128-01

DECISION DOCUMENT (DD) FOR THE TIME-CRITICAL REMOVAL ACTIONS AT FOUR SOLID WASTE MANAGEMENT UNITS (SWMUs) 24, 50/54, AND 67 METAL SITES

SENECA ARMY DEPOT ACTIVITY (SEDA)

1. PURPOSE:

a. This DD describes the selected time-critical removal actions applicable at four metal sites identified as SWMU-24, SWMU-50/54, and SWMU-67 (Defense Site Environmental Restoration Tracking System Sites SEAD-24, SEAD-50/54, and SEAD-67) at the 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, 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-24, SWMU-50/54, and SWMU-67 will be to remove accumulated soil in piles, shallow soil underlying man-made drainage ditches, and soil located on the surface of areas that have metals contamination, and to a lesser degree, other chemical constituents. The depot will transport the excavated soil and dispose of it at an off-site, state approved landfill. These remedial actions are necessary to prevent contaminants from migrating into surrounding areas via runoff, percolation, or infiltration.

c. The SEDA performed a survey to identify land and facilities suitable for beneficial uses to comply with the Department of Defense's (DOD's) Base Realignment and Closure (BRAC) process. As SEDA releases portions of the depot for other beneficial uses, there will be increased access to all portions of the former depot. This may result in an increased potential for exposure of populations to any residual chemicals that are present at former SWMUs remaining at the depot, including SWMU-24, SWMU-50/54, and SWMU-67. Performance of the proposed removal actions should lessen, and may eliminate, any potential threat that the contaminated soil and the associated chemical contaminants represent to surrounding populations and the environment.

d. The Army selected this voluntary time-critical removal action 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-24 (SEAD-24), the abandoned powder-burning pit, lies in the west-central portion of SEDA in an area of the Depot where the Local Reuse Authority's (LRA) reuse plan indicates a proposed conservation/ recreation area. The burning pit encompasses an area measuring approximately 325-feet by 150-feet. A berm surrounds the burning pit on the east, south, and west sides and is approximately 4-feet high, and West Kendaia Road bounds the site on the north. The local topography slopes gently to the west; north of the site, the land slopes more steeply to the north-northwest towards Kendaia creek.

b. The abandoned powder-burning pit was active during the 1940s and 1950s. Although operating practices at this site are undocumented, black powder, M10 and M16 solid propellants, and explosive trash were probably disposed of at the site by burning with a hydrocarbon fuel source.

c. Fifty-seven different chemical constituents, including 36 organic compounds and 21 metals, plus total petroleum hydrocarbons, were evident in soil samples collected from SWMU-24. Of this total, 3 semivolatile organic compounds (SVOCs) and 14 metals were present at concentrations that exceeded cleanup objective guidance values defined in the NYSDEC's Technical and Administrative Guidance Memorandum #4046. Each of the SVOCs that exceeded NYSDEC's cleanup objective level was a polynuclear aromatic hydrocarbon (PAH). Three of the metals (arsenic, lead, and zinc) had concentrations above their respective cleanup objective values in more than one-third of the soil samples collected. The sampling results found 11 remaining metals at concentrations above their respective cleanup objective values in 4 samples or less.

d. The constituents found in the soil did not adversely impact groundwater near the abandoned powder-burning pit. No organic compounds were evident in the samples of groundwater collected and analyzed. Three metals (aluminum, iron, and manganese) were present in the groundwater at levels exceeding their respective federal or state groundwater criteria values.

e. The SWMU-50/54 (SEAD-50/54) is SEDA's historic tank farm in the southeastern portion of the depot. The tank farm lies in a triangular-shaped tract of land immediately west of East Patrol Road and between the location of building 350 and buildings 356 and 357, in a portion of the depot where warehousing is the proposed future land use. The topography surrounding the tank farm is relatively flat. There is an east-west running access road that bisects the tank farm site and connects Avenue H with East Patrol Road. A man-made drainage ditch parallels both sides of the access road, and water captured in these ditches flows easterly towards intersecting ditches bordering the East Patrol Road. The drainage ditches next to East Patrol Road discharge into the headwaters of Hicks Gully that flows to Lake Cayuga. North of the access road, SWMU-50/54 is generally overgrown with vegetation, except in spots where the circular footprints of former tanks are evident. The area south of the access road is flat and grassy. There are no mapped wetlands in the area.

f. There is limited documentation on the history of the tank farm area. At one time there were approximately 160 aboveground storage tanks (silos) in this area. According to interviews with SEDA personnel, the tanks stored dry materials, such as ores and minerals, including asbestos. Four tanks currently remain at the tank farm site, three of which are empty. The empty tanks comprise what remains of SWMU-50. The SWMU-54 encompasses the remaining tank, Tank #88, which previously contained asbestos material.

g. Fifty-six chemical constituents, plus asbestos, were evident in one or more of the soil samples collected from SWMU-50/54. Of the chemical constituents detected, 1 was a volatile organic compound (VOC), 20 were SVOCs, 13 were pesticides or polychlorinated biphenyls (PCBs), and the remaining 22 were metals. Concentrations measured for seven SVOCs exceeded their respective NYSDEC soil cleanup objective level values. Eight metals had concentrations that exceeded their respective NYSDEC soil cleanup objective levels. Asbestos (chrysotile) comprised a level of 10 to 15 percent in a single soil sample collected at SWMU-50/54.

h. There has not been any significant impact to groundwater from the historic mineral/ore storage activities performed at SWMU-50/54 from available data. Groundwater sampling activities detected one SVOC and 18 metals. Concentrations measured for five of the metals exceeded their respective federal or state groundwater criteria levels.

i. Data also indicates that there has not been a significant impact to surface water near SWMU-50/54. Out of the 15 metals detected in the surface water samples collected, the sampling results found only 2 of these metals at a concentration that exceeded NYSDEC's Class C surface water criteria.

j. There is evidence of releases in the soil underlying the man-made drainage ditches at SWMU-50/54 that could be from past activities in the area. Sampling detected 44 chemical constituents, including one VOC, 17 SVOCs, 6 pesticides and PCBs, and 20 metals. Of the compounds detected, 11 (6 SVOCs and 5 metals) had concentrations that exceeded their NYSDEC soil cleanup objective levels.

k. The SWMU-67 (SEAD-67), Dump Site East of Sewage Treatment Plant #4, consists of five waste piles and two berm structures located east of the plant site and south of West Romulus Road in the east-central portion of SEDA. The intended future use for this site is planned industrial development. It is an undeveloped site with heavy vegetation consisting of low brush and deciduous trees. The topography in SWMU-67 slopes gently to the west towards a small, unnamed stream. There is little information available concerning the history of SWMU-67 or the origin of the berms and the waste piles

l. The sampling data indicated impacts to the soil in the piles and berm structures at SWMU-67 by SVOCs, predominantly PAHs, and by the metal mercury. Sampling data indicated 50 chemical constituents in soil samples, with 10 constituents having concentrations that exceeded NYSDEC's recommended soil cleanup objective levels.

m. For groundwater, the analytical data does not indicate any significant impacts at SWMU-67 from the historic soil piles and berms. Of the nineteen metals detected in the groundwater samples, only aluminum, iron, and manganese had concentrations exceeding their respective federal or state criteria values.

n. For surface water found in the area, the analytical data does not indicate any significant impacts due to the soil piles at SWMU-67. The only chemical constituents detected were metals in the surface water samples, and of the metals detected, only aluminum and iron had concentrations above NYSDEC's Class C surface water criteria value.

o. The data indicates impacts on sediments located near SWMU-67 to include SVOCs (mostly PAHs), pesticides, and a few metals. Six PAH compounds exceeded their respective criteria values in the sediment samples collected in addition to three pesticides. Four metals (copper, manganese, nickel, and silver) exceeded their respective sediment criteria values in the sediment samples.

p. This DD concentrates on the performance of a voluntary, time-critical action to remove contaminated soil identified at the four sites either in the near surface regions of the ground, in piles or bermed structures that are present at the sites, or in the shallow soil underlying man-made drainage ditches. The proposed removal actions may not be the final remedial 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 study process.

3. REMEDIAL ALTERNATIVES:

a. The primary objective of these voluntary time-critical removal actions is to excavate and remove surface soils, soil underlying man-made drainage ditches, and soil found in piles or bermed structures at the four SWMUs where available data indicates that contamination by metals or SVOCs exists. After excavation of the contaminated soil, all excavated areas will be backfilled with clean fill and reclaimed soil from the excavations, regraded, and revegetated.

b. The recommended removal actions at these sites provide an immediate reduction in the levels of potential exposure due to the continued presence of contaminated soil. Not executing these removal actions increases the 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. The increased access to sites within the depot, due to the termination of the historic military mission and activities, results in an increased likelihood that surrounding populations may contact the contaminated soil.

c. The estimated amount of soil requiring remediation from each of the SWMUs is as follows:

(1) The SWMU-24 - 1,990 cubic yards,

(2) The SWMU-50/54 - 3,960 cubic yards, and

(3) The SWMU-67 - 150 cubic yards.

The estimated total volume of soil planned for removal under the proposed remedial action is approximately 6,100 cubic yards; i.e., approximately 9,150 tons. These removal actions also include disposing of an additional 95 cubic yards; i.e., approximately 142 tons, of contaminated shallow soil underlying man-made drainage ditches surrounding SWMU-50/54.

d. At the completion of the removal actions, there will be verification sampling within and surrounding each excavation site to assess whether the removals meet the NYSDEC cleanup objectives for soils' criteria. After cleanup confirmation, the depot will backfill the excavation with clean soil, re-grade, contour, and reseed the site to reestablish pre-excavation conditions.

e. Seneca Depot Activity considered two other treatment and disposal alternatives/technologies for the remediation of the metal contaminated soils. These included solidification/ stabilization and soil washing. Treatment via soil washing and solidification proved to be more expensive per ton and involve additional analytical costs. In addition, the presence of organic materials in the soil and sediments 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). SEDA conducted a public availability session on 16 May 2001. 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 SWMU-24, SWMU-50/54, and SWMU-67 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 for 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. Because treatment was not feasible, this remedy does not satisfy the statutory preference for treatment as a principle element of the remedy. Soil washing or stabilization treatment had higher costs and would be less effective. Seneca Depot Activity does not propose these interim remedial actions as the final remedy for the identified SWMUs; i.e. SWMU-24, SWMU-50/54, and SWMU-67. In the future, the selected final remedy for these sites will satisfy applicable or relevant and appropriate requirements for the SWMUs to ensure that the remedy provides adequate protection of human health and the environment.

6. APPROVAL AND SIGNATURE:

a. The selected alternative for the four sites is excavation and disposal of soil contaminated with chemical constituents. 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 estimated project cost, excluding confirmational sampling and analysis, is $1,680,000. The intent of these removal actions is to eliminate other costs associated with future studies possibly needed to document site conditions and eliminate risk.

b. 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 X

Disapproved _____

GENE E. KING
Colonel, GS
Chief of Staff

11 SEP 2002

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 CK

Disapproved _____

GENE E. KING
Colonel, GS
Chief of Staff

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