2021 Hazardous Waste Scanning Project

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ADDENDUM TO PART 360 APPLICATION FOR AN EXPANSION OF THE NIAGARA RECYCLING, INC. SANITARY LANDFILL INTO AREAS III, V, VI AND VII ON THE SEAGULL DETERRENT SYSTEM

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February 1986

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1.0 INTRODUCTION

This addendum has been prepared to describe the system utilized by Niagara Recycling, Inc. to reduce the attractiveness of its landfill site to seagulls. The landfill, known as the Pine Avenue Site, is located in the Town of Niagara, Niagara County, New York. The site, in the opinion of the New York State Department of Environmental Conservation (DEC), poses a potential bird hazard to aircraft using the Niagara Falls International Airport, which is about one mile east of the site.

1.1 Background

In March of 1982, Niagara Recycling, Inc. filed a Draft Supplemental Impact Statement and a Part 360 Application for the expansion of sanitary landfill operations at the Pine Avenue Site. The proximity of the landfill to the airport and the increased bird hazard to aircraft became a primary issue during permit hearings. The permit conditions granted by the DEC prohibited the landfilling of putrescible wastes.

In the fall of 1982, Niagara Recycling began efforts to obtain a modification to the permit to allow the disposal of putrescible wastes at the Pine Avenue Site. Niagara Recycling proposed a study of an experimental overhead wire system to deter seagulls from the site by preventing access to active areas of the landfill. This method has been used successfully on landfills and reservoirs in California and at two parks in Toronto, Canada. Niagara Recycling contracted LGL Limited of Toronto to conduct a year-long study of the effects of such a deterrent system on the site. The granting of a modification of the permit would be dependent upon the outcome of the study.

1.2 Results of the LGL Limited Study

The study conducted by LGL Limited utilized a wire system consisting of pairs of moveable poles supporting a stainless steel wire spanning the working face of the landfill. Over the period of one year, the wire system was installed and then removed in four cycles. Observers counted the number of gulls on a regular basis on the site, at the airport, at two other control landfills, and several areas where gulls were known to congregate in the vicinity of the site. The presence of the wire system reduced gull numbers significantly as compared to gull numbers on site when the wires were absent. For detailed information on the study, the reader is referred to LGL's final report entitled, "Effectiveness of Wires in Reducing Gull Usage of the Pine Avenue Site, Niagara Falls, New York". This report was submitted to the DEC and FAA in March 1984.

2.0 GENERAL INFORMATION

2.1 Site Information

The areas permitted for sanitary landfilling are located on the industrially zoned property which is referred to as the Pine Avenue Site. This site is located primarily in the Town of Niagara, with a portion falling within the boundaries of the City of Niagara Falls. The site is bounded by Packard Road and Route I-190 to the north and east, respectively. The property is separated from the Airco Speer Company on the west by the Niagara Junction Railroad. A Niagara-Mohawk right-of-way runs along the southern boundary, which is adjacent to Great Lakes Carbon Company. The layout of the Pine Avenue Site is presented as Figure 1. This figure illustrates the location of sanitary landfill facilities.

2.2 Summary of LGL Limited Study

Niagara Recycling, Inc. contracted LGL Limited of Toronto to conduct a year-long study of an overhead wire system to reduce the attractiveness of the sanitary landfill area of the Pine Avenue Site to seagulls. The effectiveness of such a system had not been studied in detail, even though it is being used at other landfills and reservoirs.

To test the effectiveness of the system, the numbers of gulls on the landfill were determined in the presence and absence of the wires, and at two other landfills with no deterrent systems. Flight lines used by gulls and gull numbers in other areas near the landfill site were also monitored.

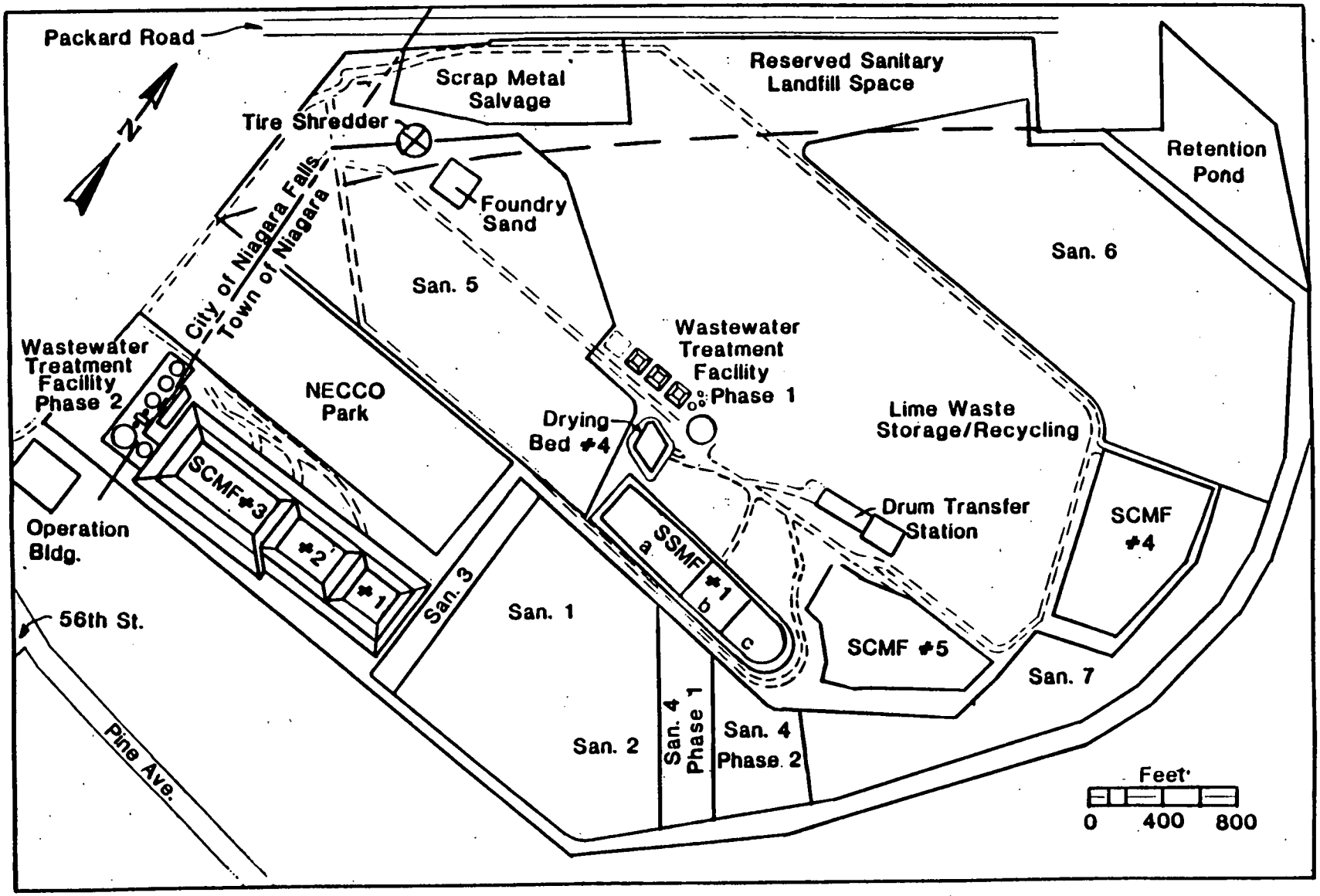


FIGURE 1

LOCATIONS OF EXISTING WASTE MANAGEMENT SYSTEMS

AT THE PINE AVENUE SITE, NIAGARA FALLS, NEW YORK

Numbers of gulls at the landfill were strongly affected by the presence of the wires. The wires were in place for four periods throughout the year, ranging in duration from three to twenty weeks. The wire system was successful in reducing gull numbers on both the active area of the landfill and the entire Pine Avenue Site.

For purposes of the study, the deterrent system consisted of parallel wires strung from telescopic poles. The bases of the poles were staked and weighted with concrete. Telescopic poles were used to allow for raising the height of the wires as the height of the landfill increased.

The two control landfills used were the BFI landfill in North Tonawanda, New York, and the Modern Disposal landfill in Model City, New York. Only the BFI landfill was permitted to accept putrescible wastes. Gulls were observed at the Modern Disposal site regularly, suggesting material attractive to gulls was present on the site.

The patterns of gull usage were similar for all three sites, however, the usage of the Pine Avenue site was obviously modified by the presence of the wires. There is a decrease in gull usage of landfills in the late winter. When the wires were initially installed in late January, the number of gulls at Pine Avenue decreased more rapidly than those at Modern Disposal. In March, large amounts of edible material were brought to both Pine Avenue and North Tonawanda. This attracted large numbers of gulls to both sites, but due to the presence of the wires, the numbers were much lower at Pine Avenue. This trend continued throughout the year with the decrease in gull numbers in the fall occurring earlier at Pine Avenue than the other two landfills, due to the presence of the wires.

Several other locations known to be utilized by seagulls were also monitored during the study to determine gull numbers for comparison purposes. These locations were the grounds of LeSalle High School, Hyde Park, the Niagara Falls Airport, and the roofs of buildings on Military Road and Third Avenue. Of these sites, Hyde Park and the adjacent golf course was the most regularly used site, besides the airport itself.

These observations showed the presence of the deterrent system decreased the attractiveness of the site to seagulls. Numbers of gulls were greater at Hyde Park than at Pine Avenue when the wires were in place. During periods when the wires were removed, the situation was reversed.

Concerning the flight patterns of gulls, very few birds travelled over the airport while en route to or from the site, and very few gulls feeding at the landfill loafed at the airport.

2.3 Aircraft/Bird Hazard Conditions

The Niagara Falls International Airport is, at its closest point, 4200 feet from sanitary landfill operations at the Pine Avenue Site. The airport itself is known to attract seagulls because of its flat, open areas. The Niagara Frontier Transportation Authority, operators of the airport, make twice daily field checks of bird numbers on the airport. Warning notices to pilots (NOTAMs) are issued when birds are present at either one or both of these field checks. In 1983, NOTAM warnings were issued on 145 days. These warnings only indicate the presence of seagulls, not their numbers. Thus, 40% of the time during that year, seagulls were present on the airport.

However, the presence of gulls at the airport was not shown to be related to the proximity of the landfill. During the study, the flight lines of gulls en route to and from the airport and the Pine Avenue Site were monitored to estimate the extent of the exchange between the landfill and the airport.

The results indicate that very few gulls fly across the airport en route to or from the site. The number of gulls coming to or leaving the site in the general direction of the airport (east or northeast) averaged less than five gulls per hour, frequently being less than one gull per hour.

From observations of gulls at the airport, the average number of gulls per hour leaving to the west, in the direction of the site, was less than one per hour. The majority of gulls flew off to the southwest or northeast, in the direction of the Niagara River or Lake Ontario, respectively.

2.4 Impact of the Deterrent System

The presence of the deterrent system decreased seagull activity on the site and significantly prevented gulls from using the landfill as a food source. From the observations of other areas of gull activity, changes in the distribution of gulls in the area have been estimated. Gulls were observed on LaSalle High School grounds very infrequently, thus no real comparison could be made. The roofs of the buildings on Military Road and Third Avenue were used regularly only in the fall, suggesting a seasonal usage pattern. The numbers obtained were too small to make meaningful comparisons. Other than the airport, Hyde Park and the adjacent golf course was the only area frequented by gulls on a regular

basis.

When the wires were absent, gulls used the Pine Avenue site in greater numbers than Hyde Park or the airport. However, during periods when the wires were present, the situation was reversed at Hyde Park, particularly in the spring, fall and winter.

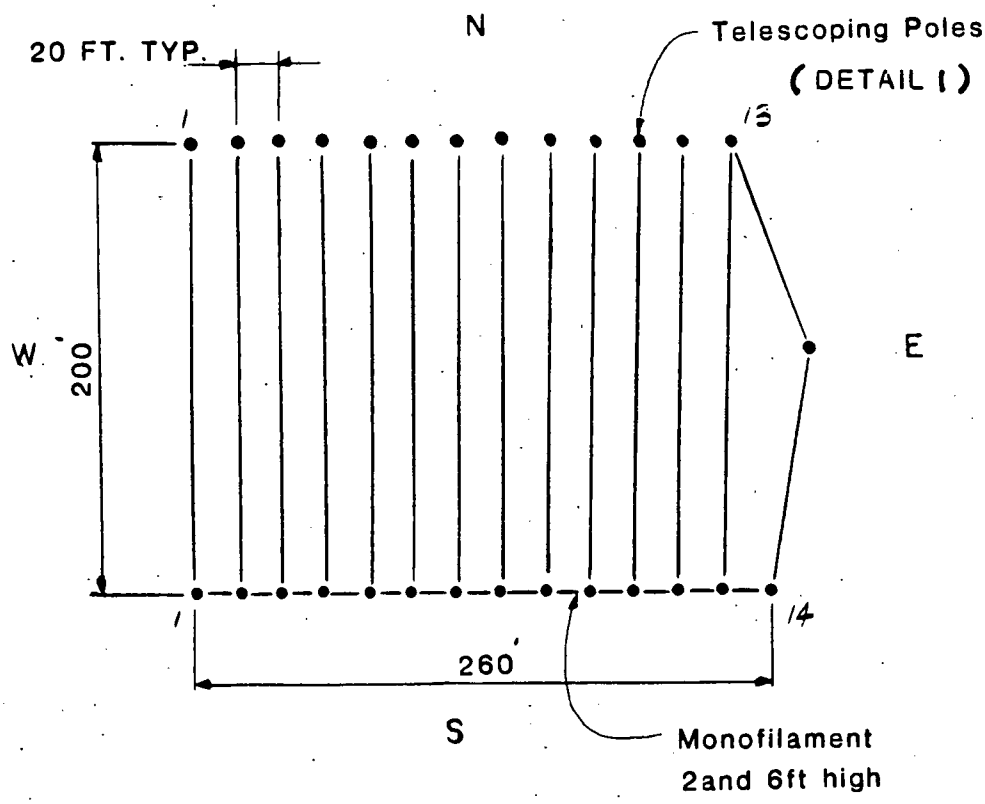
3.0 DESIGN OF GULL DETERRENT SYSTEM

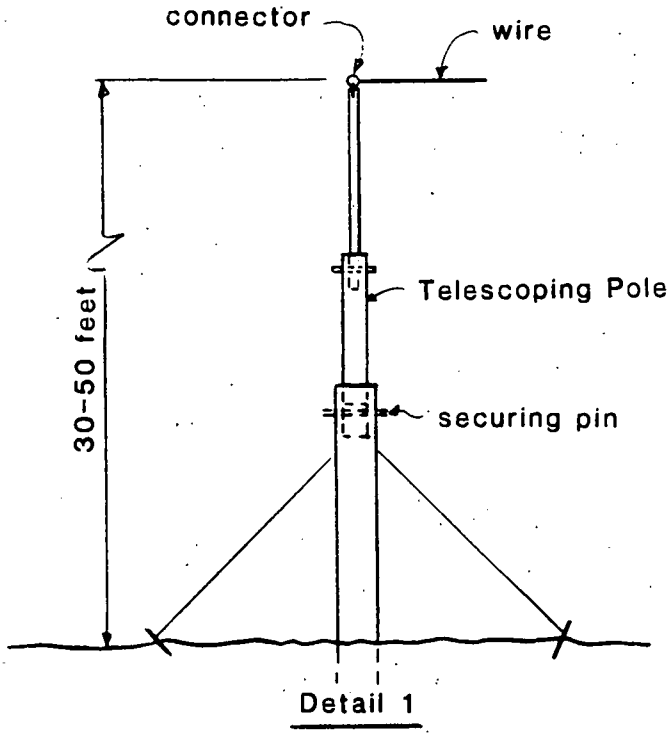
For the study, the deterrent system consisted of parallel wires strung from telescopic poles. One pair of poles was required for each wire, with the span of wire being about 1000 feet. Stainless steel 0.032 inch wire was utilized. The bases of the poles were staked and weighted with pieces of concrete. Telescopic poles were used to allow for raising the height of the wire as the height of the landfill increased.

Initially, the poles were arranged such that the space between wires was approximately 40 feet. This proved to be effective on herring gulls. As ring-billed gulls returned to the area in the spring, these birds would fly between the wires. Additional poles and wires were added to decrease the spacing from 40 feet to 20 feet. This arrangement effectively deterred both species of seagulls. For an illustration of the system, refer to Figure 2.

The key to the continued effectiveness of the system was maintenance. Broken wires needed to be replaced quickly. Severe wind storms did fell several poles, which had to be restored to their proper position.

As a result of the study, it became apparent the system needed to be redesigned to allow for easier maintenance and better stability. The telescopic poles have been replaced by 105 foot high wooden poles anchored at the corners of the landfill area. The wires are connected to a cable which runs between the poles. The system is designed to allow for replacement of a wire from ground level, allowing for continuous coverage of the landfill for an extended period of time. An illustration of the design is presented in Figure 3.

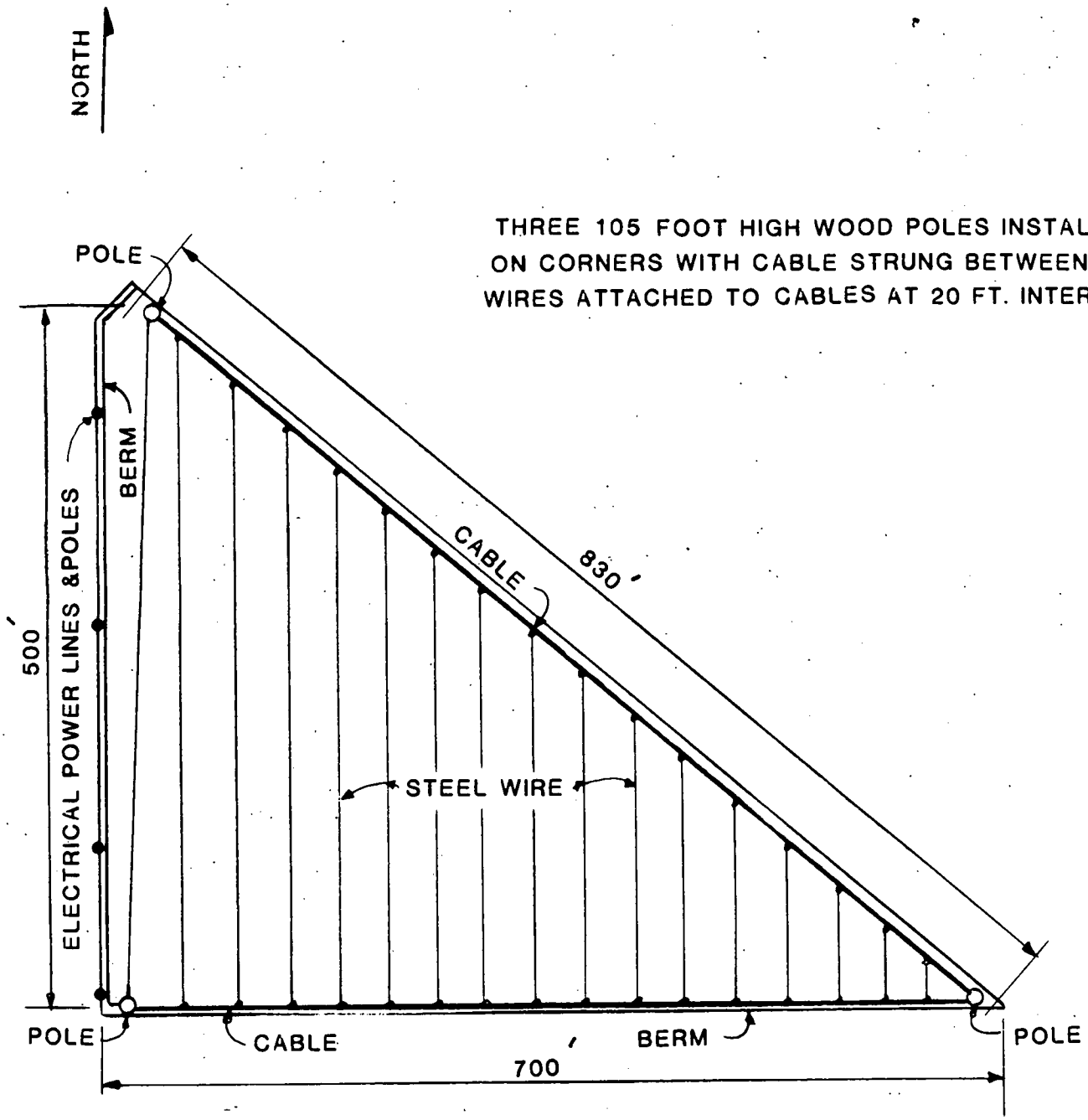




Detail 1

RECRA RESEARCH INC. BUFFALO, NEW YORK	Scale:		NIAGARA RECYCLING	CONFIGURATION OF WIRE SYSTEM FOR LGL LIMITED STUDY
		By / Date		
	Dwn.	AB 12/85		
	Ckd.			
	Ap'vd.			
	Rev.		Project No. 5C475449	A FIGURE 2

BRUNING 61160-1



RECRA RESEARCH INC. BUFFALO, NEW YORK	Scale:		NIAGARA RECYCLING	CONFIGURATION OF WIRE SYSTEM CURRENTLY OVER SANITARY LANDFILL 5
		By / Date		
	Dwn.			
	Ckd.			
	Ap'vd.			
	Rev.		Project No. 5C475449	A / FIGURE 3

BRUNING 61160-1

4.0 OPERATION OF THE SYSTEM

The system was and is operated by the sanitary landfill personnel at the Pine Avenue Site. During the LGL study, personnel set up and removed the system at the prescribed times, and were responsible for maintenance of the system, which was the necessary measure to ensure safe operation. Vehicle operators had to use caution to avoid striking the poles or the wires, if the box on a truck was raised. However, the redesigned system is more stable and the wires are at a higher level above the landfill, making it easier for safe operation of vehicles in the landfill. The system is checked twice weekly for broken wires, which are replaced as necessary. Counts of gulls on the active face are also made at that time to determine if additional deterrent measures are required as outlined in Section 5.0.

5.0 CONTINGENCY PLAN

The deterrent system in operation at the Pine Avenue Site has been designed for safe, easy operation and maintenance. Minor repairs, such as a broken wire, can be easily replaced from ground level.

In the event the system fails, such as breakage of the cable supporting the wires or collapse of one of the support poles, the following action will be taken.

1. The system shall be dismantled and repaired as necessary.

2. While the system is repaired, other means such as loud noises will be utilized to deter seagulls if necessary.

3. The cause of the failure will be determined and procedures implemented to reduce or prevent the possibility of reoccurrence.

4. After the system has been repaired, it will be reinstalled and checked daily for three days.

In addition, Niagara Recycling agrees to the conditions outlined in the November 26, 1984 letter to John Spagnoli of the DEC from the FAA. These conditions combine the use of the overhead wire system and more traditional bird control measures.

1. A wire barrier system shall be installed and maintained with a wire spacing not be exceed 20 feet. Wires shall be installed on the sides to minimize access by birds flying or walking in under the wire.

2. Landfill personnel shall be trained in bird dispersal techniques and utilize a bird patrol to disperse gulls which penetrate the wire barrier and gulls which loaf or roost on other areas of the landfill.

3. Unused portions of the landfill shall be planted with grass or other vegetation which yields 10 to 12 inches of growth and reduces gull loafing habitat.

4. If gulls or flocks of other birds begin circling higher than 200 feet over the landfill, landfill personnel shall notify airport management of the potential hazard.

5. If large volumes of putrescible waste are to be received, such as when the Hooker refuse-to-energy facility is shut down, the airport shall be notified so they can increase airport bird control activities.

6. No disposal of putrescible waste shall be allowed outside of the area covered with the wire barrier.

7. Gull numbers on the active landfill site shall not exceed 50 birds feeding under the wire barrier. Supplemental bird control techniques shall be applied to disperse birds if this number is exeeded.

8. Gulls in flocks of 50 or more who are loafing on the perimeter of the wire barrier system shall be dispersed. Perimeter shall be defined as those areas where a perched bird is within line of sight of the active landfill.

9. Landfill personnel shall secure appropriate permits for bird control from the U.S. Fish and Wildlife Service, complying with permit restrictions.

10. If for any reason the bird control measures fail to achieve control with no more than 50 loafing gulls on the perimeter of or 50 gulls inside the wire barrier system, landfill personnel will cease accepting putrescible waste until such time as it can establish, to the satisfaction of the DEC, that it can prevent bird hazards using other control techniques.