbrances, whether restrictive or for planning purposes only, may be natural or may result from Army activities or decisions.
Endangered Species	A species that is threatened with extinction throughout all or a significant portion of its range.
Environmental Impact Statement (EIS)	A document required of federal agencies by the National Environmental Policy Act for major projects or legislative proposals significantly affecting the environment. A tool for decision making, the EIS describes the positive and negative effects of the undertaking and lists alternative actions.
Groundwater	Water within the earth that supplies wells and springs.
Hazard Rating System	A system that provides a uniform method of scoring or ranking of the potential risk of a facility site where a hazardous substance has been present. EPA developed the HRS to prioritize its cleanup efforts. EPA evaluates the draft HRS packages and proposes any facilities scoring 28.5 or higher for inclusion on the National Priorities List (NPL). Facilities listed on the NPL receive the highest priority for cleanup.
Hazardous Substance	A substance or mixture of substances that poses a substantial present or potential risk to human health or the environment; any substance designated by EPA to be reported if a designated quantity of the substance is spilled in the waters of the United States or otherwise released into the environment.
Hazardous Waste	A waste or combination of wastes that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either cause or significantly contribute to an increase in mortality or an increase in serious irreversible illness, or may pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Regulated under the Resource Conservation and Recovery Act.
Hazardous Substance Accumulation Area	An area that may store a hazardous substance for up to 90 days.
Hazardous Substance Storage Area	An area that may store a hazardous substance for up to one year.

Historic	A period of time after the advent of written history dating to the time of first Euro-American contact in an area. Also refers to items primarily of Euro-American manufacture.
Impact Assessment	An assessment of the meaning of changes in all attributes being studied for a given resource; an aggregation of all the adverse effects, usually measured using a qualitative and nominally subjective technique.
Indirect Impact	An impact that is caused by an action and may occur later in time or farther removed in distance but still be a reasonably foreseeable outcome of the action.
Infrastructure	The basic installations and facilities on which the continuance and growth of a locale depend (roads, schools, power plants, transportation, and communication systems).
Installation Restoration Program (IRP)	A program established by the Department of Defense to meet requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and the Superfund Amendments and Reauthorization Act of 1986 that identifies, assesses, and cleans up or controls contamination from past hazardous waste disposal practices and hazardous material spills.
Land Use Plans and Policies	Guidelines adopted by governments to direct future land use within their jurisdictions.
Long-term Impacts	Impacts that would occur over an extended period of time, whether they start during the construction or operations phase. Most impacts from the operations phase are expected to be long-term in nature since program operations essentially represent a steady-state condition (i.e., impacts resulting from actions that occur repeatedly over a long period of time). However, long-term impacts could also be caused by construction activities if a resource is destroyed or irreparably damaged or if the recovery rate of the resource is very slow.
McKinney Act	Act that gives recognized providers of assistance to the homeless a high priority in acquiring unneeded land and buildings on federal properties. The property can be used only for the homeless and only for 2 years. The homeless provider must be able to finance upgrades of facilities, pay a proportionate share of municipal service costs, and fund its program operations.
Mitigation	A method or action to avoid, minimize, rectify, reduce, or compensate for program impacts.
National Environmental Policy Act (NEPA)	Public Law 91-190, passed by Congress in 1969, established a national policy designed to encourage consideration of the influence of human activities on the natural environment. NEPA also established the Council on Environmental Quality. NEPA procedures require that environmental information be made available to the public before decisions are made.
National Pollutant Discharge Elimination System (NPDES)	A provision of the Clean Water Act that prohibits discharge of pollutants into waters of the United States unless a special permit is issued by EPA or an authorized state.

National Priorities List (NPL)	A list of sites where releases of hazardous materials might have occurred and might pose an unreasonable risk to the health and safety of individuals, property, or the environment.
Native Americans	Used in the collective sense to refer to individuals, bands, or tribes that trace their ancestry to indigenous populations of North America prior to Euro-American contacts.
Negotiated Sale	The Army would negotiate the sale of the property to state or local governmental entities including tribal governments or private parties at fair market value.
Non-impacted Area	Any area that has no potential for residual radioactive contamination.
Ordnance and Explosives (O&E)	Bombs and warheads, guided and ballistic missiles; artillery and mortar; rocket ammunition, mines; demolition charges, pyrotechnics, grenades; containerized and uncontainerized explosives and propellants; military chemical agents; and all similar and related items or components, explosive in nature or otherwise designed to cause damage to personnel or material. Soils with explosive constituents are considered O&E if the concentration is sufficient to be reactive and present an imminent safety hazard.
PCB-contaminated Equipment	Equipment that contains a concentration of polychlorinated biphenyls (PCBs) from 50 to 449 ppm or greater. Disposal and removal are regulated by EPA.
Peak Hours	The hours of highest traffic volume on a given section of roadway, usually between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m.
Permit	An authorization, license, or equivalent control document to implement the requirements of an environmental regulation.
Polychlorinated Biphenyls (PCBs)	Any of a family of industrial compounds produced by chlorination of biphenyl. These compounds are noted chiefly as an environmental pollutant that accumulates in organisms and concentrates in the food chain with resultant pathogenic and teratogenic effects. They also decompose very slowly.
Potable Water	Water that is suitable for drinking.
Prehistoric	The period of time before the written record.
Prehistory	The archeological record of nonliterate cultures; the cultural past before the advent of written records.
Public Benefit Discount Conveyance	State or local government entities may obtain property at less than fair market value when sponsored by a federal agency for uses that would benefit the public such as education, parks and recreation, wildlife conservation, or public health
Radioactive Material	A material that spontaneously emits ionizing radiation.
Radon	A colorless, naturally occurring, radioactive, inert gaseous element formed by radioactive decay of radium in soil or rocks.

Record of Decision (ROD)	A document prepared under the federal government that documents the reasoning behind a decision.
Region of Influence	For each resource, the region affected by the proposed action or alternatives and used for analysis in the affected environment and impact discussion.
Remedial Investigation (RI)	An investigation performed to more fully define the nature and extent of the contamination at a site and evaluate possible methods of cleaning up the site. During the investigation, groundwater, surface water, soil, sediment, and biological samples are collected and analyzed to determine the type and concentration of each contaminant. Samples are collected at different areas and depths to help determine the spread of contamination.
Removal Actions	In the event of an immediate threat or potential threat to human health or the environment, a short-term mitigating or cleanup action may be implemented. The goal of the removal action is to isolate the contamination hot spots and their source from all biological receptors. Usually, removal actions do not completely clean up a site and additional remediation steps are required.
Runoff	The noninfiltrating water entering a stream or other conveyance channel shortly after a rainfall event.
Short-term Impacts	Transitory effects of the proposed program that are of limited duration and are generally caused by construction activities or operations start-up.
Significance	The importance of a given impact on a specific resource as defined under the Council on Environmental Quality regulations.
Soil Type	A category or detailed mapping unit used for soil surveys based on phases or changes within a soil series (e.g., slope, salinity).
Solid Waste Management	Supervised handling of waste materials from their source through recovery processes to disposal.
State Historic Preservation Officer (SHPO)	The official within each state, authorized by the state at the request of the Secretary of the Interior to act as a liaison for purposes of implementing the National Historic Preservation Act.
Surface Water	All water naturally open to the atmosphere and all wells, springs, or other collectors directly influenced by surface water.
Threatened Species	Plant and wildlife species likely to become endangered in the foreseeable future.
Toxic	Harmful to living organisms.
Transfer	To deliver U.S. government property accountability to another federal agency.
Unaffected Area	Any area that is not expected to contain any residual radioactivity, based on knowledge of site history and previous radiological survey information.

Unexploded Ordnance (UXO)	An item of ordnance that has failed to function as designed, or has been abandoned or discarded, and is still capable of functioning and causing injury to personnel or material.
U.S. Environmental Protection Agency (EPA)	The independent federal agency established in 1970 to regulate federal environmental matters and oversee the implementation of federal environmental laws.
Wetlands	Areas that are inundated or saturated with surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil. This classification includes swamps, marshes, bogs, and similar areas. Jurisdictional wetlands are those wetlands which meet the vegetation, soils, and hydrology criteria under normal circumstances (or meet the special circumstances as described in the U.S. Army Corps of Engineers' 1987 wetland delineation manual where one or more of these criteria may be absent) and are a subset of "waters of the United States."
Zoning	The division of a municipality into districts for the purpose of regulating land use, types of buildings, required yards, necessary off-street parking, and other prerequisites to development. Zones are generally shown on a map, and the text of the zoning ordinance specifies requirements for each zoning category.

ACRONYMS AND ABBREVIATIONS

AADT	average annual daily traffic
ACHP	Advisory Council on Historic Preservation
ACM	asbestos-containing material
ADA	Americans with Disabilities Act
ADT	average daily traffic
AIRFA	American Indian Religious Freedom Act of 1978
ARPA	Archaeological Resources Protection Act
AST	aboveground storage tank
BEA	Bureau of Economic Analysis
BLS	Bureau of Labor Statistics
BRAC	Base Realignment and Closure
BTU	british thermal unit
CAA	Clean Air Act
CCMP	Connecticut Coastal Management Program
CDF	Cyanide Destruction Facility
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERFA	Community Environmental Response Facilitation Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
C.G.S.	Connecticut General Statutes
CTDEP	Connecticut Department of Environmental Protection
CWA	Clean Water Act
CWTP	Chemical Waste Treatment Plant
CZMA	Coastal Zone Management Act
DoD	Department of Defense
DODEC	Department of Defense Environmental Category
EBS	Environmental Baseline Survey
EDC	economic development conveyance
EIFS	Economic Impact Forecast System
EIS	Environmental Impact Statement
EO	Executive order
EPA	Environmental Protection Agency
ERC	Emission Reduction Credit
ESA	Endangered Species Act
ESE	Environmental Science and Engineering
F	Fahrenheit
FAA	Federal Aviation Administration
FAR	floor area ratio
FEMA	Federal Emergency Management Act
FOSL	Finding of Suitability to Lease
FOST	Finding of Suitability to Transfer
ft^2	square foot/feet
FY	fiscal year
gpd	gallons per day
gpm	gallons per minute
HAP	hazardous air pollutant
HIR	high intensity reuse
HQDA	Headquarters, Department of the Army
kW	kilowatt
LBP	lead-based paint
LIR	low intensity reuse
LOS	level of service
LRA	Local Redevelopment Authority
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MIR	medium intensity reuse
MHIR	medium-high intensity reuse
MLIR	medium-low intensity reuse
MOA	Memorandum of Agreement
MSL	mean sea level
NA	not applicable
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OATP	Oil Abatement Treatment Plant
PCB	polychlorinated biphenyl
pCi/L	picocuries per liter
psi	pounds per square inch
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
ROI	region of influence
RTV	rational threshold value
SARA	Superfund Amendments and Reauthorization Act
SAEP	Stratford Army Engine Plant
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SWPCF	Stratford Water Pollution Control Facility

USACE	United States Army Corps of Engineers
U.S.C.	United States Code
USDOC	United States Department of Commerce
USDOI	United States Department of the Interior
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UXO	unexploded ordnance

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CERFA	Community Environmental Response Facilitation Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
C.G.S.	Connecticut General Statutes
CTDEP	Connecticut Department of Environmental Protection
CO	carbon monoxide
CWA	Clean Water Act
CWTP	Chemical Waste Treatment Plant
CZMA	Coastal Zone Management Act
dBC	C-weighted decibel scale
DoD	Department of Defense
DODEC	Department of Defense Environmental Category
EBS	Environmental Baseline Survey
EDC	economic development conveyance
EIFS	Economic Impact Forecast System
EIS	Environmental Impact Statement
EO	Executive order
EPA	Environmental Protection Agency
ERC	Emission Reduction Credit
ESA	Endangered Species Act
ESE	Environmental Science and Engineering
F	Fahrenheit
FAA	Federal Aviation Administration
FAR	floor area ratio
FEMA	Federal Emergency Management Act
FOSL	Finding of Suitability to Lease
FOST	Finding of Suitability to Transfer
ft^2	square foot/feet
FY	fiscal year
gpd	gallons per day
gpm	gallons per minute
HAP	hazardous air pollutant
HIR	high intensity reuse
HQDA	Headquarters, Department of the Army
ICUZ	Installation Compatibility Use Zone
IRP	Installation Restoration Program
kV	kilovolt
kVA	kilovolt-ampere
kW	kilowatt
LBP	lead-based paint
Ldn	day-night noise level
LIR	low intensity reuse
LOS	level of service
LQG	large quantity generator
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NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
NRHP	National Register of Historic Places
O_3	ozone
OATP	Oil Abatement Treatment Plant
OEDC	Overall Economic Development Committee
PCB	polychlorinated biphenyl
pCi/L	picocuries per liter
psi	pounds per square inch
RAB	Restoration Advisory Board

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ROD	Record of Decision
ROI	region of influence
RTV	rational threshold value
SARA	Superfund Amendments and Reauthorization Act
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UST	underground storage tank
UXO	unexploded ordnance
vpd	vehicles per day
vph	vehicles per hour