



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I

RESOURCE CONSERVATION AND RECOVERY ACT
CORRECTIVE ACTION PROGRAM
FINAL DECISION AND RESPONSE TO COMMENTS

for

LAKE SUCCESS BUSINESS PARK REMEDY I FOR TREATMENT OF SOILS
BRIDGEPORT, CONNECTICUT

MARCH 1997

INTRODUCTION

From August 20 through November 13, 1996, the United States Environmental Protection Agency (EPA) held an 86-day public comment period on a cleanup proposal, or *proposed remedy*, for treatment of contaminated soils at Lake Success Business Park (LSBP) in Bridgeport, Connecticut. This proposal was set out in the document entitled the "Statement of Basis for the Remedy for Treatment of Soils at Lake Success Business Park," August 1996. All comments received during the public comment period were carefully considered by the EPA during selection of the remedy. The proposed remedy, as set out in the Statement of Basis, was modified as a result of comments received by the EPA during the public comment period. The EPA believes that these modifications will result in a remedy that is more protective to the community surrounding Lake Success Business Park than that which was originally proposed in the August 1996 Statement of Basis.

The EPA's final decision on this remedy is set out in this Final Decision and Response to Comments. The purpose of this document is:

- To set forth the Remedy for Treatment of Soils at Lake Success Business Park and explain how the initial remedy proposal was modified to reflect public concerns;
- To expand the Corrective Action Management Unit at Lake Success Business Park from 7 acres to 24 acres, as shown in Figure 3;
- To approve Area of Environmental Concern 1-13 (shown in Figure 2) as needing no further Corrective Action; and
- To present the comments raised during the public comment period on the proposed Remedy for Treatment of Soils at Lake Success Business Park and provide the EPA's responses.

The major sections of this document and their corresponding descriptions and page numbers are listed on the following page to aid the reader. A glossary of acronyms and terms frequently used in this document is provided in Attachment II.

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BACKGROUND

Lake Success Business Park (LSBP), formerly Remington Arms Park, occupies approximately 435 acres in northern Bridgeport, CT, partially overlapping the western Stratford, CT border (see Figure 1). The Union Metallic Cartridge Company purchased most of the property around 1905, then merged with the Remington Arms Company in 1912. Remington Arms produced, tested, stored, and disposed small and large caliber ammunition, powders, and associated wastes on the property until 1989 when most operations ceased. The property became known as Lake Success Business Park after the E.I. DuPont de Nemours Company sold the trademark of the Remington Arms Company, which had been their wholly owned subsidiary. The property then came into the possession of the current owner, Sporting Goods Properties, Inc. (SGPI), also a wholly owned subsidiary of DuPont.

Under the EPA's Resource Conservation and Recovery Act Corrective Action authority, the EPA and Remington Arms entered an Administrative Consent Order (ACO), pursuant to Section 3008(h) of the Resource Conservation and Recovery Act (RCRA) in 1990. The ACO (RCRA Docket Number I-90-1005) required Remington Arms, and now SGPI, to investigate areas of LSBP where releases, spills, or discharges of hazardous substances may have occurred. The ACO also required SGPI to propose cleanup strategies for areas where contamination presents an unacceptable risk to human health or the environment. Under the ACO, Remington Arms conducted an initial site investigation and submitted the results to the EPA in December 1992. To date, 51 *Areas of Environmental Concern* have been identified where discharges of hazardous substances are suspected to have occurred. Based on the results of site investigations at LSBP, the most widespread soil contaminant on-site is lead. Other metals present in soils at much lower levels include antimony, arsenic, barium, copper, mercury, nickel, and strontium. Polycyclic aromatic hydrocarbons (PAHs) occur less frequently on-site. Additional site investigations will be conducted during the next few years.

Implementation of the Remedy for Treatment of Soils at LSBP will comprise one phase of a series of investigation and cleanup activities necessary to clean up the property as a whole. Following completion of this remedy, the EPA expects that a second phase of cleanup will remove ammunition disposed in Lake Success. A third phase, supported by additional site investigation, will address any remaining contaminated areas. As with the Remedy for Treatment of Soils, the public will be kept informed of the progress of subsequent investigation and cleanup activities. Opportunities will be provided for public involvement in subsequent remedy decisions at LSBP.

SELECTED REMEDY

Soil to be treated as part of this remedy will be excavated from 37 Areas of Environmental Concern on the LSBP property. These 37 Areas of Environmental Concern are shown on Figure 2 (attached) and are identified by number. They include the following: Areas of Environmental

Concern 1-1, 1-2, 1-4, 1-11, 1-12, 1-15, 1-17, 2, 3-1, 3-3, 3-4, 4-1, 4-2, 4-3, 5-1, 5-2, 5-3, 6-1, 6-2, 6-3, 6-5, 7, 8-3, 9-4, 9-5, 9-6, 9-7, 11, 12, 13, 15, 16, 17, 18, 20, 22, and 24.

To ensure that soils in Areas of Environmental Concern which present an unacceptable risk to human health and the environment are excavated and treated, the EPA has set standards for cleanup known as *Media Protection Standards* (MPSs). MPSs are site- and media-specific concentrations of hazardous substances developed as part of the overall cleanup standards for a site. MPSs are designed to protect human health and the environment.

The reasonably anticipated future use of a property undergoing cleanup is an important consideration in developing MPSs. Future use of the land will affect the types and frequency of human exposures that may occur to any residual contamination remaining on the site. In most cases, residential use of a property (i.e., for housing) is the land use where human activities are associated with the greatest exposure, particularly to soils. Human exposures to soils on property used for industrial/commercial purposes are generally much lower. Therefore, soil MPSs appropriate for industrial/commercial land use generally allow higher concentrations of contaminants to remain in soil than would soil MPSs appropriate for residential land use. However, as human exposure to soil on industrial/commercial properties is much less than on residential properties, the respective MPSs for these properties can result in the same level of overall protection of human health (EPA, 1995a).

It is EPA policy that contaminated soil at an industrial site might be cleaned up to be sufficiently protective for industrial use, but not residential use, if there is reasonable certainty that the site would remain industrial (EPA, 1990; EPA, 1996a). The EPA believes there is reasonable certainty that the future use of the property will be industrial based on the following information:

- the current industrial zoning of the LSBP property,
- SGPI's plans to develop the property as a business park,
- support for SGPI's development plans on the part of the local governments in Bridgeport and Stratford, and
- public input received by local governments on SGPI's development plans.

The EPA proposed MPSs in the August 1996 Statement of Basis which were designed to protect human health and the environment, given the reasonably expected future use of the property as a business park. However, during the public comment period, the EPA gained new information on the potential accessibility of the LSBP property by the public under its current use and its proposed future use as a business park. This information was gained from public comments, informal discussions with residents living near the property, and information presented on the future development plans for the property. Based on this information, the EPA has modified the remedy to provide greater protection of human health to the community surrounding the LSBP property.

The final remedy decision includes an additional specification that contaminated upland soils in any Areas of Environmental Concern addressed in this remedy within a "buffer zone" be cleaned up according to the State of Connecticut residential Direct Exposure Criteria (Regulations of Connecticut State Agencies Section 22a-133k-2). This buffer zone, illustrated in Figure 4 (attached), will extend inward for a distance of 200 feet from the property line along the entire site perimeter. Areas of Environmental Concern addressed in this remedy that are fully or partially included in this buffer zone include Areas of Environmental Concern 1-4, 1-11, 1-13, 1-17, 3-1, 3-3, 11, and 24. Soils in this buffer zone will be excavated so that remaining soils achieve the State of Connecticut residential Direct Exposure Criteria (listed in Table 1), unless those soils are *inaccessible*. Inaccessible soils are as defined in the Connecticut Remediation Standard Regulations (Regulations of Connecticut State Agencies, Section 22a-133k-1). In general, inaccessible soils include soils which are: more than four feet below the ground surface, more than two feet below a paved surface, or beneath an existing building or structure. Inaccessible soils in this buffer zone will be cleaned up to the MPSs listed in Table 2 which the EPA has approved for soils in remaining areas of the property.

The additional cleanup of soils in the buffer zone is primarily designed to protect young children who live in homes near the LSBP property. These children could frequently trespass on the LSBP property if portions of the perimeter fence fall into disrepair. A width of 200 feet has been selected for this buffer zone because it is a distance beyond which frequent trespassing by young children (i.e., younger than age 6) would not be expected to occur. There are some areas along the LSBP property perimeter which are currently bordered by roadways or industrial or commercial establishments. Trespassing by young children in these areas is unlikely under current conditions. However, as the land use of these properties could change in the future, the final decision specifies that the buffer zone extend along the entire perimeter of LSBP. The buffer zone was designed primarily to protect young children, because they generally have greater exposure to contaminants in soils than do older children or adults. Much of their exposure occurs due to ingestion of soil, as they play on the ground and frequently stick their hands in their mouth. Therefore by protecting young children, the buffer zone MPSs will be protective for the entire surrounding community.

For the soils addressed under this remedy on the remaining interior portions of the LSBP property (outside the buffer zone shown in Figure 4), approved MPSs are identical to those proposed in the August 1996 Statement of Basis. These MPSs are listed in Table 2, attached. They are slightly more stringent than the Connecticut Remediation Standard Regulations industrial/commercial Direct Exposure Criteria (Regulations of Connecticut State Agencies Sections 22a-133k-2) and are protective for human health based on exposures likely to occur under the current use and the proposed future use of the property as a business park. These MPSs are also *conditional* on an industrial/commercial future use of the property. Therefore, if the future use plans for the property change, the MPSs in this remedy will be reevaluated and modified, if necessary, to ensure that the level of cleanup is consistent with the use of the

property.

Prior to proposing the industrial/commercial MPSs (listed in Table 2) in the August 1996 Statement of Basis, the EPA analyzed risks to the surrounding community from lead, the primary site contaminant. The EPA chose child trespassers, age six years or older, as the subject of this risk analysis. It is not expected that children younger than six years old would trespass on the property further than the extent of the 200-foot buffer zone. Results of this risk analysis showed the MPS for lead (1,000 milligrams lead per kilogram soil) to be fully protective for children, age six years or older, trespassing as often as every day on the LSBP property. Through this risk analysis, EPA also found that soil achieving the MPS for lead, if tracked into homes by such child trespassers, would not present an unacceptable risk to younger siblings. This risk analysis focused on children because they are more sensitive than adults to the effects of lead. Based on this risk analysis, EPA believes that the MPSs for the 200-foot buffer zone and remaining portions of the property will be fully protective for the health of the community surrounding the LSBP property, given its proposed future use as a business park.

The MPS for lead approved for the contaminated off-site residential properties in Area of Concern 24 is an average value of 400 milligram lead per kilogram soil, with no single post-excavation sample to exceed 500 milligrams lead per kilogram soil. This MPS was developed to protect human health based on exposures to soil on residential properties. This MPS is also identical to that proposed in the August 1996 Statement of Basis.

Besides meeting the final MPSs, this remedy will be consistent with the Connecticut Department of Environmental Protection's Remediation Standard Regulations (Regulations of Connecticut State Agencies Sections 22a-133k-1 through 22a-133k-3 and 22a-133q-1) and all applicable State of Connecticut and Federal laws and policies.

EPA will not grant final approval of the completed remedy or portions of the remedy unless and until an Environmental Land Use Restriction (per Regulations of Connecticut State Agencies Section 22a-133q-1) is placed on the entire LSBP property. An Environmental Land Use Restriction is a restrictive covenant recorded on the municipal land records. These restrictions run with the land and bind the owner of the land and his successors and assigns to certain requirements and terms. Specifically, the Environmental Land Use Restriction to be placed on the LSBP property will prohibit any *residential activity* from taking place on the property. Residential activity is defined by the State of Connecticut (Regulations of Connecticut State Agencies, Section 22a-133k-1) as any activity related to the establishment or operation of a residence, dwelling, school, hospital, day care center, playground, or outdoor recreational area. Thus, the Environmental Land Use Restriction will effectively prohibit the establishment of any of the above activities on the entire 435-acre LSBP property.

The State of Connecticut requires that a property owner who is operating under an Environmental

Land Use Restriction include provisions in any lease, grant or other transfer of interest in the property requiring the lessee, grantee, or transferee to comply with the terms of the Environmental Land Use Restriction. The terms of an Environmental Land Use Restriction are enforceable by the State of Connecticut (Section 22a-133p of the General Statutes). If SGPI is unable or unwilling to place an Environmental Land Use Restriction on the entire LSBP property, EPA will reevaluate the MPSs set out as part of this remedy, and revise them if necessary.

In the future, an owner and/or developer of the LSBP property could petition the State of Connecticut to release parcels of the property from the limitations of the Environmental Land Use Restriction (Regulations of Connecticut State Agencies Section 22a-133q-1). However, such a petition will not be granted unless the individual proposing the alteration in the restriction can show that the parcel has been cleaned up to levels fully protective of human health for any future use of the parcel (e.g., for residential use or non-residential use). Release of any parcel of the property from the Environmental Land Use Restriction must be reviewed and approved by the Connecticut Department of Environmental Protection (CT DEP) Commissioner.

Soil washing is expected to be the primary technology used to treat contaminated soils excavated from the 37 Areas of Environmental Concern identified above. However, EPA may accept the use of other treatment methods as necessary to achieve the Media Protection Standards identified in this Final Decision and Response to Comments.

Soil washing refers to a range of physical and chemical treatment steps that separate and wash batches of soil. Fine portions of soil (e.g., silt, clay, or organic matter), to which metals and other contaminants generally adhere, are separated from coarse portions of soil (e.g., sand and gravel). Metal particles, which are heavier than soil particles, are separated by weight. Through this process, portions of the soil with higher levels of metals and other contaminants are separated from less contaminated and/or uncontaminated soil. Once separated, soils with these higher levels of contaminants will be disposed off-site in an appropriate disposal facility. If feasible, lead from contaminated soils may be recovered and recycled at an off-site recycling facility. Remaining treated soils that achieve the MPSs identified in this Final Decision and Response to Comments, and all applicable State of Connecticut and Federal standards and regulations, may be reused on-site.

Before treatment by soil washing, contaminated soils will be excavated from the 37 Areas of Environmental Concern listed on page 4 of this document. Soils will then be stockpiled in the on-site *Corrective Action Management Unit*. A Corrective Action Management Unit (CAMU) is an area of a site designated by EPA to be used for storage of contaminated soil, sediment, or debris excavated during Corrective Action. The purpose of a CAMU is to facilitate cleanup activities by allowing for storage of cleanup waste in compliance with other RCRA regulations. The CAMU was designated at LSBP, pursuant to 40 CFR Part 264.552, in 1994 (RCRA Docket Number I-90-1005), following a public comment period. This remedy increases the area of the CAMU from

its original 7 acres to 24 acres, as shown in Figure 3. The expanded CAMU will provide increased area for soil storage prior to soil washing, soil treatment, and placement of treated soils that meet the MPSs and the State of Connecticut Remediation Standard Regulations. Any management of contaminated media conducted on the CAMU must have prior approval by the EPA. Contaminated soils or other media stored or treated on the CAMU must be managed in a way that fully prevents release of contaminants to the environment.

As described in the August 1996 Statement of Basis, soil washing was evaluated against three other alternative methods of soil cleanup: *stabilization*, *off-site disposal of soils with no prior treatment*, and *no action*. These alternatives are described below:

- Stabilization would involve excavating soil and mixing it with a cement-like substance to immobilize contaminants. This solidified soil can then be disposed in an off-site disposal facility.
- Off-site disposal of soils with no prior treatment would involve excavating soils and, with no further treatment, disposing of them in an off-site disposal facility.
- No action would involve no further cleanup. This alternative is evaluated for comparison purposes.

All of the alternatives, except the “no action” alternative, would provide overall protection of human health and the environment by removing contaminated soil in the designated Areas of Environmental Concern so that remaining soil complies with the approved MPSs. All alternatives except the “no action” alternative would be effective in controlling the sources of future releases of contaminants from soil to groundwater, surface water, air, and sediments onsite and would comply with standards for management of waste. As “no action” did not meet these criteria, it was not considered further in this evaluation.

The EPA believes that soil washing is preferable to stabilization or off-site disposal for several reasons:

- As soil washing separates contaminated soil from less contaminated or uncontaminated soil, it greatly reduces the volume of wastes to be disposed off-site and enables up to 60 to 80% of treated soils to be reused on-site. Off-site disposal with no prior treatment would not reduce the volume or toxicity of soil, but would contain it in a hazardous waste disposal facility designed to prevent release of contaminants to the environment. Stabilization does not remove contaminants from soil, but reduces the mobility of contaminants. As stabilization is conducted by mixing soil with a cement-like substance, it would increase soil volumes and could increase the weight of soil for off-site disposal by as much as 15 to 20%.
- Impacts to the surrounding community and environment during soil washing are expected to be less than for off-site disposal or stabilization. Because soil washing greatly reduces the volume of wastes, a lower volume of wastes would need to be trucked off-site for disposal

following treatment by soil washing than by stabilization or off-site disposal. Stabilization, off-site disposal, and soil washing would each involve excavation and transport of soil on-site. Therefore, for each of these methods, airborne dust would be the primary route of potential exposure to contaminants. During the Soil Washing Pilot Study, which SGPI conducted from August to November 1995, dust controls were applied during all handling of contaminated soils. Air monitoring, conducted as a safety precaution during the Pilot Study, showed that dust controls were effective. During implementation of this remedy, dust controls equivalent to those applied during the Soil Washing Pilot Study will be applied. As a safety precaution to confirm the effectiveness of these dust controls, air monitoring will be conducted.

- Both soil washing and off-site disposal would be readily implementable at LSBP. SGPI has tested the effectiveness and implementability of soil washing during their 1995 Soil Washing Pilot Study and in ongoing treatability studies. Stabilization would require a period of study before the technology could be implemented at LSBP. If stabilization is not effective, reprocessing of material can be difficult.
- For treatment of approximately 40,000 cubic yards of soil, soil washing costs are estimated at approximately \$10 million. This estimated cost is less than that for stabilization (\$12,357,750) and off-site disposal (\$13,801,680).

During implementation of this remedy, unloaded shot-shells recovered from Areas of Environmental Concern slated for treatment will be washed and shredded. During shredding, the plastic shot-shell cup will be separated from the metal cap so that these materials may be recycled off-site.

This Remedy for Treatment of Soils approves Area of Environmental Concern 1-13 as needing no further Corrective Action. This decision is based on results of site investigations in this Area of Environmental Concern. These investigations did not show any indication of a previous release of hazardous substances in this area.

Signing of a modification to the Administrative Consent Order (RCRA Docket Number I-90-1005) or another enforceable mechanism by the EPA is necessary for this Final Remedy and Response to Comments to become effective. Implementation of this remedy will be conducted according to the terms in the consent order modification or other enforceable mechanism and according to EPA-approved work plans.

PUBLIC PARTICIPATION ACTIVITIES

A 40-day public comment period was initially scheduled from August 20, 1996 through September 28, 1996. This public comment period was designed to provide an opportunity for citizens to be involved in the EPA's final decision on the proposed August 1996 Statement of Basis for Treatment of Soil at LSBP. The public comment period, as well as a public information

session held on August 19, 1996 and a public hearing held on September 17, 1996, were advertised as follows:

- a public notice was placed in the Connecticut Post as a display advertisement on August 4, 1996; and
- a press release was sent to local media contacts on August 7, 1996.

The press release and public notice also provided locations where citizens could find more information on cleanup activities at LSBP. In addition, to make information on the cleanup proposal available to community members, the EPA mailed the following information to its community outreach mailing list on August 7, 1996:

- a letter announcing the public comment period, public information session, and public hearing;
- a copy of the August 7, 1996 press release;
- a copy of the August 1996 Statement of Basis for Treatment of Soils at LSBP, which described the proposed remedy in detail; and
- a fact sheet answering questions on proposed cleanup activities most commonly asked by residents living near cleanup sites.

The EPA community outreach mailing list consists of over 480 state and local officials, community activists, press contacts, and citizens who have attended previous LSBP meetings or otherwise expressed interest in keeping informed on cleanup activities at LSBP. After every public meeting or hearing which EPA holds on LSBP Corrective Action, individuals who signed their names and addresses on the meeting sign-in sheet are added to the mailing list. The letter sent to the mailing list and the press release also announced that copies of the August 1996 Statement of Basis and other LSBP work plans and correspondence were available to the public in the reference sections of the Burroughs Library in Bridgeport and the Stratford Public Library, and at the EPA Records Center in Boston.

At the public information session, held on August 19, 1996 at the Bishop Curtis Homes in Bridgeport, EPA representatives provided a brief overview of the proposed remedy followed by an open discussion. This discussion provided an opportunity for attendees to ask questions or raise concerns to representatives of EPA, the Connecticut Department of Environmental Protection (CT DEP), and the Connecticut Department of Public Health (CT DPH). Copies of the August 1996 Statement of Basis and other information relevant to the proposed remedy were distributed at the session. Surveys of community members' questions and concerns were distributed at each of these meetings as an additional way for community members and the agencies to communicate.

On September 17, 1996, the EPA held a second public information session in the Hollander

Auditorium at the Bridgeport Hospital in Bridgeport. This information session was followed by a formal public hearing. This hearing provided an opportunity for community members to provide comment to the EPA on the proposed remedy.

Concerns were raised at the September 17, 1996 public hearing that there had not been sufficient opportunity for the public to comment on the proposed remedy. Therefore, the EPA extended the public comment period an additional 46 days through November 13, 1996. Thus, the public comment period totaled 86 days. The EPA also scheduled an additional public hearing and two additional public information sessions for November 7, 1996. The extension of the public comment period and the additional information sessions and hearing were advertised in the following manner:

- EPA placed a public notice as a display advertisement in the Bridgeport News on October 3, 1996 and in the Connecticut Post on October 6, 1996;
- EPA sent letters to the EPA community outreach mailing list on October 21, 1996; and
- EPA sent posters to public libraries, local officials, and community leaders on October 21, 1996.

On November 7, 1996, the EPA held an afternoon information session at the Bishop Curtis Homes in Bridgeport. On the same date, the EPA held an evening information session at the Thomas Hooker School in Bridgeport. These information sessions provided opportunities for citizens to discuss questions or concerns regarding cleanup activities at LSBP with EPA, CT DEP, and CT DPH representatives. Copies of the August 1996 Statement of Basis and other information related to the proposed Remedy for Treatment of Soils at LSBP were distributed at these information sessions. The EPA also distributed an additional fact sheet designed to answer commonly raised questions on the remedy proposal.

On November 7, 1996, the second formal public hearing on the proposed remedy was held at the Thomas Hooker School in Bridgeport. This public hearing was designed to give community members additional opportunities to provide comment to the EPA on the proposed remedy. Following this second public hearing, the official public comment period on the proposed Remedy for Treatment of Soils at LSBP closed on November 13, 1996.

Many comments on the proposed Remedy for Treatment of Soils at LSBP were made verbally by citizens at the September 17, 1996 public hearing and the November 7, 1996 public hearing. In addition, several written comments on the proposed remedy were submitted to the EPA during the 86-day public comment period. These comments and the EPA's responses are presented in Attachment I of this document.

FUTURE ACTIONS

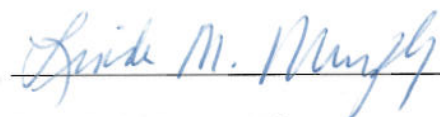
Signing of a modification to the Administrative Consent Order (RCRA Docket Number I-90-1005) or another enforceable mechanism by the EPA is necessary for this Final Remedy and Response to Comments to become effective. Following signing of such a mechanism, the EPA expects that implementation of this remedy will begin.

In order to keep members of the public informed of the status of implementation of this remedy, regular updates will be provided to the community through fact sheets and other means as appropriate. In addition, documents and correspondence related to the Remedy for Treatment of Soils will be provided regularly to the information repositories in the reference sections of the Burroughs Library in Bridgeport and the Stratford Public Library. The EPA encourages members of the public to voice any questions or concerns regarding implementation of the Remedy for Treatment of Soils at LSBP to:

Stephanie Carr, RCRA Facility Manager
EPA Region I - HBT
JFK Federal Building
Boston, MA 02203
Phone: 617/223-5593
FAX: 617/573-9662
EMAIL: Carr.Stephanie@EPAMAIL.EPA.GOV

DECLARATIONS

Based on the administrative record compiled for this Corrective Action, I have determined that the selected remedy to be ordered at Lake Success Business Park is appropriate and will protect human health and the environment.



Linda M. Murphy, Director
Office of Site Remediation and Restoration
U.S. EPA, Region I - New England



Date

ATTACHMENT I

PUBLIC COMMENTS AND THE EPA'S RESPONSES

The following section presents all comments related to the proposed remedy at LSBP received by the EPA during the public comment period, from August 20 to November 13, 1996. The EPA's response to each respective comment is presented following that comment. To aid the reader, comments have been grouped according to the main topic they address. The list of topics and corresponding page numbers can be found in the Table of Contents on page 2 of the main body of this document.

Agency Oversight of Corrective Action

Comment 1:

Four commenters expressed concern that most sampling conducted as part of investigation and cleanup is paid for by Sporting Goods Properties, Inc. (SGPI) the owner of Lake Success Business Park (LSBP). Three of these individuals expressed interest in having sampling done by an independent third party. One of these individuals asked specifically whether an independent third party would perform air monitoring. A fifth individual asked whether air monitoring, Toxicity Characteristic Leaching Procedure testing, and sampling to assess whether soil meets Media Protection Standards would be conducted by an independent third party.

Response:

The *Resource Conservation and Recovery Act* or RCRA (Public Law 94-580) includes provisions that give EPA authority to require *Corrective Action* at some RCRA-regulated industrial facilities to investigate and clean up spills or discharges of hazardous waste. Investigation and cleanup at an industrial facility, under the Corrective Action program, are paid for and conducted by the facility owner/operator. EPA depends on the facility owner/operator to do the work correctly.

At LSBP, Sporting Goods Properties, Inc. (SGPI) is paying for investigation and cleanup and has hired an environmental consultant to do the work. Laboratory analysis of samples is conducted in a private laboratory. Environmental sampling and analysis conducted as under Corrective Action requirements must follow rigorous EPA sampling protocols. Information collected during each stage of sampling and analysis to support the quality of the data obtained must be submitted to the EPA and is reviewed in detail. Any facility owner or operator convicted of falsifying data could face criminal charges.

The EPA and the Connecticut Department of Environmental Protection (CT DEP) with the involvement of the Agency for Toxic Substances and Disease Registry (ATSDR) and the Connecticut Department of Health (CT DPH), provide careful oversight of all the sampling and cleanup conducted at LSBP. This oversight includes the following:

- Thorough review of all work plans and reports that SGPI is required to submit to confirm

- that they are following appropriate EPA and CT DEP guidance;
- Regular site visits and field audits (both announced and unannounced) while sampling or cleanup is being conducted;
- Frequent collection of samples (including soil, air, sediment, surface water, or groundwater samples) in the same locations as SGPI's samples to verify SGPI's results.

The agencies will continue conducting this level of oversight of cleanup at LSBP through implementation of the Remedy for Treatment of Soils.

The EPA also has hired a contractor who assists with the oversight activities listed above. This contractor has staff with expertise in various areas such as toxicology, hydrogeology, engineering, sampling and analysis and other relevant areas. This contractor, and EPA and CT DEP staff, will perform detailed audits of SGPI's sampling and air monitoring activities and collect all types of environmental samples as a check on SGPI's results during implementation of this remedy. The results of these oversight activities will be made available to the public in the LSBP information repositories in the respective reference sections of the Burroughs Library in Bridgeport and the Stratford Public Library.

Comment 2:

At the public hearing, one commenter stated: "DuPont has an opportunity here if they get a hundred and twenty million dollars of state and federal money to build hotels, light industry, and only clean up the property using their own survey methodology that you guys go along with and say that you are monitoring, but they just dynamited and almost shattered windows and I got about twenty-five phone calls each day for the last few days and nobody at EPA even knew about the dynamiting going on."

Response:

As stated in its response to Comment 1 above, the EPA provides detailed oversight of activities related to the requirements for Corrective Action at LSBP as specified in the 1990 Administrative Consent Order (RCRA Docket Number I-90-1005). However, the EPA does not have the authority to regulate general construction activities on-site in areas that have not been identified as *Areas of Environmental Concern* (areas where releases, spills, or discharges of hazardous waste have occurred). Therefore, SGPI is not required to obtain the EPA's approval to conduct these sorts of activities. We are assuming that the "dynamiting" to which the commenter referred was the blasting that SGPI conducted on Friday, September 13, 1996. It is the EPA's understanding that this blasting was conducted for the purpose of constructing a soil accumulation area for temporary storage of soils. This blasting did not take place in an Area of Environmental Concern.

Comment 3:

At a public hearing, one commenter stated: "I ask you to pay particular attention to the four off-

site residential properties, the monitoring of dust levels, security of containment areas, noise level impact, and the handling of the trucking off-site. Those are the issues most important to the city as far as health and safety issues.”

Response:

The EPA has invested considerable time and thought on each of these issues to develop an approach that will protect public health and minimize disruption to the surrounding community. The EPA’s approach to each of these issues is summarized below.

We assume that the “four off-site residential properties” to which the commenter referred are the four properties on the western side of LSBP. These properties were contaminated with lead shot from a shooting range operated on LSBP when the property was owned by the Remington Arms Company. Because the shooting range was near the LSBP property line, part of the shot landed off-site on these abutting residential properties. Soil sampling on these properties to determine the extent of the lead shot contamination was completed in the fall of 1995. The EPA, CT DEP, and CT DPH met with the owners and residents of the affected properties in March of 1996 to discuss the sample results. A plan was then prepared for removing the lead-contaminated soil from these properties. Excavation of soil in this area has proceeded ahead of the Remedy for Treatment of Soils because some of the lead shot was located in residential properties. Therefore, there was a greater potential for humans to contact this soil than that on the fenced LSBP property. In October 1996, removal of lead-contaminated soil from these properties began. This soil has been stored on the Corrective Action Management Unit at LSBP to await treatment.

In this Final Decision and Response to Comments, the EPA has selected a Media Protection Standard (MPS) of an average of 400 milligrams lead per kilogram soil on these residential properties, with no single sample result exceeding 500 milligram lead per kilogram soil. This is a concentration that EPA has found to be protective for human health based on exposure to soil on residential properties. The EPA, CT DEP, and CT DPH have thoroughly reviewed the investigation results and work plans for soil removal in this area. EPA and CT DEP representatives have also conducted site visits nearly every week since the work began, to oversee excavation, soil sampling, and air monitoring. After removal of the lead-contaminated soil is complete, data packages will be presented to owners of the affected properties. These data packages will explain the results of post-excavation soil samples taken to confirm that the lead-contaminated soil was removed and that MPSs were attained.

To keep neighbors of these property owners informed, the EPA mailed out a fact sheet in April 1996 explaining the results of the initial soil sampling conducted to determine the extent of the lead shot contamination. In October 1996, EPA mailed out a second fact sheet to keep community members informed of how the removal of lead-contaminated soil would be conducted.

The EPA, CT DEP, CT DPH, and ATSDR have collaborated to develop dust control protocols

to be applied during soil excavation, transport, storage, and treatment. These protocols are designed to protect on-site workers and individuals who live, work, or attend school near LSBP. As a safety precaution to ensure that dust controls are working, air monitoring will be conducted. The EPA's response to Comment 5 of this Final Decision and Response to Comments provides a complete explanation of the dust controls and the air monitoring program that will be followed during implementation of this remedy to ensure that dust controls remain effective.

We assume that the "containment area" to which the commenter referred is the soil accumulation area on the Corrective Action Management Unit (CAMU) where excavated contaminated soil will be stored to await treatment. Both the EPA and the CT DEP carefully reviewed the work plan for construction of the soil accumulation area and required that controls be implemented to protect human health and the environment. During a visit to LSBP in October, EPA and CT DEP representatives observed a design change in part of the soil accumulation area made to accommodate site constraints. The EPA and CT DEP prescribed additional controls to address this design change.

The final soil accumulation area (shown in Figure 3) covers approximately 3.5 acres. The entire area is underlain with a plastic liner to prevent leaching of contaminants into underlying soil. The area is surrounded by a four foot-high concrete berm to prevent run-on and run-off of surface water. Soil inside the area is stored under plastic covers. Regular inspections of the soil accumulation area will be conducted to ensure that the plastic liner, covers, and concrete berms are secure. Results of each inspection will be recorded on a checklist. Checklists are retained and filed at LSBP and may be subject to inspection by EPA or CT DEP representatives at any time.

SGPI conducted a pilot study of the soil washing technology from August to November 1995. During the pilot study, SGPI monitored noise generated from the soil washing equipment and found that at a distance of 200 feet from the soil washing equipment, noise levels generated from the soil washing equipment were approximately equal to background noise levels. Since the nearest residential neighborhood is roughly 1,000 feet away from the soil washing equipment, noise from soil washing equipment is not anticipated to disrupt the residential community surrounding LSBP. Noise from heavy equipment used for excavation may be heard by some LSBP neighbors, as some soil areas slated for excavation are located near the LSBP property line. None of these excavations is expected to continue for longer than a few months and all work will be conducted during the day and according to local ordinances.

Soil washing is the method proposed for treating contaminated soils at LSBP. Soil washing separates contaminated soil particles from uncontaminated particles, thereby greatly reducing the volume of contaminated soil. Therefore, use of the soil washing process will greatly reduce the volume of soil that must be trucked off-site for disposal in an appropriate facility. The EPA expects that, to the extent possible, trucks and heavy equipment will enter and exit the LSBP property through the main entrance on Asylum Road that leads directly to Boston Avenue. This

will reduce disruption to the residential community surrounding LSBP.

Air Monitoring During Cleanup

Comment 4:

Two commenters expressed concern regarding the levels of mercury in air detected during the Soil Washing Pilot Study, conducted from August to November 1995.

Response:

During the Soil Washing Pilot Study, levels of mercury in air exceeding the EPA-approved action level for mercury of .31 micrograms mercury per cubic meter of air were detected. These mercury air samples were collected using a National Institute of Occupational Safety and Health (NIOSH) sampling methodology. Levels exceeding the action level were detected both upwind and downwind of site activities and at the property fence line, upwind of activities. Therefore, the EPA, CT DEP, CT DPH, and ATSDR, after a thorough review of the data, were unable to determine whether the levels exceeding the action level were related to site activities or were coming from off-site sources. In addition, high levels of mercury contamination were found in the *sample blanks* during the Pilot Study. Sample blanks are containers identical to those used to collect a sample, but are not used to actually collect a sample. They are kept under the same conditions as the actual samples and analyzed along with the samples. Contaminants detected in a sample blank suggest that other samples may have also been contaminated in the field, during transport, or in the laboratory during analysis. These levels of mercury found in sample blanks during the Pilot Study led EPA, CT DEP, CT DPH and ATSDR to question whether the sampling method used was providing accurate results.

As a step toward resolving the question of whether the mercury levels observed during the Pilot Study were due to an off-site source and to assess problems with the NIOSH sampling method, EPA mandated that SGPI conduct a month-long study of background levels of mercury in air at LSBP. For this study, air samples were collected and analyzed using the NIOSH method and a recently developed EPA method. The levels of mercury detected by the EPA method samples during the study, which were collected and analyzed by University of Connecticut scientists, ranged from 3 to 11 nanograms mercury per cubic meter of air, which are typical of urban background levels in Connecticut (based on studies conducted by the CT DEP). During the study, high sample blank levels were again detected in the NIOSH method sample blanks. This confirmed that the NIOSH method may not be appropriate for future mercury monitoring.

The EPA will require that air monitoring for mercury will be conducted during implementation of the Remedy for Treatment of Soils until results confirm that site activities, such as excavation, transport, mixing, and processing of soil, are not a source of mercury.

Comment 5:

Four commenters expressed general concern about the potential for airborne contaminants to migrate during excavation and soil washing. A fifth commenter asked for clarification on the difference between real-time air monitoring and time-weighted air monitoring. To address these issues in a comprehensive manner, EPA has provided one response to these comments.

Response:

Migration of airborne soil is the major route by which on-site workers and the off-site community surrounding LSBP could be exposed to contamination during implementation of this remedy. Therefore, the EPA, CT DEP, CT DPH, and ATSDR invested considerable time and effort in developing strict dust control protocols to be applied during soil excavation, transport, storage, and treatment. These protocols have proved successful at controlling dust levels at other cleanup sites. They are designed to protect on-site workers and individuals who live, work, or attend school near LSBP. As a safety precaution, to confirm the effectiveness of dust control, two types of air monitoring, real-time air monitoring and time-weighted sampling, will be conducted. The dust control and air monitoring program is described below.

- Dust Controls: Soils will be thoroughly wetted before and during any excavation, on-site transport, treatment or other activities that could generate dust. Transported soils will be covered with a tarp. To the extent possible, roads located in the interior of the LSBP property will be used for transporting soils. Stockpiled soils will be surrounded by a four-foot tall concrete barrier or berm and securely covered with plastic. These are the same type of dust controls applied during the 1995 Soil Washing Pilot Study. Air monitoring conducted directly downwind of soil excavation and treatment during the Pilot Study did not detect levels of lead above the action level. This showed that the dust controls were working; lead in the soil was not becoming airborne or presenting a risk to off-site populations.
- Real-time Dust Monitoring: As a safety precaution, to confirm that dust controls are working, *real-time dust monitoring* will be conducted. Real-time dust monitoring provides an instantaneous reading of the concentration of dust in air. Real-time dust monitoring will be conducted downwind of any excavation, mixing, transport, and processing of soils at frequencies of once every 30 to 60 minutes downwind of excavations occurring near the site perimeter (i.e., Areas of Environmental Concern 1, 3-3, 3-4, 16, 22, and 24) or at frequencies of 3 to 4 times per day downwind of excavations occurring in the interior of the property. Real-time dust monitoring will also be conducted on the Corrective Action Management Unit (CAMU) at a frequency of every 30 to 60 minutes during mixing, transport or processing of soils. This monitoring will be used to give an immediate indication of whether contaminants are becoming airborne in the work-zone so that actions can be taken immediately to mitigate the situation. Dust *action levels*, which are dust concentrations set well below levels at which a health effect might be expected occur, have been approved by ATSDR and CT DPH.

Action levels are designed to indicate that some sort of "action" is necessary to upgrade controls. If action levels are exceeded, dust controls will be evaluated and upgraded if appropriate. If dust levels do not drop below action levels, activities will be reduced or stopped. Real-time monitoring is important for quickly identifying a problem with the dust controls and initiating action to mitigate the problem. However, as real-time monitoring provides a reading of dust concentrations at one point in time, the data is not very useful for determining exposures, if any, to off-site populations.

- Time-weighted Dust, Lead and Mercury Sampling: Time-weighted sampling is designed to measure the average concentration of dust in air over the entire period during which the sample was collected (usually a full work day). Time-weighted dust, lead and mercury sampling will be conducted as an additional safety precaution to confirm that dust controls are working. Time-weighted sampling for total dust and lead will be conducted on the LSBP property fence-line abutting the nearest off-site human population during any potentially dust generating activities occurring near the site perimeter (i.e., excavation or transport of soils at Areas of Environmental Concern 1, 3-3, 3-4, 16, 22, and 24). EPA expects that time-weighted sampling for mercury will be conducted at each of these locations near the site perimeter, except at the residences from which lead shot is being removed. Time-weighted sampling for dust and lead will be conducted during any handling or treatment of soils on the CAMU. These samples will be collected at a minimum frequency of one sample per day of activity per location for the first week of activity in a given location. EPA may consider allowing reduction of this frequency if sample results confirm that dust controls are effective and public health is being protected. ATSDR and CT DPH have approved dust, lead, and mercury action levels for time-weighted sampling at levels well below the levels at which a health effect might be expected to occur. If time-weighted sample results exceed the appropriate action levels, SGPI must contact EPA or its representatives immediately. Time-weighted sampling will provide information on the concentration of a substance in air over an entire work day. Therefore this information is more useful than real-time data in evaluating human exposure, in the event of an action level exceedance. During implementation of this remedy, all time-weighted air data will be summarized weekly and submitted to local health departments in Bridgeport and Stratford. Copies of the data summaries will also be available to the public in the LSBP information repositories located in the respective reference section of the Burroughs Library in Bridgeport and the Stratford Public Library. There is a time delay in receiving and reporting the time-weighted results, as these results must first be analyzed in a laboratory. However, based on previous reliability of the dust control methods at LSBP and the fact that increases in dust concentrations can be immediately identified by real-time sampling and subsequently controlled, EPA does not expect to see action level exceedances from time-weighted sampling conducted at the property fence line.
- Time-weighted Dust and Lead Sampler Near the John F. Kennedy School Campus: A permanent dust and lead sampler has been installed on the LSBP property fence line

abutting the John F. Kennedy School Campus. One sample per day will be collected at this location during days that any soil excavation, transport or treatment is conducted anywhere on the LSBP property. This sampler is designed to provide added assurance that dust controls are working.

- Volatile Organic Compound Monitoring: Based on historical uses of Areas of Environmental Concern 2 and 7, it is possible that volatile organic compounds could be present. Therefore, real-time monitoring will be conducted every 60 minutes for volatile organic compounds during excavation of Areas of Environmental Concern 2 and 7 to ensure that volatile organic compounds are not being emitted during excavation.
- Asbestos Sampling: During implementation of this remedy, shot-shells will be excavated from areas of the property where they were dumped years ago. These shot shells will be washed and shredded on the CAMU so that the plastic and metal components may be separated and recycled. Daily asbestos air samples will be collected on the CAMU during shotshell shredding and washing to confirm that controls are working.
- Additional Treatment Activities: If EPA approves additional steps for treatment of soil, such as soil leaching, EPA will require additional air monitoring as necessary based on the chemicals used in those proposed additional steps.

If EPA determines that soil washing or related activities may be presenting harm to human health or the environment, EPA will require that these activities be stopped until proper measures can be implemented to address the harm.

Comment 6:

One commenter referenced in Comment 5 stated: "I live basically right next to Remington Woods and I'm just an ordinary resident and my concern is that when this project starts I don't think anyone can guarantee us that we're going to be immune from health risks that digging up the soil might present. The soil does contain lead, copper, nickel, and mercury as well as many other things. And we know that these substances are hazardous to peoples health and there's no way to tell the long term effects of it. Maybe one or two or 10 years down the road, when children start becoming ill, that won't be directly related to the cleanup. And I oppose cleaning up the area. I think it will be better to just leave it. These contaminants are in the ground. We have a public water supply so they can't leach into wells. There's not wells around the area that I'm aware of. And I think it would be far better off to leave it in the soil than to start digging it up and posing the threat to people in the area because we might not be multi-million dollar conglomerates, but we're people too and our lives are important. There's no way to measure what ill effects these toxins directly near us are causing. If the site had been further away from residential property, it might be another story. But these areas [are] in our backyard and I really would implore the EPA to consider this... to consider the health of the people. Being that our area has already been affected by exposure from the Raymark facility, I feel that further exposure to the people in the areas surrounding Remington is adding insult to injury. There is no real way to measure the long term health effects this cleanup will have on the people here. At what point

do the health and well being of people become the primary concern? If one man, woman, or child develops cancer or some other illness as a result of exposure to those hazardous wastes, it's one too many. Consider the people. We've been overexposed already."

Response:

Off-site migration of contaminants in airborne soil is the route by which individuals near LSBP could potentially be exposed to site contaminants during excavation and soil washing. However, the 1995 Soil Washing Pilot Study showed that dust generation from cleanup activities can be controlled through use of dust controls. The effectiveness of these dust controls can be confirmed by the results of air monitoring. To control dust during excavation, transport, storage, and treatment of soil, the dust control program described in the EPA's response to Comment 5 will be implemented. To ensure these dust controls are working, multiple types of air monitoring, described in the EPA's response to Comment 5, will be conducted.

As described on page 8 of the main body of this document, the EPA evaluated the alternative of no further cleanup action at LSBP. If contamination at LSBP were to be left as is with no further cleanup action, the risks from site contaminants would remain uncontrolled with the possibility of eventual effects on human health and the environment.

Bridgeport residents are not being exposed to contamination from the Raymark facility clean up. In the past, the most significant exposures to Raymark waste were to residents who had the waste on their properties. All residential properties known to have been contaminated with Raymark waste have now been cleaned up. Dust controls and an air monitoring and sampling program have been in place at the Raymark facility to ensure that contamination is not migrating off-site during site cleanup. No contaminant levels exceeding action levels have been detected during the cleanup.

Comment 7:

One commenter stated the following: "This statement [August 1996 Statement of Basis] does not address the potential problems of time-weighted air samples above the action levels with pages 13-14 merely calling for notice to EPA and ceasing of activities. There is also the potential problem of unhealthy exposure due to time lags in calculations between real-time and [time-]weighted sampling. What is the plan for notifying the public?"

Response:

As described fully in the EPA's response to Comment 5, two different types of air monitoring, real-time air monitoring and time-weighted air monitoring, will be conducted during soil excavation and soil washing. Each of these methods provides different information and is useful in different ways.

Real-time air monitoring provides an instantaneous reading of the levels of dust or of certain

contaminants at a specific point in time. Real-time dust monitoring at LSBP will be conducted at the downwind edge of the work-zone, which in most cases is some distance from the nearest off-site population. This monitoring will be used to give an immediate indication of whether dust is becoming airborne in the immediate work-zone so that actions can be taken immediately to mitigate such a situation. This type of monitoring is important for identifying a problem quickly and taking immediate action to control it. However it is not very useful for determining exposure of off-site populations.

Time-weighted sampling will be conducted as a safety precaution to confirm the effectiveness of dust controls and to support real-time data. Time-weighted sampling will be conducted at various locations around the perimeter of the LSBP property near off-site populations, as described in the response to Comment 5. Time-weighted sampling provides information on the contamination in the air over a period of time, generally an 8-hour work day. Therefore, this information is more useful than real-time data in evaluating human exposure. However, as time-weighted sample results must be analyzed in a laboratory, there is a time delay in receiving and reporting the time-weighted results.

Based on experiences during the Soil Washing Pilot Study, EPA anticipates that the dust controls to be applied during this remedy (described in Comment 5) will be effective in controlling dust levels. In addition, any temporary increase in dust concentration can be rapidly identified through real-time air monitoring and immediately controlled. Therefore, EPA does not expect to see contaminant action level exceedances in time-weighted sample results at the property fence line from cleanup activities. If a contaminant action level exceedance does occur in a time-weighted sample, this result will be submitted to local health departments and placed in the LSBP information repository in the respective reference sections of the Burroughs Library in Bridgeport and the Stratford Public Library. All other time-weighted air data will be summarized weekly as results are received. These summaries will also be submitted to local health departments and placed in the LSBP information repositories.

Comment 8:

One commenter submitted a written comment that stated: "The air monitoring section makes no mention of plans to communicate air monitoring data, and particularly exceedances, to local health officials. Likewise, there is no apparent plan to coordinate emergency response actions with local officials should a public health danger arise from the remedial actions."

Response:

Air sampling results will be submitted weekly to the EPA, CT DEP, CT DPH, the Bridgeport Director of Health, and the Stratford Director of Health. These results will also be placed in the LSBP information repositories located in the reference sections of the Burroughs Library in Bridgeport and the Stratford Public Library. Results of any action level exceedances will be reported to EPA, CT DEP, CT DPH, the Bridgeport Director of Health, and the Stratford

Director of Health immediately after these results are received from the laboratory. Results from air samples collected during the removal of lead-shot contaminated soil from residential properties, described in the response to Comment 3, are currently available at the Burroughs Library and the Stratford Public Library.

Based on current plans for implementing this remedy, dust migration during excavation and soil washing is the only potential route by which off-site populations could be exposed to soil and/or contaminants during cleanup activities. Any other potential hazards would be limited to general construction hazards to on-site workers.

During the Soil Washing Pilot Study, acid leaching of soils was conducted as a component of the soil washing process. SGPI coordinated its activities with local emergency officials during the development of the Pilot Study work plan on how to proceed in case of an acid spill. If acid leaching or another chemical treatment process is used as a component of soil washing during implementation of the Remedy for Treatment of Soils, local emergency officials will be informed of and involved in the development of work plans for soil treatment.

Comment 9:

One commenter submitted a written comment which asked: "Will children under six years old who live within potential exposure radius undergo lead in blood monitoring to ensure EBL's [elevated blood-lead levels] are not caused by the cleanup?"

Response:

Children, particularly in urban areas, are exposed to numerous sources of lead in the environment. These sources include old paint, lead solder in drinking water pipes, some canned foods, lead residues in soil from leaded gasoline automobile exhaust, and various other sources. Therefore, it is generally advisable for parents to have their children tested to ensure that they do not have elevated blood-lead levels.

The EPA has evaluated previous air monitoring data collected during the Soil Washing Pilot Study and the conservative action level for lead in air set for the implementation of the Remedy for Treatment of Soil. Based on its analysis, EPA does not believe that lead will migrate from the work areas at LSBP at levels which could result in elevated blood-lead levels in any individuals living, working, or attending school near the property during implementation of this remedy.

During the Soil Washing Pilot Study, conducted from August to November, 1996, contaminated site soils were excavated and treated, essentially in the same way that EPA expects they will be handled during implementation of the Remedy for Treatment of Soils. Dust was controlled during the Pilot Study in the same way that it will be controlled during implementation of the Remedy, by wetting the soil during excavation, transport, and treatment and by covering the soil during transport and storage. Air monitoring conducted directly downwind of soil excavation and

processing during the Pilot Study did not detect levels of lead above the action level. This demonstrated that dust controls implemented during the Pilot Study were working; lead in the soil was not becoming airborne or presenting a risk to off-site populations.

Dust controls equivalent to those applied during the Pilot Study will be applied during the remedy implementation. As described in the response to Comment 5, air monitoring will be conducted to confirm the effectiveness of the dust controls. If EPA determines that soil washing activities are causing harm to human health or the environment, EPA will require that activities be stopped until the proper measures have been implemented to address the harm.

Comment 10:

One commenter submitted a written comment that stated: "Nitric acid air monitoring is never mentioned, even though it is toxic and used [for] leaching. Explain."

Response:

Currently, it is not expected that soil leaching will be used to treat contaminated soils. If a soil leaching process is implemented to achieve MPSs, the EPA will evaluate what additional air monitoring is necessary. The EPA's decision on additional air monitoring will be based on chemicals to be used in the proposed leaching process.

Comment 11:

One commenter submitted a written comment that stated: "Arsenic [is] not monitored, even it is toxic, and has high concentrations... Explain."

Response:

Conducting air monitoring for every contaminant detected in LSBP soils is not feasible. Therefore, the EPA, CT DEP, CT DPH, and ATSDR have reviewed all site data to identify those contaminants that occur most commonly in LSBP soils, are present at the highest concentrations, and might present the most significant health threat. The agencies used this information to select contaminants for which air monitoring will be conducted during cleanup activities.

Historically, arsenic was used in Remington Arms's production processes as a rounding agent in the manufacture of lead shot. Therefore, it is generally found on-site in the same locations as lead, but at much lower concentrations. If air monitoring results for lead do not exceed health-based action levels, we can be assured that other metals or metalloids, such as arsenic, are not becoming airborne at concentrations that could present a risk to off-site populations.

Comment 12:

At a public hearing, one commenter stated "They are talking about the benzo(a)pyrene problems. The organic -- volatile organic compound. Now in the original procedure when I read [the] protocol about the air monitoring system... I did not see any volatile organic compound

monitor[ed].”

Response:

Organic compounds are classified as *volatile* or *semi-volatile* by the rate at which they evolve vapors. Benzo(a)pyrene evolves vapors at a low rate. Therefore, benzo(a)pyrene is not considered a volatile organic compound. It would not be expected to evolve vapors at a rate which could present a health risk during implementation of this remedy.

Benzo(a)pyrene has a very low vapor pressure of 2.3×10^{-10} atmospheres (1.75×10^{-7} mm Hg) at 25 degrees Celsius. Vapor pressure can be defined as the partial pressure of a chemical in a gas phase that is in equilibrium with the pure liquid or solid chemical. To illustrate, if some benzo(a)pyrene was placed in a closed bottle at 25 degrees Celsius, the partial pressure of benzo(a)pyrene vapor in the air-filled neck of the bottle would be 2.3×10^{-10} atmospheres (Hemond et al., 1994).

Generally, organic compounds that have vapor pressures less than that of the compound, naphthalene, are considered semi-volatile organic compounds. Naphthalene has a vapor pressure of 1.05×10^{-4} atmospheres (0.08 millimeters mercury) at 25 degrees Celsius (NIOSH, 1990). The vapor pressure for benzo(a)pyrene is much less than that of naphthalene. Therefore, benzo(a)pyrene is most correctly characterized as a semi-volatile compound.

It is possible, based on their historical use, that volatile organic compounds could be present at Areas of Environmental Concern 2 and 7. Therefore, real-time monitoring for volatile organic compounds will be conducted every 60 minutes during excavation of these areas.

CAMU (Corrective Action Management Unit)

Comment 13:

One commenter submitted a written comment that stated: “Expanding the size of the Corrective Action Management Unit (CAMU) from 7 to 24 acres would seem to also increase the risk of human exposure from stockpiling such a large mass of hazardous waste on site. What protective measures are required for the CAMU and who is responsible for monitoring the area to ensure conformance with protocol?”

Response:

Based on the controls to be applied to soil stored on the CAMU and the dust controls and air monitoring to be conducted during movement of soil on the CAMU (as described in the EPA’s response to Comment 5), the EPA does not believe that the increased volume of stored soil will increase health risks.

The soil accumulation area (shown in Figure 3) is a 3.5-acre area on the CAMU that will be used

for storing excavated soils prior to treatment. The entire area is underlain with a plastic liner to prevent leaching of contaminants into underlying soil. The entire area is surrounded by a 4-foot high concrete berm to prevent surface water run-on and run-off. Soils stored inside the area will be covered with plastic sheets. While contaminated soil is stored in the soil accumulation area, regular inspections of the soil accumulation area will be conducted to ensure that the plastic liner, covers, and concrete berms are secure. The results of each inspection are recorded on a checklist. Checklists are retained and filed at LSBP and may be subject to inspection by the EPA or CT DEP at any time. EPA and CT DEP representatives also inspect the soil accumulation area during site visits at LSBP. EPA and CT DEP representatives plan to conduct frequent site visits during implementation of the Remedy for Treatment of Soils.

While the increased area of the CAMU will increase its capacity for soil storage, this will not increase the amount of material to be processed. The purpose of stockpiling contaminated soils is to allow some soils to be blended before treatment. This makes the soils entering the soil washing process more uniform and the soil washing process more effective. The controls described in the previous paragraph will prevent migration of dust or contaminants from the soils during storage. Additional dust controls, including wetting of soils, will be implemented at points at which the soils are mixed, moved, or treated. Air monitoring will be conducted during handling of soil to confirm the effectiveness of these additional dust controls.

Comment 14:

One commenter submitted a written comment that stated: "EPA has advised that Sporting Goods Properties, Inc. 'cease groundwater monitoring around the CAMU area' due to lack of evidence of contamination to date. Is this wise? Why wait till after the fact to detect migration of toxins from the soil to the groundwater? If caught earlier, can't steps be taken to quell the contamination?"

Response:

As described in the EPA's response to Comment 13, EPA and CT DEP have prescribed extensive controls and protective measures to prevent migration of contaminants from soils stored on the CAMU into underlying soils and groundwater. During and following the 1995 Soil Washing Pilot Study, the EPA required that quarterly groundwater samples be collected near the CAMU as a precautionary measure to check the effectiveness of these controls. These groundwater sample results did confirm that the controls were working.

The EPA does agree that soil sampling and groundwater monitoring near the CAMU will be necessary as part of Corrective Action to provide assurance that contaminants have not migrated from the CAMU into underlying soil and groundwater. A complete site-wide characterization of groundwater is planned as part of the second phase of the RCRA Facility Investigation. EPA expects that this investigation will include characterization of groundwater near the CAMU. Based on the effectiveness of controls on contaminated soils, as confirmed by previous

groundwater sample results in the area, the EPA believes that ceasing groundwater monitoring in the short term is appropriate for this location.

Community Involvement in Corrective Action

Comment 15:

One commenter submitted a written comment that inquired "How do EPA and SGPI plan to keep area residents informed of progress at the site? Will newsletters and forums continue throughout the remediation process?"

Response:

The EPA plans to continue to keep area residents informed of progress at LSBP through implementation of the Remedy for Treatment of Soils. In the past, the EPA and SGPI have each sent out fact sheets or newsletters and held public meetings to keep citizens informed of activities at LSBP. SGPI has also organized a community advisory committee, which has been meeting since May of 1994.

In the future, the EPA plans to continue sending out fact sheets on the progress of cleanup activities at LSBP. These fact sheets are sent to individuals on the EPA's community outreach mailing list for LSBP. The EPA's mailing list consists of over 480 state and local officials, community activists, press contacts, and citizens who have attended previous LSBP meetings or otherwise expressed interest in keeping informed on activities at LSBP. This mailing list is updated following every public meeting the EPA holds to add names of individuals who signed-in at each meeting.

The EPA will continue to place documents related to implementation of the Remedy for Treatment of Soils in the LSBP information repositories located in the reference sections of the Burroughs Library in Bridgeport and the Stratford Public Library. These information repositories are designed for individuals who are interested in following LSBP Corrective Action in greater detail than can be presented in a fact sheet or at a public meeting.

The EPA welcomes any comments suggesting new ways to keep the community informed of cleanup activities and to communicate community concerns. Please direct any such comments to Stephanie Carr (phone number and address provided on page 12 of the main body of this document).

Comment 16:

One commenter submitted a written comment that stated: "Organize better. Give more time to study the materials and answer. For the 9/17 hearing the materials were distributed on the meeting. For the 11/6 you request[ed] comments in 6 days, including 3 holidays when no people were available to answer. I did not receive [a] call from Ms. Carr in the time when I said I am

available and she promised to call. Mr. Jorgensen could not answer to a number of questions that involved EPA materials. The Statement of Basis [is] often too complex. The 95% Upper Confidence Level for lead and benzo(a)pyrene is not clear for most of people. Clarify it. A great part of the population was not represented, probably because of this, at the hearings. Organize an informative discussion about the project. Tell it to the neighborhood in plain English, preferably with your Response to Comments.

I think it would be helpful for the public; how do we evaluate this project if you don't know really precisely that what is going on and get the proper information... I would appreciate... a more popular kind of brochure about the procedure.”

Response:

In planning the length of a public comment period, EPA tries to strike a balance between providing sufficient time for citizens to review the relevant information and comment while not unreasonably delaying the cleanup process. The time span for public comment periods in the RCRA program are generally between 30 and 45 days.

The public comment period for the Remedy for Treatment of Soils was originally scheduled for 40 days. However, EPA extended the comment period an additional 46 days based on comments that there had been insufficient opportunity for public comments. Thus, the comment period for this remedy totaled 86 days. As explained in the EPA's response to Comment 15, the EPA will provide regular information on LSBP activities to help keep citizens informed of site activities.

Approximately two weeks before the start of the public comment period, the EPA did mail copies of the Statement of Basis, a question and answer fact sheet, and a press release to individuals on the EPA mailing list. This was done to provide an opportunity for citizens to review the remedy proposal before the public comment period began. In addition, the EPA held a public meeting in Bridgeport on August 19, 1996, the day before the start of the official public comment period. This meeting and the September 17, 1996 hearing were both advertised through the EPA's August 7, 1996 press release and through a public notice that the EPA placed in the Connecticut Post on August 4, 1996. These dates were also announced in the information mailed to the EPA mailing list. At the August 19, 1996 public meeting, the EPA distributed the Statement of Basis and presented an overview of the Remedy proposal. In addition, EPA, CT DEP, and CT DPH representatives were present to discuss questions and concerns raised by attendees.

Informational materials were also distributed at the September 17, 1996 public hearing. However, the only materials on the proposed remedy distributed at this hearing that had not been mailed out or placed in the Burroughs Library and the Stratford Public Library before the start of the public comment period were the photocopies of the overhead slides for the short presentation by EPA representatives before the start of the hearing. The commenter is correct in stating that the second hearing, on November 7, 1996, was scheduled toward the end of the 86-day public

comment period, leaving only three working days between the hearing and the end of the public comment period. The close of the public comment period was scheduled to occur shortly following the November 7, 1996 hearing because this was the second and last hearing held. Based on public comments received at the September 17, 1996 public hearing, the EPA believed that the public was interested in having more time to review the remedy proposal before another public hearing. Therefore, the EPA scheduled the public hearing close to the end of the public comment period to allow community members as much time as possible to review the remedy proposal before formulating their comments.

The EPA regrets the fact that some commenters may have found the Statement of Basis too complex. The EPA used many reviewers to proofread the Statement of Basis for clarity. However, it is necessary that the Statement of Basis convey technical information. Conveying technical information in simple terms is sometimes difficult. We will redouble our future efforts to simplify such documents and fact sheets, without sacrificing the quality of information they contain.

The EPA held four information sessions on the proposed remedy during the public comment period. The EPA held these sessions to provide an opportunity for all interested citizens to discuss the proposed remedy. These information sessions were held at the following times and locations:

- August 19, 7:00 - 9:00 p.m. at Bishop Curtis Homes, Bridgeport
- September 17, 7:00 - 8:00 p.m. at Bridgeport Hospital, Bridgeport
- November 7, 1:30 - 3:00 p.m. at Bishop Curtis Homes, Bridgeport
- November 7, 5:00 - 6:00 p.m. at Thomas Hooker School, Bridgeport

We agree with the commenter that the public needs to be informed about the LSBP project to evaluate it and make comments to the EPA. Consequently, the Statement of Basis for the Remedy for Treatment of Soils described the proposed remedy in detail. Because the Statement of Basis was lengthy and detailed, the EPA developed a fact sheet, which provided a brief summary of issues related to the Remedy for Treatment of Soils at LSBP. The EPA mailed copies of this fact sheet to the EPA mailing list before the start of the public comment period. This fact sheet was also provided at all public meetings and hearings. The EPA provided a second fact sheet, summarizing responses to commonly asked questions on the proposed remedy, at the November 7, 1996 hearing. The EPA is interested in considering suggestions citizens may have on topics of interest or format for future fact sheets. Please direct any such suggestions to Stephanie Carr (phone number and address provided on the page 12 of the main body of this document).

Comment 17:

At a hearing, one commenter stated: "I went over to the library going over the original pilot

project. It's quite a few large volumes and I don't see [that] too many people [have] looked into it. Now I feel that EPA and DuPont probably try to give out information to the people, but this information, I don't think that it is satisfactorily understood. I am a professional and I didn't understand a number of things until I question[ed] everything... The records in the Bridgeport Library contain materials under Remington. The public should be aware of it."

Response:

The EPA believes that providing technical documents and correspondence on LSBP Corrective Action for interested citizens to review is important. This information is currently in the reference sections of the Burroughs Library in Bridgeport and the Stratford Public Library. Because much of this information is technical in nature, it may be difficult to understand. EPA representatives are available to discuss questions citizens may have on this material. Questions can be referred to Stephanie Carr (address and phone number provided on page 12 of the main body of this document).

The EPA has asked the libraries again to list the library files under "Lake Success Business Park" rather than under "Remington Arms."

Comment 18:

At a public hearing, one commenter stated: "A number of things [are] improperly mentioned. They are talking about different methods that they are using in the cleanup procedure. The remedies... off-site disposal, no action, and very often they mention that all alternatives will be effective. All alternatives including no action. Is [this an] oversight or what? I am not sure about [whether] they... wrote properly this kind of information."

Response:

The EPA believes this commenter is referring to the "Evaluation of the Proposed Remedy and Alternatives" section on pages 10 through 12 of the August 1996 Statement of Basis for Lake Success Business Park Proposed Remedy I for Treatment of Soils. This section applies nine remedy criteria to evaluate soil washing against two alternative methods of cleanup. For purposes of comparison, the EPA also evaluates a "no action" alternative to assess how the proposed method of a cleanup compares to taking no further cleanup action at LSBP. However, as the "no action" alternative did not satisfy the first of the nine remedy criteria, "overall protection of human health and the environment," it was eliminated from further evaluation. This is clearly stated at the bottom of page 10 of the Statement of Basis.

Comment 19:

At a public hearing, one commenter stated: "I'm tired of these questions. This is about the fourth meeting I've been to. I've asked questions, plenty of them. Did I ever get results? No. I don't know why. I've never got an answer on any questions that have been asked and I'm tired of coming to these meetings. It's just a run around. We talk. We get nowhere, nothing happens."

That's it.”

Response:

As explained at the beginning of each public hearing held on the Proposed Remedy for Treatment of Soils at Lake Success Business Park, a hearing is a formal session designed to provide an opportunity for the public to provide comment on the proposed remedy. To provide adequate opportunity for all interested participants to provide comment, EPA representatives do not respond directly to most comments and questions raised during a public hearing. These comments are transcribed and considered by the EPA when a final decision is made on the proposed remedy. Through this Final Decision and Response to Comments, the EPA responds to comments and questions raised during public hearings or otherwise submitted to the EPA during the public comment period.

The EPA did hold several informal public meetings before and during the public comment period to provide an opportunity for questions and answers on the proposed remedy. These meetings were held at the following locations and times:

- August 19, 7:00 - 9:00 p.m. at Bishop Curtis Homes, Bridgeport
- September 17, 7:00 - 8:00 p.m. at Bridgeport Hospital, Bridgeport
- November 7, 1:30 - 3:00 p.m. at Bishop Curtis Homes, Bridgeport
- November 7, 5:00 - 6:00 p.m. at Thomas Hooker School, Bridgeport

EPA representatives are available to discuss further questions or concerns on cleanup activities at Lake Success Business Park. Please feel free to contact Stephanie Carr (address and phone number provided on page 12 of the main body of this document.)

Comment 20:

At the September 17 Public Hearing, two individuals expressed concern that the hearing started later than scheduled. One of these individuals commented: “I was at Thomas Hooker, I was at Bullard Haven and the majority, the vast majority of people have very major concerns about this plan or process and about the whole project because we have to live and breath this air and we shouldn't be here tonight. However, since we are here I would like to let you know that this is the worst public hearing I've ever seen. It's ten of nine. A public hearing is supposed to be for the public. I've had about ten people come up to me saying that they were leaving. Two or three people scratched their names off the list who live right on the park because they are intimidated because they had all these so-called people who don't live in Bridgeport who are so-called experts on development when these people had thirty second speeches and minute speeches to talk about how they feel they are going to be impacted and they are gone. They left. We need to have a public hearing at Thomas Hooker. We need to have a couple more public hearings and during the day because this is Bridgeport. It's the East Side of Bridgeport at seven o'clock at night. I'm starting at ten of nine. A public hearing should be where a microphone is given to the public, not

to have like I've seen in past meetings, our planning department run the meeting to the end. Not to have David Daddario, nice guy, up here. Well, he's not affected by this monetarily. Not to have Victor Ordija, Michael Freimuth, I mean, are all you guys sleeping in bed together? I mean, I think EPA is absolutely working hand in hand with the City of Bridgeport and DuPont and even GE. GE wants to cover up their contaminated, polluted land. These guys, they polluted this land. They should clean up the land. And we should not be here at ten of nine just getting started with the public hearing. We should have been hearing from the people without having to listen to the bull wink that I've been hearing all night from the so called experts, okay? ... The bottom line to me is we need your help at EPA to bring these people to the table because at this point in time every time there is a question being asked you refer to somebody else. And at the last meeting Mike Freimuth ran the meeting and the City of Bridgeport should not be advocating at a public hearing where the city is at. We want to sit at the negotiating table. So far we haven't. EPA has gone along with everything DuPont wants. We want your cooperation at EPA to hear from the people more at a true public hearing where you open the microphone, you don't listen to the experts because the experts would confuse and intimidate those who would just like to say I'm worried about mercury in the air and are you going to protect me. When DuPont pays the freight, DuPont will get their way. EPA, in my estimation, should never ever should not allow and keep allowing the city, DuPont and others to answer all your questions. If you can't answer the questions, you shouldn't be here. This is an EPA public hearing, not well run. A terrible hearing and not even in a neighborhood that people want to go at night to tell you the truth."

Response:

The EPA selected the hearing time to accommodate working people and selected the hearing location based-on suggestions by a Bridgeport citizen. However, to address these commenters' concerns about the public hearing time and location, the EPA extended the public comment period an additional 46 days and held two additional information sessions and one additional public hearing.

The commenter quoted above also had concerns about the fact that non-EPA personnel were answering some questions on the LSBP redevelopment plan and proposed access road. These questions were posed at the information session before the commencement of the public hearing. As explained at this information session, the EPA's role is to oversee investigation and cleanup of discharges of hazardous substances at LSBP. The EPA RCRA Corrective Action program does not have authority over local zoning or development issues. However, questions were raised on these issues by community members at public information sessions. As individuals involved in the development plans for LSBP were present at these information sessions, EPA representatives referred questions related to redevelopment of the LSBP property to these individuals to facilitate information exchange.

The EPA urges this commenter and any other individuals who have concerns that "EPA has gone along with everything that DuPont [SGPI] wants" to review correspondence between the EPA

and SGPI. Copies of this correspondence are available in the LSBP information repositories, located in the reference sections of the Burroughs Library in Bridgeport and the Stratford Public Library. This correspondence provides insight into the regulations and policies with which SGPI must comply. This correspondence is one illustration of the careful scrutiny with which the EPA, CT DEP, ATSDR, and CT DPH review SGPI work plans and reports. Any further questions on the EPA's oversight of investigation and cleanup at LSBP can be referred to Stephanie Carr (address and phone number provided on page 12 of the main body of this document).

Comment 21:

At a public hearing, one commenter stated: "There needs to be a survey methodology employed that's going to allow for you to get into the senior citizens centers of which we have around six hundred units."

Response:

The EPA held two public information meetings in a senior citizen's center, on August 19, 1996 and November 7, 1996. The EPA also accepts written comments from the public. This may be an easier way for individuals who are not able to attend public meetings or hearings to comment. While some senior citizen's centers are on the EPA's community outreach mailing list, the EPA would welcome any suggestions of others which should be included. Please refer any such suggestions to Stephanie Carr (address and phone number provided on page 12 of the main body of this document).

Comment 22:

At a public hearing, one commenter stated: "And if we do conduct meetings in the future, I wish you would address the people in attendance and have a little respect for the opinions of those in the audience and those who want to make a comment and not have anybody address their intelligence, education or what not."

Response:

The public information sessions which the EPA held on the proposed Remedy for Treatment of Soils are described on pages 9 through 11 of the main body of this document. These public information sessions were designed to provide opportunity for attendees to discuss the proposed remedy and to express their opinions. EPA representatives tried to run these meetings in an orderly and productive manner so that attendees could receive the information they were seeking. However, the EPA cannot assume responsibility for comments made from one attendee of a public information session to another.

Investigation and Cleanup: Previous and Subsequent Phases

Comment 23:

One commenter at a public hearing stated: "I say to myself, how come some of the park is going

to be cleaned up? Why -- if I was to employ sampling methodology I would then take samples from every part of the park, every part of the park to get a representative sample. Not just portions of the park because then and only then can you have a representative sample and then if DuPont did that I would feel more comfortable. However, I'm not comfortable because I don't know if anybody is cooking the data and this is public health at risk here. I think the EPA or DEP should do a second sampling of every segment of the park so as to make sure we don't have high mercury levels inside that park."

Response:

As with many industrial facilities, EPA and CT DEP have been involved in regulating hazardous waste activities at LSBP since before the early 1980s. Due to this regulatory involvement, a long history of records from previous EPA site inspections and documentation from permitted waste management activities was available when initial Corrective Action site investigations were planned. These records provided information on locations where releases of hazardous substances may have occurred. This information was helpful in planning initial site investigations.

Corrective Action soil investigations at LSBP began with site-wide surveys conducted to identify areas where discharges of hazardous waste may have occurred. These surveys included the following:

- Aerial photographs of the entire property were taken and interpreted by the EPA to identify areas which showed evidence of disposal activities or other human disturbance;
- The EPA conducted an assessment of the facility in which soil and sediment samples were collected in 15 different areas of the property in locations identified by the aerial photographs as showing evidence of previous disposal activities; and
- Interviews of former Remington Arms employees were conducted to identify areas where discharge of hazardous waste may have occurred.

Through the steps described above, the EPA identified several *Areas of Environmental Concern*. Areas of Environmental Concern are areas of the property where discharges or spills of hazardous waste were expected to have occurred. The following steps were then taken to characterize soils in these Areas of Environmental Concern:

- Two types of surveys were conducted to identify areas where metals or magnetic material may be buried;
- Sampling was conducted for metals (lead, strontium, and in some cases, mercury) and volatile organic compounds to delineate contaminated soil areas;
- Test pits were dug and samples collected to determine the depth of contamination;
- Soil samples were collected and analyzed for a full suite of organic and inorganic chemicals to identify what chemicals were present.

Sampling of ground water, surface water, and sediments has also been conducted. Further site investigation is planned. As part of this investigation, the EPA expects that some sampling will be conducted outside areas that have already been identified as Areas of Environmental Concern to confirm that all such areas have been identified.

As explained in the EPA's response to Comment 1, in the RCRA Corrective Action program the property owner/operator conducts investigation and cleanup under EPA oversight. Therefore, much of the sampling conducted at LSBP was paid for by the property owner/operator. Environmental sampling and analysis conducted as part of Corrective Action must adhere to rigorous EPA sampling protocols. Information collected during each stage of sampling and analysis to support the quality of the data obtained must be submitted to the EPA and is reviewed in detail. Any individual convicted of falsifying such data could face criminal charges.

EPA and Connecticut Department of Environmental Protection (CT DEP) with the involvement of the Agency for Toxic Substances and Disease Registry (ATSDR) and the Connecticut Department of Health (CT DPH), provide oversight of all the sampling conducted at LSBP. This oversight includes:

- Thorough review of all work plans and reports which SGPI is required to submit to confirm that they are following appropriate EPA and CT DEP policy;
- Regular site visits and field audits (both announced and unannounced) while sampling is being conducted;
- Frequent collection of samples (including soil, air, sediment, surface water, or groundwater sampling) in the same locations as SGPI's samples to verify SGPI's results.

The agencies will continue conducting this level of oversight of cleanup at LSBP through implementation of the Remedy for Treatment of Soils.

Comment 24:

One commenter submitted a written comment that stated: "The document [August 1996 Statement of Basis] states that SGP plans to conduct further (phase II & III) studies on remediation of wetlands contamination and the lake itself. I steadily urge that no certification for building/development for any purpose be granted by the EPA until all remediation is complete. Otherwise it is likely that development will commence and further phases of lake/wetlands remediation will never occur."

Response:

SGPI is conducting investigation and cleanup of LSBP under an Administrative Consent Order that is enforceable by law. Regardless of how development proceeds at LSBP, SGPI is required to investigate and cleanup areas of the property that pose an unacceptable risk to human health and the environment. The EPA does not have authority to regulate construction and development

at the property.

Comment 25:

One commenter submitted a written comment that stated: "As indicated at the Hearing the surveys and studies are not complete. There has been activity at the site. The Phase II Environmental Assessment must be complete prior to any substantial activity."

Response:

Investigation at LSBP is being conducted in multiple phases. The first phase of investigation was completed in 1992. This part of the investigation focused mainly on soils, using the approach described in the EPA's response to Comment 23 to delineate areas where discharges or spills of hazardous waste occurred in the past. As this part of the investigation focused mainly on soils, it provided sufficient information for the EPA to make a final decision on this plan to excavate and treat contaminated soils at LSBP.

A second major phase of site investigation is planned. The results of this investigation will help determine how any remaining contamination at LSBP will be addressed.

Comment 26:

One commenter submitted a written comment that inquired: "When does the EPA plan to produce a plan to address contamination in the wetlands, lake and stream areas of the property?"

Response:

The EPA expects that a plan for addressing contamination in Lake Success sediments will be developed within the next two years and implemented following opportunities for public input. Following treatment of Lake Success sediments and the completion of the second phase of the facility investigation, the EPA expects that additional cleanup may be necessary to address any remaining contaminated areas, which could include wetlands and stream sediments.

Comment 27:

One commenter submitted a written comment that inquired: "Will ground water at the perimeter of the site be tested to discover if either present conditions or the cleanup effort is creating a hazard?"

Response:

Yes. Before cleanup activities at LSBP are complete, any impacts to groundwater from activities at the site will be fully characterized. Some groundwater investigation has already taken place as part of the Phase I RCRA Facility Investigation. The results of this investigation can be found in the Phase I RCRA Facility Investigation Report located in the Lake Success Business Park information repository at the Burroughs Library in Bridgeport. Initial groundwater results do not show any imminent threat from groundwater contamination. However, the EPA expects that

further groundwater investigation will be necessary at LSBP.

Comment 28:

One commenter submitted a written comment that stated: "The uncertainty about the whereabouts and status of explosive materials on the site is most disturbing. How will this serious issue be addressed."

Response:

The EPA's response to Comment 23 provides a full description of previous site investigation at LSBP. As part of this investigation, in addition to environmental sampling, the following steps were taken to identify the presence of explosive materials:

- Aerial photographs of the entire property were taken and interpreted by the EPA to identify areas which showed evidence of disposal activities or other human disturbance;
- Interviews of former Remington Arms employees were conducted to identify areas where explosives may have been buried; and
- Two types of surveys were conducted to identify areas where metals or magnetic material may be buried.

In addition, over the past few years, most buildings associated with Remington Arms production have been demolished. During their demolition, all floor drains, piping, and debris associated with explosive waste were removed and deactivated.

Based on historical information and site investigation results, it is unlikely that explosive materials will be uncovered during implementation of this remedy. However, as a safety measure, contractors conducting soil excavation will be trained to recognize signs of the presence of explosives and to take the proper safety measures. Any recovered explosives will be transferred to an on-site bunker for temporary storage.

Comment 29:

One commenter submitted a written comment that stated: "Dioxin [was] found in Remington studies. Something should be said about it. It would be dangerous in the proposed remedy."

Response:

Dioxins are commonly found in soils throughout rural and urban environments. They are typically found in urban soils at greater concentrations than those detected in LSBP soils. As explained in greater detail below, the levels of dioxins in the soils proposed for treatment as part of this remedy at LSBP are one-hundred fold less than the action level for dioxin in residential soils, recommended by the Agency for Toxic Substances and Disease Registry (ATSDR). ATSDR's recommended action level has been used by the EPA as a residential cleanup standard for soils at many hazardous waste sites.

Soil samples taken during the Phase I RCRA Facility Investigation detected octachlorodibenzo-*p*-dioxin in 5 of the 37 Areas of Environmental Concern slated for cleanup as part of this remedy. Concentrations in these 5 Areas of Environmental Concern ranged from .19 to 4.4 nanograms octachlorodibenzo-*p*-dioxin per gram of soil (parts per billion). Heptachlorodibenzo-*p*-dioxin was detected in 1 of the 37 Areas of Environmental Concern slated for cleanup as part of this remedy at a concentration of .61 nanograms heptachlorodibenzo-*p*-dioxin per gram soil (parts per billion). Octachlorodibenzofuran was detected in 1 of the 37 Areas of Environmental Concern slated for cleanup as part of this remedy at a concentration of .18 nanograms octachlorodibenzofuran per gram of soil (parts per billion). Heptachlorodibenzofuran was detected in 1 of the 37 Areas of Environmental Concern slated for cleanup as part of this remedy at a concentration of .073 nanograms heptachlorodibenzofuran per gram of soil (parts per billion).

Studies on background levels of dioxins in rural and urban soils have found background levels of octachlorodibenzo-*p*-dioxin ranging from zero to .810 nanograms octachlorodibenzo-*p*-dioxin per gram soil (parts per billion) in rural soils and from zero to 16 nanograms octachlorodibenzo-*p*-dioxin per gram soil (parts per billion) in urban soils. These studies have found background levels of heptachlorodibenzo-*p*-dioxin ranging from zero to .091 nanograms heptachlorodibenzo-*p*-dioxin per gram soil (parts per billion) in rural soils and from zero to 2.4 nanograms heptachlorodibenzo-*p*-dioxin per gram soil (parts per billion) in urban soils. These studies have not detected background levels of heptachlorodibenzofuran or octachlorodibenzofuran in rural soils, but have detected background levels of heptachlorodibenzofurans ranging from zero to .820 nanograms heptachlorodibenzofuran per gram soil (parts per billion) and background levels of octachlorodibenzofurans ranging from zero to .660 nanograms octachlorodibenzofuran per gram soil (parts per billion) in urban soils (Birmingham, 1990) (Pearson et al., 1990). Based on these studies, the levels of octachlorodibenzo-*p*-dioxin, heptachlorodibenzo-*p*-dioxin, heptachlorodibenzofuran, and octachlorodibenzofuran detected in soils at LSBP are within the range of urban background soil concentrations.

ATSDR has recommended use of 1 part per billion 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (2,3,7,8-TCDD) in soils as a residential cleanup level. This recommendation was based on a Center for Disease Control study that recommended 1 part per billion 2,3,7,8-TCDD in soils as a reasonable level for residential exposure, above which some action should be considered to reduce human exposure (Kimbrough, et al., 1984). 2,3,7,8-TCDD has been widely studied and is the most toxic dioxin *congener* or chemical structure known. In 1988 an international procedure was developed under the auspices of the North Atlantic Treaty Organization's Committee on Challenges of Modern Society to promote consistency in addressing contamination involving chlorinated dibenzo-*p*-dioxins and chlorinated dibenzofurans (NATO/CCMS 1988a; 1988b). This procedure assigned Toxicity Equivalency Factor (TEF) values to 210 structurally related individual chlorinated dibenzo-*p*-dioxin and chlorinated dibenzofuran congeners based on a data base of

toxicity testing. By relating the toxicity of 209 of these congeners to the highly-studied 2,3,7,8-TCDD, which has been assigned a TEF value of 1, this approach simplifies the assessment of risks involving exposures to mixtures of chlorinated dibenzo-*p*-dioxins and chlorinated dibenzofurans (EPA, 1989).

Using the TEF approach, we multiplied the TEF values for octachlorodibenzo-*p*-dioxin, heptachlorodibenzo-*p*-dioxin, heptachlorodibenzofuran, and octachlorodibenzofuran respectively by the respective soil concentrations of these congeners at LSBP. The result, known as the Toxicity Equivalency Quotient (TEQ), can then be compared to the 1 part per billion 2,3,7,8-TCDD residential soil action level to determine whether dioxins at LSBP are present at levels that present an unacceptable risk to human health and the environment and therefore warrant cleanup. The TEQ calculated for octachlorodibenzo-*p*-dioxin by multiplying the maximum concentration detected in the LSBP soil slated for treatment as part of this remedy (4.4 parts per billion) by the TEF for octachlorodibenzo-*p*-dioxin (.001) is .0044 parts per billion. This is much less than the 1 part per billion action level. The TEQ calculated for heptachlorodibenzo-*p*-dioxin by multiplying the maximum concentration detected in the LSBP soil slated for treatment as part of this remedy (.61 parts per billion) by the TEF for heptachlorodibenzo-*p*-dioxin (.01) is .0061 parts per billion. This is much less than the 1 part per billion 2,3,7,8-TCDD action level. The TEQ calculated for heptachlorodibenzofuran by multiplying the maximum concentration detected in LSBP soil slated for treatment as part of this remedy (.073 parts per billion) by the TEF for heptachlorodibenzofuran (.01) is .00073 parts per billion. This is much less than the 1 part per billion 2,3,7,8-TCDD action level. The TEQ calculated for octachlorodibenzofuran by multiplying the maximum concentration detected in LSBP soil slated for treatment as part of this remedy (.18 parts per billion) by the TEF for octachlorodibenzofuran (.001) is .00018 parts per billion. This is much less than the 1 part per billion 2,3,7,8-TCDD action level. Therefore, in consideration of the ATSDR's recommendation of 1 part per billion 2,3,7,8-TCDD in soils as an action level for residential exposure, concentrations of dioxin-like compounds are not present at levels of concern for industrial/commercial exposure that would warrant cleanup.

Comment 30:

One commenter submitted a written comment that stated: "I read the Public Notice in the CT Post. I was an employee of Remington Arms for over 30 years. I read that there is a plan for cleaning up the lead contaminated soils at the site. There is indeed lead in the soil. During the 2nd World War they test fired tracer rounds and shells of various sizes into mounds for 3 shifts for years. Lake Success, as you call the lake in the Park, should also be looked into. Divers would be able to see what's in the lake. Shells from the first War, primers, machinery, and chemicals. Asbestos was dumped in the park area at several sites. Asbestos wads used in shotgun shells that were scrapped were dumped there for years, around 20. Plastic shells that were N.B. and scrap plastic was ground or chopped up and dumped in the park. The sewer pipes are full of powder from the mixing for over 50 years. The past 10 years or more, the park has overgrown hiding everything. People who were in charge were not longer around. Some have

died. The Chief Supervisors of Maintenance and Plant Management are gone. DuPont conveniently passed the property to Sporting Goods Properties, Inc.

When I was a kid playing ball at Yellow Mill Pond area on the other end of the river and ponds that flowed through Remington Arms Park and past GE Company, the water ended up in the Yellow Mill Pond. That was the color of the water, yellow, from raw sewage and chemicals. They should clean up the whole river.”

Response:

Areas of the LSBP property described by this comment, including Lake Success, firing ranges, and shot shell piles, have been investigated and are slated for cleanup. In addition, further investigation is planned for LSBP. The EPA welcomes any historical information available on disposal practices, to help assess whether all contaminated areas of the property have been located. The EPA encourages this commenter, who submitted this comment anonymously, to contact Stephanie Carr of the EPA to schedule a visit to LSBP or simply discuss his/her recollections about disposal practices at LSBP. Stephanie Carr can be reached at the address and phone number provided on page 12 of the main body of this document.

Comment 31:

At a public hearing, one commenter stated “In this park where there is stuff buried, you cleaned up what you saw, but there -- I buried most of that stuff in the park and I know where it’s at. I worked nineteen years in that park. I would just like to know whether its all been looked over?”

Response:

EPA and SGPI conducted a site visit at LSBP with this commenter, a former Remington Arms employee, in October 1996. This commenter was very helpful in identifying areas where he recalled waste being buried during his years at Remington Arms. Most of these areas were already slated for cleanup. Areas which the commenter identified which had not been previously investigated will be investigated as part of the Phase II RCRA Facility Investigation.

Media Protection Standards

Comment 32:

Two commenters expressed concern regarding the potential for recreational activity, such as jogging, walking, or picnicking, etc. to occur among employees at the business park proposed for the LSBP property. The Environmental Land Use Restriction to be placed at LSBP will not allow for use of the property as a “playground or outdoor recreational area.” These commenters were concerned whether the MPSs are sufficiently protective to safely allow recreational activities among employees at a business park and whether developers at LSBP are fully aware of the present and future restrictions on the property.

Response:

The EPA, in its final decision on this remedy, is requiring that a “buffer zone” on the LSBP property be remediated to State of Connecticut Remediation Standard Regulations residential Direct Exposure Criteria (Regulations of Connecticut State Agencies Section 22a-133k-2). This buffer zone, shown in Figure 4, will extend 200 feet inward from the LSBP property line along the entire perimeter of the property.

The MPSs for soils in Areas of Environmental Concern not included in the 200-foot buffer zone are slightly more stringent than the State of Connecticut Remediation Standard Regulations industrial/commercial Direct Exposure Criteria. They were developed to be protective for human health based on exposures expected to occur on land used for industrial/commercial purposes. In developing the industrial/commercial Direct Exposure Criteria, Connecticut did consider some outdoor activity by employees, such as walking or picnicking outdoors, which could occur on industrial/commercial land.

To ensure that the future uses of the LSBP property remain consistent with the level of cleanup, EPA is requiring that an Environmental Land Use Restriction (per Regulations of Connecticut State Agencies Section 22a-133q-1) be placed on the entire LSBP property. An Environmental Land Use Restriction is a restrictive covenant recorded on the municipal land records. These restrictions run with the land and bind the owner of the land and his successors and assigns to certain requirements and terms. Specifically, the environmental land use restriction to be placed on the LSBP property would prohibit any *residential activity* on the property, as defined by the State of Connecticut (Regulations of Connecticut State Agencies, Section 22a-133k-1). Residential activity includes any activity related to a residence, dwelling, school, hospital, day care center, playground, or outdoor recreational area. Thus, the environmental land use restriction will effectively prohibit the establishment of any of the above activities on the entire 435-acre LSBP property.

The State of Connecticut requires that a property owner who is operating under an Environmental Land Use Restriction include provisions in any lease, grant or other transfer of interest in the property to require the lessee, grantee, or transferee to comply with the terms of the Environmental Land Use Restriction. The terms of an Environmental Land Use Restriction are enforceable by the State of Connecticut (section 22a-133p of the General Statutes).

In the future, an owner and/or developer of the LSBP property could petition the State of Connecticut to release parcels of the property from the limitations of the Environmental Land Use Restriction (Regulations of Connecticut State Agencies Section 22a-133q-1). However, such a petition will not be granted unless the individual proposing the alteration in the restriction can show that the parcel has been cleaned up to levels fully protective of human health for any future use of the parcel (e.g. for residential use or non-residential use). Release of any parcel of the property from the Environmental Land Use Restriction must be reviewed and approved by the

Connecticut Department of Environmental Protection (CT DEP) Commissioner.

Comment 33:

One commenter submitted a written comment that stated "I am requesting on behalf of all the families living in the residential area surrounding the Remington Woods that a very specific stipulation be made in the final EPA approval, if final approval is given, for the development of a Corporate Park on this property, that it remain fenced in forever and always.

This is very important to our health concerns, since the levels of contaminants in the soil will only be at the commercial not the residential level. If Sporting Goods Properties, Inc. were allowed to remove the fence or open the fence in certain areas for additional access to the park, it is more than possible that the remaining levels of contaminants could be transported into our area by various means, such as motor vehicles, pedestrians, etc."

Response:

The EPA proposed MPSs in the August 1996 Statement of Basis which were designed to protect human health and the environment, given the reasonably expected future use of the property as a business park. However, during the public comment period, the EPA gained new information on the potential accessibility of the LSBP property by the public under its current use and its proposed future use as a business park. This information was gained from public comments, informal discussions with residents living near the property, and information presented on the future development plans for the property. Based on this information, the EPA has modified the remedy to provide greater protection of human health to the community surrounding the LSBP property.

The final remedy decision includes an additional specification that contaminated upland soils in any Areas of Environmental Concern addressed in this remedy within a "buffer zone" be cleaned up according to the State of Connecticut residential Direct Exposure Criteria (Regulations of Connecticut State Agencies Section 22a-133k-2). This buffer zone, illustrated in Figure 4 (attached), will extend inward for a distance of 200 feet from the property line along the entire site perimeter. Areas of Environmental Concern that are fully or partially included in this buffer zone include Areas of Environmental Concern 1-4, 1-11, 1-13, 1-17, 3-1, 3-3, 11, and 24. EPA believes that requiring additional cleanup in this buffer zone offers greater protection of human health for the surrounding community than requiring that the LSBP property remain fenced. EPA does not believe that requiring that the LSBP perimeter fence be maintained is a permanent solution which can function as a component of a final remedy decision for the property.

The additional cleanup of soils in the buffer zone is primarily designed to protect young children who live in homes near the LSBP property. These children could frequently trespass on the LSBP property if portions of the perimeter fence fall into disrepair. A width of 200 feet has been selected for this buffer zone because it is a distance beyond which frequent trespassing by young

children (i.e., younger than age 6) would not be expected to occur. There are some areas along the LSBP property perimeter which are currently bordered by roadways or industrial or commercial establishments. Trespassing by young children in these areas is unlikely under current conditions. However, as the land use of these properties could change in the future, the final decision specifies that the buffer zone extend along the entire perimeter of LSBP. The buffer zone was designed primarily to protect young children, because they generally have greater exposure to contaminants in soils than do older children or adults. Much of their exposure occurs due to ingestion of soil, as they play on the ground and frequently stick their hands in their mouth. Therefore, by protecting young children, the buffer zone MPSs will be protective for the entire community surrounding LSBP.

For the soils addressed under this remedy on the remaining interior portions of the LSBP property (outside the buffer zone shown in Figure 4), approved MPSs are identical to those proposed in the August 1996 Statement of Basis. These MPSs are listed in Table 2, attached. They are slightly more stringent than the Connecticut Remediation Standard Regulations industrial/ commercial Direct Exposure Criteria (Regulations of Connecticut State Agencies Sections 22a-133k-2) and are protective for human health based on exposures likely to occur under the current use and the proposed future use of the property as a business park. These

MPSs are also *conditional* on an industrial/commercial future use of the property. Therefore, if the future use plans for the property change, the MPSs in this remedy will be reevaluated and modified, if necessary, to ensure that the level of cleanup is consistent with the use of the property.

Prior to proposing the industrial/commercial MPSs (listed in Table 2) in the August 1996 Statement of Basis, the EPA analyzed risks to the surrounding community from lead, the primary site contaminant. The EPA chose child trespassers, age six years or older, as the subject of this risk analysis. It is not expected that children younger than six years old would trespass on the property further than the extent of the 200-foot buffer zone. Results of this risk analysis showed the MPS for lead (1,000 milligrams lead per kilogram soil) to be fully protective for children age six years or older trespassing as often as every day on the LSBP property. Through this risk analysis, EPA also found that soil achieving the MPS for lead, if tracked into homes by such child trespassers, would not present an unacceptable risk to younger siblings. This risk analysis focused on children because they are more sensitive than adults to the effects of lead. Based on this risk analysis, EPA believes that the MPSs for the 200-foot buffer zone and remaining portions of the property will be fully protective for the health of the community surrounding the LSBP property, given its proposed future use as a business park.

Vehicles driving into LSBP would most likely be driving on paved roadways on the property and therefore would not transport soil from the property into surrounding residential areas. During implementation of this remedy, vehicles and heavy equipment used for cleaning up the property

will be working in unpaved areas. However, residual soil will be removed from the tires of such vehicles before they exit any contaminated areas of the property. Therefore, the EPA believes that the MPSs for the buffer zone and remaining portions of the property will be fully protective for the health of the community surrounding the LSBP property.

Comment 34:

Four individuals and one local organization expressed concern that the MPSs would limit the property to an industrial/commercial future use and requested that MPSs be protective for any potential future use. One of these individuals stated "The deed restrictions, you should know, it's a done deal. You're going to limit our options if you allow this plan to go through. The deed restrictions will not allow for hospitals, for passive recreation, for day care. If they do this plan up half -- half baked, we will then be limited as a city with light industrial and if DuPont doesn't develop their land, then we are not going to be able to, as a state or as a city, purchase this land as cleaned land. We're going to end up with a dirty park for another 150 years and I don't support that."

Response:

The reasonably anticipated future use of a property undergoing cleanup is an important consideration in developing MPSs. Future use of the land will affect the types of exposures and the frequency of exposures that may occur to any residual contamination remaining on the site. In most cases, residential use of a property (i.e., for housing) is the land use where human activities are associated with the greatest exposure, particularly to soils. Human exposures to soils on property used for industrial/commercial are generally much lower. Therefore, soil MPSs appropriate for industrial/commercial land use generally allow higher concentrations of contaminants to remain in soil than would soil MPSs appropriate for residential land use. However, as human exposure to soil on industrial/commercial properties is much less than on residential properties, the respective MPSs for these properties can result in the same level of overall protection of human health (EPA, 1995a). Therefore, it is EPA policy that contaminated soil at an industrial site might be cleaned up to be sufficiently protective for industrial use, but not residential use, as long as there is reasonable certainty that the site would remain industrial (EPA, 1990; EPA, 1996a).

The EPA believes there is reasonable certainty that the future use of the LSBP property will be industrial/commercial based on the following considerations:

- the industrial zoning of the property,
- the property-owner's plans to developing the property as a business park,
- the support for the property owner's redevelopment plans by the municipal governments of Bridgeport and Stratford, and
- public input received by these municipal governments on the property owner's future development plans.

However, as explained on page 5 of the main body of this document, the industrial/commercial MPSs finalized for Areas of Environmental Concern not included in the 200-foot perimeter buffer zone (described in the EPA's response to Comment 33) are also *conditional* on a future industrial/commercial use of the property. This means that if the future use plans for LSBP change the MPSs in this remedy would be reevaluated and modified, if necessary, to ensure that the level of cleanup is consistent with the future use of the property.

The EPA is requiring that an Environmental Land Use Restriction (per Regulations of Connecticut State Agencies Section 22a-133q-1) be placed on the entire LSBP property. As explained in the EPA's response to Comment 32, the Environmental Land Use Restriction to be placed on the LSBP property is designed to ensure that the future use of the property remains consistent with the level of cleanup. Therefore, the Environmental Land Use Restriction would prohibit any *residential activity* on the property, as defined by the State of Connecticut (Regulations of Connecticut State Agencies, Section 22a-133k-1). Residential activity includes any activity related to a residence, dwelling, school, hospital, day care center, playground, or outdoor recreational area. Initially, the EPA is requiring that an environmental land use restriction be placed on the entire 435-acre LSBP property. However, under Connecticut law (Regulations of Connecticut State Agencies Section 22a-133q-1) parcels of the property may be released from the limitations of the Environmental Land Use Restriction in the future, provided a level of cleanup protective for any future use is demonstrated on these parcels. Release of any parcel of the property from the Environmental Land Use Restriction must be reviewed and approved by the Connecticut Department of Environmental Protection Commissioner.

The EPA encourages individuals who have questions on the future use plans for LSBP to contact Mike Nidoh, Director of Planning for the City of Bridgeport, for further information. He can be reached at 203/576-7191.

Comment 35:

Another individual mentioned in Comment 34 stated: "The EPA and DEP roles must not be influenced by the developer nor the politicians. The level to which the cleanup is to be implemented has been determined by finances rather than prudent practice. EPA and DEP cannot assume liability for a site that is no longer hazardous but will remain toxic. Why are we allowing Brownfields standards when this has not been designated as a Brownfields site? Under the Governmental financial structure, DuPont like the Exxon Oil Company after the Valdez cleanup will receive many more rebates. Eventually the taxpayer will carry the burden, therefore you must insist on the most stringent standards available. The necessity to place Restrictive Covenants on the property will serve as evidence that the cleanup is inadequate."

Response:

It is EPA policy that contaminated soil at an industrial site might be cleaned up to be sufficiently protective for industrial use, but not residential use, as long as there is reasonable certainty that

the site would remain industrial (EPA, 1990; EPA, 1996a). As explained on pages 4 through 6 of the main body of this document, the EPA believes that the proposed MPSs will be fully protective of human health and the environment given the proposed future use of the property as a business park. The “restrictive covenant” or Environmental Land Use Restriction is designed to ensure that the use of the property remains consistent with the exposure assumptions used in developing the MPSs.

A *brownfield* is defined as “a site, or a portion thereof, that has actual or perceived contamination and an active potential for redevelopment or reuse” (EPA, 1996b). Based on this definition, LSBP could be considered a brownfield. The EPA is not aware of the existence of specific “Brownfield Standards.” However, the EPA does consider the reasonably anticipated future use of a property along with other site specific considerations in determining the appropriate level of cleanup for any property, including brownfields.

SGPI is paying for the investigation and cleanup of LSBP. Investigation and cleanup is being conducted under EPA and CT DEP regulatory oversight. There is always a risk that the property owner of a contaminated property will go bankrupt, resulting in the need for government funds to be used to clean up that property. However, the RCRA Corrective Action program is designed to reduce the number of properties at which this situation arises by requiring investigation and cleanup at industrial facilities where a viable owner/operator is present to pay for the cleanup.

Comment 36:

At a public hearing, one commenter stated: “I would just like to say I would like things clarified as to the cleanup standards, the monitoring, how it will be conducted if it isn’t a Brown Field Act, if it falls under the Brown Field Act. And, also, I would like to point out that the variance in the two cleanup standards are very key over here because of restrictions that must be placed on the property in the future. So, in fact, does that mean that if I worked there at the new site I would only be allowed to stay eight hours a day and I can’t stay overtime?”

Response:

A *brownfield* is defined as “a site, or a portion thereof, that has actual or perceived contamination and an active potential for redevelopment or reuse” (EPA, 1996b). Based on this definition, LSBP could be considered a brownfield. The EPA has a *Brownfield Initiative* designed to empower States, communities and other stakeholders in economic development to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields (EPA, 1996b). The EPA is not aware of any “Brownfield Act.” However, the EPA does consider the reasonably anticipated future use of a property along with other site specific considerations in determining the appropriate level of cleanup for any property, including properties on which cleanup is proceeding under the Brownfields Initiative.

The commenter inquired whether the industrial/commercial MPSs would be protective for

someone who was to stay at work more than eight hours a day at LSBP. The industrial/commercial MPSs are developed based on conservative exposure assumptions and therefore would protect individuals working overtime on an industrial/commercial property.

This commenter also points out the differences between residential and industrial/commercial MPSs. A full explanation of the rationale for the MPSs which the EPA has selected at LSBP, the Environmental Land Use Restriction and the differences between residential and industrial/commercial exposure assumptions is provided on pages 4 through 7 of the main body of this document.

Comment 37:

At a hearing, one commenter stated: "We want to have a say into the cleanup of this whole process. Into the cleanup of the Remington Woods. If this begins, you're going [to] find probably 60, 70 percent of the trees coming down in Remington Woods. You're going to find a major process, one which, though, is not going to do the job, as far as I'm concerned, in cleaning up the soil. We -- my attitude has been and seemingly -- the people in this district are saying the same thing... if they polluted -- meaning DuPont - Remington Arms -- polluted this land, they should clean it up. Now if they're going to clean it up to their own standards, that means that a lot of the park will not be cleaned up. And once they take the fences down and a hotel goes up -- like we need one -- or light industry. And I'm not against light industry. But the bottom line is, we need first and foremost tonight to address the cleanup. The cleanup has to be a full cleanup. I have asked EPA, DEP how much it would cost to do a full cleanup and do new sampling. Sampling from all over the park. Not just DuPont's paid for sampling. No one could give me an answer. I called DuPont in Delaware. They don't want to talk to me. They will not give me an answer. So had it been for tonight's meeting, we were going to get a partial cleanup stuffed down our throats and although they say in the newspaper that there is not mercury, there's mercury we think in there. There's arsenic in there. There's lead in there. There are chemicals in there that we don't know how dangerous they've been and if they're in the air. We're breathing them. DuPont has paid for the whole process so far. EPA and DEP must step up to the plate and let us have a say in our city's future."

Response:

The 37 soil areas slated for cleanup as part of this remedy cover an estimated 15 acres, roughly 3% of the entire 435-acre LSBP property. Therefore, given that the entire property is heavily wooded, cleanup of these areas will not result in removal of 60 to 70% of the trees on the property.

It is unclear to what this commenter is referring in expressing concerns regarding a "partial cleanup" at LSBP. EPA suspects that the commenter could be referring to the fact that 1) the MPSs proposed are consistent with industrial/commercial standards rather than residential standards; or 2) only upland soils are addressed under this remedy. The Remedy for Treatment of

Soils represents a comprehensive cleanup of upland soils from 37 areas of the LSBP property. The MPSs which EPA has finalized for this remedy are consistent with the current and proposed future use of the property and are fully protective for the surrounding community. A complete explanation of the EPA's rationale for these MPSs is presented on pages 4 through 6 of the main body of this document. Based on public comments on the proposed MPSs, the EPA has modified these MPSs for a "buffer zone" extending 200 feet inward along the entire perimeter of the property. Soils in Areas of Environmental Concern addressed under this remedy which are included in the buffer zone will be cleaned up according to the Connecticut Remediation Standard Regulations residential Direct Exposure Criteria (Regulations of Connecticut State Agencies, Section 22a-133k-2). These modified MPSs are designed to provide greater protection for abutting residents.

Cleanup at Lake Success Business Park is expected to proceed in three separate phases. The Remedy for Treatment of Soils is the first major phase of cleanup. Upland soils from 37 areas of the property will be addressed under this remedy. EPA expects that the second phase of cleanup will remove ammunition from the sediments of Lake Success. The third phase will address remaining contaminated areas, including groundwater. This phased approach will allow contaminants in soils, which are more likely to be contacted by on-site workers and trespassers than contaminants in groundwater or sediments, to be addressed early in the process. In addition, a phased approach allows information obtained from previous phases to be used for planning and refining subsequent investigation or cleanup (EPA, 1996a).

The EPA believes it has provided ample opportunity to involve the public in this remedy decision. A 40-day public comment period was scheduled to solicit public comment on the remedy. This public comment period was extended to a total of 86 days to provide additional opportunity for public comment. As described on pages 4 through 5 of the main body of this document, the EPA has modified the initial remedy proposal based on concerns raised by members of the public.

As explained in the EPA's response to Comment 23, widespread sampling has been conducted at LSBP and a second phase of site investigation is planned. As facility owner/operators are responsible for conducting investigation and cleanup as part of RCRA Corrective Action, SGPI has paid for most of the sampling conducted thus far. However, there are various checks on SGPI's work, including regular field audits and duplicate sampling conducted by EPA and CT DEP, and thorough review of SGPI's work plans and reports. The EPA will continue to provide this level of oversight for future investigation at LSBP.

Comment 38:

At a public hearing, one commenter stated: "I'm hearing partial cleanup. This concerns me. What cost for a child when we really don't know where the roads are going to go, if they lose a limb, an eye. What cost? The longitudinal effects. These are carcinogens. Do these seep up through the soil, down through the soil? Will they effect the water beneath? There is a water

problem. I'm not an environmentalist. These are things that are a concern."

Response:

It is unclear to what this commenter is referring in expressing concerns regarding a "partial cleanup" at LSBP. EPA suspects that the commenter could be referring to the fact that 1) the MPSs proposed are consistent with industrial/commercial standards rather than residential standards; or 2) only upland soils are addressed under this remedy. EPA's response to Comment 37 provides an explanation of both of these issues.

The major soil contaminant at LSBP is lead. Other metals and polycyclic aromatic hydrocarbons are also present at lesser concentrations. Small amounts of these contaminants can leach down through the soil to affect the groundwater below. Under Corrective Action, a complete characterization of any impacts to groundwater from contaminants at LSBP is required. Some groundwater investigations have been conducted as part of the Phase I RCRA Facility Investigation. The results of this investigation can be found in the Phase I RCRA Facility Investigation Report in the Burroughs Library in Bridgeport. This investigation does not show any imminent threat posed by contaminant concentrations in groundwater. Further groundwater investigation is planned as part of the Phase II RCRA Facility Investigation.

Comment 39:

A petition, signed by approximately 1,817 individuals, was submitted to the EPA during a public hearing. The petition stated "We the undersigned oppose the partial cleanup of Remington Woods and the construction of a four-lane highway north of Boston Avenue. We support the full cleanup of Remington Woods to pristine levels so as to assure the surrounding neighborhoods a safe, clean, healthy environment."

Response:

It is unclear to what this petition is referring in expressing concerns regarding a "partial cleanup" at LSBP. EPA suspects that the petition could be referring to the fact that 1) the MPSs proposed are consistent with industrial/commercial standards rather than residential standards; or 2) only upland soils are addressed under this remedy. EPA's response to Comment 37 provides an explanation of both of these issues.

EPA assumes that "pristine levels" refers to levels protective for human health and the environment based on residential exposure. It is EPA policy that contaminated soil at an industrial site might be cleaned up to be sufficiently protective for industrial use, but not residential use, if there is reasonable certainty that the site would remain industrial (EPA, 1990; EPA, 1996a). The EPA does believe there is reasonable certainty that the future use of the property will be industrial based on the following considerations:

- the current industrial zoning of the LSBP property,

- SGPI's plans to develop the property as a business park,
- support for SGPI's development plans on the part of the local governments in Bridgeport and Stratford, and
- public input received by local governments on SGPI's development plans.

The EPA proposed MPSs in the August 1996 Statement of Basis which were designed to protect human health and the environment, given the reasonably expected future use of the property as a business park. During the public comment period, the EPA gained new information on the potential accessibility of the LSBP property by the public under its current use and its proposed future use as a business park. This information was gained from public comments, informal discussions with residents living near the property, and information presented on the future development plans for the property. Based on this information, the EPA has modified the remedy to provide greater protection of human health to the community surrounding the LSBP property.

The final remedy decision includes additional specifications that contaminated upland soils in any Areas of Environmental Concern addressed in this remedy within a "buffer zone" be cleaned up according to the State of Connecticut residential Direct Exposure Criteria (Regulations of Connecticut State Agencies Section 22a-133k-2). This buffer zone, illustrated in Figure 4 (attached), will extend inward for a distance of 200 feet from the property line along the entire site perimeter. Areas of Environmental Concern that are fully or partially included in this buffer zone include Areas of Environmental Concern 1-4, 1-11, 1-13, 1-17, 3-1, 3-3, 11, and 24.

The additional cleanup of soils in this buffer zone is primarily designed to protect young children who live in homes near the LSBP property. These children could frequently trespass on the LSBP property if portions of the perimeter fence fall into disrepair. A width of 200 feet has been selected for this buffer zone because it is a distance beyond which frequent trespassing by young children (i.e., younger than age 6) would not be expected to occur. There are some areas along the LSBP property perimeter which are currently bordered by roadways or industrial or commercial establishments. Trespassing by young children in these areas is unlikely under current conditions. However, as the land use of these properties could change in the future, the final decision specifies that the buffer zone extend along the entire perimeter of LSBP. This buffer zone was designed to protect young children, because they generally have greater exposure to contaminants in soils than do older children or adults. Much of their exposure occurs due to ingestion of soil, as they play on the ground and frequently stick their hands in their mouth. Therefore, by protecting the health of young children, the buffer zone MPSs will be protective for the entire community surrounding LSBP.

For the soils addressed under this remedy on the remaining interior portions of the LSBP property (outside the buffer zone shown in Figure 4), approved MPSs are identical to those proposed in the August 1996 Statement of Basis. These MPSs are listed in Table 2, attached. They are slightly more stringent than the Connecticut Remediation Standard Regulations

industrial/ commercial Direct Exposure Criteria (Regulations of Connecticut State Agencies Sections 22a-133k-2) and are protective for human health based on exposures likely to occur under the current use and the proposed future use of the property as a business park. These MPSs are also *conditional* on an industrial/commercial future use of the property. Therefore, if the future use plans for the property change during EPA's oversight of Corrective Action at LSBP, the EPA will reevaluate the MPSs in this remedy and modify them if necessary to ensure that the level of cleanup is consistent with the use of the property.

Prior to proposing the industrial/commercial MPSs (listed in Table 2) in the August 1996 Statement of Basis, the EPA analyzed risks to the surrounding community from lead, the primary site contaminant. The EPA chose child trespassers, age six years or older, as the subject of this risk analysis. It is not expected that children younger than six years old would trespass on the property further than the extent of the 200-foot buffer zone. Results of this risk analysis showed the MPS for lead (1,000 milligrams lead per kilogram soil) to be fully protective for children age six and older trespassing as often as every day on the LSBP property. Through this risk analysis, EPA also found that soil achieving the MPS for lead, if tracked into homes by such child trespassers, would not present an unacceptable risk to younger siblings. This risk analysis focused on children because they are more sensitive than adults to the effects of lead. Based on this risk analysis, EPA believes that the MPSs for the 200-foot buffer zone and remaining portions of the property will be fully protective for the health of the community surrounding the LSBP property, given its proposed future use as a business park.

The EPA is overseeing Corrective Action at LSBP. However, it is not EPA's role to make decisions on local development issues. Therefore, concerns about future development plans for the LSBP property, including the construction of access roads, should be referred to Mike Nidoh, Director of Planning for the City of Bridgeport. He can be reached at 203/576-7191.

Need for Cleanup at Lake Success Business Park

Comment 40:

One commenter submitted a written comment that stated: "I would like to ask the people from the EPA several questions as to what site problems are there which have to waste taxpayers money and that of the owners that need to be cleaned up? Lead is no problem. It gives off no radiation, in fact it is used to store isotopes of radium and other elements used in atomic reactors. Also it is used in making the protective garments used in the atomic field. Copper is no problem. It was used in water pipes, etc., and still is today. What is more harmful is using PVC pipes in water mains and pipes for drinking water. Aluminum if stored there is no problem, as it does not give off harmful radiation if any at all. It can be buried right on-site when construction starts. In fact if there are large quantities of these elements (lead, copper, and aluminum, etc.) stored on site, they can be reclaimed for reuse as there are shortages of these elements at present."

Response:

The commenter is correct in stating that lead and copper have many beneficial uses. However, these metals can cause health effects in humans and wildlife if sufficient amounts are ingested. To protect against environmental and human health effects, the EPA develops Media Protection Standards (MPSs) which are concentration levels of contaminants shown to be protective of human health and the environment. For this remedy, soil concentrations following cleanup in the 37 areas of LSBP being addressed will meet the MPSs set by the EPA.

Lead reclaimed from soil during treatment may be recycled if it is feasible. Other metals and plastic recovered from excavated, unloaded shot shells may also be recycled.

Comment 41:

At a public hearing, one commenter stated: "I support the cleanup wholeheartedly. I do have concerns about the toxins in the air and I'm sure that we'll address that in the near future... Somewhere down the road, these toxins will eventually seep out of those munitions and work their way into our properties. I want the property cleaned up. I think it's a major necessity right now. Cleanup needs to be done regardless of whether we want to build on it or not." In addition to this commenter, six other commenters expressed the need for cleanup to proceed at LSBP.

Response:

The EPA agrees that contaminated portions of LSBP needs to be cleaned up whether or not the property is redeveloped. Implementation of the Remedy for Treatment of Soils will result in cleanup of a major portion of contamination at LSBP. The EPA anticipates that at least two subsequent phases of cleanup will be necessary to address remaining contaminated areas at LSBP.

In response to the commenter's concern regarding "toxins in the air," the EPA is requiring that stringent dust controls be applied and during soil excavation, transport, storage, and treatment to prevent contaminated soils from migrating off-site as dust. The EPA is also requiring that air monitoring be conducted as a safety precaution to confirm the effectiveness of the dust controls. The dust controls and air monitoring to be implemented are described fully in the EPA's response to Comment 5.

Comment 42:

One commenter submitted a written comment that stated: "Page 9 of RCRA Program Statement of Basis specifically requests comments on the lake, streams, and wetland areas. It would appear to me the residential properties north of LSBP add to the ground water flow and flood conditions. Hopefully the removal of the toxic chemicals will significantly reduce the hazard of toxic migration from water run off during flood times."

Response:

It is possible that, under current conditions at LSBP, heavy rains could result in run-off

transporting some soil from contaminated areas into on-site stream and wetland sediments. Excavation and treatment of contaminated soil as part of this remedy should greatly reduce or eliminate contaminated soil run-off. Further investigation of stream and wetland sediments will be conducted as part of the Phase II RCRA Facility Investigation.

Comment 43:

At a public hearing, a petition, signed by approximately 42 people, was submitted to the EPA. This petition stated: "We, the undersigned, oppose all clean-up of Remington Woods."

Response:

If no cleanup were to occur on the LSBP property, the contamination present on portions of the property could present risks to future residents living near the property and would be harmful to the ecosystem. As explained in the August 1996 Statement of Basis and on page 8 of the main body of this document, the EPA has evaluated a "no action" alternative of no further site cleanup at LSBP. The EPA compared benefits and risks of this alternative to those of the proposed remedy. Due to the high levels of contamination that exist on portions of the property, the EPA does not believe that the "no further action" alternative would provide overall protection of human health and the environment.

EPA representatives are available to discuss any concerns individuals who signed this petition may have concerning specific aspects of this remedy. Please contact Stephanie Carr (address and phone number are provided on page 12 of the main body of this document).

Noise Concerns

Comment 44:

One commenter submitted a written comment that inquired: "Have noise levels during 300 working days of soil washing, plus excavation, been considered as a factor in this decision?"

Response:

Yes. All potential impacts to the local community of excavation and soil washing have been considered as a factor in the EPA's final decision on the Remedy for Treatment of Soils. SGPI conducted a pilot study of the soil washing technology from August to November 1995. During the pilot study, SGPI monitored noise generated from the soil washing equipment and found that at a distance of 200 feet from the soil washing equipment, noise levels generated from the soil washing equipment were approximately equal to background noise. Since the nearest residential neighborhood is roughly 1,000 feet away from the soil washing equipment, the noise is not anticipated to disrupt the residential community surrounding LSBP.

Noise from heavy equipment used for excavation may be heard by some LSBP neighbors, as some soil areas slated for excavation are close to off-site residents. However, none of these

excavations will continue for longer than a few months and all work will be conducted during the day and according to local ordinances.

Properties Formerly Operated by Remington Arms

Comment 45:

One commenter submitted a written comment that stated: "Let me have whatever information you may be able to gather concerning the Dictaphone Corp. Headquarters which was built on Remington Arms property somewhere around 1985 or 1986."

Response:

The Dictaphone Corporation Headquarters on Broadbridge Avenue was reported to have been previously owned by Remington Arms. We have referred this property to the EPA's Superfund Site Assessment program for further investigation. To obtain further information on status of this property, please feel free to contact Daria Till of the EPA's Region I Superfund Site Assessment program by telephone at 617/223-5524.

Comment 46:

One commenter submitted a written comment that stated: "I went to your last meeting on September 17, 1996 at the Bridgeport Hospital. At that meeting I heard two comments that Remington Arms would not sell their property for 150 years. And another comment was that they would not sell for 135 years. As you know, they sold ten plus or minus acres to Daddario industry. Daddario then sold it to Con Co Company and Schwabben Hall and one other party. Seeing that these areas border Remington Arms Park, I do not understand why the EPA is cleaning only certain areas and not these ten acres because, 40 years ago, I recall a powder house built into a hill which is now owned by Con Co Company. I would appreciate your looking into this matter."

Response:

Based on this comment, we have referred both the Con Co property and the Schwabben Hall property to the EPA Superfund Site Assessment program for further investigation.

Soil Washing Technology

Comment 47:

One commenter submitted a comment that stated: "The biocides represented in the literature have been present on the subject property for many years. Acid rain as a catalyst has caused the pollutants to migrate as leachates and increase adsorption by the surrounding media. The physical pollution may be removed, but the chemical mutant molecules remain. Soil washing at best is inadequate and additional steps must be undertaken in order to neutralize any remaining in contact media."

Response:

Through implementation of this remedy, contaminants in the soil at LSBP will be removed so that soil remaining on-site achieves levels protective of human health and the environment based on the current and proposed future land use at the property. Based on results of the Soil Washing Pilot Study, which SGPI conducted from August to November 1995, the EPA believes that soil washing is an adequate technology for achieving the approved MPSs. The rationale for EPA accepting soil washing as a treatment technology for this remedy is presented on pages 7 through 9 of the main body of this document.

As part of LSBP Corrective Action, any impacts to groundwater due to leaching of contaminants will be fully characterized. Some investigation of groundwater at LSBP has been conducted. Results can be found in the Phase I RCRA Facility Investigation Report in the LSBP information repository in the Burroughs Library in Bridgeport. The results of this investigation does not indicate any imminent threat posed by contaminant concentrations in groundwater at LSBP.

Comment 48:

One commenter submitted a written comment that stated: "The blending of soil cannot be allowed to achieve acceptable levels of the contaminants."

Response:

The EPA will not allow the blending of soils to be used to achieve acceptable levels of contaminants. Some blending of soil prior to treatment by soil washing is necessary to make the soil washing process more effective. Soil washing separates smaller soil particles to which contaminants adhere from larger, clean particles and separates heavier metal particles from lighter soil particles. It is this separation process, not the blending of soil, which results in soil that meets MPSs and can be reused on-site.

Miscellaneous**Comment 49:**

One commenter submitted a written comment that stated: "There is also the matter of the water flow between the Remington property and the pond adjacent to George Zemola's house. Does it present a contamination problem in that area outside the fence?"

Response:

EPA and CT DEP representatives visited LSBP with this commenter to look at a culvert at the end of Evers Street. Run-off from Evers Street runs through this culvert onto the LSBP property and downstream into Lake Success. The commenter was concerned that in heavy rain storms, flow in this culvert could reverse and water could flow from LSBP back toward Evers Street. Based on our inspection of the culvert, this is not the case. The culvert itself may become blocked with debris from Evers Street during storms, but there is no obstruction to flow

downstream of Lake Success which would cause flow to reverse. EPA and CT DEP representatives visited this culvert a second time in December during a heavy rain storm and found that water in the culvert was still clearly flowing from Evers Street toward Lake Success.

Comment 50:

One commenter submitted a written comment that stated: "I am totally against this project because the wildlife would have no place to go and they leave the park and go out of the park and would get hurt or even killed. The wildlife need a place to stay. I would miss the deer and wild turkeys that come in our back yard. Leave it the way it is."

Response:

The 37 soil areas slated for cleanup as part of this remedy cover an estimated 15 acres, roughly than 3% of the entire 435-acre LSBP property. Therefore, it is doubtful that cleanup of these areas would result in habitat disruption sufficient to drive wildlife out of LSBP.

Comment 51:

Two commenters inquired about who would pay for the cleanup of Lake Success Business Park. A third commenter asked whether local companies would be allowed to bid on the work.

Response:

Under the RCRA Corrective Action program, the owner/operator of the property is responsible for paying for investigation and cleanup. In the case of LSBP, SGPI is paying for the investigation and cleanup of the property. Therefore, questions on who will be allowed to bid on the performance of the work should be referred to SGPI.

SPORTING GOODS PROPERTIES, INC. (SGPI) COMMENTS

The following is the complete text of comments submitted by Sporting Goods Properties, Inc. (SGPI) on the Statement of Basis for Remedy I for Treatment of Soils at Lake Success Business Park. For the convenience of the reader, these comment numbers are preceded by "SGPI." The EPA's response follows each of SGPI's comments.

SGPI Comment 1:

"The August 1996 Mercury Background Study indicates that the LSBP site does not appear to be a source of mercury and that the pilot results were most likely in error as a result of the National Institute of Occupational Safety and Health (NIOSH) method deficiencies in detecting low mercury concentrations."

Response:

During both the Soil Washing Pilot Study and the Mercury Background Study, the NIOSH Method 6009 was used to sample mercury in air. In both studies, mercury contamination was

observed in the sample blanks. These high sample blank results do call into question the quality of the NIOSH data and suggest that the NIOSH method may not be reliable for future mercury monitoring. However, the blank sample results do not offer evidence that mercury was not generated as a result of site activities during the Soil Washing Pilot Study. There is still uncertainty about whether mercury was being generated. Therefore, there is a need for additional monitoring during future soil excavation and soil washing.

SGPI Comment 2:

“It is SGPI’s understanding that the frequency of real-time monitoring and mercury sampling [as specified on page 13 of the August 1996 Statement of Basis] may also be reduced if results are favorable, as is the case for air sampling. Also, it is SGPI’s understanding that monitoring is only required during the period of site activities that could potentially generate dust and not during the entire period of the remedy.”

Response:

Real-time monitoring frequency may be reduced for Area of Environmental Concern 24 excavation, from every 30 minutes to every 60 minutes if results are favorable. The EPA believes that the real-time air monitoring frequencies agreed upon for other Areas of Environmental Concern are appropriate and do not warrant reduction. However, the EPA may consider reducing mercury air sampling frequency requirements if mercury results observed during initial sampling conducted are low.

Air monitoring is only required during site activities which involve moving, handling, or otherwise disturbing soils and therefore could potentially generate dust. Such activities include soil excavation, transport, or treatment.

SGPI Comment 3:

“In reviewing the Administrative Consent Order (ACO) and the Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) documents, the “remaining A-5 area” [shown on page 15, Table 1 of the August 1996 Statement of Basis] appears to be included in AECs 5-1, 5-2, and 5-3 and should be removed from this table.”

Response:

Table 1 of the August 1996 Statement of Basis is based on a table included in the 1990 Administrative Consent Order (RCRA Docket Number I-90-1005), identifying Areas of Environmental Concern on the LSBP property. The EPA is searching the LSBP administrative record for information on the specific location to which this refers. As the EPA has not yet exhausted its search, the EPA does not believe that eliminating “remaining A-5 area” from the list of Areas of Environmental Concern is appropriate.

SGPI Comment 4:

“SGPI supports the expansion of the corrective action management unit (CAMU) to facilitate a protective remedy for the site.”

Response

The EPA has approved the expansion of the CAMU from its original 7 acres to 24 acres as part of this remedy.

SGPI Comment 5:

“It is SGPI’s understanding that the reference to the 1994 CAMU designation [August 1996 Statement of Basis, page 12, first bullet] includes all comments, response to comments, and supporting clarification letters or work plans. In addition, during the course of remedial action implementation, if substantially different conditions from those anticipated (e.g., substantially larger soil volumes, treatment difficulties, additional constituents) are encountered, SGPI may submit to the EPA proposed modifications to the remedial action to address such conditions.”

Response:

SGPI’s understanding of the reference to the 1994 CAMU designation is correct. Proposed modifications may be submitted to the EPA for approval if, during implementation of this remedy, substantially different conditions from those anticipated are encountered.

SGPI Comment 6:

“For consistency purposes, the EPA should use a single term to describe numeric remedial goals. SGPI believes that ‘media protection standards’ is the most appropriate term and should be substituted for the term ‘cleanup standards’ and similar terms throughout the Statement of Basis. For clarity, SGPI also suggests that EPA employ the consistent terms remediation and remedial action throughout the Statement of Basis rather than the term ‘cleanup.’”

Response:

The term “media protection standards” was introduced and defined on page 8 of the August 1996 Statement of Basis. This term was used consistently in subsequent sections of the Statement of Basis text.

To keep the language simple in the Statement of Basis and Final Decision and Response to Comments, the term “cleanup” has been used rather than “remediation” and “remedial action.” The use of this term is consistent with its use in recent EPA Federal Register Notices, such as the *Requirements for Management of Hazardous Contaminated Media; Proposed Rule* (40 CFR Part 260, et al.), Federal Register, Vol. 61, No. 83, Monday, April 29, 1996.

SGPI Comment 7:

“SGPI strongly supports the EPA’s proposal to establish MPSs based on the proposed future use

of the site as a commercial/industrial development. Both the city of Bridgeport and the town of Stratford have filed comments stating that their plans for site development contemplate nonresidential use and that they support the business park concept proposed by SGPI. The zoning and development plans for the property are described in detail in the LSBP Property Reuse Plan that SGPI submitted to the EPA on July 20, 1995.

In accordance with Connecticut Regulations of State Agencies section 22a-133q-1, placing a deed restriction on the entire site to prohibit uses based on residential standards provides and additional institutional protection to ensure that the property will not be used for residential purposes. Under state law, the site, or portions thereof, can only be released from this restriction if the Commissioner of Environmental Protection determines that the subject area has been remediated in accordance with the remediation standard regulations and as necessary to protect human health and the environment. Therefore, before any part of the property could be used for residential purposes, data would have to be provided to demonstrate (to the satisfaction of the CT DEP) that remediating an area to residential standards will protect human health and the environment. This can best be determined after remediation has been completed and after a specific use, other than commercial/industrial, has been proposed. Accordingly, the environmental use restriction:

- ensures that all uses of the property will be consistent with the proposed commercial/industrial MPSs.
- provides a mechanism to allow some residential activities to occur on portions of the site if an appropriate demonstration can be made to the CT DEP.”

Response:

The MPSs approved as part of the Remedy for Treatment of Soils at LSBP are conditional on an industrial/commercial future use for the LSBP property and on the placement of an Environmental Land Use Restriction restricting residential activity on the entire LSBP property (per Regulations of Connecticut State Agencies Section 22a-133q-1), as described on pages 6 and 7 of the main body of this document.

SGPI Comment 8:

“EPA has evaluated a range of MPSs that might apply to the site under various land uses. SGPI concurs with EPA that the proposed 1,000 milligram per kilogram (mg/kg) average and 2,000 mg/kg maximum lead MPS for on-site soil is most appropriate, given the commercial/industrial land use for the site that will be ensured through application of a deed restriction.

However, SGPI believes that additional clarification is required with regard to the EPA’s proposed residential MPS of 400 mg/kg, which would be applied as an average value. While SGPI would prefer that the EPA apply CTDEP’s residential standard of 500 mg/kg, at the very least the EPA should apply the 400 mg/kg MPS in a manner consistent with both the CTDEP criteria and the EPA’s proposed lead MPS for on-site soil. A consistent approach for the off-site properties would consider 400 mg/kg applied as an average concentration with no single sample

exceeding twice that value, or 800 mg/kg.

The method in determining how MPSs are met both on- and off-site should also be consistent with state of Connecticut remediation standards. The state standards allow for a statistical approach to demonstrate compliance, as is proposed for lead and benzo(a)pyrene in the Statement of Basis. However, on Page 8 of the Statement of Basis, the EPA indicates that, with the exception of benzo(a)pyrene and lead, ‘...levels of contaminants in all samples taken of soil remaining in excavated AECs must be below MPSs...’

The approach of defining compliance with MPSs on the basis of requiring all postremediation samples to be at or below these levels is both scientifically invalid and inconsistent with existing CTDEP regulations and EPA guidance on the topic. Rather, the appropriate measure of compliance is a comparison of the 95 percent upper confidence limit on the mean (95% UCLM) residual constituent concentration with the MPS. If the 95% UCLM of the residual concentration is at or below the MPS, compliance with respect to the constituent has been attained.

In considering the long-term risks posed by a site, the concentration term that best represents the exposure potential to a given constituent is the average concentration. Thus, when establishing a remediation level (MPS) that is designed to be protective for long-term exposure, such as is the case at Lake Success Business Park, it is appropriate to compare the cleanup level to an average residual constituent concentration when determining compliance. This is the approach adopted by the CTDEP in its remediation standards and is consistent with the EPA’s MPS for benzo(a)pyrene and lead.

The EPA has recently acknowledged this in its June 1996 Soil Screening Level Guidance Fact Sheet (EPA 9355.4-14 FSA). In that document, the EPA indicates that for situations where the site has been well characterized, further action is not necessary when the constituent concentrations in soil do not exceed twice the soil screening level. The document goes on to indicate that “For data sets of lesser quality, the 95% upper confidence level on the arithmetic mean of contaminant soil concentration can be compared directly to the SOLS.”

The same issue has recently been addressed in the technical literature base in an Environmental Science and Technology article by Bowers, et al. (ES&T, Volume 30, No. 5, 1996). In that article the authors note:

‘The establishment of health-protective soil remediation levels often relies on the results of a risk assessment, which provides a way to equate a permissible risk to a target soil contaminant concentration. Inherent in such risk assessments is the assumption that the target concentrations are representative averages. Unfortunately, soil cleanup levels thus calculated are typically misapplied on a point-by-point basis, rather than on an average. This is not cost-effective because it results in post-remedy conditions that overshoot the

target risk goals. Because environmental contamination is characterized by a distribution of concentrations, some exceedances of target averages, average risk, or average concentration can be allowed in the post-remediation distribution.'

The EPA should apply all of the MPSs consistent with such an approach. The EPA is proposing, without a reasonable basis to apply some MPSs in this manner, but to apply other MPSs as single sample maximums. SGPI notes that the MPS as an average concentration is consistent both with the CTDEP approach and the EPA's own approach in applying the Soil Screening Level Guidance Fact Sheet. While soil screening levels (SOLS) are screening levels and not MPSs, they are even more conservative than the MPSs because they assume residential exposures. Even for these more stringent levels, the EPA guidance calls for its application as average concentrations. The EPA should apply this approach at the site consistently using the 95% UCLM of the residual constituent concentration as a comparison point with the MPSs. Alternatively, the EPA may want to apply the same criteria as are applied to benzo(a)pyrene and lead, using a value of twice the MPS as a "not-to-exceed" criterion for all site constituents."

Response:

The residential lead MPS of an average value of 400 milligrams lead per kilograms soil is a concentration calculated using the EPA's Integrated Exposure Uptake Biokinetic (IEUBK) Model for lead in children. The IEUBK model considers important site specific and toxicological information in calculating protective residential soil levels, including (EPA, 1994):

- the multiple-source nature of lead exposures,
- information regarding human absorption, distribution, and elimination of lead, and
- the potential distributions of exposure and risk likely to occur at a site.

Allowing post-excavation concentrations of lead in soil to exceed 400 milligrams lead per kilogram soil up to a maximum value of 500 milligrams lead per kilogram soil is protective for humans, based on exposures to soil on residential properties. This MPS is also consistent with soil cleanup standards applied during removal of lead-contaminated fill from the Raymark facility at residential properties in Stratford, Connecticut.

The EPA believes that the MPSs as finalized in this Final Decision and Response to Comments are protective for the current and proposed future use of LSBP and does not believe that modifying them as proposed in this comment is appropriate.

SGPI Comment 9:

"MPSs should only be developed and post excavation and treatment testing should only be required for those constituents present at concentrations of potential concern as indicated by previous sampling data. Those constituents are lead, arsenic, and antimony site-wide and total petroleum hydrocarbons and certain polycyclic aromatic hydrocarbons such as benzo(a)pyrene at certain AECs. Other constituents were all detected at concentrations below MPSs in previous sampling; therefore, costly and unnecessary sampling and testing for these additional constituents

should not be required.”

Response:

The EPA has followed EPA Region I guidance on identifying constituents present at levels of potential concern, as explained in U.S. EPA Region I, New England (August 1995) Risk Updates. Through conducting a site-wide baseline risk assessments, some constituents of concern identified during initial screening may be eliminated. A decision on eliminating a given constituent of concern would be based on the relative risk that contaminant presents, as calculated in the risk assessment. A site-wide baseline risk assessment has not been conducted at LSBP. Therefore, the EPA does not believe that eliminating constituents present at concentrations of potential concern from further sampling during implementation of this remedy is appropriate.

SGPI Comment 10:

“Beryllium is also found in background levels in the soil and has been mined extensively in Fairfield County, Connecticut. Given that beryllium was never used at the site and could be at significantly higher background concentrations based on local geology, it should not be listed as a site constituent with an associated MPS.”

Response:

The Remington Arms Company conducted sampling and analysis from uncontaminated soil areas within LSBP site boundaries and near the site to establish surficial soil background concentrations for 25 inorganic chemicals, including beryllium. Phase I RCRA Facility Investigation soil samples, collected from the Areas of Environmental Concern slated for treatment as part of this remedy, are consistent with beryllium background levels reported in the 1992 Background Sampling and Analysis Report. These results are also below the Connecticut residential soil criteria for beryllium of 2 milligrams beryllium per kilograms soil (Connecticut Remediation Standard Regulations residential Direct Exposure Criteria, Regulations of Connecticut State Agencies, Sections 22a-133k-2). In addition, based on historical information available on production processes used by the Remington Arms company, it does not appear that beryllium was used at LSBP. Therefore, it will not be necessary for post-excavation and sampling and analysis for beryllium to be conducted in the Areas of Environmental Concern addressed through remedy or in treated soil to satisfy the EPA.

SGPI Comment 11:

“SGPI supports the use of soil washing as a final remedy for the 37 areas of environmental concern (AECs) mentioned in the Statement of Basis. Soil washing is the most cost-effective method for removing contaminants from site soil. This technology maximizes reuse of site soil for redevelopment purposes and minimizes the amount of material requiring off-site disposal. In addition, recovered metals, primarily lead, may be suitable for recycling as a commercial product.”

Response:

Based on results of the Soil Washing Pilot Study which SGPI conducted from August to November 1995, the EPA believes that soil washing would be an effective method for removing contaminants from site soil. The EPA would also consider other proposed methods as necessary to achieve the approved MPSs in soil.

COMMENTS EXPRESSING GENERAL SUPPORT FOR LAKE SUCCESS BUSINESS PARK CLEANUP

The following comments submitted during the public comment period express general support for cleanup activities at LSBP. Therefore, the EPA has not prepared responses for these comments. The complete text of the comments submitted are presented below.

1. "I have every confidence in the EPA and the monitoring that is going to be done by our DEP that they will do the right thing. If people do not trust that the right thing is going to be done, then you can't trust your neighbor. You can't trust your family member. And I think we have come to a time when we must trust... I have every confidence that the employees of the EPA supporting this property will have the best interest of the neighbors at heart and I hope that they will continue to hold the neighbor's best interest at heart."
2. "I support EPA's clean-up efforts and the reuse of Lake Success Business Park."
3. "I feel the information sessions and public hearings were well run, informative and fair."
4. "I appreciate the patience and perseverance you and your associates have extended to satisfy the various demands for hearings on the Lake Success Business Park."
5. "One [thing] that's really made me distraught over the past couple of days is the misinformation that's being put out there and the way that the misleading tactics of certain people are to generate petitions regarding certain issues. I don't think that's appropriate. I really think a lot of people have been misled out there. A lot of people, if they would have come together and sat on this [community advisory] panel and had a chance to view the process along for the last two or three years as I have, would have seen things in a different light. And certainly, it's a shame that it has to come down to these last few weeks before people actually have to surface and really pay attention to a view as serious as this. EPA and DuPont has put together a community team that services these questions on a regular basis. I sat in on these meetings on quite a few occasions. Certainly they are more than willing to educate you and provide information that you need to answer your questions."
6. "I attended many meetings for the EPA and to address these concerns. Most of the people were not in disagreement. They supported the project. I do want to say that I am here to

represent a lot of people who are in support of the Lake Success Cleanup.”

7. “We are currently undergoing our own development of a hundred and twenty thousand square foot business park in Bridgeport Lumber. It’s a ten acres site. We’ve also done some cleanup. I’ve looked at these levels in this plan. It does seem viable.”

8. “I am very much in favor of the cleanup due to the economic benefits that will follow such as jobs, increased tax base for Bridgeport, and increase in economic activity in the neighborhood and along the new Seaview Avenue corridor which I am also in favor of.”

9. “The public hearing on the DuPont project held at Bridgeport Hospital was excellent. The proposed clean up and second phase work should begin to move forward. The EPA’s record and its concern for the site showed at the public hearing last night. The work you have done at the Raymark site in Stratford should put all fears at ease, and the EPA should be commended for their work on the Lake Success Business Park site.”

10. “Any opportunity to clean up a piece of property at somebody other than the taxpayer’s expense, ought to be seriously considered. The EPA and its Superfund has made many lawyers very wealthy. The percentage of the funds that have been spent in court fighting battles is phenomenal. But we have a company here that is interested in cleaning up something that they did over the years, defending or protecting or contributing to the security of our country as it exists today. They deserve to pay for their past ills, but it should also be done right. And if EPA doesn’t have the wherewithal to monitor it, who does?”

11. “I think DuPont putting forth a project like this, should we give them such a hard time? I think by looking over a lot of the paperwork and what not that I have, I think they have most of our best interest in mind. And you look at sites other than this around where the government is getting involved and spending a lot of money, here you’ve got an outside concern that’s willing to come in and do it. EPA, you are following all the standards that I can see that you are supposed to follow. I would just like to state that I’m all for it. I think it’s a good idea.”

12. “I am writing to you to express the support of the Bridgeport Regional Business Council, a 1,100 member business association, for the work that the EPA is performing at the Lake Success Business Park in Bridgeport, CT. The efforts of your administration have been noted by the business community as exemplary in the work to clean up this site for future use.

The ultimate reuse of this site is vital to the economic future of this City and this Region. EPA’s guidance in getting the job done to enable development while protecting the residents has been superb. We thank you and urge your continuance.”

13. “I do want to thank Vic Ordija for raising the issue of the mercury problem which the EPA

has already been looking at. Had he not done what he had with his monitoring and had not several of us known about it for sometime, we might not be doing further monitoring in the City of Bridgeport, so I think that's definitely a plus."

14. "Much has been said and written about the future of Lake Success Business Park. During this process, EPA has been very helpful in assisting the City in understanding environmental laws and rules and in explaining the often difficult issues. I would like to express my thanks for your agency's efforts to date."

COMMENTS WHICH DO NOT RELATE TO THE REMEDY FOR TREATMENT OF SOILS

The following comments do not relate to the Remedy for Treatment of Soils at Lake Success Business Park. Therefore, EPA has not formally responded to them as part of this Final Decision and Response to Comments. However, where appropriate, EPA has referred these comments to another EPA program or another government office for further consideration.

1. "We do need developers, we need money. We are not anti jobs. We would like to see DuPont come to the table. We would like to see buffer zones along Pearl Harbor Street. We would like to see buffer zones around Palisade, the Dinan Center, the senior citizens homes who are going to be breathing the air off this four lane Merit Parkway that's going to get built, if by some miracle it does get built."

2. "I'm here in support of the project. I believe that the master plan developed by Remington is a very viable and excellent plan. And our company is ready to invest in this development today and we have personally spoken to Fortune 1000 companies that have interest in locating to Bridgeport and in an environment such as proposed by the owner."

3. "DuPont has come in here and is working to clean up a property and put it back to good use. I think we all have to give a chance to it and see what they come up with and to also work with them to come up with a plan that fits within the residential area, whether it's Stratford or Bridgeport... But there are things that can go there right now on the Stratford side that we probably don't want there. They can go there because it is zoned light industrial. They have a right under our zoning laws to go in there and do what the law allows. What they are now proposing is something that's much nicer than the minimum they could put there."

4. "As Town Manager, I am concerned about the recycling of Brownfield properties in our community. Properties such as Lake Success Business Park have the potential to once again play an important role in our economy. Our community needs new investment, tax rates and employment opportunities. The development of the Lake Success Business Park can provide these benefits... I urge you to help pave the way for new private-sector investment and jobs for

the Town of Stratford.”

5. “With the announced closure of Allied Signal, the Town’s second largest taxpayer, Stratford will suffer a tremendous economic setback. The EPA’s “Brownfield” initiative and the reuse of the Lake Success Business Park property is therefore important to Stratford and the region. New employment opportunities and much needed tax revenues will result for the Town of Stratford and the region with the revitalization/reuse of this property. We wholeheartedly support the revitalization of Lake Success Business Park and urge your assistance in helping to expedite this important economic development initiative.

The master plan for Lake Success Business Park creates a viable, modern park like setting that can attract investment, jobs and new sources of tax revenue. The property is zoned for industrial use as we’ve heard tonight. And the plan circulates all activity and traffic within the property to reserve and respect the integrity of nearby residential and business communities by limited access to the site. The plan provides new open spaces and protects conservation land from former industrial property, a valuable asset for the community. They can serve the region and create employment for many generations to come.”

6. “Stratford has recently suffered an economic setback with the announced closure of the AlliedSignal facility and the continued downsizing of the defense industry. The EPA’s “Brownfield” initiative and the reuse of Lake Success Business Park is therefore very important to our community. I have reviewed the reuse plan for Lake Success Business Park and have discussed it with our Economic Development Commission. We believe that the proposed reuse will result in new employment opportunities and tax revenue for the Town of Stratford. We support the revitalization of Lake Success Business Park and urge your assistance in helping to expedite this important economic development initiative.”

7. “The property that is the subject of your public hearing has been industrial since its first use, something that has been recognized repeatedly in various master plans and zoning codes. In fact the recently adopted master plan (March 1996) and the new zoning rewrite (August 1996) reflect this use.

In Bridgeport, there is a need to rebuild the tax base and Lake Success offers the City a location competitive to suburban sites. The conflict between industrial and residential in the City’s older neighborhoods undermines both, industrial/commercial cannot grow without either leaving the city or demolishing housing and residential uses compete with parking, trucking and other business needs to the detriment of the houses.

Lake Success offers a new modern place for business that is a very vital element of Bridgeport’s future. A significant portion of the site has been set aside for open space and to buffer the surrounding neighborhoods. The jobs and taxes generated by the build-out of Lake Success will

benefit all of the City. There is plenty of opportunity for residential development in other areas of the City.

The cleanup effort has and will be aggressive and the City supports the oversight of EPA. We look forward to the reutilization of this urban Brownfield, that is consistent with the City's master plan of development and meets the standards of EPA and the needs and opportunities of the property's owner."

8. "With the announced closure of Allied Signal, the Town's second largest taxpayer, Stratford will suffer a tremendous economic setback. The EPA's Brownfield initiative and the reuse of the Lake Success Business Park property is therefore important to Stratford and the region.

I am personally, as a business owner and resident, very concerned about the future of this site. I wholeheartedly support the revitalization of Lake Success Business Park and urge your assistance in helping to expedite this important economic development initiative."

9. "We hope to see the realization of substantial economic development with the construction of an access road from Interstate 95 into the LSBP area. This road logically would follow the Seaview Avenue corridor which would be extended north through the current General Electric plant.

If this were to happen our city would mirror the Marshall plan so successful 50 years ago. ...Lake Success has 435 square acres and G.E. must have at least another 100. Almost 1/17th of the city of Bridgeport. And with 1/17th the land mass maybe we can do something. We have an airport, a harbor, a railroad and two interstate highways. We lost Singers, Bullards, Underwood, Sperry-Remington, Remington Arms, Chance Voight. They're gone. We're here. We're paying the tax. I really believe we've got to find some remedy to modify our tax. Certainly we've got to take care and get the contaminants cleaned up. But unless we have a job, we're all going to be on welfare.

I am in favor of the Lake Success Business Park. DuPont is a twenty-two billion dollar corporation. They are among the top ten in this country. How many Fortune 500 companies want to come to Bridgeport let alone one of the top ten? I do feel that this would improve our economic base, lower our tax, and get jobs for the people."

10. "I am totally against this project, or anything which would disrupt this park. I have lived next to this property for 50 years and it should remain as open space."

11. "One of the biggest complaints that we hear in the City of Bridgeport is our high taxes and the lack of jobs. And the only way we're going to get jobs and lower property tax is to get

development to come into the City of Bridgeport. I know that we all are concerned and I'm just as concerned as the lady who came up ahead of me, about the toxic waste that is there and I would hope that the EPA would use every possible means to make sure that there are no contaminants that reach the people around us. My house is not far from the Remington Woods also. But I think the people of Bridgeport have to realize that we just can't watch our industry keep leaving the city and our tax rates falling on the burden of the homeowner. We've gotten to the point where we can't pay it anymore and we need to bring in clean industry to the city of Bridgeport and one way to do it is to develop property like the Remington Woods into a complex that will generate revenue so that our homeowners could have their taxes reduced. I would hope that the only road would be the Seaview Avenue corridor so that we could develop, as we planned, the Bridgeport Harbor and have the industrial property."

12. "I really want to let you know right now that a tax base is very important. Why don't we finally join together and come together and start doing a positive image for our city and make progressive steps to go in that directions. Certainly I think we should put our heads together, support this. If there are variations that need to be made to the project, I'm sure that we can do that as a committee and as a survey and advisory panel."

13. "The neighborhood is starting to grow again. My concern is destroying that type of family neighborhood. But I, too, am conscious of the taxes. We need industry. We need growth. But we live in a sum zero society. Every time we put something here, we take something away there. The question is, what's the cost... There are many blighted areas in Bridgeport that are in need of rejuvenation. There's access to roads. Better access to railway. Better access to boating and waterways. Did we look at these areas?"

I've seen many drawings. I'm not an architect. My concern is, is this going to be an area of architectural harmony with the area or are we embarking upon a type of architectural mishmosh where structures do not fit in?

And if jobs do come, who will get the jobs? Will they be skilled jobs. Will people who need the skills be trained by these corporations and places? And what jobs will go to the city people? Will they be the low paying jobs, the middle jobs, the high paying jobs? These are things that concern me."

14. "I am a supporter of the cleanup, but I can't see cleaning it up to put an industrial park there, since Bridgeport has so many acres of land abandoned today that we could bring in industry."

15. "They're not making any more open space, and according to demographic trends, we're going to become a more and more crowded region. We're going to be part of a huge megalopolis. We're really going to desperately need open space for recreation, for many reasons.

Just for psychological benefit, for physical benefit. And I think that alternative uses for the Remington Woods along those lines should be entertained. For instance, we have an excellent first class zoo already... And we could use their expertise and expand the Beardsley Zoo into the Remington Woods as a Beardsley Zoo type of annex.”

16. “Well, I can tell you right now, we sent out a survey. Ninety-one percent of the people do not want this type of encroachment on their neighborhoods. This impacts blacks and judicial review, environmental justice I think you better check EPA because if you look at it this is impacting minority neighborhoods, Puerto Rican neighborhoods as well as white neighborhoods. And the bottom line is, if that is the case and it’s federal law that protects minority neighborhoods, then we should look at environmental justice which you have in Boston, which we have here at Hartford.

Let us, on the state level and city level, have a park that is clean so that we can purchase it and make it a Beardsley Park Annex with revenues to the city if this doesn’t come to fruition.”

17. “I would like to say for the record that I’m in favor of this cleanup and the ultimate development of Lake Success Office Park. We need the jobs. We need the increased tax base and the increased economic activities and tax revenue that will come with this development. We are the Park City here in Bridgeport and why not have an office park and an industrial park in our neighborhood?”

18. “Let’s invest in the people in the City of Bridgeport. Go forward with this project.”

19. “We are very proud to work in and for the Park City and strongly support the responsible cleanup of this and other contaminated sites in this city. We believe that the development of this site into the proposed uses will be in the best interest of the residents of this community and will result in a substantial increase and growth in the grand list and in the creation of many additional jobs. Using the property for residential or recreational use does not add to the grand list and only adds cost to the city budget. What the city needs is more businesses to add to the tax base and create more jobs. We find the DuPont Company to be a good corporate citizen and to be working with all due diligence and with very high standards to bring this sensible plan to a viable conclusion.”

20. “I believe this proposal is a serious one, one that Bridgeport needs badly... I urge you to go forward with your proposal.”

21. “Where will the roads access the project. Will they come from Route 8, 95, or Seaview Avenue? What I’d like to see is some business opportunities generated from this project for small businesses because they are the greatest employers.”

22. “This is a flood control neighborhood. We are embattled with flooding up around here. We’re dealing with a 22 billion dollar neighbor. DuPont. And -- then in G.E. who’s contaminated earlier and left us high and dry, they’re even bigger. They’re both in the top 10. We have a six and a half million dollar problem in this neighborhood. I’ve never seen DuPont or G.E. come to the plate and say, we’re going to solve your flood control problems. And we’re battling on the state level to get that money. That’s just one example of where they could be a good corporate neighbor.”

23. “DuPont owns Remington Woods and DuPont has held Remington Woods hostage from the rest of us. The fact is that they could have cleaned... they only clean it up for their profits, their corporation, that’s what they do. And we’re people who want to see this area. We want to see what the beautiful lakes and so forth, but we don’t get a chance to do that. So the only way we’re going to get there if for them to have us say it’s okay to financially profit from it.”

24. “I just like to make my comments to the EPA because I think enough people have spoken on the basic -- on the winning of this project bringing into Bridgeport. EPA has been involved at a site in Stratford, Raymark, and have done a remarkable job. If they do as good a job monitoring this one as they did in the Stratford site, it should be commended. They should be commended for their work and getting the job started and bringing it to reality.”

25. “I had an observation for the EPA. I’ve been involved in economic development work in Bridgeport for at least a decade. I think Bridgeport is a beautiful city. I think it has a lot to offer. It has good transportation. It’s got a good labor force. It’s in a part of the world’s biggest market. Bridgeport’s problem right now is lack of industrial sites. You can help at the EPA by doing everything you can not just on this property, but throughout Bridgeport to expedite the Brownfield effort so that we can get industrial sites back into productive use to get people employed. What I’m saying here is that I support your effort, but I wish somehow there was a way to move it along quicker. I know for a fact that there are companies who will invest in Bridgeport, there are companies who will locate their business in Bridgeport and the economic people will back me up on this. The problem is lack of industrial land. We need clean sites. We can get business. We can get jobs. This city has everything to offer. Please do, at the EPA please do whatever you can to expedite the good work you are doing consistent with the public health.”

26. “I have been tested chemically sensitive to reformulated gasoline. We have supplied the EPA and Carol Browner with petitions, with health reports in the various states that have done studies... I can’t go anywhere and I blame it on the Environmental Protection Agency for their complete ignoring of our petitions, our calls... Carol Browner completely ignores everything that we have done, everything we have sent her. She has refused to answer our petitions with regards to the toxic elements in the air... the EPA is working hand in hand with the oil companies because they don’t want to remove these elements from the gasoline. They know that it’s causing

problems, but they say it's not affecting the general public. It's just affecting a sub-group."

27. "An additional fact which may be addressed at a later time is the General Electric properties which are located to the south west of LSBP."

28. "Our neighborhoods could then pursue HUD Section 108 grants to improve local problems. The people near the Thomas Hooker School have a flood plain problem. Possibly a Section 108 grant would allow an irrigation tie in to the lake at Lake Success and allow discharge of flood waters."

ATTACHMENT II

GLOSSARY OF ACRONYMS AND TERMS

The following is a glossary of acronyms and terms frequently used through this document.

Action level	a specified concentration or level, generally set below a level at which a health or environmental effect might be expected to occur, designed to indicate that some sort of action is necessary
Area of Environmental Concern	an area where a previous discharge, spill, or release of hazardous substances is believed to have occurred
ATSDR	the U.S. Agency for Toxic Substances and Disease Registry
CAMU (Corrective Action Management Unit)	an area of a cleanup site designated by EPA to be used for storage of contaminated soil, sediment, or debris excavated during cleanup
CT DEP	the Connecticut Department of Environmental Protection
CT DPH	the Connecticut Department of Public Health
EPA	the U.S. Environmental Protection Agency
LSBP	Lake Success Business Park (the 435-acre property in Bridgeport, Connecticut formerly known as Remington Woods)
microgram	one millionth (.000001 or 1×10^{-6}) of a gram (metric unit of weight)
milligram	one thousandth (.001 or 1×10^{-3}) of a gram (metric unit of weight)
MPS	Media Protection Standard (concentrations or levels of contaminants, designed to protect human health and the environment, developed as part of the overall cleanup standards for a cleanup site)
nanogram	one billionth (.000000001 or 1×10^{-9}) of a gram (metric unit of weight)
NIOSH	the National Institute of Occupational Safety and Health
RCRA	Resource Conservation and Recovery Act (Public Law 94-616) a federal law which regulates the management of hazardous waste

RCRA Corrective Action	Resource Conservation and Recovery Act provisions that give the EPA authority to require <i>Corrective Action</i> , or the investigation and cleanup of spills or discharges of hazardous waste at certain industrial facilities
SGPI	Sporting Goods Properties, Inc., the owner of Lake Success Business Park
soil washing	a treatment technology for contaminated soils designed to separate contaminants by several steps. These steps may include separating soil by particle size or weight and/or washing soil with water.
Soil Washing Pilot Study	A pilot study of to test soil washing technology conducted at Lake Success Business Park from August through November 1995

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TABLE 1: Media Protection Standards for Soils in Areas of Environmental Concern Located Within the Buffer Zone Shown in Figure 4

Contaminant	Concentration in Soil (mg/kg)
Antimony	27
Arsenic	20.7*
Barium	4700
Copper	2500
Lead	500
Mercury	20
Nickel	1400
Strontium	47,000
PCBs	1
Benzo(a)anthracene	1
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1
Benzo(k)fluoranthene	8.4
Dibenz(a,h)anthracene	.088
Ideno(1,2,3-cd)pyrene	.88
Pentachlorophenol	5.1

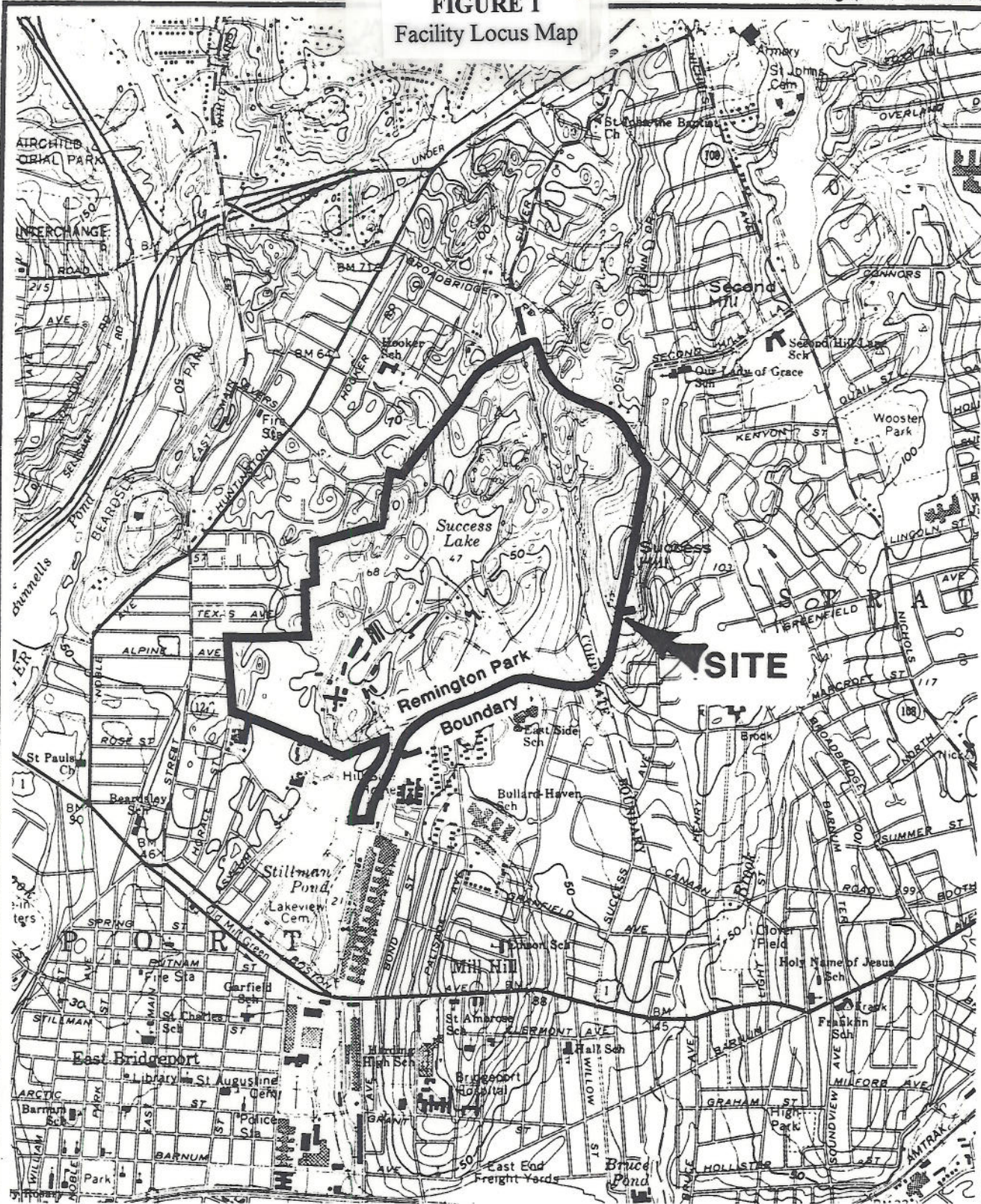
* The MPS for arsenic is based on background concentrations in soils. Therefore, it shall be applied such that no single post excavation or confirmatory sample exceeds the MPS. Buffer zone MPSs for other constituents shall be applied in a manner consistent with the Connecticut Remediation Standard Regulations Residential Direct Exposure Criteria (Regulations of Connecticut State Agencies Section 22a-133k-2).

TABLE 2: Media Protection Standards for Soils in Areas of Environmental Concern Located on the Lake Success Business Park Property Outside of the Buffer Zone Shown in Figure 4

Contaminant	Concentration in Soil (mg/kg)
Antimony	820
Arsenic	20.7
Barium	140,000
Copper	76,000
Lead	1,000*
Mercury	610
Nickel	7,500
PCBs	10
Benzo(a)anthracene	7.8
Benzo(a)pyrene	1*
Benzo(b)fluoranthene	7.8
Benzo(k)fluoranthene	78
Dibenz(a,h)anthracene	.78
Ideno(1,2,3-cd)pyrene	7.8
Pentachlorophenol	48

* The Media Protection Standard (MPS) for lead and benzo(a)pyrene may be applied in a manner consistent with the Connecticut Remediation Standard Regulations Direct Exposure Criteria (Regulations of Connecticut State Agencies Section 22a-133k-2). The MPSs listed in this table for other constituents shall be applied such that no single post-excavation or confirmatory sample exceeds the MPS.

FIGURE 1
Facility Locus Map



Source: U.S.G.S. Bridgeport Connecticut 7.5 Minute Quadrangle



0 1000 2000 feet



SCALE

Contour Interval = 10 feet
Referenced to Mean Sea Level



CONNECTICUT
QUADRANGLE LOCATION

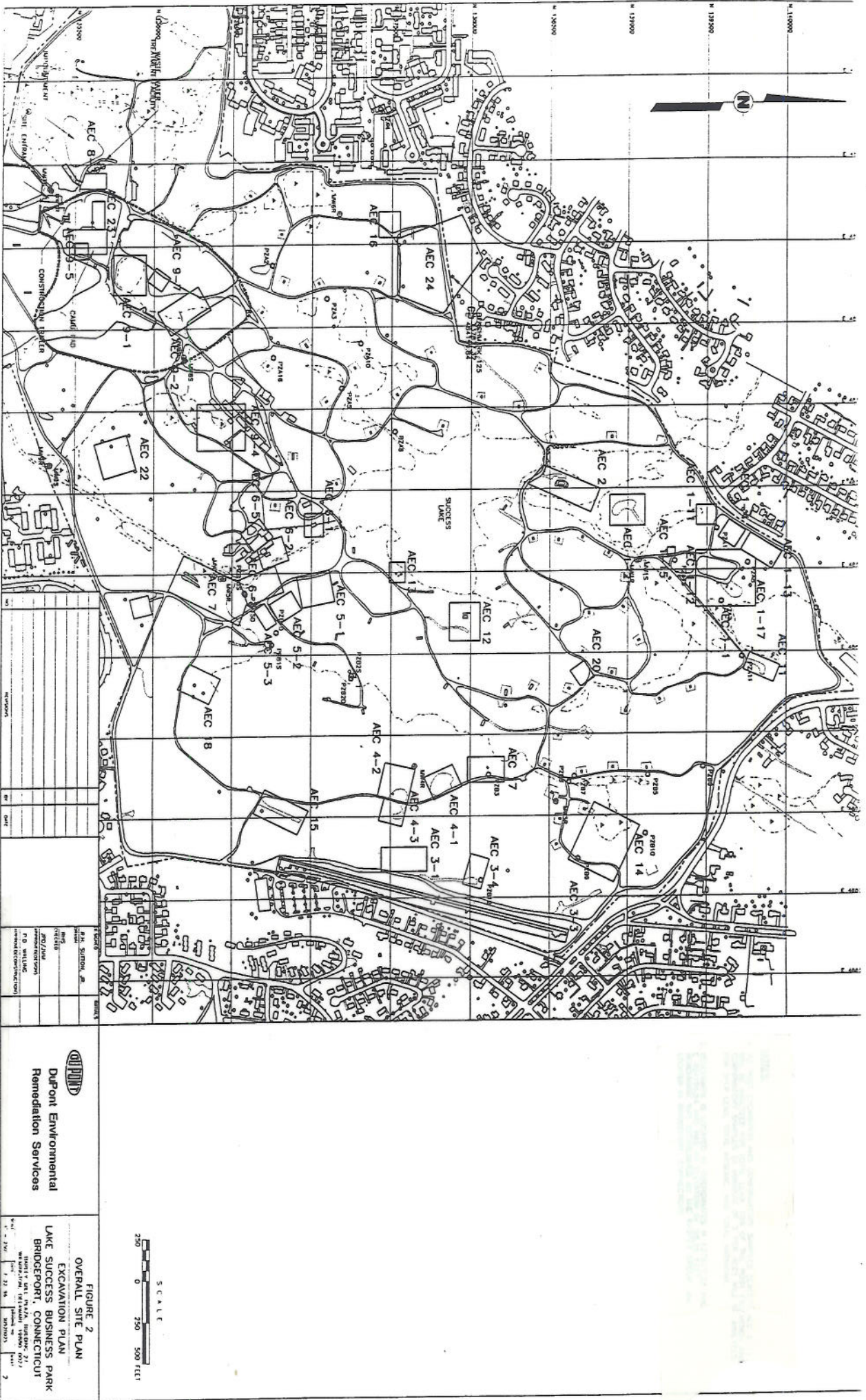


FIGURE 2
Map of Lake Success Business Park and Areas of Environmental Concern

KEY

- AEC = Area of Environmental Concern
- = Corrective Action Management Unit (CAMU)
- = surface water boundaries
- = Lake Success Business Park property line

<p>DuPont Environmental Remediation Services</p>	<p>FIGURE 2 OVERALL SITE PLAN EXCAVATION PLAN LAKE SUCCESS BUSINESS PARK BRIDGEPORT, CONNECTICUT</p> <p>DATE: 11/21/88 DRAWN BY: [Name] CHECKED BY: [Name] SCALE: AS SHOWN</p>
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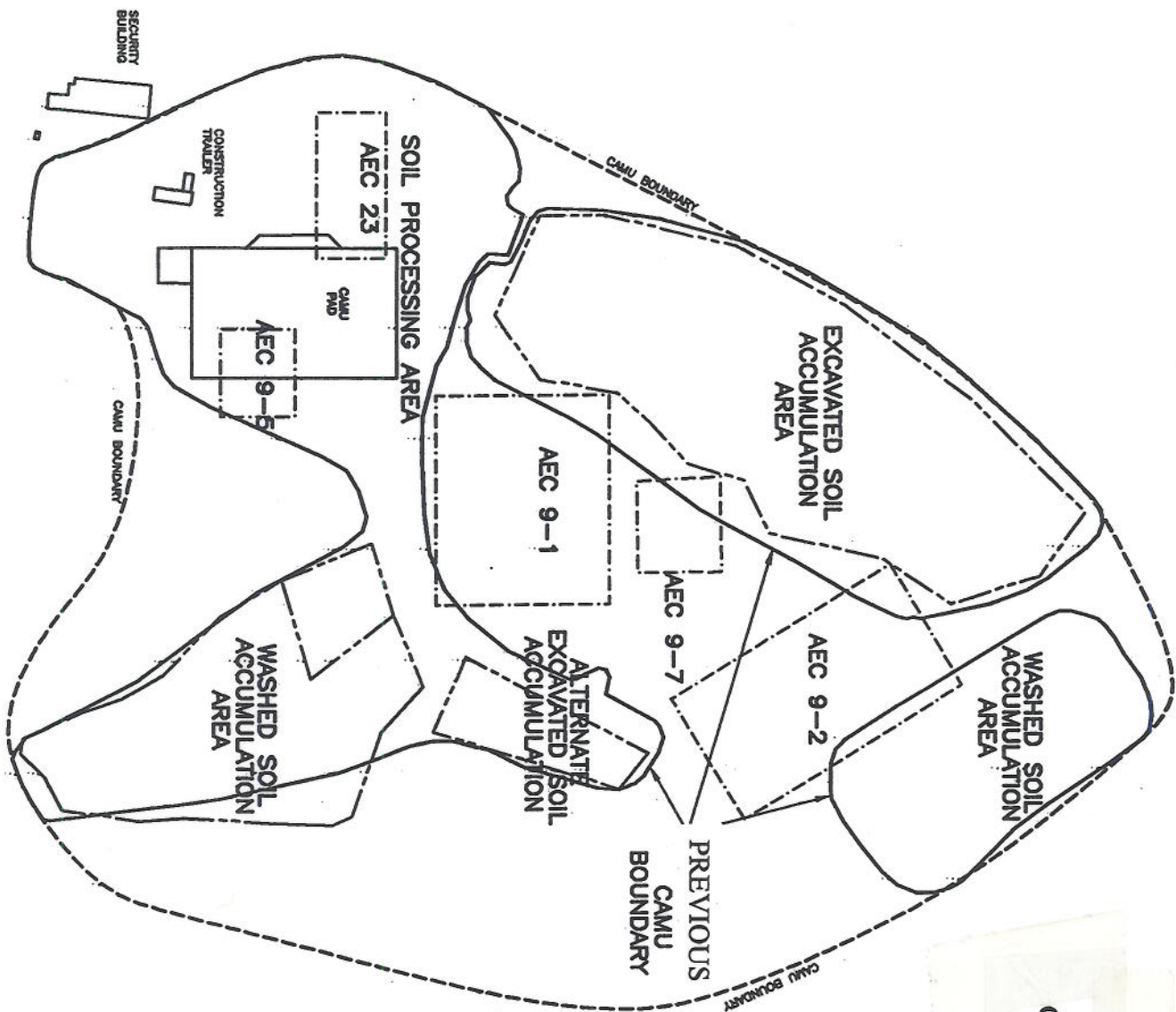


FIGURE 3
Corrective Action Management Unit



LEGEND:

- Previous CAMU Boundary
- Current CAMU Boundary
- Approx. AEC* Boundary
- Proposed Soil Stockpile

* Area of Environmental Concern



FIGURE

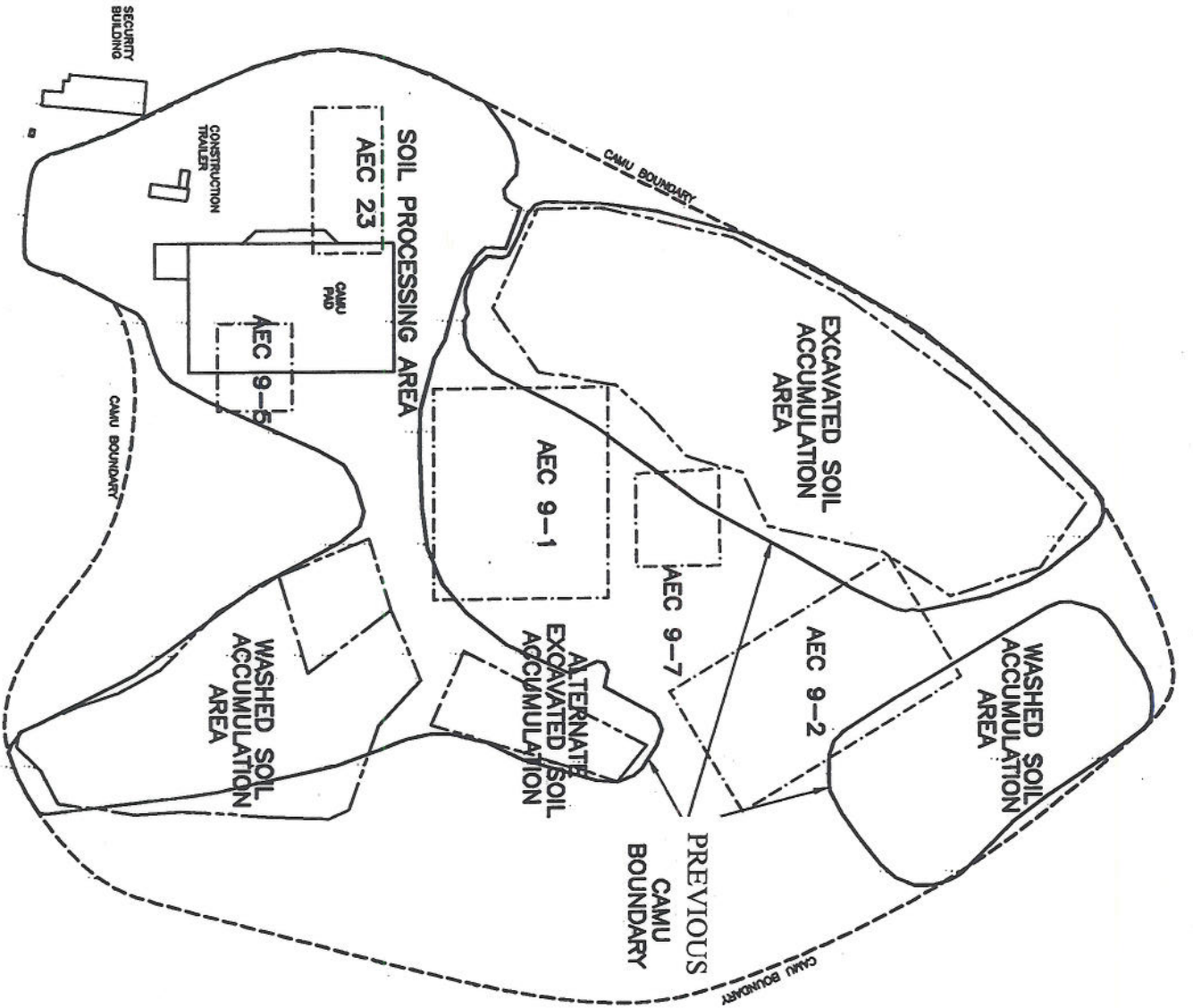
CAMU AREA		DATE	DESIGNED BY	DATE	CAD DRAWING NO.
SCALE	1" = 200'	8-5-96	TD	3032A001	
CHECKED			APPROVED	PROJECT NO.	3052



LAKE SUCCESS BUSINESS PARK
BRIDGEPORT, CONNECTICUT

Dupont Environmental Remediation Services

FIGURE 3
Expanded Corrective Action Management Unit (CAMU) Boundary



LEGEND:

- Previous CAMU Boundary
- - - Current CAMU Boundary
- · - · - Approx. AEC* Boundary
- Proposed Soil Stockpile

* Area of Environmental Concern



FIGURE		CAMU AREA	
SCALE	DESIGNED BY	DRAWN BY	CAD DRAWING NO.
1" = 200'	TLO	TLO	3052A001
DATE	CHECKED	APPROVED	PROJECT NO.
8-5-96			3052
LAKE SUCCESS BUSINESS PARK BRIDGEPORT, CONNECTICUT			
DuPont Environmental Remediation Services			