50-03

DECISION DOCUMENT (DD) FOR THE
TIME-CRITICAL REMOVAL ACTIONS
AT THREE VOLATILE ORGANIC COMPOUND SOLID WASTE MANAGEMENT UNITS
(SWMUs) 38, 39, AND 40
BOILER BLOWDOWN LEACH PITS

SENECA ARMY DEPOT ACTIVITY (SEDA)

1. PURPOSE:

a. This DD describes the selected time-critical removal actions for three-boiler blowdown leaching areas identified as SWMU-38, SWMU-39, and SWMU-40 (Defense Site Environmental Restoration Tracking System Sites SEAD-38, SEAD-39, and SEAD-40) at Seneca Army Depot Activity (SEDA). These actions are in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), the National Contingency Plan (NCP), the Resource Conservation and Recovery Act, and Army Regulation 200-1, as applicable, and the applicable or relevant and appropriate requirements of the State of New York.

b. The purpose of the proposed voluntary remedial actions at SWMU-38, SWMU-39, and SWMU-40 is to remove soil contaminated with total petroleum hydrocarbon (TPH), and possibly other volatile or semivolatile organic compounds and metals associated with the petroleum hydrocarbon contamination, and to transport and dispose of the contaminated soil at an off-site, state approved landfill. The continuing presence of the TPH contaminated soil at each of these sites may allow contaminants present to mobilize and migrate via runoff, percolation, or infiltration into surrounding or underlying environmental matrices where they may produce additional concerns.

c. The Army completed a survey of the land and the facilities at SEDA, and identified prospective beneficial uses of the facility to comply with the Department of Defense's (DOD's) Base Realignment and Closure (BRAC) process. Seneca Depot Activity is now releasing portions of the depot to the public and private sectors for reuse under the BRAC process. This may result in an increased potential for exposure of populations to any residual chemicals that are present at the former SWMUs remaining at SEDA, including SWMU-38, SWMU-39, and SWMU-40. Therefore, the goal of the proposed voluntary, time-critical removal action at the three sites is to remove

contaminated soil that remains at each site. Once completed, the removal actions should lessen and may eliminate any potential threat that the contaminated soil and the associated chemical contaminants may pose to surrounding populations and the environment.

d. The Army selected the voluntary, time-critical removal actions proposed for SWMU-38, SWMU-39, and SWMU-40 with support from the US Environmental Protection Agency, Region II (USEPA), the New York State Department of Environmental Conservation (NYSDEC), and the New York State Department of Health.

2. SITE RISK:

a. The SWMU-38 (SEAD-38) is the blowdown leaching area located to the north-northwest of building 2079. Building 2079 is an abandoned boiler plant located in the southwestern portion of SEDA in a portion of the depot designated as conservation/ /recreation for future land use. Evidence of the historic leach pit is currently not visible. A drainage pipe that originates in building 2079 possibly carried boiler blowdown liquids from the boiler plant to the man-made roadside drainage ditch located approximately 100 feet to the north-northwest of building 2079, which subsequently drains to the west. A second, smaller man-made drainage ditch originates approximately 50 feet to the west of building 2079 and drains to the northwest until it intercepts the larger roadside drainage ditch discussed above. The area between building 2079 and the two drainage ditches is a relatively flat and level, grassy field. The SWMU-38 area lies approximately 1,800 feet away from the nearest fence line that marks the depot's boundary with neighboring properties.

b. The SWMU-39 (SEAD-39) is the historic blowdown leaching area located immediately north of building 121. Building 121 is an active boiler plant located in the administrative area of SEDA in a portion of the depot where the future designated land use is planned industrial development. The historic blowdown area associated with building 121 lies north of the building and approximately 500 feet south of the nearest depot fence line.

c. The SWMU-40 (SEAD-40) is a former blowdown leach pit located north of building 319 in a drainage ditch that was next to railroad tracks. Building 319 is an active boiler plant located on First Street at SEDA in a portion of the depot where planned industrial development is the future land use. Currently there is no evidence of the historic leach pit. It is likely that a drainage pipe originating in building 319 carried

blowdown liquids to the drainage ditch. The drainage ditch originates at the mouth of the drainage pipe approximately 30 feet northeast of building 319. The drainage ditch continues for approximately 400 feet to the north where it eventually levels into a grassy field. Asphalt covers the ground surface to the north of building 319 and to the south of the drainage ditch. The SWMU-40 area lies approximately 2,000 feet west of the nearest depot fence line.

d. Before SEDA connected all boiler blowdown points to the depot's sanitary sewer system, the discharge rate from each boiler possibly discharged between 400 and 800 gallons of liquid per day. The discharged liquid drained partly into nearby man-made drainage ditches and partly into the ground. The boiler discharge most likely contained water, tannins, caustic soda (sodium hydroxide), and sodium phosphate.

e. At SWMU-38, the TPH detected in the surface and subsurface soil samples ranged from 85 to 1,940 parts per million (ppm).

f. At SWMU-39, all soil samples showed evidence of TPH. With the exception of soil sample 39-1, which contained 118 ppm, all soil samples contained TPH concentrations of less than 100 ppm.

g. The TPH detected in all of the surface and subsurface soil samples collected from SWMU-40 had concentrations ranging from 300 to 1,640 ppm.

h. The detection of TPH in a majority of the soil samples collected from the three former boiler blowdown leach pits suggests that petroleum hydrocarbon-type releases probably occurred. At SWMU-38, identified TPH impacts appear to diminish with depth; however, at SWMU-40, identified TPH impacts appear to have penetrated to a depth of 6 feet below grade surface near the mouth of the discharge pipe.

i. This DD concentrates on the performance of a voluntary, time-critical action to remove TPH contamination identified at the three sites in the surface and subsurface soils. Due to the limited data available, it is the Army's intention to conduct initial, focused removal actions that are limited to those areas where it believes there is the greatest likelihood that boiler blowdown liquids discharged. Seneca Depot Activity does not propose that these removal actions are the final action at any of the sites, but an interim solution that will minimize, and

possibly eliminate, future releases of chemical contaminants to the soil, groundwater, surface water, and drainage ditch soil. After completion of the removal action, the Army intends on completing the Remedial Investigation/Feasibility Statement process at these sites.

3. REMEDIAL ALTERNATIVES:

a. The primary objective of the selected voluntary time-critical removal actions is to excavate and remove contaminated soils at the three SWMUs where available data indicates that TPH contamination exists. After excavation of the contaminated soil, SEDA will backfill all excavated areas with clean fill and reclaimed soil from the excavations, re-grade and re-vegetate the site.

b. The recommended removal actions at these sites provide an immediate reduction in the levels of potential exposure due to the remaining TPH contaminated soil. Without these removal actions, there is increased likelihood that chemical contaminants may migrate into the underlying groundwater via infiltration and percolation or into storm water runoff and impact surrounding soil, surface water bodies, and underlying sediments. With the increased access to sites within the depot, there is a higher likelihood that surrounding populations may contact the contaminated soil.

c. The estimated amount of soil requiring treatment from each of the three SEADs is as follows:

(1) The SWMU-38 - 15 cubic yards,

(2) The SWMU-39 - 18 cubic yards, and

(3) The SWMU-40 - 13 cubic yards or a combined total of approximately 46 cubic yards.

d. To assess the completion of the removal actions, SEDA will obtain verification samples within and surrounding each excavation site. The data obtained from the confirmational sampling and analysis must comply with the applicable NYSDEC cleanup objectives for soil. Once SEDA achieves the cleanup objectives, the depot will have the site backfilled with clean soil, regraded, contoured, and reseeded to reestablish preexcavation conditions.

e. Seneca Depot Activity considered seven other treatment and disposal alternatives/technologies for the remediation of the TPH contaminated soils. These include:

(1) Bioventing,

(2) Vapor extraction,

(3) Solidification/stabilization,

(4) Land treatment or farming,

(5) Biopiles,

(6) Soil washing, and

(7) Low temperature thermal desorption.

Bioventing, landfarming, and low temperature thermal desorption are the most feasible for sites where large volumes are involved. Vapor extraction is generally applicable to soils with more volatile organic compounds and to soil that are more permeable than the tills that predominate at SEDA. Treatment via soil washing and solidification were expensive per ton and involved additional analytical costs. Additionally, the presence of organic materials in the soil to be treated may affect the ease and completeness of treatment via either of these processes. Excavation and off-site disposal is cost-effective, easily implemented, and the preferred alternative.

4. PUBLIC/COMMUNITY INVOLVEMENT: It is DoD and Army policy to involve the local community as early as possible and throughout the interim remediation process at an installation. To accomplish this, SEDA is complying with the public participation requirements of CERCLA/SARA (Sections 113(K)(2)(A) and 117) and DoD and Army policy by advising the NYSDEC, USEPA, the Restoration Advisory Board, and the Base Closure Team of the proposed action. The SEDA has a Community Relations Plan (CRP). The SEDA conducted a public availability session on 16 May 2001. The SEDA received no comments during this meeting with the public. In accordance with the CRP, SEDA will place a public notice in the local newspaper announcing the Army's intent to conduct interim remedial actions at SEAD-38, SEAD-39, and SEAD-40 at least 30 days prior to the initiation of the proposed actions. In the future, SEDA will conduct a public availability session upon completion of these actions to present findings and the status of the remedy to the overall closure to these SWMUs.

5. DECLARATION: The selected interim remedies are protective of human health and the environment, attain federal and state requirements that are applicable or relevant and appropriate to these interim remedial actions, and are cost-effective. The proposed remedies utilize permanent solutions and alternative treatment technologies to the maximum extent feasible for these sites. Since SEDA did not find treatment feasible, this remedy does not satisfy the statutory preference for treatment as a principal element of the remedy. Treatment via other alternatives had higher costs, were more applicable to sites with higher quantities of contamination, required additional pilot testing, and were found to be less effective due to interferences that would result due to the presence of organic constituents in the soil. As previously stated, SEDA does not propose these interim remedial actions as the final remedy for the identified SWMUs; i.e., SWMU-38, SWMU-39, and SWMU-40. In the future, the selected final remedies for these sites will satisfy applicable or relevant and appropriate requirements for the SWMUs to ensure that the remedies provides adequate protection of human health and the environment.

6. APPROVAL AND SIGNATURE:

a. The selected alternative for the three sites is excavation and disposal of soil contaminated with chemical constituents associated with the boiler blowdown materials. The estimated cost for excavation, transportation, disposal, backfill, and compaction is $100 per ton. Additional project costs include mobilization, project oversight and management, site monitoring, and reporting. The total project cost estimate, excluding confirmational sampling and analysis, is $70,000.

b. With these removal actions, SEDA intends to eliminate other costs associated with future studies possibly needed to document site conditions and eliminate risk. The installation commander approves DDs less than $2 million. For BRAC classified installations, the installation commander is the Headquarters, US Army Operations Support Command's Chief of Staff.

Approved ___EIK___

Disapproved _____

GENE E. KING
Colonel, GS
Chief of Staff

11 SEP 2002