FINAL
SITE INSPECTION
RAMAPO HELICOPTER
SPRING VALLEY, ROCKLAND COUNTY, NEW YORK

FEBRUARY 10, 1997

VOLUME 1

Review
copy

SUBMITTED BY:

Joseph I. Peck
PROJECT MANAGER

1/96 revision

SITE SUMMARY

The Ramapo Helicopter Site is located on Smith Road in a mixed residendial and commercial area, about 1.25 miles east of the village of Spring Valley in the Town of Clarkson Rockland County. It is a 11.53 acre portion of the former Ramapo Valley Airport. Ramapo helicopter serviced private and military helicopters at this location, from 1973 through February 1991, after which they moved to New Jersey. In the course of its maintenance operations the company used solvents. There was a small spray paint booth, which is believed to have been located in the southern and eastern portion of the former corrugated metal building used as a hanger for the helicopters.

In September 1990, exploratory drilling was conducted and soil samples were taken because a properly transfer was scheduled to occur in the near future. In boring #12, located west of the former hanger, Toluene, Xylene and unknown solvents, were found. Other boring may have also indicated solvents, along with fuel oil, but the exact location of these borings is unclear.

During the excavation of three underground petroleum storage tanks, in December 1990, the Rockland County Department of Health discovered a vent pipe exiting the south wall of the facility and leading to a half-buried 10-gallon bucket. The bucket had overflowed and it contained a liquid from which solvent oders emanated. Although the bucket and approximately 5 feet of surrounding soil were excavated, a solvent oder persisted in the bottom and sidewalls of the excavation. According to staff at Ramapo Helicopter, Several 55-gallon drums containing waste solvents were located on grassy areas on the west and south of the building. Unknown waste solvents were believed to be disposed in the excavated waste oil tanks, west of the former hanger,

There are four groundwater monitering wells in the vincinity of the site, ~~they~~ which were installed to investigate ~~a~~ an on-site petroleum spill. ~~They~~ they were not specifically designed to detect contaminents originating in the area of the suspected hazardous waste disposal. But, the analysis of samples from these wells revealed acetone contamination from an upgradient source.

Potential Sources listed in the site summary

10-gallon paint bucket, half-buried

drums on grassy areas west and south of the building

Location of the former waste oil tanks west of the former hanger

spray paint booth

SITE CONDITIONS AND BACKGROUND

1. PHYSICAL LOCATION - Smith Road, Spring Valley, NY
   Lat-45 51 25.0 N Long-58 15 00 E

2. SITE CHARACTERISTICS - The Site was used to service private and military helicopters from 1973 until 1991 when the company using the site moved to New Jersey. The site has been contaminated by petroleum breakdown products and paint solvents.

3. RELEASE OR THREATENED RELEASE INTO THE ENVIRONMENT OF A HAZARDOUS SUBSTANCE, OR POLLUTANT OR CONTAMINANT - A release of petroleum breakdown products, paint solvents, Toluene and Xylene has been confirmed.

4. SITE ASSESSMENT ACTIVITIES / OBSERVATIONS - The Responsible Party has performed subsurface investigations which indicate that petroleum breakdown byproducts, solvents, Toluene, and Xylene are present.

5. CERCLA STATUS - Site Inspection to be performed.

6. OTHER ACTIONS TO DATE - The NYSDEC plans to perform additional investigations to determine if the concentrations of above hazardous substances are a threat to human health and environment.

7. STATE AND LOCAL AUTHORITIES ROLE - The NYSDEC has assumed the oversite responsibility in the investigation for hazardous substances at this site.

POSSIBLE THREAT TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES - there is no evidence to indicate at this time that there is a threat to human health and the environment. There are no known hazardous substance permits associated with this site.

EXPECTED CHANGE IN THE ENVIRONMENTAL CONDITIONS SHOULD ACTION BE DELAYED OR NOT TAKEN AS CONSISTENT WITH REPORT INFORMATION AND RECOMMENDATION - No changes in environmental conditions are expected at this site if no action takes place.

ENFORCEMENT HISTORY OF THE SITE - The PRP still has the responsibility to determine what hazardous substances are present at this site.

* CONCLUSION - The PA Score of this site is below the minumum necessary to be considered for the NPL.

* RECOMMENDATIONS - That no further action be taken.

CITE REFERENCES - See Reference List.

Joe, I suggest you put these two lines on a separate page so the EPA can either keep them or remove them. Joe Hudak told me this today, 2/10/97.

SITE SKETCH

SITE ASSESSMENT REPORT:

PART I: SITE INFORMATION

1. Site Name/Alias - Ramapo Helicopter Site

Street Address - Smith Road

City - Spring Valley | State - NY | Zip Code - 10019

Describe Site Boundaries - The site is bounded on the North by a former airport runway, on the West by an access road, on the South by the Pascack ~~Rail Road~~ Railroad, and on the East by former runway.

2. County - Rockland | County Code - 087 | Cong. Dist. - 20

3.CERCLIS ID No. - NYD986949535 | Region - II

4. Block No. 164A | Lot No. 12.3

5. Latitude - 45 51 25.0 N | [redacted] | Longitude - 58 15 00 W

USGS Quads. Park Ridge, ~~196D~~ Newyork

6. Approximate size of site - 14.3 Acres

7. Owner - Parker-Nanuet Associates | Telephone Number N/A

Street - 104-70 Queens Blvd

City - Forest Hills | State - NJ | Zip Code - 11375

8. Operator - Inactive | Telephone Number

Street

City | State | Zip Code

9. Type of Ownership

Private (X) Federal ( ) State ( ) County ( ) Municipal ( )
Unknown ( ) Other

10. Owner/Operator Notification on File

RCRA 3001 Date _____ CERCLA 103c Date_____

Other *(Specify, Date)* | None | Unknown

11. Permit Information - N/A

Permit | Permit No. | Date Issued | Expiration Date

Comments:

12. Site Status

(X) Active ( ) Inactive ( ) Unknown

13. Years of Operation - Approximately 20 years from 1973 to 1991.

14. Identify the types of waste sources (e.g., landfill, surface impoundment, piles, stained soil, above- or below-ground tanks or containers, land treatment, etc.) on site. Initiate as many waste unit numbers as needed to identify all waste sources on site.

Petroleum Spills have been Identified as one possible source of soil contamination as identified in soil samples retrieved from the site.

(a) Waste Sources

Waste Unit No.	Waste Source Type	Facility Name for Unit
1.	contaminated soil	
2.		

(b) Other Areas of Concern

Ground water may also contaminated with petroleum break down products, solvents, toluene and Xylene.

Ref. Nos. 1

15. Describe the regulatory history of the site, including the scope and object ves of any previous response actions, investigations and litigation by State, Local and Federal agencies

The Company which operated this helicopter facility has had petroleum spills and removed contaminated soil. they have also removed 55 gallon drums and paint solvents.

Ref. Nos. 1

a) Is the site or any waste source subject to Petroleum Exclusion? Identify petroleum products and by products that justify this decision.

Petroleun byproducts (Toluene and Xylene) have been detected in soil samples retrieved from onsite.

Ref. Nos. 1

b) Are pesticides produced and stored on site? Does the facility apply pesticides to any part of the property? No, this site is a inactive helicopter facility.

Ref. Nos. 1

c) Is the site or any waste source subject to RCRA Subtitle C ? - No, this site is a inactive helicopter facility.

Ref. Nos. 1

d) Is the site or any waste source maintained under the authority of the Nuclear Regulatory Commission ? - No, This site is a inactive helicopter facility.

Ref. Nos. 1

16. Information available from:

Contact: Joseph I. Peck Agency: NYSDEC Telephone Number: 518 457 0927

Preparer: Same as above Agency/Company: Same as above

Date: February 10, 1997 Telephone Number: Same as above

PART I: WASTE SOURCE INFORMATION

For each of the waste units (sources) identified in Part I, complete the following items.

Waste Unit (#) 1 -

Source Type

__	Constituent	__	Wastestream
__	Landfill	X	Contaminated Soil
__	Surface Impoundment (buried/backfilled)	__	Pile(Specify type: chemical, junk, trash, tailings, etc.)
__	Drums	__	Land Treatment
__	Tanks/Containers	__	Other (Specify)

Description:

Ref. Nos. 1

1. Describe the types of containers, impoundments or other storage systems and any labels that may be present. - N/A

2. Describe the physical condition of the containers or storage systems . -N/A

3. Describe any secondary containment that may be present. - N/A

Ref. Nos. 1

Hazardous Waste Quantity - for each source, evaluate waste quantity by as many tiers (a-d) as you have information to support. Assume that the total area of contaminated soil occupies a 10' x 10' x 1' space (100 cf) and that the specific gravity of soil is 110 #/cf. Therefore, approximately 11,000 # of contaminated soil should be removed.

Hazardous Substances/Physical State - N/A

PART III: SAMPLING RESULTS

EXISTING ANALYTICAL DATA

Review and summarize any previously existing groundwater, soil, sediment, surface water, air, or waste sample analyses. Discuss the precision, accuracy, representativeness and completeness of previous sampling efforts. Describe the concentrations of chemicals of concern based on available data and media impacted. These parameters should be evaluated by examining the results of routine quality control procedures. Any suspected problems with this data should be identified. This is especially if the data cannot be used for HRS purposes. Any problems should receive the immediate attention of the work assignment manager. Identify data gaps.

The analysis of soil samples taken in September 1990 indicated that traces of Hydrocarbons, SVOCs, and hazardous substances Toluene and Xylene were present.

Ref. Nos. 1

SITE INSPECTION RESULTS

As appropriate to the particular site collect samples from air, drainage ditches, soil (surface and subsurface), standing pools of liquids, storage containers, stream and pond surface water, sediments (upgradient, at suspected source and downgradient) and ground water (upgradient, beneath site and downgradient). Samples are to be used for NPL listing purposes or to support an EE/CA (Engineering Evaluation/Cost Analysis) (as opposed to sampling used to determine immediate fire, explosion or direct contact hazards), and should go through CLP for full TAL and TCL analysis. Background samples are always necessary to document an observed release. Those samples that are considered background samples should be clearly identified.

No other sampling has occurred since September 1990. The company which operated the helicopter facility has moved to New Jersey.

Ref. Nos. 1

PART IV: HAZARD ASSESSMENT

GROUNDWATER ROUTE

1. Describe the likelihood of a release of contaminant(s) to groundwater as follows: observed release, suspected release, or none. Identify contaminants detected or suspected and provice a rationale for attributing them to the site. For observed release, define the supporting analytical evidence and relationship to background.

   A release of petroleum breakdown Products, solvents. Toluene, and Xylene to the groundwater is suspected based upon analytical results of sampling performed during September 1990.

   Ref. Nos. 1

2. Describe the aquifer of concern; include information such as stratigraphy, depth, thickness, geologic composition, areas of karst terrain, permeability, overlying strata, confining layers, interconnections, discontinuities, depth to water table, groundwater flow direction. Attach a sketch of stratigraphic column.

   The Ramapo Helicopter site is located in the Spring Valley region to the west of the lower Hudson Valley, an area characterized by bedrock of undivided sandstone and conglomerate n the Brunswick Formation (Upper Triassic) generally one meter or more from the surface. Soils consist of variable texture poorly sorted diamict till from deposition beneath glacial ice. The site contains three different soil associations. To the west, beyoud the hanger building, fluvial sand and gravel, with occasional lateral lenses of silt predominate in thicknesses from 2 to 20 meters. To the east, beyond the driveway, Kame deposits, or course to fine gravel and/or sand with lateral variability in sorting, coareness, and thickness predominates. Locally, areas are firmly cemented with calcareous cement. Thickness vary from 10 to 30 meters. The overall site soils tend towards the relatively impermeable loans with variable clast content ranging from well rounded diverse lithologies to relatively angular more limited lithologies in upland till.

   The elevation at the site is about 410 feet. The site is bordered by residential and light commercial development to the north and east, and commercial development to the west and south. There are no public wells within 1000 feet of the site.

   There are several Drinking Water Supply Companies in Rockland County which obtain their water by pumping from deep water supply wells. The Spring Valley Water Company has the nearest wells to this site. A Report cited in the references describes a water contamination problem which had already existed because of the intense development that has occurred in the area.

   Ref. Nos. 1, 2 & 3

3. What is the depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer(s) of concern?

   The depth below ground level of the ground water contamination is unknown. A depth of 6 feet is assumed. The depth to the water table is assumed to be 13 feet. Therefore, the depth to the highest seasonal level of the aquifer of concern is approximately 7 feet.

   Ref. Nos. 2

4. What is the permeability value of the least permeable continuous intervening stratum between the ground surface and the top of the aquifer of concern?

The permeability of the glacial deposits range from 10x-3 to 10x-5.

*Ref. No.2

5. What is the net precipitation at the site (inches)?

The average annual precipitation is between 35 - 40 inches per year.

Ref. Nos. 2

6. What is the distance to and depth of the nearest well that is currently used for drinking purposes?

The nearest potable well is located approximately 1,000 feet northwest of the site and is owned by the Spring Valley Water Company, Inc.. The minimum depth of their water supply wells in the area is around 20 feet.

Ref. Nos. 2 & 3

7. If a release to groundwater is observed or suspected, determine the number of people that obtain drinking water from wells that are documented or suspected to be actually contaminated by hazardous substance(s) attributed to an observed release from the site.

A release of contamination from the site is suspected to have occurred: the contamination boundary of the release is suspected under a worst case scenario to have a approximately 500ft radius which is expected to affect the nearest portable water supply. There are no people using private water supply wells within that radius.

Ref. Nos. 2 & 3

8. Identify the population served by wells (private + municipal) located within 4 miles of the site that draw from the aquifer(s) of concern.

Distance	Population
0 - 1/4 mi	450
>1/4 - 1/2 mi	2050
>1/2 - 1 mi	7000
>1 - 2 mi	33020
>2 - 3 mi	39110
>3 - 4 mi	47910

Ref. Nos. 4

State whether groundwater is blended with surface water, groundwater, or both before distribution.

Groundwater is blended with surface water, groundwater, or both before distribution.

Ref. Nos. 2 & 3

Is a designated well head protection area within 4 miles of the site?

No If municipal wells are present the answer should be "yes."

Ref. Nos. 2 & 3

Does a waste source overlie a designated or proposed wellhead protection area? If a release to groundwater is observed or suspected. does a designated or proposed wellhead protection area lie within the contaminant boundary of the release? If the source is within 1500' of a municipal well, the answer would be yes.

No

Ref. Nos. 2 & 3

9. Identify one of the following resource uses of groundwater within 4 miles of the site (i.e., commercial livestock watering, ingredient in commercial food preparation, supply for commercial aquaculture, supply for major, or designated water recreation area, excluding drinking water use, irrigation (5-acre minimum) of commercial food or commercial forage crops, unusable).

Groundwater within 4 miles of the site is be used as a portable water supply and for commercial purposes.

Do you know of any of these questions within 4 miles? If no, say, "none identified."

Ref. Nos. 2 & 3

SURFACE WATER ROUTE

10. Describe the likelihood of a release of contaminant(s) to surface water as follows: release, suspected release, or none. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For observed release, define the supporting analytical evidence and relationship to background.

Because of past oil spills, there may have been a release of petroleum contaminants at the site. Also, because of past painting activities at the site, There may a release of paint solvents at the site. There is no known overland migration from the site to surface water because ~~of the~~ topography, roads, and the buildup of the area are barriers to surface water entry. However, there may be storm drains in the area.

It is unknown if there is a groundwater discharge to surface water.

Ref. Nos. 2 & 3

11. Identify the nearest down slope surface water. Include a description of possible surface drainage patterns from the site.

The only known surface water ~~tributarys~~ tributaries located around the helicopter landing area are the drainage ditches. The nearest surface water bodies are the Pascack Brook located to the west of the site and the Nauraushaun Brook located to the east of the site. The Pascack Brook gerenally flows south into New Jersey and into Silver Lake. The Nauraushaun Brook also flows south and eventually into the Hackensack River Basin. However, there are no known overland runoff pathways from the site to these tributaries. In #10 you say there is no overland migration, but here you say there are drainage ditches. Do the drainage ditches lead to surface water?

Ref. Nos. 2 & 3

12. What is the distance to the nearest down slope surface water? Measure the distance along a course that runoff can be expected to follow.

Both the Pascack Brook and the Nauraushaum Brook are located about 1000 feet from this site. This reduces the prospect of a overland surface water pathway. It is possible that surface water runoff may discharge into storm drains located on the border of the site. What is their outlet? Drywells? unknown?

Ref. Nos. 2 & 3

13. Identify all surface water body types within 15 downstream miles.

Name	Water Body Type	Flow (cfs)	Saline/Fresh/Brackish
Pascack Brook	Stream	10	Fresh
Nauraushaun Brook	Stream	10	Fresh
Hackensack River	Small River	300	Fresh
Lake Tappan	Lake		Fresh

Ref. Nos. 2 & 3

14. Determine the 2 yr, 24 hr rainfall (inches) for the site?

3 to 5 inches.

Ref. Nos. 2 & 3

15. Determine size of drainage area (Acres) for the sources at the site?

Approximately 14.3 acres.

Ref. Nos. 2

16. Describe the predominant soil group in the drainage area?

In the vicinity of the site, brown coarse to fine sands with quantities of silt and coarse to fine sandy gravels are encountered as surfical deposits.

Ref. Nos. 2 & 3

17. Determine the floodplain (1 yr., 10 yr., 100 yr., 500 yr., none) that the site is within.

The site is located outside the 100-year floodplain.

Ref. Nos. 2 & 3

18. Identify drinking water intakes in surface waters within 15 miles downstream of the point of surface water entry. For each intake identify: the name of the surface water body in which the ntake is located, the distance in miles from the point of surface water entry, population served, and stream f ow at the intake location.

Intake	WB Type	Distance From PPE	Pop. Served	Flow (cfs)

There probably are surface water intakes located along the Hackensack River Basin located within 15 miles downstream of the site, but they are unknown at this time. Is this because they are in New Jersey?

Ref. Nos. 2 & 3

19. Identify fisheries that exist within 15 miles downstream of the point of surface water entry. For each fishery specify the following information:

Fishery	WB	Distance From PPE	Flow (cfs)	Saline/Fresh/Brackish
Pascack Brook	Stream	<1mi.	10	Fresh
Nauraushaun Brook	Stream	<1mi.	10	Fresh
Hackensack River	Small River	<15mi.	300	Fresh

Ref. Nos. 2 & 3

20. Identify surface water sensitive environments that exist within 15 miles of the point of surface water entry.

Environment	WB Type	Distance from PPE	Flow (cfs)	Wetland Frontage (miles)
Pascack Brook	Stream	<1mi	10	<0.5
Nauraushaun Brook	Stream	<1mi	10	<0.5
Hackensack River	Small River	<15mi.	300	5+

Ref. Nos. 2 & 3

21. If a release to surface water is observed or suspected, identify any intakes, fisheries, and sensitive environments from question Nos. 18-20 that are or may be actually contaminated by hazardous substance(s) attributed to an observed release from the site.

Intake: A release to surface water is not observed or suspected from this site.

Fishery: Same as above.

Sensitive Environment: Same as above.

Ref. Nos. 2 & 3

22. Identify whether the surface water is used for any of the following purposes, such as: irrigation (5 acre minimum) of commercial food or commercial forage crops, watering of commercial livestock, commercial food preparation, recreation, potential drinking water supply?

The Oradell Reservoir is located just downstream from the 15 mile point on the Hackensack River Basin. The Hackensack River is probably used as a limited recreational Fishery. Also, It is probably used for recreational boating.

Ref. Nos. 2 & 3

SOIL EXPOSURE PATHWAY

23. Determine the number of people that occupy residences or attend school or day care on or within 200 feet of an area of observed contamination.

    Based upon visual observations, there are no people that occupy residences within 200 feet of the site property

    Ref. No. 2 & 3

24. Determine the number of people that regularly work on or within 200 feet of an area of observed or suspected contamination.

    The number of people that work within 200 feet of the site property is estimated to be 20 employees that work in the Costeo Building.

    Ref. No. 2 & 3

25. Identify terrestrial sensitive environments on or within 200 feet of an area of observed or suspected contamination.

    There are no terrestrial sensitive environments within 200 feet of the site property.

    Ref. No. 2 & 3

26. Identify whether there are any of the following resource uses, such as commercial agriculture, silviculture, livestock production or grazing within an observed or suspected contamination boundary?

    None ~~of the above apply.~~ identified

    Ref. No. 2 & 3

AIR ROUTE

27. Describe the likelihood of release of contaminants to air as follows: observed release, suspected release, or none. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For observed release define the supporting analytical evidence and relationship to background.

There ~~is~~ are no known suspected or observed releases of contaminants from the Ramapo Helicopter site to the air. There is a record of past spills which occurred in the past, therefore, the potential for volatilization of wastes to air does exist.

Ref. Nos. 2 & 3

28. Determine populations that reside within 4 miles of the site.

Distance	Population
0 (on-site)	20
0 - 1/4 mi	450
>1/4 - 1/2 mi	2,050
>1/2 - 1 mi	7,000
>1 - 2 mi	33,020
>2 - 3 mi	39,110
>3 - 4 mi	47,910

Ref. No. 2 & 3

29. Identify sensitive environments and wetlands acreage (wetland acreage only for wetlands sensitive environment) within 4 miles of the site.

Distance	Type of Sensitive Environment	Actual Distance from site (miles)	Wetland Acreage
0 (on-site)			
0-1/4 mi.			
>1/4-1/2 mi.			
>1/2-1 mi.			
>1-2 mi.			
>2-3 mi.			
>3-4 mi.			

There are no known significant sensitive environments/wetland acreage within a 4 mile radius of the Ramapo Helicopter Site.

Ref. Nos. 2 & 3

30. If a release to air is observed or suspected, determine the number of people that reside or are suspected to reside within the area of air contamination (might be actual contamination) from the release.

A release to the air from the Ramapo Helicopter Site has not been observed or is suspected.

Ref. Nos. 2 & 3

31. If a release to air is observed or suspected, identify any sensitive environments, listed in question No. 46, that are or may be located within the area of air contamination from the release.

A release to the air from the Ramapo Helicopter Site has not been observed or is suspected.

Ref. Nos. 2 & 3

REFERENCES

1. 1997 Exerpts from the New York State Department of Environmental Conservation Bureau of Hazardous Waste Ramapo Helicopter Investigations File.

2. 1988 NUS Final Draft Site Inspection Reports for Ramapo Land Company and Ramapo Incinerator Ramapo, New York.

3. 1995 Ebasco Final Draft Site Inspection Report for Nyack Landfill, Rockland County, New York.

4. January 24, 1997 Population Calculation.