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ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE I INVESTIGATIONS

**CENTRAL AUTO WRECKING, SITE NUMBER 915125
CITY OF LACKAWANNA, ERIE COUNTY**

September 1989



Prepared for:

**New York State Department
of Environmental Conservation
50 Wolf Road, Albany, New York 12233
Thomas C. Jorling, Commissioner**

**Division of Hazardous Waste Remediation
Michael J. O'Toole, Jr., P.E., Director**

Prepared by:

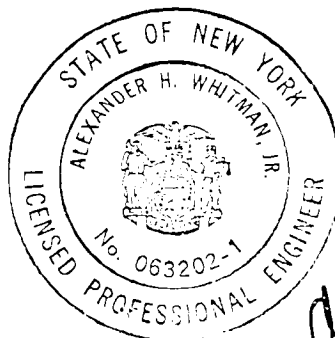
Ecology and Environment Engineering, P.C.

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1. EXECUTIVE SUMMARY

1.1 SITE BACKGROUND

The Central Auto Wrecking site comprises two properties: 343 Ridge Road, Lackawanna, where the facility wrecking yard was located, and 345 Ridge Road, Lackawanna where the owner of Central Auto Wrecking, Mr. Russell J. Scherrer, leased the property site from Mr. Stanley G. Tomaka in the late 1970s and early 1980s for a landfill (see Figures 1-1 and 1-2).

According to the tax assessor's office, no listing differentiates between the properties of 343, 345, or 347 Ridge Road. The only listing is for 343-347 Ridge Road. The tax map obtained by E & E shows the western property boundary of 343-347 Ridge Road running north from 50 Lehigh Avenue, along Lehigh Avenue to the City of Lackawanna southern property boundary. However, the western property boundary is no longer adjacent to Lehigh Avenue; rather, it is eastward of several lots bordering Lehigh Avenue. The northern property boundary of the site is the City of Lackawanna's southern property line. The eastern boundary is the City of Lackawanna's eastern property boundary, extending south to the 50 Lehigh Avenue property. The southern property boundary of the site is the property edge of 50 Lehigh Avenue.

Mr. Scherrer used the landfill to bury tires, used automobiles and automobile parts, and construction and demolition materials. He did not obtain a Part 360 permit from New York State Department of Environmental Conservation (NYSDEC) for operating the landfill or for the backfilling of construction and demolition debris.

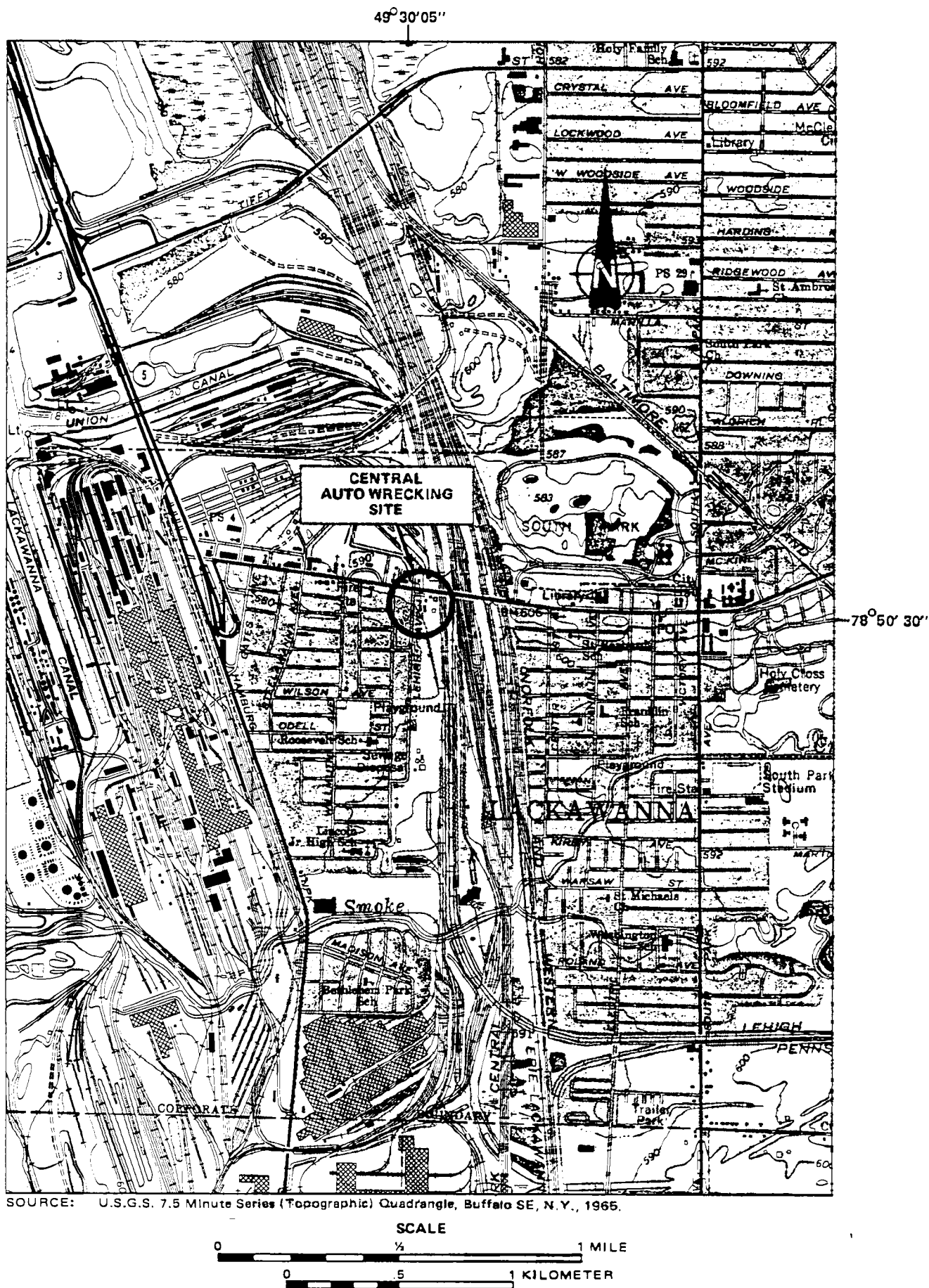
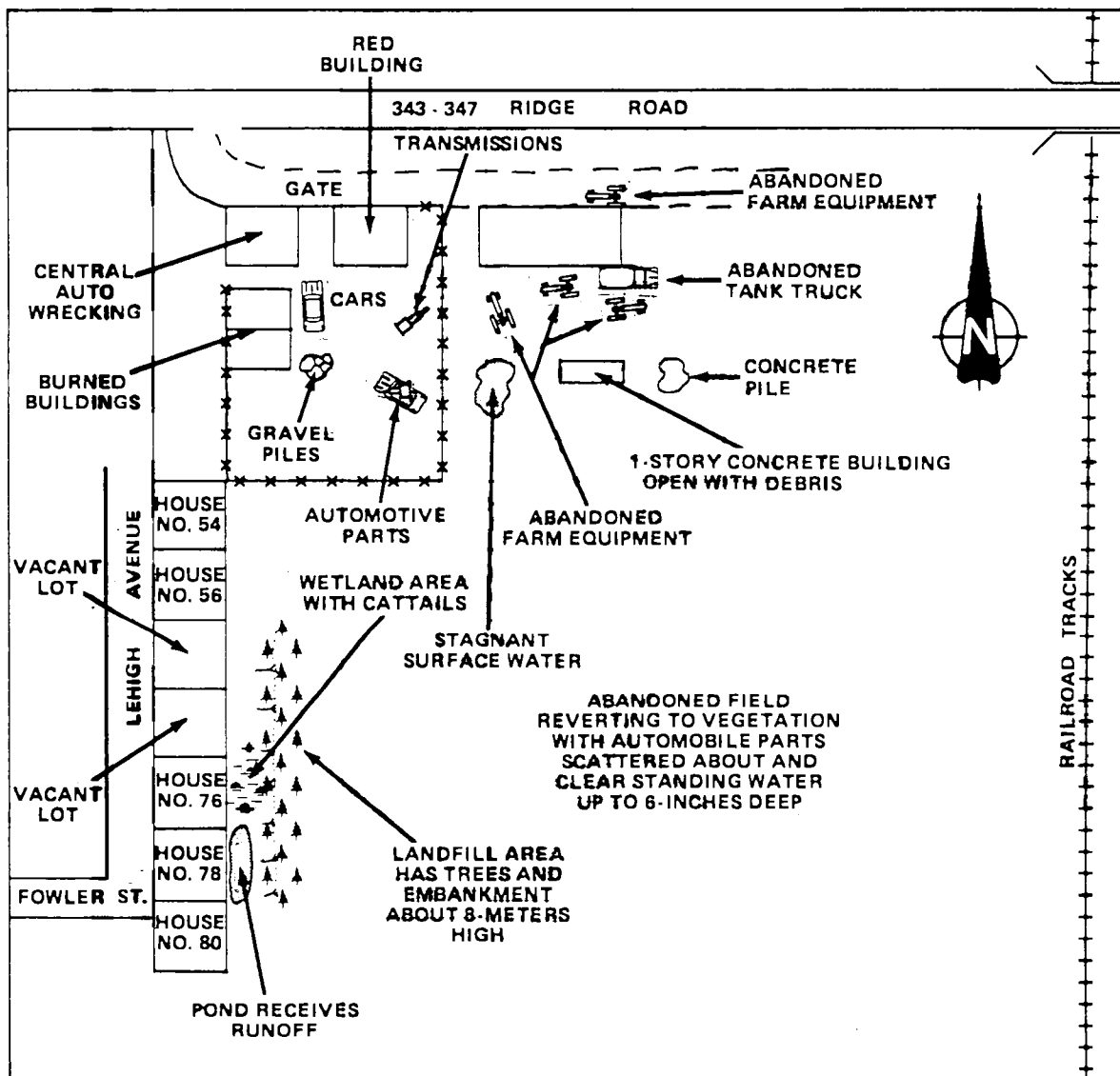


Figure 1-1 LOCATION MAP



SOURCE: Ecology and Environment, Inc., 1987.

NOT TO SCALE

Figure 1-2 SITE MAP - CENTRAL AUTO WRECKING

Complaints from nearby residents began in 1980 and continued through the present. Their complaints have included noise, dust, drainage problems, boundary disputes, and onsite disposal of thousands of tires. Mr. Scherrer was fined by the City of Lackawanna and requested to remediate the drainage problems. Through a countersuit, Mr. Scherrer avoided the voluntary remediation. Mr. Scherrer subsequently moved his wrecking yard to Seneca Street, covered and graded the landfill, and in 1986, sold the Central Auto Wrecking property (the wrecking yard) to Mr. Louis Fadale, owner of Transmission Exchange.

The ECDEP collected soil and water samples at the 343 and 345 Ridge Road properties and at neighboring residential properties in 1982. The samples were analyzed for total recoverable phenolics, PCBs, polynuclear aromatic hydrocarbons, and heavy metals. In addition, water samples were tested for chloride and total organic carbon and soils were scanned for halogenated organic compounds. The test results indicated contamination from heavy metals, PCBs, and organics (ECDEP 1982).

On July 9, 1984, NUS Corporation, under contract for the EPA, collected three surface water and nine soil/sediment samples which were analyzed for priority pollutants. Both organics and higher than typical metal concentrations were detected (NUS 1985).

The landfill is currently unused and vacant, and the property site of Central Auto Wrecking is now used for automobile parts storage by Mr. Fadale.

1.2 PHASE I EFFORTS

On September 17, 1987, Ecology and Environment, Inc., (E & E) conducted a site inspection in support of this investigation. Prior to the inspection, available federal, state, county, and municipal files were reviewed. The site inspection consisted of a visual survey of the property that included:

- o Overall site conditions;
- o Description of vegetation and a survey for stressed vegetation;

- Presence of structures on the site;
- Distance to nearest residence;
- Location of nearest agricultural land;
- Location of nearest surface water and wells, and type of use;
- Visual delineation of former waste disposal areas;
- Air quality survey using an HNu photoionizer; and
- Photodocumentation of the site.

All observations were recorded in a field logbook and are reported in the United States Environmental Protection Agency (EPA) Site Inspection Report form.

1.3 ASSESSMENT

No drums, leachate, or soil contamination was observed during the site inspection performed by E & E on September 17, 1987. The landfill supports a full vegetative cover. It is about 10 to 15 feet higher than adjacent properties and causes drainage problems into backyards of nearby residences. The soil and surface water in the vicinity of the landfill has been sampled by ECDEP and found to be contaminated with heavy metals, PCBs, and organics believed to be the result of the materials that were deposited at the landfill. These materials include tires, used automobiles, and construction and demolition debris. NUS conducted soil and water sampling within the vicinity of the landfill and detected both metals and organics contamination. NUS also observed a red leachate pool on the western side of the site (NUS 1985).

1.4 HAZARD RANKING SYSTEM SCORE

A preliminary application of the Hazard Ranking System (HRS) was completed to quantify risks associated with the site. A detailed environmental site assessment to fully evaluate the site was not

conducted because the Phase I investigation is limited in scope. However, a preliminary HRS score was completed on the basis of the available data. It should be noted that without a full environmental assessment, an unrealistically low HRS score may result.

Under the HRS, three numerical scores are computed to express the site's relative risk or damage to the population and the environment. The three scores are described below:

- S_M reflects the potential for harm to humans or the environment from migration of a hazardous substance away from the facility via groundwater, surface water, or air. It is a composite of separate scores for each of the three routes (S_{GW} = groundwater route score, S_{SW} = surface water route score, and S_a = air route score).
- S_{FE} reflects the potential for harm from substances that can explode or cause fires.
- S_{DC} reflects the potential for harm from direct contact with hazardous substances at the facility (i.e., no migration need be involved).

The preliminary HRS score was:

$S_M = 9.68$ ($S_{GW} = 12.93$; $S_{SW} = 10.63$; $S_a = 0$)

$S_{FE} =$ Not scored

$S_{DC} = 37.50$

2. PURPOSE

This Phase I investigation was conducted under contract to the New York State Department of Environmental Conservation (NYSDEC) Superfund Program. The purpose of the investigation was to provide a preliminary evaluation of the potential hazardous waste present at the landfill, to estimate the potential pollutant migration pathways leading off site, and to determine the natural resources or extent of the human population that might be affected by the pollutants. This initial investigation consisted of conducting a detailed file review of available information and a site inspection. The evaluation includes preparation of a narrative site description, initial characterization of the hazardous substances on site, and calculation of a preliminary HRS score. This assessment will be used to determine what additional actions, if any, should be conducted at the site.

3. SCOPE OF WORK

The Phase I effort involved the following tasks:

- A review of available information from state, county, municipal, and private files;
- Interviews with individuals knowledgeable of the site; and
- Physical inspection of the site that included review of USGS 7.5-minute topographic maps. No samples were collected, although air monitoring was performed using an HNu photoionizing organic vapor detector.

Photographs were taken during the site inspection and are included in Appendix A.

Table 3-1 lists sources contacted for the Phase I investigation. References are included in Section 7.

Table 3-1

SOURCES CONTACTED FOR THE NYSDEC PHASE I
INVESTIGATION AT THE CENTRAL AUTO
WRECKING SITE

Agencies Contacted

U.S. Environmental Protection Agency
Region II Office
26 Federal Plaza, Room 900
New York, New York 10278
Contact: Ben Conetta
Telephone No.: (212) 264-6696
Date: 5/20/87
Information Gathered: File search for the Central Auto
Wrecking site.

New York State Department of Environmental Conservation
Division of Solid and Hazardous Waste
50 Wolf Road
Albany, New York 12233-0001
Contact: Raymond Lupe
Telephone No.: (518) 457-9538
Date: 6/22/87
Information Gathered: File search for the Central Auto
Wrecking site.

New York State Department of Environmental Conservation, Region 9
Solid and Hazardous Waste Division
600 Delaware Avenue
Buffalo, New York 14202
Contact: Lawrence Clare, Paul Eismann
Telephone No.: (716) 847-4585
Date: 4/29/87
Information Gathered: File search for the Central Auto
Wrecking site.

New York State Department of Environmental Conservation
Fish and Wildlife Division
600 Delaware Avenue
Buffalo, New York
Contact: Jim Farquar
Telephone No.: (716) 847-4550
Date: 8/26/87
Information gathered: Significant habitats, plant species of
concern, and wetlands in the vicinity of the Central Auto
Wrecking site.

New York State Department of Environmental Conservation
Lands and Forests Division
128 South Street
Olean, New York 14760
Contact: Joe Evans, Steve Mooradian
Telephone No.: (716) 372-5636
Date: 5/15/87
Information Gathered: Significant fisheries in the vicinity of
the Central Auto Wrecking Site

New York State Department of Health
Corning Tower
The Governor Nelson A. Rockefeller
Empire State Plaza
Albany, New York 12237
Contact: Lani Rafferty
Telephone No.: (518) 458-6310
Date: April 5, 6, 1989
Information Gathered: File search for site history,
correspondence, background information.

Table 3-1 (Cont.)

New York State Department of Health
Regional Toxic Program Office
584 Delaware Avenue
Buffalo, New York 14202
Contact: Linda Rusin and Cameron O'Connor
Telephone No.: (716) 847-4365
Date: May 5 and June 4, 1987; and April 13, 1989
Information Gathered: Contact with NYSDOH on May 5, 1987,
indicated that files were being transferred from Albany to
Buffalo. The files were not accessible. Further correspondence
in June 1987 indicated that the office was newly established and
file information was extremely limited; therefore, the county
health departments were visited in lieu of NYSDOH. NYSDOH files
were searched April 13, 1989.

Federal Emergency Management Agency
Flood Map Distribution Center
6930(A-F) San Tomas Road
Baltimore, Maryland 21227
Contact: Not known
Telephone No.: (800) 638-6620
Date: 6/87
Information Gathered: Flood insurance rate maps.

Erie County Department of Environment and Planning
95 Franklin Street
Buffalo, New York
Contact: Kermit Studley
Telephone No.: (716) 846-6370
Date: 5/22/87
Information Gathered: Interview and file search on the Central
Auto Wrecking site.

United States Department of Agriculture (USDA)
Soil Conservation Service
21 S. Grove Road
East Aurora, New York 14052
Contact:
Telephone No.: (716) 655-1210
Date: 8/25/87
Information Gathered: Agricultural district lands and distance
to productive prime agricultural lands.

National Weather Service
Buffalo Airport, East Terminal
Buffalo, New York 14225
Contact: Donald Wuerch
Telephone No.: (716) 632-1319
Date: 7/7/87
Information Gathered: Weather statistics.

Lackawanna Water District
714 Ridge Road
Lackawanna, New York 14218
Contact: Allen Strycharz
Telephone No.: (716) 823-5800
Date: 9/3/87
Information Gathered: Location and characteristic information on
municipal wells and springs.

Table 3-1 (Cont.)

Interviews

Contact: Louis Fadale, Owner
Agency: Transmission Exchange
333 Ridge Road
Lackawanna, New York
(716) 824-2600
Date: 9/17/87
Information Gathered: Site history and property ownership of Central
Auto Wrecking

Contact: Helen Pacjon
Agency: Resident
78 LeHigh Street
Lackawanna, New York
(716) 823-8771
Date: 9/17/87
Information Gathered: Site history and contamination/drainage prob-
lems at Central Auto Wrecking

4. SITE ASSESSMENT

4.1 SITE HISTORY

Mr. Russell J. Scherrer, owner of Central Auto Wrecking, Inc., purchased the property at 343 Ridge Road on August 24, 1977 to operate an automobile wrecking yard. Mr. Scherrer additionally leased property at 345 Ridge Road from an adjacent neighbor, Stanley G. Tomaka, for use as a landfill. Mr. Scherrer deposited tires and used car parts at this landfill site. Asphalt, concrete, and other construction and demolition debris were also deposited at this site, much of which originated at the Ridge Road bridge construction project. Mr. Scherrer controlled the debris accepted and its placement in the landfill, and had City of Lackawanna approval for the wrecking operation (O'Conner 1980a).

In 1980 Mr. Scherrer was found to be in violation of the Environmental Conservation Law which requires a Part 360 Permit--Construction and Debris Disposal (Campbell 1980). This permit was never completed or filed by Mr. Scherrer. In addition, neighborhood residents met with ECDEP in July 1980 to voice their complaints about the operations of the wrecking company. Their complaints included noise, dust, drainage problems, boundary disputes, and the disposal of thousands of tires (O'Conner 1980b).

Although previously level with the surrounding area, by December 1980 the landfill was 10 to 15 feet higher than adjacent properties, and water pools were forming in various neighboring locations due to the formation of the landfill (Pacjon 1987). Most of the material

deposited in the landfill was of unknown origin and chemical composition.

Mr. Scherrer defied the directive not to dump at his landfill without a NYSDEC Part 360 permit and was responsible for the disposal of demolition material on his property, Stanley Tomaka's property, and on the Conrail railroad right-of-way. He was found guilty in court of operating a construction and demolition landfill without a permit and for trespassing on adjoining properties. Mr. Scherrer was fined \$1,000 and was ordered to remediate the drainage problems at neighboring residences (Janik 1980). The work was to be completed by April 15, 1981. No remedial actions were completed by Mr. Scherrer by this date.

In September of 1981, Mr. Scherrer filed court papers alleging interference by the City of Lackawanna in his attempt to proceed with remedial work. To properly close out the landfill, Conrail property adjoining the 343-345 Ridge Road properties was needed to create a gradual slope from the built-up areas of the landfill (O'Conner 1981). Conrail cancelled their lease agreement for this property with Central Auto Wrecking without stating a specific reason (O'Conner 1981). In his court papers, Mr. Scherrer charged that the City of Lackawanna influenced Conrail to cancel the lease (Buffalo Evening News, September 25, 1981).

State files did not contain information on the resultant Court actions, but during 1982 no remediation proceedings occurred on any of the involved properties and complaints were still being made to ECDEP (O'Conner 1981). In 1983 Mr. Scherrer submitted plans for remediation; however, the plans were deemed incomplete by NYSDEC. He removed junk cars from the landfill and covered, graded, and seeded the area (O'Conner 1983). NYSDEC Region 9 files lack communication subsequent to 1983. It is not known when landfill operations ceased and Mr. Scherrer vacated his property. In 1986 Mr. Scherrer sold his property to Louis Fadale, owner of the adjacent property and Transmission Exchange at 333 Ridge Road. Mr. Fadale utilizes the Central Auto Wrecking property for storage of transmissions, used automobiles, automobile parts, and some gravel materials. He does not lease the landfill site property owned by Stanley Tomaka. Other than the

Transmission Exchange shop, all commercial buildings on the block have been vacated.

4.2 SITE TOPOGRAPHY

Central Auto Wrecking lies 1.5 miles east of Lake Erie and 0.75 mile north of Smoke Creek. The site is approximately 3 acres in size and is located immediately west of the Conrail railroad tracks on Ridge Road within the City of Lackawanna, Erie County, New York (NYS 1985). The area is located in the Erie Ontario lowland physiographic province and is essentially on level ground with less than 5% slope, oriented south. Site elevation is 590 feet above mean sea level. South Park, a City of Lackawanna residential park, is 0.3 mile north-east of the site.

4.2.1 Soils

The soil types at Central Auto Wrecking are classified as Urban Land-Lima complex and Urban Land-Churchville complex. The southern portion of the property is of Churchville soils that have a surface layer of dark grayish brown silt loam 9 inches thick. The subsoil is a reddish brown silty clay loam that extends to 26 inches. Permeability of this soil is low, causing a perched, seasonally high water table in the upper part of the subsoil. Soil permeability is 0.6 inch to 2.0 inches per hour, which contributes to high runoff rates. Red-rock is at a depth of more than 5 feet below ground surface (Owens 1986).

Lima soils have a surface layer of dark grayish brown loam 9 inches thick. The subsoil extends to a depth of 26 inches, and is a mottled brown silt loam. These soils have a perched, seasonally high water table in the lower part of the subsoil during spring. Permeability is 0.6 inch to 2.0 inches per hour. The available water capacity is high, and runoff is medium (Owens 1986).

4.2.2 Wetlands

State wetlands are classified by NYSDEC into four ranked groups based on the relative value and the degree of benefits supplied by the wetland. A Class I wetland is considered the most valuable wetland type while a Class IV wetland lacks the characteristics justifying a

higher classification (e.g., habitat for endangered species, proximity to reservoirs, etc.); however, a Class IV wetland still qualifies as a regulated wetland. State wetlands are a minimum of 12.4 acres. Federal wetlands may be as small as 0.5 acre and may be located in the same wetland as the state designated wetland, although state and federal wetland boundaries may differ.

The closest wetlands to Central Auto Wrecking includes both a federal and a state wetland. The federal wetland is at South Park which is located 0.3 mile northeast of the site. It is a lacustrine limnetic open-water permanently excavated wetland. The state wetland is known as the Republic Steel Wetland, an elongated wetland 1.2 miles from the site which extends for 1.5 miles, averaging 0.5 mile wide. The wetland is a Class I wetland and is a minimum of 50 acres in size. It is comprised of emergent marsh (65%), floating, submergent vegetation (25%), and deciduous swamp (10%). Other state-designated wetlands close to the wrecking yard are the Tifft Farm Wetlands and Procknal and Katra Wetland, 1.2 and 0.8 mile, respectively, north of the site (NYSDEC 1987).

4.2.3 Surface Waters

Smoke Creek is the closest source of moving water that is perennial. The creek is 0.75 mile south of the site. It is classified by NYSDEC as a Class C stream but is not annually stocked with trout (Mooradian 1987). Class C inland waters are suitable for fish and wildlife habitat, recreational boating, and certain industrial processes. These streams have good aesthetic value. Central Auto Wrecking is also 1.5 miles east of Lake Erie. The lake is used as a source of municipal drinking water but the intake is at Sturgeon Point, 15 miles southwest of the site (Strycharz 1987).

4.2.4 Land Use

The site is within both a commercial and residential district with row housing near retail shops along Ridge Road. The closest land used to grow commercial agricultural produce is about 5 miles from the site (Whitney 1987). The total population within 3 miles of the landfill is 101,153 persons (General Sciences Corporation 1986).

4.2.5 Critical and Sensitive Habitats

There are no critical habitats or plant species of concern within 3 miles of the Central Auto Wrecking site (NYSDEC 1987) nor are there any buildings in view of this site that are included on the National Register of Historic Places (New York State Office of Parks, Recreation, and Historic Preservation 1980; Murtagh 1976). The site is not within a 100-year floodplain (Federal Emergency Management Agency 1982).

4.3 SITE HYDROLOGY

4.3.1 Regional Geology and Hydrogeology

The Central Auto Wrecking site lies within the Erie-Niagara basin and the Erie-Ontario lowland physiographic province. The overburden consists mainly of glacial till, an unconsolidated poorly sorted mix of clay, silt, and/or sand. It forms a thin mantle over the bedrock and exhibits low permeability. The region between the Onondaga Escarpment to the north and the hilly areas to the south also received lacustrine clay and silt deposits during late Pleistocene time from the larger ancestral Great Lakes. These deposits exhibit very low permeabilities. As the ancestral lakes retreated, sandy beach sediments were also deposited in this region. These deposits exhibit relatively high permeabilities.

The bedrock in the region is exclusively sedimentary. The shale, limestone, and dolostone units dip gently southward approximately 40 feet per mile. Although the bedrock dips southward, the land surface is flat or actually increases in elevation to the south. Therefore, the further south the location, the younger the underlying bedrock.

Up to 32 distinct bedrock members have been identified in Erie County (see Figure 4-1). The oldest unit, Silurian in age, underlying the northern part of the county is the Camillus Shale. This member, which is 30 to 100 feet thick, contains significant reserves of groundwater in cavities formed by the dissolution of gypsum.

Several limestone members also of Silurian age overlie the Camillus Shale. The Bertie limestone, approximately 50 feet thick, overlies the Camillus Shale and is in turn overlain by the Akron Dolostone, which is about 8 feet thick. Little record of latest Silurian or Early Devonian history is preserved in Western New York. However,

System	Series	Group	Formation	Thickness in feet	Section	
Devonian	Upper	Conneaut Group of Chadwick (1934)		500	Shale, siltstone, and fine-grained sandstone. Top is missing in area.	
		Canadaway Group of Chadwick (1933)	Undivided	600	Gray shale and siltstone, interbedded. (Section broken to save space)	
			Perrysburg	400- 450	Gray to black shale and gray siltstone containing many zones of calcareous concretions. Lower 100 feet of formation is olivegray to black shale and interbedded gray shale containing shaly concretions and pyrite.	
			Java	90- 115	Greenish-gray to black shale and some interbedded limestone and zones of calcareous nodules. Small masses of pyrite occur in the lower part.	
		West Falls	400- 520	Black and gray shale and light-gray siltstone and sandstone. The lower part is pottowaterlike. Throughout the formation are numerous zones of calcareous concretions, some of which contain pyrite and marcasite.		
			Sonyea	45-85	Olivegray to black shale.	
			Genesee	10-20	Dark-gray to black shale and dark-gray limestone. Zones of nodular pyrite are common.	
		Hamilton	Roscow Shale	12-55	Gray, soft shale.	
			Ludlowville Shale	65-130	Gray, soft, fissile shale and limestone beds at top and bottom.	
			Skaneateles Shale	60-90	Olivegray, gray and black, fissile shale and some calcareous beds and pyrite. Gray limestone, about 10 feet thick is at the base.	
	Marcellus Shale		30-55	Black, dense fissile shale.		
	Middle	Unconformity	Onondaga Limestone	108	Gray limestone and cherty limestone.	
		Cayuga	Akron Dolomite	8	Greenish-gray and buff fine-grained dolomite.	
			Bertie Limestone	50-60	Gray and brown dolomite and some interbedded shale.	
			Salina	Camillus Shale	400	Gray, red, and green thin-bedded shale and massive mudstone. Gypsum occurs in beds and lenses as much as 5 feet thick. Subsurface infiltration indicates dolomite (or perhaps, more correctly, anhydrous lime rock) is interbedded with the shale (shown schematically in section). South of the outcrop area, at depth, the formation contains thick salt beds.
				Niagara	Lockport Dolomite	150
Clinton		Rochester Shale	60		Dark-gray calcareous shale.	

SOURCE: LaSala 1968

Figure 4-1 BEDROCK UNITS OF THE ERIE-NIAGARA BASIN

the Middle and Late Devonian record is well preserved beginning with the Onondaga Limestone unconformably overlying the Akron Dolostone. The unit comprises three distinct members that cumulatively are approximately 140 feet thick.

The Marcellus Shale member overlies the limestone units. This dense, black, fissile shale is approximately 30 to 55 feet thick. This shale, unlike the Camillus Shale, is impermeable. It confines the limestone and Camillus Shale aquifers below.

The Skaneateles Formation overlies the Marcellus Shale. This 60- to 90-foot-thick formation is represented by the Stafford Limestone and Levanna Shale. The black, fissile shale is expected to be impermeable and will therefore confine groundwater found in the lower limestone units.

Overlying the Skaneateles is the Ludlowville formation represented by the Centerfield Limestone, Ledyard Shale, Wanakah Shale, and Tichenor Limestone members. The shale members contain numerous limestone beds. The Ludlowville Formation is followed by the Moscow Formation represented by the Kashong shale and Windom shale. The Moscow Formation is followed by 2,500 feet of upper Devonian rocks in southwestern New York State consisting of the Genesee, Sonyea, West Falls, Java, Canadaway, Chodakoin, and Cattaraugus formations. These consist almost exclusively of shale members. The Canadaway formation is by far the thickest (up to 1,000 feet) and underlies the southern third of Erie County.

Significant amounts of groundwater occur only in the overburden and in the lower bedrock units. The Camillus shale contains numerous cavities formed by the dissolution of gypsum and is thus a very productive aquifer. The Onondaga, Akron, and Bertie Dolostone and limestones contain water in bedding joints widened by dissolution. Vertical fractures in the limestone provide hydraulic connections among the many bedding planes.

Very little groundwater is found in the formations above the limestone unit. These formations, principally shale, are impermeable. Some water transmission occurs in small fractures in the bedrock, but no wells of significant yield are found in these units. Groundwater in these regions is obtained mainly from glacial overburden deposits (Buehler and Tesmer 1963; LaSala 1968; Buehler 1966).

4.3.2 Site Hydrogeology

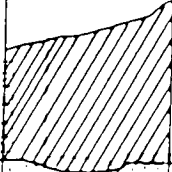

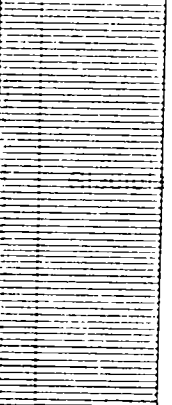
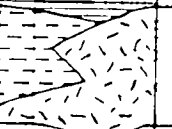
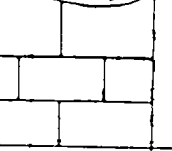
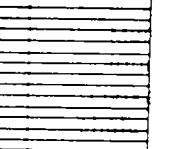
The geology at the Central Auto Wrecking site cannot be specifically defined due to the lack of borings in the immediate area. However, detailed information is available from 18 monitoring wells at the Republic Steel Marilla Street Landfill (Malcolm Pirnie 1985a), and eight borings at the Alltiff Landfill (Koszalka et al. 1985) approximately 1.0 mile north of the Central Auto Wrecking site. Thicknesses of overburden materials and depth to bedrock may vary from site to site, but based on these borings, the undisturbed overburden consists of alluvium, glacio-lacustrine clay, and glacial till. Bedrock consists of the Skaneateles Formation: Stafford Limestone Member, followed by the Marcellus Formation: Oatka Creek Shale Members (see Figure 4-2). The shale bedrock ranged in depth from 14 to 25 feet at the Republic Steel Site. Groundwater systems existed in both the overburden and bedrock. Direction of groundwater flow was variable in the overburden, and westward toward Lake Erie in the bedrock (Malcolm Pirnie 1985b).

Permeability tests on two samples of the glacio-lacustrine clay by Wehran and Recra (1978) indicated permeabilities of 5.8×10^{-8} cm/sec and 6.4×10^{-8} cm/sec. The report concluded that the permeability of the clay was sufficiently low to prevent vertical migration of contaminants from the upper unconsolidated water-bearing zone to the lower aquifers (Koszalka et al. 1985).

Groundwater in the Central Auto Wrecking area is not used for drinking water (Gilbert 1987, Strycharz 1987). The Town of Lackawanna uses municipal water supplies from Lake Erie (Strycharz 1987). The closest private well is near Mile Strip Road and South Park Avenue, 2 miles south of the site (Gilbert 1987). Municipal water is obtained from Lake Erie at Sturgeon Point Intake located 15 miles south of the site (Strycharz 1987).

4.3.3 Hydraulic Connections

The shallow groundwater system may be separated from the deeper groundwater system by clayey glacio-lacustrine deposits. The bedrock underlying these deposits is mainly impermeable shale 90 to 145 feet thick (Skaneateles and Marcellus formations) separated by a thin layer of limestone 8 to 15 feet thick (Stafford Limestone Member).

PERIOD	PERIOD	FORMATION	COLUMNAR SECTION	THICKNESS IN FEET	CHARACTER
QUATERNARY	RECENT	Fill		0-18	Refuse, wood, concrete, cinders, fly ash, decomposed vegetation, sand, metal fragments; highly permeable
		Unconformable			
	PLEISTOCENE (WISCONSIN AGE)	Alluvium		0-6	Fine sand, silt; Marginally permeable
		Conformable			
		Glaciolacustrine clay		6-43	Grey varved clay, occasional laminations of silt or fine sand, stiff at upper contact, soft to very soft below; highly impermeable
DEVONIAN		Conformable			
		Basal glaciolacustrine/ glacial till		0-12.5	Clayey silts, some sand and gravel; marginally permeable
		Unconformable			
		Skaneateles formation: Stafford limestone member		<15	Grey limestone
		Marcellus formation: Oatka Creek shale member		30-55	Black calcareous shale

SOURCE: Koszalka et al, 1985.

Figure 4-2 GENERALIZED GEOLOGIC COLUMN OF FORMATIONS UNDERLYING THE ALLTIFT LANDFILL, BUFFALO, APPROXIMATELY ONE MILE NORTH OF THE CENTRAL AUTO WRECKING SITE.

Isopotential maps seem to indicate different flow patterns in the overburden and bedrock; there is, therefore, a good chance that there is little vertical movement. These conditions may be similar at the Central Auto Wrecking site (Malcolm Pirnie 1985b).

4.4 SITE CONTAMINATION

Sampling had been performed at the site by ECDEP in 1982 and by NUS in 1984, as detailed below. During the E & E site investigation on September 17, 1987, an HNu photoionizer was used to conduct an air quality survey. No readings above background were noted.

Background information indicates that the Stanley G. Tomaka property was used by the adjacent property owner Russell Scherrer of Central Auto Wrecking, as a landfill. The landfill contained tires, automobiles, automobile parts, construction and demolition materials and is known to have received 20 55-gallon drums. The drums were removed from the site (O'Conner 1980c).

Mr. Scherrer mounded the landfill to a height of 10 to 15 feet causing drainage problems into nearby residences (Pacjon 1987). Surface runoff from the construction of the landfill was observed as early as March 1980. In March of 1984, ECDEP alleged that oil-contaminated surface run-off was draining into adjacent properties and from these properties into the City of Lackawanna sewer system (Burke 1982).

Soil and water samples were taken in the vicinity of the landfill to determine the extent of contamination. Sampling by ECDEP was conducted on March 30, 1982, and samples were analyzed for PCBs, organics, metals, TOC, phenols, chlorides, and pH. A summary of the results is listed in Table 4-1.

NUS performed soil and water sampling on site in July of 1984. Organic compounds such as phenanthrene and chrysene were found in a water sample taken on the west border of the property. In addition, soil samples taken from the fenced junkyard demonstrated higher metal concentrations than typical soil values. These metals included lead, zinc, manganese, and mercury (NUS 1985).

The landfill operation ceased by 1983, although drainage, seepage, and leakage into adjacent residential property continues to the present time. Neighbors complain of runoff seeping into their

Table 4-1
ANALYTICAL RESULTS FROM SURFACE WATER AND SOIL
SAMPLES AT CENTRAL AUTO WRECKING*

Parameter	Water Analysis Range (mg/L)	Number of Samples	Soil Analysis Range (ug/g)	Number of Samples
Chloride	33-38	2	--	--
Organic Carbon	2.5-30	4	--	--
Recoverable Phenolics	ND	2	ND-8.6	7
Acenaphthene	ND	2	ND	7
Acenaphthylene	ND	2	ND	7
Anthracene	ND-0.15	2	0.021-16	7
Benzo(a)anthracene	ND	2	0.02-26	7
Benzo(a)pyrene	ND	2	ND-0.10	7
Benzo(b)fluoranthene	ND	2	ND-0.14	7
Benzo(g,h,i)perylene	ND	2	ND-0.29	7
Benzo(k)fluoranthene	ND	2	ND-0.050	7
Chrysene	ND	2	0.079-24	7
Dibenzo(a,h)anthracene	ND	2	ND	7
Fluoranthene	ND	2	ND-260	7
Fluorene	ND	2	ND-23	7
Indeno (1,2,3-cd)pyrene	ND	2	ND	7
Naphthalene	ND	2	ND	7
Phenanthrene	0.4-3.8	2	0.090-72	7
Pyrene	ND	2	0.20-310	7
PCB	ND	2	ND-0.51	7
Total Antimony	ND	4	ND	8
Total Arsenic	ND	4	0.32-2.7	8
Total Beryllium	ND	4	0.20-0.77	8
Total Cadmium	ND	4	ND-4.9	8
Total Chromium	0.004-0.020	4	7.5-290	8
Total Copper	ND-0.092	4	13-240	8
Total Iron	1.3-130	4	12,000-160,000	8
Total Lead	ND-0.2	4	9.5-2,700	8
Total Mercury	ND	4	ND	8
Total Nickel	ND	4	3.8-190	8
Total Selenium	ND	4	0.1-0.6	8
Total Silver	ND	4	0.2-3.7	8
Total Thallium	ND	4	ND	8
Total Zinc	0.063-0.701	4	69-860	8
Halogenated Organic Scan	ND-1.5	5	ND-8.2	7

*Analysis was performed by Recra Research Inc. on March 31, 1982
ND = Not detected

Source: Ecology and Environment, Inc. 1987.

gardens, yards, and homes. Although the landfill is capped, it is about 10 to 15 feet higher than adjacent property with construction, automobile, and demolition debris projecting from the landfill periphery. No reference has been made to the quality or thickness of the cap. There is continual seepage out of the landfill onto adjacent property, forming small scattered surface water pools.

5. PRELIMINARY APPLICATION OF THE HRS

5.1 NARRATIVE SUMMARY

The Central Auto Wrecking site covers three acres on 343-345 Ridge Road, Lackawanna, Erie County, New York (see Figure 5-1). The site is 1.5 east of Lake Erie and 0.75 mile north of Smoke Creek. The area is located in the Erie Ontario lowland physiographic province and is on essentially level ground with a less than 5% slope, oriented south.

A federal wetland at South Park is 0.3 mile northeast of the site. The Republic Steel Wetland, a state wetland, is 1.2 miles from the site. Other state-designated wetlands close to the site are the Tifft Farm Wetlands, and Procknal and Katra Wetland, located 1.2 and 0.8 mile, respectively, north of the site. The closest perennial source of moving water is Smoke Creek, a NYSDEC Class C stream. Smoke Creek is 0.75 mile south of the site. Lake Erie, which is 1.5 miles west of the site, is a source of municipal drinking water, but the intake is at Sturgeon Point, 15 miles southwest of the site.

The site is within both a commercial and a residential district. The closest land used to grow commercial agricultural produce is about 5 miles from the site. The total population within 2 miles of the landfill is approximately 62,000 persons (NUS 1985).

Central Auto Wrecking purchased the property at 343 Ridge Road in 1976 and used it as an automobile wrecking yard. The owner of Central Auto Wrecking, Russell Scherrer, also leased the adjacent property site (345 Ridge Road) owned by Stanley Tomaka, for an automobile, construction, and demolition debris landfill. According to the tax

assessor's records, Elizabeth Zoladz owned the property prior to Stanley Tomaka. Mr. Scherrer constructed the landfill 10 to 15 feet higher than surrounding properties causing surface water leakage and drainage problems into the yards of nearby residential homes. Although under court order from the City of Lackawanna, Mr. Scherrer did not attempt to remedy the drainage problems caused by the landfill. Analyses from soil and water sampling at the site show contamination from heavy metals, PCBs, and organics. Eight occupied residential homes on the block receive runoff from the landfill. Transmission Exchange is the only remaining active commercial site on the block. Mr. Scherrer sold the 343 Ridge Road site to the owner of Transmission Exchange, Louis Fadale, in 1986.

The Tomaka property is now vacant and its buildings abandoned. The landfill is covered, graded, and seeded, although surface drainage from the landfill still seeps into neighboring residences. Mr. Fadale utilizes the former Central Auto Wrecking site for storage of automobile parts.

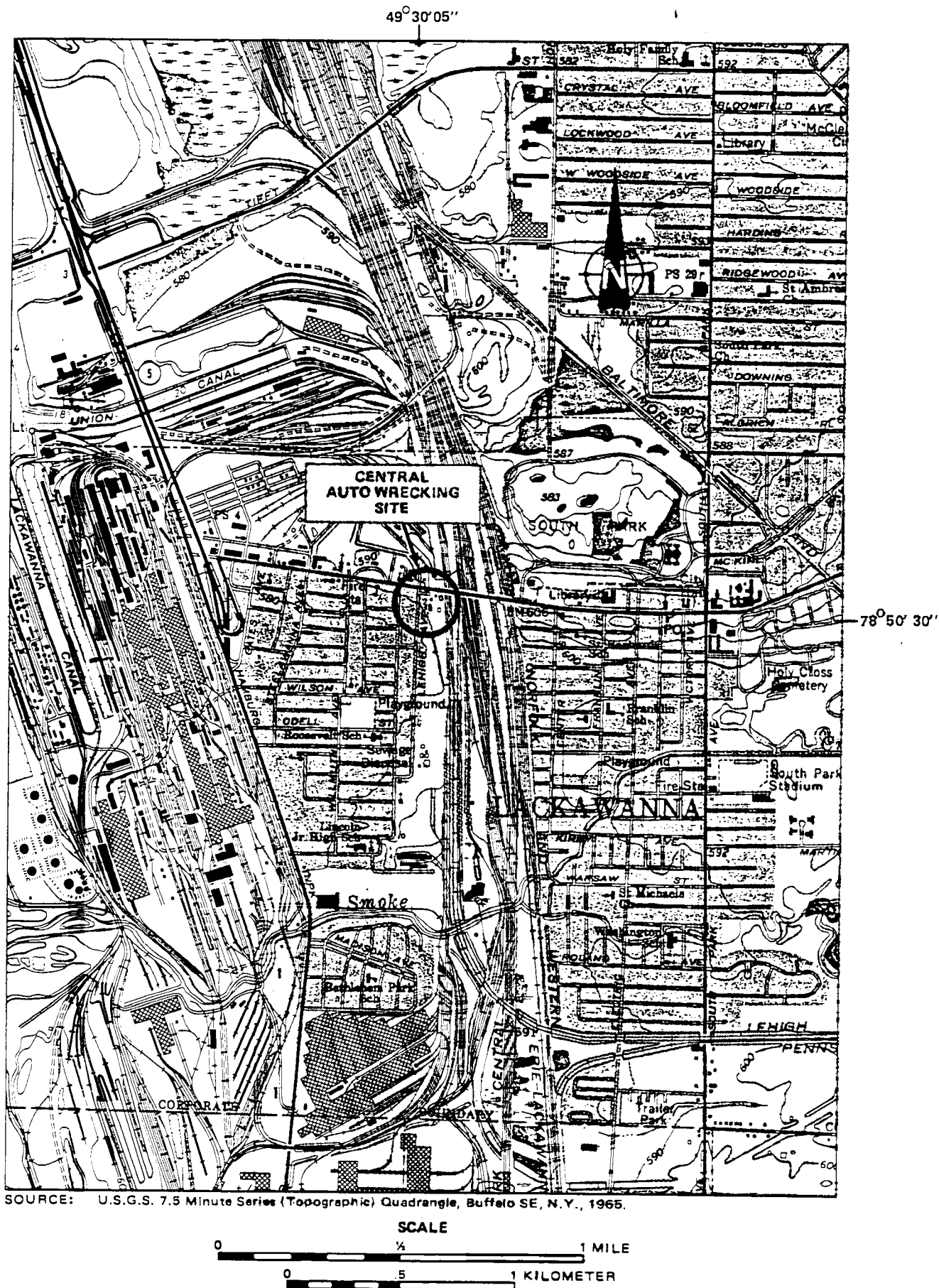


Figure 5-1 LOCATION MAP

FIGURE 1

HRS COVER SHEET

Facility Name: Central Auto Wrecking

Location: 343-345 Ridge Road, Lackawanna, New York

EPA Region: II

Person(s) in Charge of Facility: Louis Fadate - 345 Ridge Road

Stanley Tomaka - 343 Ridge Road

Name of Reviewer: Pamela Gunther

Date: September 25, 1987

General Description of the Facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action; etc.)

The Central Auto Wrecking site is located at 343-345 Ridge Road, Lackawanna, Erie County, New York. The site is a landfill with contaminated runoff draining into yards of nearby residential homes. The landfill has caused drainage problems due to the mounded formation and contents. The exact cause of the contamination is unknown. The landfill is known to contain automobile parts and construction and demolition debris. The site presents the potential for soil and surface water contact as well as direct contact.

Scores: $S_M = 9.68$ ($S_{gw} = 12.93$ $S_{SW} = 10.63$ $S_B = 0$)

$S_{FE} =$ Not scored

$S_{DC} = 37.50$

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Ground Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	0 45	1	0	45	3.1	
If observed release is given a score of 45, proceed to line 4 . If observed release is given a score of 0, proceed to line 2 .						
2 Route Characteristics					3.2	
Depth to Aquifer of Concern	0 1 2 3	2	6	6		
Net Precipitation	0 1 2 3	1	2	3		
Permeability of the Unsaturated Zone	0 1 2 3	1	1	3		
Physical State	0 1 2 3	1	1	3		
Total Route Characteristics Score			10	15		
3 Containment	0 1 2 3	1	3	3	3.3	
4 Waste Characteristics					3.4	
Toxicity/Persistence	0 3 6 9 12 15 18	1	18	18		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1	1	8		
Total Waste Characteristics Score			19	26		
5 Targets					3.5	
Ground Water Use	0 1 2 3	3	9	9		
Distance to Nearest Well/Population Served	0 4 6 8 10 12 16 18 20 24 30 32 35 40	1	4	40		
Total Targets Score			13	49		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			7,410	57,330		
7 Divide line 6 by 57,330 and multiply by 100			S _{gw} = 12.93			

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	0 (45)	1	45	45	4.1	
If observed release is given a value of 45, proceed to line 4 . If observed release is given a value of 0, proceed to line 2 .						
2 Route Characteristics					4.2	
Facility Slope and Intervening Terrain	0 1 2 3	1		3		
1-yr. 24-hr. Rainfall	0 1 2 3	1		3		
Distance to Nearest Surface Water	0 1 2 3	2		6		
Physical State	0 1 2 3	1		3		
Total Route Characteristics Score				15		
3 Containment	0 1 2 3	1		3	4.3	
4 Waste Characteristics					4.4	
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18		
Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8		
Total Waste Characteristics Score			19	26		
5 Targets					4.5	
Surface Water Use	0 1 (2) 3	3	6	9		
Distance to a Sensitive Environment	0 (1) 2 3	2	2	6		
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 40 24 30 32 35 40	1	0	40		
Total Targets Score			8	55		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			6,840	64,350		
7 Divide line 6 by 64,350 and multiply by 100			$S_{sw} = 10.63$			

**FIGURE 7
SURFACE WATER ROUTE WORK SHEET**

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	① 45	1	0	45	5.1	
Date and Location:						
Sampling Protocol:						
If line 1 is 0, the $S_a = 0$. Enter on line 5 . If line 1 is 45, then proceed to line 2 .						
2 Waste Characteristics					5.2	
Reactivity and Incompatibility	0 1 2 3	1		3		
Toxicity	0 1 2 3	3		9		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8		
Total Waste Characteristics Score				20		
3 Targets					5.3	
Population Within 4-Mile Radius	} 0 9 12 15 18 21 24 27 30	1		30		
Distance to Sensitive Environment	0 1 2 3	2		6		
Land Use	0 1 2 3	1		3		
Total Targets Score				39		
4 Multiply 1 x 2 x 3			0	35,100		
5 Divide line 4 by 35,100 and multiply by 100			$S_a = 0$			

FIGURE 9
AIR ROUTE WORK SHEET

	s	s ²
Groundwater Route Score (S _{gw})	12.93	167.18
Surface Water Route Score (S _{sw})	10.63	113.00
Air Route Score (S _a)	0	0
$s_{gw}^2 + s_{sw}^2 + s_a^2$		280.18
$\sqrt{s_{gw}^2 + s_{sw}^2 + s_a^2}$		16.74
$\sqrt{s_{gw}^2 + s_{sw}^2 + s_a^2} / 1.73 = S_M =$		9.68

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Containment	1 3	1	3	3	7.1	
2 Waste Characteristics					7.2	
Direct Evidence	0 3	1	0	3		
Ignitability	0 1 2 3	1	1	3		
Reactivity	0 1 2 3	1	1	3		
Incompatibility	0 1 2 3	1	0	3		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1	1	8		
Total Waste Characteristics Score			3	20		
3 Targets					7.3	
Distance to Nearest Population	0 1 2 3 4 5	1	4	5		
Distance to Nearest Building	0 1 2 3	1	3	3		
Distance to Sensitive Environment	0 1 2 3	1	1	3		
Land Use	0 1 2 3	1	3	3		
Population Within 2-Mile Radius	0 1 2 3 4 5	1	5	5		
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1	5	5		
Total Targets Score			21	24		
4 Multiply 1 x 2 x 3			189	1,440		
5 Divide line 4 by 1,440 and multiply by 100			SFE = 13.125			

**FIGURE 11
FIRE AND EXPLOSION WORK SHEET**

Direct Contact Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Incident	0 45	1	0	45	8.1	
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2						
2 Accessibility	0 1 2 3	1	3	3	8.2	
3 Containment	0 15	1	15	15	8.3	
4 Waste Characteristics Toxicity	0 1 2 3	5	15	15	8.4	
5 Targets					8.5	
Population Within a 1-Mile Radius	0 1 2 3 4 5	4	12	20		
Distance to a Critical Habitat	0 1 2 3	4	0	12		
Total Targets Score			12	32		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			8,100	21,600		
7 Divide line 6 by 21,600 and multiply by 100			SOC = 37.50			

FIGURE 12
DIRECT CONTACT WORK SHEET

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

Instructions: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

Facility Name: Central Auto Wrecking

Location: 343-345 Ridge Road

Date Scored: 9/25/87

Person Scoring: Pamela Gunther

Primary Source(s) of Information (e.g., EPA region, state, FIT, etc.):

NYSDEC Region 9 files
ECHOEP files
Site interviews
Site inspection

Factors Not Scored Due to Insufficient Information:

Comments or Qualifications:

The hazardous waste quantity is unknown; however, since hazardous waste is present (as evidenced by contaminants in surface water), a minimum score of 1 was used.

D1727

GROUNDWATER ROUTE

1. OBSERVED RELEASE

Contaminants detected (3 maximum):

No contamination detected during site inspection.
No known groundwater sampling.

Rationale for attributing the contaminants to the facility:

* * *

2. ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

Skaneateles Formation: Stafford limestone
Marcellus Formation: Oatka Creek Shale
Ref. No. 1

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

15 feet
Ref. No. 1

Depth from the ground surface to the lowest point of waste disposal/storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

36 inches
Ref. No. 2

Mean annual lake or seasonal evaporation (list months for seasonal):

27 inches
Ref. No. 2

Net precipitation (subtract the above figures):

9 inches
Ref. No. 2

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Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Urban land - Lima complex
Urban land - Churchville complex
Ref. No. 3

Permeability associated with soil type:

0.6 - 2.0 in/hr
Ref. No. 3

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Since hazardous waste is present and solid waste can be seen projecting from the landfill, a score of 1 is indicated.
Ref. No. 13

* * *

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Landfill, no provisions for containment
Ref. Nos. 16, 17, 20

Method with highest score:

Landfill, no provisions for containment
Ref. No. 2

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Lead, PCBs, chloride, other heavy metals and organics (total of 35 compounds evaluated)
Ref. No. 5

Compound with highest score:

Lead
Ref. No. 2

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (give a reasonable estimate even if quantity is above maximum):

Unknown, but hazardous waste is present so a minimum score was used (1).
Ref. Nos. 4 and 5

Basis of estimating and/or computing waste quantity:

There were contaminants detected in the surface water, so it is known that there is some form of hazardous waste present, but it is not known what in the landfill is the cause of the contamination; therefore, a minimum score of 1 was used.

5. TARGETS

Groundwater Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Drinking water from private wells used by a few residents
Ref. No. 6, 10

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Private well serving one family 2 miles from site
Ref. Nos. 6, 10

Distance to above well or building:

2 miles
Ref. No. 6, 10

Population Served by Groundwater Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

One private well known to occur within a 3-mile radius
Ref. No. 6, 10

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

NA - no farms within 3 miles
Ref. No. 7

Total population served by groundwater within a 3-mile radius:

One family
Ref. Nos. 6, 10

D1727

S U R F A C E W A T E R R O U T E

1. OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

There were 35 compounds detected. These included lead, PCBs, benzene, chrysene, and fluorene
Ref. No. 5

Rationale for attributing the contaminants to the facility:

The surface water has been observed seeping out from the landfill.
Ref. Nos. 16, 18, 19

* * *

2. ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

0 - 5%
Ref. No. 11

Name/description of nearest downslope surface water:

Smoke Creek
Ref. No. 11

Average slope of terrain between facility and above-cited surface water body in percent:

0 - 5%
Ref. No. 13

Is the facility located either totally or partially in surface water?

Partially in surface water
Ref. No. 11

Is the facility completely surrounded by areas of higher elevation?

No
Ref. No. 11

1-Year 24-Hour Rainfall in Inches

2.1 inches
Ref. No. 2

Distance to Nearest Downslope Surface Water

0.75 miles
Ref. No. 11

Physical State of Waste

Auto parts, tires.
Ref. Nos. 15, 16, 17, 18

* * *

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Landfill, no provision for containment
Ref. Nos. 16, 17, 20

Method with highest score:

Landfill, no provision for containment
Ref. No. 2

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

PCBs, chlorides, other heavy metals and organics (total of 35 compounds)
Ref. No. 5

Compound with highest score:

Lead
Ref. No. 2

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (give a reasonable estimate even if quantity is above maximum):

Total quantity is unknown; a minimum score of 1 was used
Ref. Nos. 4, 5

Basis of estimating and/or computing waste quantity:

It is known that there are contaminants in the landfill, but the size of the landfill and the amount of hazardous waste is unknown, thus a minimum estimate was used.

* * *

5. TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Recreation; but not drinking
Ref. No. 8

Is there tidal influence?

No.

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

NA

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

0.4 miles
Ref. No. 9

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

None within 1 mile
Ref. No. 9

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

None within 1 mile
Ref. No. 10

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

None
Ref. No. 7

Total population served:

NA

Name/description of nearest of above water bodies:

NA

Distance to above-cited intakes, measured in stream miles:

NA

A I R R O U T E

1. OBSERVED RELEASE

Contaminants detected:

No contaminants detected
Ref. No. 11

Date and location of detection of contaminants:

Methods used to detect the contaminants:

HNu monitor
Ref.: No. 11

Rationale for attributing the contaminants to the site:

* * *

2. WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:
NA

Most incompatible pair of compounds:
NA

Toxicity

Most toxic compound:
NA

Hazardous Waste Quantity

Total quantity of hazardous waste:
No qualitative or quantitative evidence of airborne hazardous waste.

Basis of estimating and/or computing waste quantity:
Visual inspection, HNu photoionizer.

* * *

3. TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi

0 to 1 mi

0 to 1/2 mi

0 to 1/4 mi

16,378 General Science Corporation, 1986, Ref. No. 13

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

NA
Ref. No. 9

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

0.3
Ref. No. 9

Distance to critical habitat of an endangered species, if 1 mile or less:

>1 mile
Ref. No. 9

Land Use

Distance to commercial/industrial area, if 1 mile or less:

On site
Ref. No. 11

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

1.2
Ref. No. 11

Distance to residential area, if 2 miles or less:

Adjacent
Ref. No. 11

Distance to agricultural land in production within past 5 years, if 1 mile or less:

>2 miles
Ref. No. 7

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

>2 miles
Ref. No. 7

Is a historic or landmark site (National Register of Historic Places and National Natural Landmarks) within the view of the site?

None within view
Ref. 25

F I R E A N D E X P L O S I O N

1. CONTAINMENT

not scored

Hazardous substances present:

Benzo(a)anthracene, Chrysene, Mercury, Lead, Manganese
Ref. No. 13

Type of containment, if applicable

No containment

* * *

2. WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

No evidence using the HNus.

Ignitability

Compound used:

Phenanthrene Fluoranthene
Ref. No. 13

Reactivity

Most reactive compound:

Phenanthrene, Fluoranthene
Ref. No. 13

Incompatibility

Most incompatible pair of compounds:

NA
Ref. Nos. 2, 13

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Unknown

Basis of estimating and/or computing waste quantity:

Quantity unknown; a minimum score of 1 was used
Ref. Nos. 4, 5

* * *

3. TARGETS

Distance to Nearest Population

Residential area adjoining site
Ref. Nos. 11, 13, 17, 25

Distance to Nearest Building

<25 feet
Ref. Nos. 11, 17

Distance to a Sensitive Environment

Distance to wetlands:

0.3 miles South Park Wetlands
Ref. No. 9

Distance to critical habitat:

1.2 miles Tiffy Farm Wetlands
Ref. No. 9

Land Use

Distance to commercial/industrial area, if 1 mile or less:

On site
Ref. No. 11

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

>2 miles
Ref. No. 11

Distance to residential area, if 2 miles or less:

Adjacent
Ref. No. 11

Distance to agricultural land in production within past 5 years, if 1 mile or less:

>1 mile
Ref. No. 7

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

>2 miles
Ref. No. 7

Is a historic or landmark site (National Register of Historic Places and National Natural Landmarks) within the view of the site?

None within view
Ref. No. 25

Population Within 2-Mile Radius

61,817
Ref. No. 11

Buildings Within 2-Mile Radius

7,907
Ref. No. 11

DIRECT CONTACT

1. OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident
Ref. Nos. 11, 15-24

* * *

2. ACCESSIBILITY

Describe type of barrier(s):

No barriers
Ref. No. 11

* * *

3. CONTAINMENT

Type of containment, if applicable:

Debris was observed protruding out of the landfill at periphery
Ref. No. 11

* * *

4. WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Lead, PCBs, chloride, heavy metals and organics (35 compounds evaluated).
Ref. No. 5

Compound with highest score:

Lead
Ref. No. 2

* * *

5. TARGETS

Population within one-mile radius

16,378 people
Ref. No. 11

Distance to critical habitat (of endangered species)

None
Ref. No. 9

R E F E R E N C E S

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	Malcolm Pinnie, 1985, Marilla Street Landfill, Conceptual Site Closure, Closure Plan, Prepared for LTV Steel Company, Buffalo, New York. Document location: Ecology and Environment, Inc., Buffalo, New York.
2	Uncontrolled Hazardous Waste Site Ranking System; A Users Manual, in National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300) (47 FR 31219), July 16, 1982. Document location: Ecology and Environment, Inc., Buffalo, New York.
3	Owens, D.W., W.L. Rittman, J.P. Wulforst, and W.E. Hanna, December 1986, <u>Soil Survey of Erie County, New York</u> , USDA Soil Conservation Service, Ithaca, New York. Document location: Ecology and Environment, Inc., Buffalo, New York.
4	Erie County Department of Environment and Planning, Division of Environmental Control. 1982, Results of examination of sewage and polluted water at Central Auto Wrecking, 343 Ridge Road. Document location: ECDEP, Buffalo, New York.
5	New York State Department of Environmental Conservation. 1982, Analytical results for samples from Central Auto Wrecking site. Document location: NYSDEC Region 9, Buffalo, New York.
6	Gilbert, J., 1987, Town Engineer for Hamburg Water District, personnel communication regarding location of municipal and private wells, Hamburg, New York. Document location: Ecology and Environment, Inc., Buffalo, New York.
7	Whitney, J., 1987, USDA Soil Conservation Service, Prime Agricultural Lands Currently Under Production, Ellicottville, New York. Document location: SCS, East Aurora, New York.
8	Mooradian, S., Regional Fisheries Management for NYSDEC, personnel communication regarding stream classification and fishery information, Olean, New York. Document location: NYSDEC Region 9, Olean, New York.
9	New York State Department of Environmental Conservation, 1987, State and Federal Regulated Wetland Maps, Critical Habitats, and File Information, Buffalo, New York. Document location: NYSDEC Region 9, Buffalo, New York.
10	Strycharz, A., 1987, Lackawanna Water District, personnel communication regarding location of municipal and private wells, Lackawanna, New York. Document location: Ecology and Environment, Inc., Buffalo, New York.
11	Site Inspection by Ecology and Environment, 1987, New York. Document location: Ecology and Environment, Inc., Buffalo, New York.
12	USGS 7.5-minute Series (Topographic) Quadrangle, Buffalo, S.E., NY, 1965. Document location: Ecology and Environment, Inc., Buffalo, NY.
13	NUS Corporation, 1985, Final Draft Site Inspection Report and Hazardous Ranking System Model-Central Auto Wrecking, Lackawanna, New York, prepared for USEPA Region II.

Reference
Number

Description of the Reference

- 14 O'Connor, C., 1980, ECDEP, Memo to Robert Mitrey, NYDEC. Document location: NYSDEC Region 9, Buffalo, New York.
- 15 O'Connor, C., 1980, ECDEP, Memo to Robert Mitrey, NYDEC. Document location: NYSDEC Region 9, Buffalo, New York.
- 16 Janik, C., 1980, NYSDEC, Memo to Robert Mitrey, NYDEC. Document location: NYSDEC Region 9, Buffalo, New York.
- 17 O'Connor, C., 1980, ECDEP, Memo to Donald Campbell, ECDEP. Document location: NYSDEC Region 9, Buffalo, New York.
- 18 O'Connor, C., 1981, ECDEP, Memo to Robert Mitrey, NYSDEC. Document location: NYSDEC Region 9, Buffalo, New York.
- 19 Clare, L., 1981, ECDEP, Memo to Legislator Francis Pordum. Document location: ECDEP, Buffalo, New York.
- 20 O'Connor, C., 1981, ECDEP, Memo to Lawrence Clare, NYSDEC. Document location: ECDEP, Buffalo, New York.
- 21 Buffalo Evening News, 1981, article on Central Auto Wrecking legal action. Document location: NYDEC Region 9, Buffalo, New York.
- 22 Clare, L., 1982, NYSDEC, Memo to Peter Burke, NYSDEC. Document location: NYSDEC, Region 9, Buffalo, New York.
- 23 O'Connor, C., 1983, ECDEP, Memo to Donald Campbell, ECDEP. Document location: NYSDEC, Region 9, Buffalo, New York.
- 24 Pacjon, H., 1987, resident adjacent to Central Auto Wrecking site, interview with P. Gunther of Ecology and Environment, Inc., Buffalo, New York. Document location: Ecology and Environment, Inc. Buffalo, New York.
- 25 Murtagh, W.J., 1976, The National Register of Historic Places, USDI National Park Service, Washington, D.C.. Document location: Ecology and Environment, Inc., Buffalo, New York.

DT727

REFERENCE NO. 1

Engineering Report

MARILLA STREET LANDFILL CONCEPTUAL SITE CLOSURE PLAN

**LTV Steel Company
Buffalo, New York**

September 1985

Project: 848-02-1

**MALCOLM
PIRNIE**

5-26

ENVIRONMENTAL ENGINEERS, SCIENTISTS & PLANNERS

APPENDIX B

BORING LOGS AND GROUNDWATER
MONITORING WELL DETAILS

PROJECT NO: 84-8-02-1

13 JUNE 10, 1985

LOCATION: SOUTH BUFFALO, NEW YORK

ING CONTRACTOR: EARTH DIMENSIONS

INSPECTOR: J. WHITNEY

ING. METHOD: 8" x 4 1/4" HOLLOW

SAMPLING METHOD: 2" Ø SPLIT SPOON

STEM AUGER

AT 5' INTERVALS

TION:

DATUM:

SAMPLE			DEPTH	STRATA	SOIL DESCRIPTION	WELL CONST.	REMARKS
depth	blows per 6"						
0'-2'	6	6	5		MEDIUM DENSE DARK BROWN SAND AND GRAVEL SIZE FILL, DRY WITH REDDISH BROWN STAINING		
	10	5					
		9					
4.5-6.5	15	13	10		DENSE DARK BROWN SAND AND GRAVEL SIZE FILL, DRY WITH REDDISH BROWN STAINING		
	13						
9.5-11.5		2	15		MEDIUM DENSE BROWN SILT, SAND AND GRAVEL SIZE FILL, MOIST WITH REDDISH BROWN STAINING		
	5	5					
	36						
14.5-16.5		8	20		VERY DENSE GREY-BLACK GRAVEL SIZE FILL, WITH TRACE OF BROWN STAINING, DRY		
	40	8					
	20						
19.5-21.5		20	25		VERY DENSE DARK BROWN GRAVEL SIZE FILL WITH TRACE OF BROWN STAINING, DRY		
	33	26					
	32						
24.5-26.5		12	30		VERY DENSE REDDISH-BROWN SAND GRAVEL SIZE FILL WITH SOME SILT SIZE PARTICLES, WET		
	60	68					
	6						
29.5-31.5	4	4	35		TYPE SAME TO 29.9' SOFT BLACK SILT, WET (ORIGINAL POND BOTTOM) TO 30.5' LOOSE GREENISH BROWN VERY FINE TO FINE SAND, WET BOTTOM OF BORING AT 31.5'		
	4						

PROJECT: LTV MARILLA STREET LANDFILL		PROJECT NO: 848-02-1	
DATE: JUNE 11, 1985		LOCATION: SOUTH BUFFALO, NEW YORK	
DRILLING CONTRACTOR: EARTH DIMENSIONS		INSPECTOR: J. WHITNEY	
DRILLING METHOD: 8" x 4 1/4" HOLLOW		SAMPLING METHOD: 2" Ø SPLIT SPOON	
STEM AUGER		AT 5' INTERVALS	
ELEVATION:		DATUM:	

SAMPLE			DEPTH	STRATA	SOIL DESCRIPTION	WELL CONST.	REMARKS
no.	depth	blows per 6"			density, color, SOIL, admixtures, moisture, other notes, ORIGIN		
8-1	0'-2'	7 14			MEDIUM DENSE GREY SAND AND GRAVEL SIZE FILL TO 1.5' TO MEDIUM DENSE BROWN STAINED SAND AND GRAVEL SIZE FILL TO 1.7' TO GREY TO 20'		
		16 17					
8-2	4.5-6.5	8	5		MEDIUM DENSE GREY COARSE SAND AND GRAVEL SIZE FILL WITH BROWN STAINING, MOIST TO 6.2' TO DRY AT 6.5'		
		6 6					
		17					
8-3	9.5'-11.5	25	10		EXTREMELY DENSE LIGHT GREY TO BLACK COARSE SAND AND GRAVEL SIZE FILL W/ CEMENTED SLAG AND BRICK FRAGMENTS. DRY.		
		58 41					
		17					
			15		AUGER AND SAMPLER REFUSAL AT 13.0 - BOTTOM OF BORING		
			20				
			25				
			30				
			35				

NOTES:

SAMPLE			DEPTH	STRATA	SOIL DESCRIPTION	WELL CONST.	REMARKS
depth	blows per 6"				density, color, SOIL, admixtures, moisture, other notes, ORIGIN		
0'-1.5'	10	21			DENSE BROWN SAND AND GRAVEL SIZE INDUSTRIAL FILL, DRY FRIABLE - AUGER REFUSAL @ 1.5'		STEEL MAKING SLAG
	100						
4.5'-6.5'		17	5		VERY DENSE BROWN AND BLACK SAND TO COARSE GRAVEL INDUST. FILL, DRY LOOSE WHEN DISTURBED SLAG.		STEEL MAKING SLAG
	30	28					
	32						
9.5'-11.5'		14	10		VERY DENSE GREY AND BLACK SAND TO COARSE GRAVEL W/ 1" SLAG FRAGMENTS, INDUSTRIAL FILL TO 11', LIGHT GREY FRACTURED SLAG W/ SAND AND GRAVEL SIZE FILL TO 11.5' AUGER REFUSAL AT 12.5'		STEEL MAKING SLAG AND LIME STONE.
	38	54					
	37						
			15				
			20				
			25				
			30				
			35				

5-30

PROJECT: LTV MARILLA STREET LANDFILL	PROJECT NO: 848-02-1
DATE: JUNE 11, 1985	LOCATION: SOUTH BUFFALO, NEW YORK
DRILLING CONTRACTOR: EARTH DIMENSIONS	INSPECTOR: J. WHITNEY
DRILLING METHOD: 8" x 4 1/4" HOLLOW STEM AUGER	SAMPLING METHOD: 2" Ø SPLIT SPOON AT 5' INTERVALS
ELEVATION:	DATUM:

SAMPLE			DEPTH	STRATA	SOIL DESCRIPTION		WELL CONST.	REMARKS
no.	depth	blows per 6"			density, color, SOIL, admixtures, moisture, other notes, ORIGIN			
S-1	0'-2'	9 15 25 15			VERY DENSE DARK BROWN MIXTURE OF GRAVEL AND SILT SIZE INDUS- TRIAL FILL, DRY.			CLARIFIER SLUDGE AND STEEL MAKING SL
S-2	4.5'-6.5'	7 4 8 7	5		MEDIUM DENSE BROWN SAND AND GRAVEL SIZE FILL TO 5.0' TO MED. DENSE BLACK GRAVEL, SAND & SILT SIZE INDUSTRIAL FILL, MOIST.			CLARIFIER SLUDGE
S-3	10'-12'	3 3 3 2	10		LOOSE BLACK FINE SAND AND SILT SIZE W/ SOME GRAVEL SIZE FILL (INDUS.) SOME BROWN STAINING, MOIST			CLARIFIER SLUDGE
S-4	16'-17'	1 1 2 3	15		SOFT BLACK SILT SIZE, SOME GRAVEL SIZE FILL TO 16.0' WET TO SOFT REDDISH BROWN SILT SIZE FILL, WET TO 16.33' TO SOFT BLACK SILT SIZE SOME GRAVEL TO 16.75' SOFT RED- DISH BROWN SILT SIZE FILL @ 17.0'			BOF DUST
S-5	20'-22'	10 6 8 16	20		MEDIUM DENSE REDDISH BROWN SILT SIZE W/ SOME GRAVEL SIZE FILL TO 21.5' TO GREYISH BLACK SILT SIZE BRICK FRAGMENTS, MOIST.			CLARIFIER SLUDGE, STEEL MAY SLAG AND BOF DUST
S-6	25'-27'	2 2 3 9	25		BRICK FRAGMENTS TO 23.5' TO SOFT BLACK SILT SIZE FILL, WET TO 26.5' TO LOOSE GREENISH BLUE FINE GRAVEL SIZE FILL, WET.			CLARIFIER SLUDGE A STEEL MAKING SL
S-7	30'-32'	3 8 5 4	30		DENSE GREY ANNULAR CEMENTED SLAG FRAGMENTS WITH SOME GRAVEL AND SAND SIZE FILL, BROWN STAINING, WET.			STEEL MAKING SL AND SLAG FURNACE SLAG.
S-8	—	50/2	35		SAMPLER REFUSAL AT 33'-2" WET GREY SILT AND FINE SAND W/ SHALE FRAGMENTS (FLOWED UP INTO SAMPLER) AUGER REFUSAL AT 33.4'			

NOTES: INFORMATION IN REMARKS COLUMN IS BASED ON EXAMINATION OF SAMPLE
BY ~~revised~~ PERSONNEL.

ecology and environment

LTV MARILLA STREET LANDFILL		PROJECT NO: 848-02-1	
JUNE 12, 1985		LOCATION: SOUTH BUFFALO, NEW YORK	
CONTRACTOR: EARTH DIMENSIONS		INSPECTOR: J. WHITNEY	
METHOD: 8" x 4 1/4" HOLLOW		SAMPLING METHOD: 2" Ø SPLIT SPOON	
STEM AUGER		AT 5' INTERVALS	
:		DATUM:	

SAMPLE			DEPTH	STRATA	SOIL DESCRIPTION		WELL CONST.	REMARKS
depth	blows per 6"				density, color, SOIL, admixtures,			
					moisture, other notes, ORIGIN			
0-2'	25	23	5		DENSE GREY GRAVEL AND SAND SIZE FILL BROWN STAINING, DRY TO 1' TO GREY SOLID SLAG FRAGMENTS TO 1.25' TO GREY GRAVEL AND SAND SIZE FILL SOME BRICK FRAGMENTS TO 2'		STEEL MAKING SLAG AND BRICK	
	17	9						
3'-6.5'		24			MINIMAL RECOVERY SAMPLE - 3-2 GRAY SLAG FRAGMENTS; PUSHED A PIECE OF SLAG AHEAD OF SAMPLER		STEEL MAKING SLAG	
	20	17						
	24							
			10		VERY DENSE DARK BROWN TO DARK GREY GRAVEL AND COARSE SAND SIZE INDUST RIAL FILL W/ SOME SLAG FRAGMENTS DRY. AUGER REFUSAL @ 12.5' (BOTTOM OF BORING)		STEEL MAKING SLAG	
5'-10.3'		34						
	100	4						
			15					
			20					
			25					
			30					
			35					

FORMATION IN REMARKS COLUMN IS BASED ON EXAMINATION OF SAMPLES
 BY LTV PERSONNEL.

PROJECT: LTV MARILLA STREET LANDFILL	PROJECT NO: 848-02-1
DATE: JUNE 20, 1985	LOCATION: SOUTH BUFFALO, NEW YORK
DRILLING CONTRACTOR: EARTH DIMENSIONS	INSPECTOR: J. WHITNEY
DRILLING METHOD: 8" x 4 1/4" HOLLOW	SAMPLING METHOD: 2" Ø SPLIT SPOON
STEM AUGER	AT 5' INTERVALS
ELEVATION:	DATUM:

SAMPLE			DEPTH	STRATA	SOIL DESCRIPTION	WELL CONST.	REMARKS
no.	depth	blows per 6"			density, color, SOIL, admixtures, moisture, other notes, ORIGIN		
S-1	0'-2'	3 18 26 66			VERY DENSE BLACK FINE SAND AND GRAVEL SIZE CINDERY ASH AND SLAG FRAGMENTS FILL DRY LOOSE WHEN DISTURBED.		STEEL MAKING
S-2	4.5'-6.5'	13 21 23 23	5		VERY DENSE DARK BROWN SAND SIZE CINDERY ASH WITH SOME BRICK AND GRAVEL SIZE SLAG FRAGMENTS FILL, DRY, LOOSE WHEN DISTURBED.		STEEL SLAG / SCRAP FLASH
S-3	9.5'-11.5'	3 15 16 10	10		DENSE BROWN SAND AND GRAVEL SIZE INDUSTRIAL FILL, DRY W/ SOME SLAG FRAGMENTS, LOOSE WHEN DISTURBED.		STEEL MAKING
S-4	14.5'-16.5'	1 1 1/12	15		SOFT REDDISH BROWN SILT AND FINE SAND SIZE FILL, WET		STEEL MAKING DUST
S-5	19.5'-21.5'	7 31 24 22	20		VERY DENSE DARK BROWN SAND AND COARSE GRAVEL SIZE INDUSTRIAL FILL, DRY, W/ SOME BRICK AND SLAG FRAGMENTS		STEEL SLAG / FURNACE SLAG
S-6	24.5'-26.5'	7 47 66 45	25		VERY DENSE DARK BROWN COARSE SAND AND GRAVEL SIZE INDUSTRIAL FILL, DRY W/ SOME SLAG AND DETERIORATED BRICK FRAGMENTS		
			30				
			35				

NOTES: AUGERS LOST IN HOLE. HOLE ABANDONED AT 26.5'

INFORMATION IN REMARKS COLUMN IS BASED ON EXAMINATION OF SAMPLES

NOTES: SAMPLE S-6 NO RECOVERY (PUSHED A PIECE OF SLAG AHEAD OF
SAMPLER) SAMPLER DROPPED WITH WEIGHT OF BOSS FOR NEW
RECOVERY. 5-35 BASED ON EXAMINATION OF SAMPLES

UTILITY MARILLA STREET LANDFILL	PROJECT NO: 848-02-1
DATE: JULY 8, 1985	LOCATION: SOUTH BUFFALO, NEW YORK
DRILLING CONTRACTOR: EARTH DIMENSIONS	INSPECTOR: J. WHITNEY
DRILLING METHOD: 8" x 4 1/4" HOLLOW STEM AUGER	SAMPLING METHOD: 2" Ø SPLIT SPOON
LOCATION:	AT 5' INTERVALS
DATUM:	

SAMPLE			DEPTH	STRATA	SOIL DESCRIPTION	WELL CONST.	REMARKS
depth	blows per 6"				density, color, SOIL, admixtures, moisture, other notes, ORIGIN		
40'-42'	33	48	40		VERY DENSE GREY COARSE SAND AND GRAVEL SIZE FILL, WET @ 41.0' W/ SOME SLAG FRAGMENTS.		BLAST FURNACE SLAG.
	21	9					
44.5'		89	45		BOTTOM OF BORING @ 44.5'		
			50				
			55				
			60				
			65				
			70				
			75				
			80				

NO RECOVERY SAMPLE 3-10 SOME SAND FLOWED UP INTO SAMPLER

INFORMATION IN REMARKS COLUMN IS BASED ON EXAMINATION OF SAMPLES BY LTV PERSONNEL

PROJECT: LTV MARILLA STREET LANDFILL	PROJECT NO: 848-02-1
DATE: JUNE 11, 1985	LOCATION: SOUTH BUFFALO, NEW YORK
DRILLING CONTRACTOR: EARTH DIMENSIONS	INSPECTOR: J. WHITNEY
DRILLING METHOD: 8" x 4 1/4" HOLLOW STEM AUGER	SAMPLING METHOD: 2" Ø SPLIT SPOON AT 5' INTERVALS
ELEVATION:	DATUM:

SAMPLE			DEPTH	STRATA	SOIL DESCRIPTION		WELL CONST.	REMARKS
no.	depth	blows per 6"			density, color, SOIL, admixtures, moisture, other notes, ORIGIN			
S-1	0'-2'	5 6 8 8			MEDIUM DENSE BLACK GRAVEL SIZE FILL TO 6" TO BROWN SAND AND GRAVEL SIZE FILL TO 2' WITH SOME BEAMS OF BLACK SILT SIZE PARTICLES (FILL)			CLARIFIED SLUDGE SLAG
S-2	5'-7'	2 2 3 2	5		LOOSE BLACK CINDEY SAND DRY FILL.			BLAST FURNACE FLUE DUST
S-3	10'-12'	2 2 3 2	10		VERY LOOSE BLACK CINDEY SAND SOME CINDER FRAGMENTS W/ SLIGHT BROWN STAINING DRY FILL			FLUE DUST AND SLAG
S-4	15'-17'	1 2 1 1	15		SIMILAR			FLUE DUST WITH SLAG
S-5	20'-22'	2 10 10 11	20		MEDIUM DENSE GREENISH BLUE COARSE GRAVEL SIZE FILL WITH SOME SLAG FRAGMENTS, MOIST			BLAST FURNACE SLAG
S-6	25'-27'	1 2 5 10	25		LOOSE GRAVEL AND SAND SIZE GREY SLAG TO 25.5' TO SOFT BLACK PEAT SOME WOOD TO 26.0' TO LOOSE LIGHT BROWN FINE SAND TO 27' - BOTTOM OF BORING @ 27'			
			30					
			35					

NOTES: INFORMATION IN REMARKS COLUMN IS BASED ON EXAMINATION OF SAMPLES
BY LTV PERSONNEL ecology and environment

PROJECT: LTV MARILLA STREET LANDFILL	PROJECT NO: 848-02-1
DATE: JUNE 19, 1985	LOCATION: SOUTH BUFFALO, NEW YORK
DRILLING CONTRACTOR: EARTH DIMENSIONS	INSPECTOR: J. WHITNEY
DRILLING METHOD: 7" x 3 1/4" HOLLOW STEM AUGER	SAMPLING METHOD: 2" Ø SPLIT SPOON
0'-30', REDRILLED W/ 8" x 3 3/8" H.S.A.	AT 5' INTERVALS
ELEVATION:	DATUM:

SAMPLE			DEPTH	STRATA	SOIL DESCRIPTION		WELL CONST.	RE
no.	depth	blows per 6"			density, color, SOIL, admixtures, moisture, other notes, ORIGIN			
S-1	0'-1.17'	9 32 100% 72			VERY DENSE DARK BROWN SAND AND GRAVEL SIZE FILL, DRY LOOSE WHEN DISTURBED			STEEL SLAG BLAF FURL SLAC
S-2	4.5'-6.3'	37 100% 73	5		VERY DENSE DARK BROWN SAND AND GRAVEL SIZE FILL			STEE SLAC BLAF FUR SLA
S-3	9.5'-11.5'	95 43 30 30	10		SIMILAR			STEEL SLAC BLAF FURL SLAC
S-4	14.5'-16.5'	8 17 24 20	15		SIMILAR			STEE SLAC BLAF FUR SLA
S-5	19.5'-21.5'	29 32 23 15	20		VERY DENSE OLIVE BROWN SAND, GRAVEL AND SILT SIZE FILL, MOIST, SOME BRICK FRAGMENTS AND SLAG.			STEE SLAC FURL AND FRA
S-6	24.5'-26.5'	14 40 33 40	25		VERY DENSE DARK BROWN SAND AND GRAVEL SIZE FILL, WET @ 25.5' TO 25.7' SOME BRICK AND SLAG FRAGMENTS.			STEE SLAC
S-7	29.5'-31.3'	16 42 50 100% 74	30		VERY DENSE GREY/BLACK COARSE SAND AND GRAVEL SIZE FILL, DRY W/ SOME SLAG AND CINDER FRAGMENTS.			STEE SLAC SOM PEA
S-8	34.5'-36.5'	36 37 46 100% 4.5'	35		EXTREMELY DENSE GRAY/BLACK COARSE SAND AND GRAVEL SIZE FILL, WET WITH SOME SLAG AND BRICK FRAGMENTS. AUGER REFUSAL @ 39' (BOTTOM OF BORING) AUGERS LOST IN HOLE, ABANDONED, MOVED TO MW-88*			

NOTES: EXTREMELY DIFFICULT AUGERING BETWEEN 17 + 19.5', 30' & DOWN AUGER REFUSAL @ 39' (BOTTOM OF BORING) AUGERS LOST IN HOLE, ABANDONED, MOVED TO MW-88*
 HAD TO HEAT THE AUGERS TO BREAK APART, LEFT AUGERS IN GROUND @ 1:30 (6)
 AUGERS LOST IN HOLE 7-3-85; INFORMATION IN REMARKS COLUMN IS BASED ON
 EXAMINATION OF SAMPLES BY LTV PERSONNEL. 5-39

DEPT: ETV MARILLA STREET LANDFILL	PROJECT NO: 848-02-1
JUNE 18, 1985	LOCATION: SOUTH BUFFALO, NEW YORK
ING CONTRACTOR: EARTH DIMENSIONS	INSPECTOR: J. WHITNEY
ING METHOD: 8" x 4 1/4" HOLLOW	SAMPLING METHOD: 2" Ø SPLIT SPOON
STEM AUGER	AT 5' INTERVALS
TION:	PROTECTIVE CASING W/ LOCKING CAP

SAMPLE			DEPTH	STRATA	SOIL DESCRIPTION		REMARKS
depth	blows per 6"				density, color, SOIL, admixtures, moisture, other notes, ORIGIN		
0'-2'	7	5			MEDIUM DENSE DARK BROWN SAND AND GRAVEL SIZE FILL W/ SOME BRICK SILT SIZE PARTICLES		
	8	9					
4.5'-6.5'		5	5		LOOSE BROWN SAND AND GRAVEL SILT SIZE FILL, MOIST		CEMENT BENTONITE GROUT
	5	4					2" DIA. PVC WELL CASING
	6						
9.5'-11.0'		23	10		VERY DENSE DARK BROWN TO BLACK SAND AND GRAVEL SIZE FILL, DRY		
	90	75					
14.5'-16.5'	1	28	15		NO RECOVERY SAMPLE 3-4		
19.5'-20.08'		70	20		VERY DENSE BROWN SAND AND GRAVEL SIZE FILL W/ SOME SLAG FRAGMENTS, MOIST		BENTONITE PLUG
	100	71					
24.5'-26.5'	WOR	WOR	25		VERY SOFT BROWN SILT SIZE FILL, WET TO 26.25' TO BLACK FINE SAND SIZE FILL, WET TO 26.5'		
	1	1					
29.5'-31.5'	WOR	3	30		LOOSE LIGHT GREENISH-GREY FINE SILTY SAND TO 31', MOIST TO STIFF LIGHT GREENISH GREY CLAYEY SILT LAMINATED WITH A BROWN VERY FINE SAND, DRY TO 31.5'		HOLE CAVE-IN
	3	9					
34.5'-36.5'		3	35		FIRM GREY SILTY CLAY MOTTLED W/ BROWN OXIDATION LAYERS, LAKE SEDIMENTS		QUARTZ SAND
	6	9					
	9						
		WOR					

WOR - WEIGHT OF RODS

WOH - WEIGHT OF HAMMERS

PROJECT: LTV MARILLA STREET LANDFILL

PROJECT NO: 848-02-1

DATE: JUNE 18-19, 1985

LOCATION: SOUTH BUFFALO, NEW YORK

DRILLING CONTRACTOR: EARTH DIMENSIONS

INSPECTOR: J. WHITNEY

DRILLING METHOD: 8" x 3 3/8" HOLLOW

SAMPLING METHOD: 2" Ø SPLIT SPOON

STEM AUGER

AT 5' INTERVALS

ELEVATION:

DATUM:

[illegible]

NOTES:

~~recycled paper~~

ecology and environment

PROJECT: LTV MARILLA STREET LANDFILL	PROJECT NO: 848-02-1
DATE: JULY 8-9, 1985	LOCATION: SOUTH BUFFALO, NEW YORK
DILLING CONTRACTOR: EARTH DIMENSIONS	INSPECTOR: J. WHITNEY
DILLING METHOD: 8" x 4 1/4" HOLLOW STEM AUGER	SAMPLING METHOD: 2" Ø SPLIT SPOONS AT 5' INTERVALS
PROTECTION: PROTECTIVE CASING W/ LOCKING CAP	

SAMPLE			DEPTH	STRATA	SOIL DESCRIPTION density, color, SOIL, admixtures, moisture, other notes, ORIGIN	REMARKS
depth	blows per 6"					
			5		SEE B-12	CEMENT BENTONITE GROUT
			10			2" DIA. PVC WELL CASING
			15			BENTONITE PLUG
			20		VERY DENSE DARK BROWN COARSE SAND AND GRAVEL SIZE FILL W/SOME BRICK AND SLAG FRAGMENTS	QUARTZ SAND
16.5'-18.1'	11	12				STEEL MAKING SLAG
	30	59				STEEL MAKING SLAG WITH SOME SOIL.
20'-21.8'	46	45	20		EXTREMELY DENSE MOTTLED GREY GRAVEL SIZE FILL, MOIST W/ 40% SLAG FRAGMENTS	
	33	108			BOTTOM OF BORING @ 21.8' AUGER AND SAMPLER REFUSAL	
			25			2" DIA .010" SLOTTED PVC WELL SCREEN
			30			
			35			

3: INFORMATION IN REMARKS COLUMN BASED ON EXAMINATION OF SAMPLES
BY LTV PERSONNEL.

REFERENCE NO. 2

1. MICROFILM
(C.Y./M.S.)

Uncontrolled Hazardous Waste Site Ranking System

A Users Manual

Kris W. Barrett
S. Steven Chang
Stuart A. Haus
Andrew M. Platt

August 1982

MTR-82W111

SPONSOR:
U.S. Environmental Protection Agency
CONTRACT NO.:
68-01-6278

The MITRE Corporation
Metrek Division
1820 Dolley Madison Boulevard
McLean, Virginia 22102

REFERENCE NO. 3

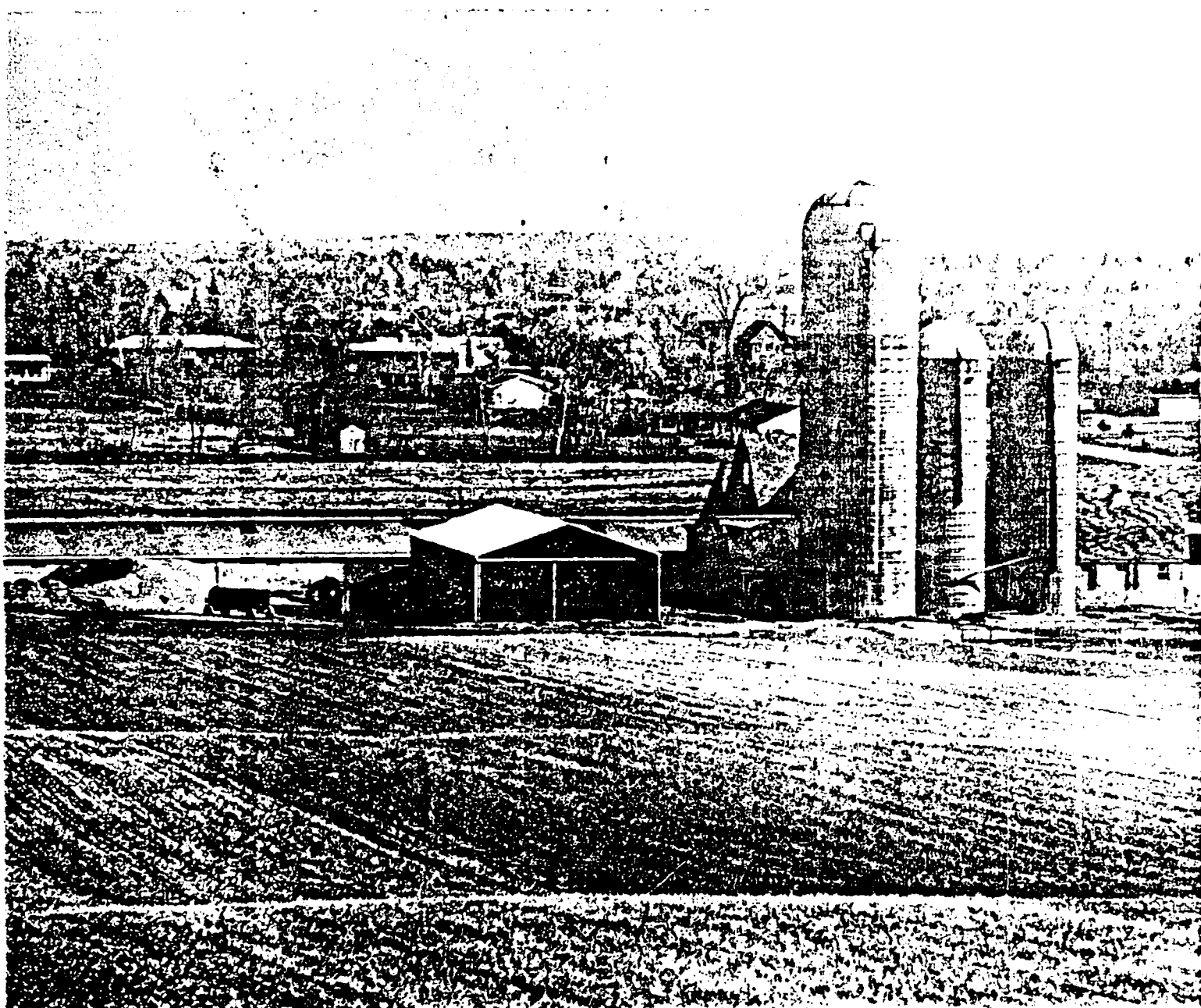
United States
Department of
Agriculture

Soil
Conservation
Service

In Cooperation with
the Cornell University
Agricultural
Experiment Station

Soil Survey of Erie County, New York

S
591
G3803.E6



County, New York

135

s, and other similar urban uses. Areas of this complex range from about 3 to 500 acres and are irregular or irregular in shape. Slope ranges from 0 to 1 percent.

This complex is about 60 percent Urban land that is covered by concrete, asphalt, buildings, or other impervious manmade surfaces; about 30 percent undisturbed Cayuga soils; and 10 percent other soils. Urban land and Cayuga soils occur together in such an intricate pattern that it was not practical to separate them in mapping.

Typically, these Cayuga soils have a surface layer of grayish brown silt loam about 8 inches thick. The surface layer is mottled, light brown silt loam about 2 inches thick. The subsoil extends to a depth of 26 inches. It is mottled, brown heavy silty clay loam in the upper part and mottled, reddish brown silty clay in the lower part. The substratum to a depth of 60 inches is reddish brown gravelly loam. In places the surface layer is silty clay loam.

Included with this complex in mapping are areas of the nearly level Colliamer soils that have a till substratum, gently sloping Cayuga soils, and a few areas of deep fill deposits. Areas of included soils range up to 3 acres. In April and May the Cayuga soils have a perched seasonal high water table in the lower part of the subsoil. The undisturbed Cayuga soils are slowly permeable in the subsoil and substratum, the available water capacity is moderate to high, and runoff is slow. Bedrock is at a depth of more than 5 feet. In some areas the surface layer is medium acid to neutral. Runoff is rapid from the relatively impermeable Urban land part of this complex.

The Urban land-Cayuga complex is not suited to agriculture because it is in highly urbanized areas. Parts of the complex that are not built up include narrow plots between streets and sidewalks, small yards, courtyards, areas between industrial buildings, and small traffic islands and circles. Because these areas generally cover less than 1,000 square feet, they are poorly suited to agriculture. Most building activity is on sites of demolished buildings.

Some undisturbed areas of this complex are subject to heavy foot traffic and are shaded by tall buildings. These areas are only moderately suited to lawns, trees, shrubs, and vegetable gardens. Because there is limited open space, this complex is not suited to recreational uses. A few larger areas are potential sites for local parks and playgrounds. Onsite investigation is necessary to determine the suitability and limitations for any proposed use.

The Urban land-Cayuga complex has not been assigned a capability subclass.

Urban land-Churchville complex. This complex consists of nearly level areas of Urban land and deep, poorly drained Churchville soils. These

Churchville soils formed in clayey deposits underlain by glacial till. This complex is in housing developments, shopping centers, industrial parks, and other similar uses in and around the city of Buffalo. Some open areas of the Churchville soils have been slightly altered by minor cuts and fills during construction. Areas of this complex are irregular in shape and range from about 5 to 600 acres. Slope ranges from 0 to 3 percent.

This complex is about 65 percent Urban land that is mostly covered by concrete, asphalt, buildings, or other impervious surfaces; about 25 percent undisturbed Churchville soils; and 10 percent other miscellaneous areas. Urban land and Churchville soils occur together in such an intricate pattern that it was not practical to separate them in mapping.

Typically, these Churchville soils have a surface layer of very dark grayish brown silt loam 9 inches thick. The subsurface layer is mottled, pinkish gray silt loam about 2 inches thick. The subsoil extends to a depth of 26 inches. It is reddish brown silty clay loam in the upper part and mottled, reddish brown silty clay in the lower part. The substratum to a depth of 60 inches or more is mottled, reddish gray gravelly loam.

Included with this complex in mapping are areas of the nearly level Niagara soils that have a till substratum, the reddish Ovid soils, and areas of deep fill deposits.

From December through May a perched seasonal high water table is in the upper part of the subsoil of the Churchville soils. These soils are slowly or very slowly permeable. The available water capacity is moderate to high, and runoff is slow. Bedrock is at a depth of more than 5 feet. The surface layer is medium acid to neutral. Runoff is rapid in the relatively impermeable Urban land part of this complex.

Parts of this complex that are not built up include narrow plots between streets and sidewalks, small yards, courtyards, areas between industrial buildings, and small traffic islands and circles. Because these areas generally cover less than 800 square feet, they are poorly suited to building. Most building activity is on sites of demolished buildings.

Some undisturbed areas of this complex are subject to heavy foot traffic and are shaded by tall buildings and trees. Many areas are poorly suited to lawns, recreational uses, and vegetable gardens because of the seasonal wetness, clayey subsoil texture, and shading. High risk of frost damage, low soil strength, and slow or very slow permeability are additional limitations for further development on this complex. Onsite investigation is necessary to determine the suitability and limitations for any proposed use.

This Urban land-Churchville complex has not been assigned a capability subclass.

Urban land-Claverack complex. This complex consists of nearly level areas of Urban land and moderately well drained Claverack soils. The Claverack

to building because they have a seasonal high water table, low strength, and a clayey substratum and generally cover less than 800 square feet. A few homes and structures show signs of settling because the soil has low strength. Most building activity is on sites of demolished buildings.

Most of the undisturbed areas are subject to heavy foot traffic and are shaded by tall buildings. Establishing lawns or gardens on these Cosad soils is difficult because of seasonal wetness, sandy surface layer texture, low organic matter content, and the tendency of the soil to be droughty in the root zone in midsummer. Drainage and increasing the organic matter in the soil minimize these problems. Onsite investigation is necessary to determine the suitability and limitations for any proposed use.

This Urban land-Cosad complex has not been assigned a capability subclass.

Up—Urban land-Galen complex. This complex consists of nearly level areas of Urban land and moderately well drained Galen soils. This complex is in the city of Buffalo and its metropolitan area. The areas are generally 3 to 100 acres or slightly more and are oblong or irregular in shape. Slope ranges from 0 to 3 percent.

A typical area of this complex is about 60 percent Urban land that is covered by concrete, asphalt, buildings, or other impervious surfaces; about 25 percent undisturbed Galen soils; and 15 percent other soils. Urban land and Galen soils occur together in such an intricate pattern that it was not practical to separate them in mapping.

Typically, these Galen soils have a surface layer of dark brown very fine sandy loam about 8 inches thick. The subsoil extends to a depth of 36 inches. It is mottled, brownish yellow fine sandy loam in the upper part; mottled, brown loamy fine sand in the middle part; and mottled, brown loamy fine sand with fine sandy loam bands in the lower part. The substratum to a depth of 60 inches is mottled, pale brown fine sand. In places the surface layer is fine sandy loam.

Included with this complex in mapping are areas of the nearly level Elnora soils. Also included are Udorthents, smoothed, which are areas of deep fill deposits or deep cuts that have not been paved or built upon. Areas of included soils range up to 3 acres.

The Galen soil has a seasonal high water table in the lower part of the subsoil in the spring. Permeability of the subsoil is moderate, the available water capacity is moderate, and runoff is slow. The soil generally does not contain gravel. The surface layer is strongly acid to neutral. The Urban land areas of this complex are relatively impermeable and have very rapid runoff.

Because this Urban land-Galen complex is highly urbanized, it is not suited to farming. The few areas that are not built up include narrow plots between streets and

sidewalks, small yards, courtyards, and small traffic islands and circles. These areas are generally poorly suited to additional building because they are subject to seasonal wetness and low strength and generally cover less than 900 square feet. Most building activity is on sites of demolished buildings.

Some of the undisturbed areas are subject to heavy foot traffic or are shaded by tall buildings. Most areas of the Galen soils are well suited to lawns, shrubs, and vegetable gardens. Liming, fertilizing, and watering during dry periods help maintain quality lawns and shrubs. A few of the larger undisturbed areas are suitable for parks or playgrounds. Onsite investigation is necessary to determine the suitability or limitations for any proposed use.

This Urban land-Galen complex has not been assigned a capability subclass.

UrA—Urban land-Lima complex. 1 to 6 percent slopes. This complex consists of nearly level to gently sloping areas of Urban land and moderately well drained Lima soils. The Lima soils formed in loamy glacial till deposits. In places these soils have been slightly altered by grading and landscaping. This complex is in the city of Buffalo and its metropolitan area. Areas are generally about 3 to 200 acres or more and are oblong or irregular in shape.

A typical area of this complex is about 60 percent Urban land that is mostly covered by concrete, asphalt, buildings, or other impervious surfaces; about 30 percent undisturbed Lima soils; and 10 percent other soils. Urban land and Lima soils occur together in such an intricate pattern that it was not practical to separate them in mapping.

Typically, these Lima soils have a surface layer of very dark grayish brown loam about 9 inches thick. The subsurface layer is mottled, light brownish gray loam about 2 inches thick. The subsoil extends to a depth of 26 inches. It is mottled, brown silt loam. The substratum to a depth of 60 inches or more is mottled, brown gravelly silt loam. In places the surface layer is silt loam.

Included with this complex in mapping are areas of the nearly level, well drained, Honeoye soils. Also included are Udorthents, smoothed, which are areas of deep fills or excavations. Areas of included soils range up to 3 acres.

The Lima soils have a perched seasonal high water table in the lower part of the subsoil in the spring. Permeability is moderate in the subsoil and slow or very slow in the substratum. The available water capacity is moderate to high, and runoff is medium. The surface layer and subsoil are medium acid to mildly alkaline. Runoff is very rapid in the relatively impermeable Urban land part of this complex.

Because this Urban land-Lima complex is highly urbanized, it is not suited to farming. The few areas that are not built upon include narrow plots between streets

and sidewalks, small yards, courtyards, areas between large buildings, and small traffic islands and circles. These undisturbed areas of Lima soils generally cover less than 1,000 square feet. Most building activity is on sites of demolished buildings.

Some of the undisturbed areas are subject to heavy foot traffic or are shaded by tall buildings. These areas are generally suited to lawns, shrubs, and vegetable gardens. A few of the larger areas are suited to parks or recreational uses. Onsite investigation is necessary to determine the suitability and limitations of this complex for any proposed use.

This Urban land-Lima complex has not been assigned a capability subclass.

Us—Urban land-Niagara complex. This complex consists of nearly level areas of Urban land and somewhat poorly drained Niagara soils. The Niagara soils formed in silty lake-laid deposits. This complex is on relatively flat landscapes in the city of Buffalo and its metropolitan area. Areas of this complex are 5 to over 600 acres and are oblong or irregular in shape. Slope ranges from 0 to 3 percent.

A typical area of this complex is about 60 percent Urban land that is mostly covered by concrete, asphalt, buildings, or other impervious surfaces; about 30 percent undisturbed Niagara soils; and 10 percent other soils.

Typically, these Niagara soils have a surface layer of dark brown silt loam about 11 inches thick. The subsoil extends to a depth of 27 inches. It is mottled, yellowish brown silt loam in the upper part and mottled, dark brown silt loam in the lower part. The substratum, to a depth of 60 inches, is mottled, dark brown silt loam and olive brown coarse silt, and it is very fine sand below 60 inches. In places the surface layer is loam or very fine sandy loam.

Included with this complex in mapping are areas of the deep, nearly level Raynham soils. Also included are Udorthents, smoothed, which are areas of deep fills or excavations. Areas of included soils are 1/4 acre to 3 acres.

The Niagara soils have a seasonal high water table in the upper part of the subsoil from December through May. Permeability of the Niagara soils is moderately slow, the available water capacity is high, and runoff is slow. There is generally no gravel, and bedrock is more than 5 feet deep. In unlimed areas, reaction ranges from strongly acid to neutral in the surface layer. Runoff is rapid from the relatively impermeable Urban land part of this complex.

The few areas of this Urban land-Niagara complex that are not built up include narrow plots between streets and sidewalks, small yards, courtyards, and small traffic islands and circles. These undisturbed areas are poorly suited to building because they are seasonally wet, have low strength, and generally cover less than 800 square feet. Many homes show signs of settling mainly because

of low soil strength and frost heaving. Most building activity is on sites of demolished buildings.

Some of the undisturbed areas are subject to heavy foot traffic or are shaded by tall buildings. With subsurface drainage, these areas of Niagara soils produce better lawns, shrubs, and vegetable gardens. Because of seasonal wetness, most areas are not well suited to recreational uses. Onsite investigation is necessary to determine the suitability and limitations of this complex for any proposed use.

This Urban land-Niagara complex has not been assigned a capability subclass.

Ut—Urban land-Odesa complex. This complex consists of nearly level areas of Urban land and somewhat poorly drained Odesa soils. The Odesa soils formed in clayey lake-laid sediments. This complex is on relatively flat landscapes in the city of Buffalo and its metropolitan area. These areas are generally about 5 to 600 acres and are mostly irregular in shape. Slope ranges from 0 to 3 percent.

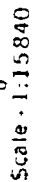
A typical area of this complex is about 60 percent Urban land that is mostly covered by concrete, asphalt, buildings, or other impervious surfaces; about 25 percent undisturbed Odesa soils; and 15 percent other soils. Urban land and Odesa soils occur together in such an intricate pattern that it was not practical to separate them in mapping.

Typically, these Odesa soils have a surface layer of very dark grayish brown silt loam about 9 inches thick. The subsoil extends to a depth of 22 inches. It is mottled, pinkish gray silty clay in the upper part and mottled, reddish brown silty clay in the lower part. The substratum to a depth of 60 inches is varved reddish brown, gray, reddish gray, and weak red silty clay. In places the surface layer is silty clay loam.

Included with this complex in mapping are small areas of the nearly level Rhinebeck and Lakemont soils. The Rhinebeck soils formed in gray color sediments, and the Lakemont soils are in a few depressions. Also included are Udorthents, smoothed, which are areas of deep fills or very deep cuts that have not been paved or built upon. Areas of included soils range up to 3 acres.

The Odesa soils have a perched seasonal high water table in the upper part of the subsoil from December through May. Permeability is slow or very slow in the Odesa soils. The available water capacity is moderate to high, and runoff is slow. Bedrock is at a depth of 5 feet or more. In most unlimed areas the surface layer is medium acid to neutral. Runoff is rapid from the relatively impermeable Urban land part of the complex.

This Urban land Odesa complex is not suited to farming because it is highly urbanized. The few areas of this complex that are not built up include narrow plots between streets and sidewalks, small yards, courtyards, and small traffic islands and circles. These undisturbed areas are poorly suited to building because they are



REFERENCE NO. 4

COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT & PLANNING
DIVISION OF ENVIRONMENTAL CONTROL

MEMORANDUM

TO Peter Burke, NYSDEC DATE June 15, 1982
FROM Lawrence G. Clare
SUBJECT Central Auto Wrecking (15034), 343 Ridge Road, City of Lackawanna.

any news on
results of DEC
sampling -
H. Voelt
LGC

Sample
D.K.
10000

Attached are copies of the sampling results that were taken by DEP at Central Auto Wrecking during March of this year.

- 1) The first sample was taken March 11, 1982. The sample was taken due to a complaint (#01959) that heavy rains and snow melt were causing surface runoff, contaminated with oil, to flow from Central Auto Wrecking property to the front yard of 54 Lehigh Street and then via curb to a storm water receiver located on Lehigh Street.

The sample that was taken consisted of water mixed with oil.

The Erie County Laboratory analyzed that sample with the following results:

PCB's in oil - 67.0 ppm
PCB's in water- 11.2 ppb

- 2) On March 17, 1982, leachate samples were taken from a leachate extrusion located in a vacant lot adjacent to 64 Lehigh. The results of these samples indicated no high levels of hazardous or toxic materials. However, as leachate was leaving the landfill site, this constitutes a violation of Part 360.8 (a) (3) of the Environmental Conservation Law.

Please keep this office informed of NYSDEC's legal action against Central Auto Wrecking. If we can be of further assistance, please advise.



LAWRENCE G. CLARE, P.E.
Asst. Deputy Commissioner

LGC:rb

Attachments

5-52

cc: R. Koczaja ✓

ERIE COUNTY LABORATORY
PUBLIC HEALTH DIVISION

RESULTS OF EXAMINATION OF SEWAGE AND POLLUTED WATER

Lab Nos. 82-113 Collected by Cameron O'Connor
Date: Collected 3/11/82 Received 3/11/82 Examined 4/1/82
Place Lackawanna County Erie
Source Central Auto Wrecking, 343 Ridge Rd.

BACTERIAL EXAMINATION

Tests for coliform group: M.F. per 100 ml. _____

CHEMICAL EXAMINATION

Color _____
Turbidity _____
Odor* _____
Suspended matter* _____
pH value _____
Temperature C _____

B.O.D., 5 day _____
Dissolved oxygen _____
% Saturation _____
Fluoride _____
Phosphates _____
Sulfates _____
Anionic detergent _____
Phenol _____
Cyanide _____

Nitrogen Cycle
Free Ammonia _____
Organic _____
Nitrites _____
Nitrates mg. NO₃, NO₂ - N/l

REMARKS:

Hardness _____

Total Solids
Total _____
Volatile _____
Fixed _____

Suspended Solids
Total _____
Volatile _____
Fixed _____

Dissolved Solids
Total _____
Volatile _____
Fixed _____

C.O.D. _____
Chlorides _____
Alkalinity _____
Grease and Oil _____

Oil _____ 67.0 ppm
Water _____ 11.2 ppb
PCB

Other organics present:

Benzene L.T. 0.035
Toluene L.T. 0.035
Xylene L.T. 0.035

All results in mg/l.

* 1-very slight, 2-slight, 3-distinct,
4-decided, 5-extreme

recycled paper

Gerhard Paluca
Gerhard Paluca
Senior Sanitary Chemist

JOSEPH FULCO, DVM, MPH
Director
ecology and environment

ERIE COUNTY LABORATORY
PUBLIC HEALTH DIVISION

RESULTS OF EXAMINATION OF SEWAGE AND POLLUTED WATER

Lab Nos. 82-122 Collected by Cameron O'Connor
Date: Collected 3/17/82 Received 3/17/82 Examined 6/2/82
Place Lackawanna County Erie
Source Central Auto Wrecking, 343 Ridge Rd. - leachate seep west side of landfill

BACTERIAL EXAMINATION

Tests for coliform group: M.F. per 100 ml. _____

CHEMICAL EXAMINATION

Color _____
Turbidity _____
Odor* _____
Suspended matter* _____
pH value _____
Temperature C _____

B.O.D., 5 day _____
Dissolved oxygen _____
% Saturation _____
Fluoride _____
Phosphates _____
Sulfates _____
Anionic detergent _____
Phenol _____ 0.001
Cyanide _____

Nitrogen Cycle
Free Ammonia _____
Organic _____
Nitrites _____
Nitrates mg. NO₃ + NO₂ - N/l

Calcium 173.0
Sodium 24.0
Arsenic L.T. 0.02
Barium L.T. 0.2
Cadmium L.T. 0.001
Chromium L.T. 0.01
Copper L.T. 0.02
Iron 6.80
Lead 0.01
Magnesium 19.0
Manganese 2.87
Mercury 0.0010
Selenium 0.002
All results in mg/l.

Hardness _____

Total Solids
Total _____
Volatile _____
Fixed _____

Suspended Solids
Total _____
Volatile _____
Fixed _____

Dissolved Solids
Total _____
Volatile _____
Fixed _____

C.O.D. _____
Chlorides _____
Alkalinity _____
Grease and Oil _____

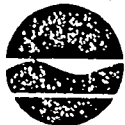
Silver L.T. 0.01
Zinc 0.04
PCB's None detected
Benzene L.T. 0.035
Toluene L.T. 0.035
Xylene L.T. 0.035

Gerhard Paluca
Gerhard Paluca
Senior Sanitary Chemist

* 1-very slight, 2-slight, 3-distinct,
4-decided, 5-extreme

JOSEPH PULEO, DVM, MPH
Director

REFERENCE NO. 5



New York State Department of Environmental Conservation

M E M O R A N D U M

TO: Cameron O'Connor
FROM: Thomas Christoffel *JRC*
SUBJECT: Central Auto Wrecking

DATE: August 5, 1982

Enclosed are the results of analyses performed on samples obtained from the Central Auto Wrecking site on March 31, 1982. The sampling locations are:

- 1) leachate breakout on west edge of landfill (soil and water)
- 2) confluence of drainage ditches draining west and south edges (soil and water)
- 3) front yard of 54 Lehigh Street: 3a-surface, 3b-8" below surface, 3c-3' below surface
- 4) SW corner of landfill, 4a and 4b soil

If you have any questions or comments concerning these results please contact me at 847-4590.

cag

ERIE COUNTY ENVIRONMENTAL CONTROL - COMPLAINT CARD

Name of Person, Company, or Institution Complained against:

Central Auto Leasing

Address:

Phone Number:

Month Date Year

Date: 3/7/84 Time: A.M. (P.M.) 4:15

Name of Complainant:

Tracy Peters (1) Lackawanna Public Safety

Address:

Phone Number:

Anthony Cafiero 1st Dist Councilman (Complainant)
Home 823-4643 office 827-6461

DESCRIPTION OF COMPLAINT

Happening Now: Yes ☒ No ()

Emergency: Yes ☒ No ()

Oil Substance leaving Central Auto
Leaking on Lehigh St side under fence
as per Bob Mitry NYSDC

COMPLAINT CATEGORY/COUNTY RULE (STATE RULE)

- A. Open Burning/Rule (Part 215) ()
- B. Fuel Burning/Rule 3 (Part 227) ()
- C. Incinerators/Rule 4 (Part 219) ()
- D. Process Equipment/Rule 5 (Part 212) ()
- E. Nuisance/Rule 7.5 (Part 211) ()
- F. Internal Combustion/Rule 8 (Part 217-218) ()
- G. Odors ()

- H. Solid Waste (Part 360, 364) ()
- I. Oil Spill ☒ ()
- J. Chemical Spill (17-0701) ()
- K. Sewerage ()
- L. Water Pollution ()
- M. Other ()

Person taking complaint:

J. Daleo

Person handling complaint:

J. Daleo

Contact Complainant Date:

Time:

Field: YES ☐

NO ☐

*(If YES see back)

Referral to:

INSPECTOR'S REPORT:

No oil found at solid fence
on Lehigh St. Heavy snow cover covers
bottom of fence. Water leakage was seen
leaving the land fill at the vacant lot
Brown material in water appears to be
dead algae and other vegetation. No oil found.

MANDATORY NOTIFICATION:

DATE

TIME

REASON

STATUS:

N.Y.S. DEC

() Abated

U.S.C.G.

☒ Resolved

OTHER

() Referred

recycled paper

Inspector's Signature

Supervisor's Signature and Date

1. FACILITY # _____ SOURCE # _____
 COMPANY _____
 SOURCE _____
 GROUP CODE () _____

2. FIELD INVESTIGATION: Type 5 ()
 Other _____

3a. DATE OF INSPECTION _____

3b. PLEASE SCHEDULE INSPECTION FOR _____

TOTAL NUMBER OF VISITS _____

TYPE _____

VIOLATION: Yes ☐ No ☐ P (Rule 10) ☐

4. COMPLIANCE SCHEDULE REQUIRED Yes ☐ No ☐

DATE OF VIOLATION NOTICE _____

DATE REQUIRED _____

REPLY OR CONFERENCE DUE _____

FIELD REPORT AND FOLLOW UP:

(Include Sketch as needed)

Called Mr. Caperno said to call Mrs. Tomalia 823-8771
 She said ① Oil on runoff ② Seen when foot there
 ③ Water runoff from fill area ④ More cars are
 being brought in
 ⑤ No Evidence of oil today.

POST INVESTIGATION NOTIFICATION: TOTAL HOURS

0.5
 8 me

DATE- TIME
 Complainant 3/8/84 9:15
 N.Y.S. DEC _____
 Specify Other _____

ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATIONReport Date: 5/18/82
Date Received: 3/31/82

WATER ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DATE	PARAMETER (UNITS OF MEASURE)
		CHLORIDE (mg/l)
R-209-07 1	3/31/82	38
R-209-13 2	3/31/82	33

COMMENTS: Refer to pages 1 through 9.

FOR RECRA RESEARCH, INC.

DATE

Q. V. Finn
5/18/82

ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATIONReport Date: 5/18/82
Date Received: 3/31/82

WATER ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DATE	PARAMETER (UNITS OF MEASURE)
		TOTAL ORGANIC CARBON (mg/l)
R-209-06 1	3/31/82	11
R-209-12 2	3/31/82	2.5
R-210-02	3/31/82	30
R-210-06	3/31/82	19

COMMENTS: Refer to pages 1 through 9.

FOR RECRA RESEARCH, INC.

R. V. Finn

DATE

5/18/82

ANALYTICAL RESULTS

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Report Date: 5/18/82
Date Received: 3/31/82

WATER ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DATE	PARAMETER (UNITS OF MEASURE)
		TOTAL RECOVERABLE PHENOLICS (mg/l)
R-209-01 1	3/31/82	<0.01
R-209-09 2	3/31/82	<0.01

COMMENTS: Refer to pages 1 through 9.

FOR RECRA RESEARCH, INC.

DATE

D. V. Finn
5/18/82



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ecology and environment

RECRA RESEARCH, INC.

I.D. #82-337

ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
HIGH PRESSURE LIQUID CHROMATOGRAPHY

Report Date: 5/18/82
Date Received: 3/31/82

WATER ANALYSIS

COMPOUND	UNITS OF MEASURE	SAMPLE IDENTIFICATION (DATE)	
		R-209-04 ¹ (3/31/82)	R-209-16 ² (3/31/82)
acenaphthene	µg/l	<1	<1
acenaphthylene	µg/l	<2	<2
anthracene	µg/l	✓ 0.15	<0.1
benzo(a)anthracene	µg/l	<0.1	<0.1
benzo(a)pyrene	µg/l	<0.1	<0.1
benzo(b)fluoranthene	µg/l	<0.2	<0.2
benzo(g,h,i)perylene	µg/l	<0.2	<0.2
benzo(k)fluoranthene	µg/l	<0.1	<0.1
chrysene	µg/l	<0.1	<0.1
dibenzo(a,h)anthracene	µg/l	<0.4	<0.4
fluoranthene	µg/l	<0.2	<0.2
fluorene	µg/l	<0.2	<0.2
indeno(1,2,3-cd)pyrene	µg/l	<0.1	<0.1
naphthalene	µg/l	<1	<1
phenanthrene	µg/l	✓ 3.8	✓ 0.4
pyrene	µg/l	<0.1	<0.1

COMMENTS: PAH analyses of waters were performed using Waters C18 Sep-Pak cartridges.

FOR RECRA RESEARCH, INC.

DATE

Stephen L. Frost
5/18/82



ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
GAS CHROMATOGRAPHYReport Date: 5/18/82
Date Received: 3/31/82

WATER ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DATE	PARAMETER (UNITS OF MEASURE)
		TOTAL POLYCHLORINATED BIPHENYLS ($\mu\text{g/l}$ AS AROCLOR 1242)
R-209-03 1	3/31/82	<2
R-209-10 2	3/31/82	<1

COMMENTS: The chromatograms of all the samples for PCB analysis were qualitatively screened for the presence of nine PCB mixtures (Aroclors). These include Aroclor 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1262 and 1268.

FOR RECRA RESEARCH, INC.

William J. Marino

DATE

5/18/82

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ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ATOMIC ABSORPTION

Central Auto Wrecking

R-209

Report Date: 5/18/82
Date Received: 3/31/82

WATER ANALYSIS

COMPOUND	UNITS OF MEASURE	SAMPLE IDENTIFICATION (DATE)			
		R-209-021 (3/31/82)	R-209-112 (3/31/82)	R-210-01 (3/31/82)	R-210-05 (3/31/82)
Total Antimony	mg/l	<0.2	0.2	<0.2	<0.2
Total Arsenic	µg/l	<5	<5	<5	<5
Total Beryllium	mg/l	✓ 0.01	<0.01	<0.01	<0.01
Total Cadmium	mg/l	<0.004	<0.004	<0.004	<0.004
Total Chromium	mg/l	<0.004	✓ 0.018	✓ 0.020	✓ 0.004
Total Copper	mg/l	✓ 0.064	0.092	0.022	<0.005
Total Iron	mg/l	✓ 66	1.3	✓ 130	1.5
Total Lead	mg/l	✓ 0.20	<0.03	<0.03	<0.03
Total Mercury	µg/l	<1	<1	<1	<1
Total Nickel	mg/l	<0.03	✓ 0.03	<0.03	<0.03
Total Selenium	µg/l	<5	<5	<5	<5
Total Silver	mg/l	<0.01	<0.01	<0.01	<0.01
Total Thallium	mg/l	<0.1	<0.1	<0.1	<0.1
Total Zinc	mg/l	✓ 0.152	0.035	0.701	0.063

COMMENTS: Comments pertain to data on one or all pages of this report.

FOR RECRA RESEARCH, INC.

DATE

R. V. Finn
5/18/82



ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
GAS CHROMATOGRAPHY

Report Date: 5/18/82

Date Received: 3/31/82

WATER ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DATE	PARAMETER (UNITS OF MEASURE)
		HALOGENATED ORGANIC SCAN - ECD ($\mu\text{g/l}$ AS CHLORINE; LINDANE STANDARD)
R-209-05 1	3/31/82	✓ 0.89
R-209-09 2	3/31/82	<0.3
R-209-14 2	3/31/82	✓ 0.85
R-210-03	3/31/82	1.5
R-210-07	3/31/82	0.75

COMMENTS: Halogenated Organic Scan (ECD) results are used for screening purposes only and are not designed for qualification or quantification of any specific organic compounds. The results are calculated based upon the chlorine content and response factor of lindane, but do not imply either the presence or absence of the compound itself. Halogenated Organic Scan results generally do not include volatile organic constituents.

FOR RECRA RESEARCH, INC.

Heborah J. Prazio

DATE

5/18/82

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ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ATOMIC ABSORPTION

Report Date: 5/18/82
Date Received: 3/31/82

SOIL ANALYSIS

COMPOUND	UNITS OF MEASURE	SAMPLE IDENTIFICATION (DATE)			
		R-209-08 (3/31/82)	R-209-152 (3/31/82)	R-209-173 (3/31/82)	R-209-183 (3/31/82)
Total Antimony	µg/g dry	<5	<5	<5	<5
Total Arsenic	µg/g dry	2.7	2.6	0.32	1.5
Total Beryllium	µg/g dry	0.61	<1	0.77	0.51
Total Cadmium	µg/g dry	2.5	3.1	4.9	3.4
Total Chromium	µg/g dry	26	46	52	48
Total Copper	µg/g dry	70	86	66	170
Total Iron	µg/g dry	43,000	77,000	40,000	27,000
Total Lead	µg/g dry	370	410	2,700	1,600
Total Mercury	µg/g dry	0.13	<0.2	<0.05	0.22
Total Nickel	µg/g dry	20	28	31	16
Total Selenium	µg/g dry	<0.3	<0.6	<0.2	<0.2
Total Silver	µg/g dry	3.7	<1	✓ 0.77	0.62
Total Thallium	µg/g dry	<4	<5	<3	<2
Total Zinc	µg/g dry	450	860	380	170

COMMENTS: The samples were received at Recra Research, Inc. on March 31, 1982.

FOR RECRA RESEARCH, INC.

DATE

R. V. Finn

5/18/82



ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ATOMIC ABSORPTION

Report Date: 5/18/82
Date Received: 3/31/82

SOIL ANALYSIS

COMPOUND	UNITS OF MEASURE	SAMPLE IDENTIFICATION (DATE)			
		R-209-193 (3/31/82) ^c	R-209-204 (3/31/82) ^c	R-209-214 (3/31/82) ^b	R-210-04 (3/31/82)
Total Antimony	ug/g dry	<5	<5	<5	<5
Total Arsenic	ug/g dry	1.9	2.0	1.3	1.1
Total Beryllium	ug/g dry	0.20	0.35	0.20	<0.3
Total Cadmium	ug/g dry	0.30	<0.06	2.6	0.29
Total Chromium	ug/g dry	✓ 8.1	✓ 170	✓ 290	7.5
Total Copper	ug/g dry	13	62	240	15
Total Iron	ug/g dry	✓ 12,000	✓ 160,000	✓ 140,000	29,000
Total Lead	ug/g dry	✓ 31	✓ 920	✓ 440	9.5
Total Mercury	ug/g dry	0.08	<0.06	<0.04	<0.06
Total Nickel	ug/g dry	✓ 10	✓ 26	✓ 190	3.8
Total Selenium	ug/g dry	<0.2	<0.2	<0.1	<0.3
Total Silver	ug/g dry	0.79	0.35	<0.2	<0.3
Total Thallium	ug/g dry	<2	<2	<2	<3
Total Zinc	ug/g dry	69	150	210	160

COMMENTS: All analyses were performed according to U.S. Environmental Protection Agency methodologies where applicable.

FOR RECRA RESEARCH, INC.

DATE

R. V. Finn
5/18/82



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ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
GAS CHROMATOGRAPHYReport Date: 5/18/82
Date Received: 3/31/82

SOIL ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DATE	PARAMETER (UNITS OF MEASURE)
		HALOGENATED ORGANIC SCAN - ECD ($\mu\text{g/g}$ DRY AS CHLORINE; LINDANE STANDARD)
R-209-08 1	3/31/82	<0.5
R-209-17 3a	3/31/82	✓ 1.9
R-209-18 3b	3/31/82	<0.5
R-209-19 3c	3/31/82	<0.5
R-209-20 4a	3/31/82	<0.5
R-209-21 4b	3/31/82	✓ 8.2
R-210-04	3/31/82	✓ 0.58

COMMENTS: Results of the analysis of soils are generally corrected for moisture content and reported on a dry weight basis.

FOR RECRA RESEARCH, INC.

DATE

Heborah J. Prario
5/18/82

ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
GAS CHROMATOGRAPHYReport Date: 5/18/82
Date Received: 3/31/82

SOIL ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DATE	PARAMETER (UNITS OF MEASURE)
		TOTAL POLYCHLORINATED BIPHENYLS (ug/g DRY AS AROCLOR 1242)
R-209-08 1	3/31/82	J 0.51
R-209-15 2	3/31/82	<1
R-209-17 3a	3/31/82	<2
R-209-18 3b	3/31/82	<0.2
R-209-19 3c	3/31/82	<0.2
R-209-20 4a	3/31/82	<0.2
R-209-21 4b	3/31/82	<4

COMMENTS: Values reported as "less than" (<) indicate the working detection limit for the particular sample and/or parameter.

FOR RECRA RESEARCH, INC.

DATE

Wesley J. Prater5/18/82

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ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
HIGH PRESSURE LIQUID CHROMATOGRAPHY

Report Date: 5/18/82
Date Received: 3/31/82

SOIL ANALYSIS

COMPOUND	UNITS OF MEASURE	SAMPLE IDENTIFICATION (DATE)			
		1 R-209-08 (3/31/82)	2 R-209-15 (3/31/82)	3a R-209-17 (3/31/82)	3b R-209-18 (3/31/82)
acenaphthene	ug/g dry	<6	<1	<20	<10
acenaphthylene	ug/g dry	<10	<2	<30	<20
anthracene	ug/g dry	0.67	0.32	16	0.94
benzo(a)anthracene	ug/g dry	2.0	<0.08	26	2.8
benzo(a)pyrene	ug/g dry	2.2	1.4	<10	1.6
benzo(b)fluoranthene	ug/g dry	3.9	0.18	<20	3.1
benzo(g,h,i)perylene	ug/g dry	6.3	0.58	<3	3.3
benzo(k)fluoranthene	ug/g dry	2.4	0.28	<10	1.2
chrysene	ug/g dry	2.9	0.43	17	<1
dibenzo(a,h)anthracene	ug/g dry	6.2	1.6	<6	4.7
fluoranthene	ug/g dry	4.6	0.38	<20	12
fluorene	ug/g dry	3.3	<0.2	16	<2
indeno(1,2,3-cd)pyrene	ug/g dry	2.3	<0.08	<2	1.7
naphthalene	ug/g dry	<6	<1	<20	<10
phenanthrene	ug/g dry	3.2	0.090	59	3.7
pyrene	ug/g dry	3.3	0.40	<10	15

COMMENTS: Polynuclear Aromatic Hydrocarbons (PAH's) analysis of soils were performed by mixing equal portions of sample (by weight) with anhydrous sodium sulfate prior to sixteen-hour extraction with 1:1 hexane:acetone in a Soxhlet apparatus. All extracts were subjected to Silica Gel column cleanup according to EPA Method 610 prior to High Pressure Liquid Chromatographic (HPLC) analysis using ultra-violet detection at 254 nm.

FOR RECRA RESEARCH, INC.

DATE

5/18/82



ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
HIGH PRESSURE LIQUID CHROMATOGRAPHY

Report Date: 5/18/82
Date Received: 3/31/82

SOIL ANALYSIS

COMPOUND	UNITS OF MEASURE	SAMPLE IDENTIFICATION (DATE)		
		^{3c} R-209-19 (3/31/82)	^{4a} R-209-20 (3/31/82)	^{4b} R-209-21 (3/31/82)
acenaphthene	µg/g dry	<0.2	<3	<4
acenaphthylene	µg/g dry	<0.3	<6	<7
anthracene	µg/g dry	0.021	<0.3	9.2
benzo(a)anthracene	µg/g dry	<0.02	3.3	<9
benzo(a)pyrene	µg/g dry	0.10	1.1	<4
benzo(b)fluoranthene	µg/g dry	0.14	<0.6	<7
benzo(g,h,i)perylene	µg/g dry	0.29	0.82	<7
benzo(k)fluoranthene	µg/g dry	0.050	<0.3	<4
chrysene	µg/g dry	0.079	3.2	24
dibenzo(a,h)anthracene	µg/g dry	0.32	<1	<10
fluoranthene	µg/g dry	<0.03	22	260
fluorene	µg/g dry	<0.03	<0.6	23
indeno(1,2,3-cd)pyrene	µg/g dry	0.14	0.56	<4
naphthalene	µg/g dry	<0.2	<3	4.4
phenanthrene	µg/g dry	0.052	1.5	72
pyrene	µg/g dry	0.20	22	310

COMMENTS: Refer to pages 1 through 9.

FOR RECRA RESEARCH, INC.

DATE

Stephen J. Frost
5/18/82



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RECRA RESEARCH, INC.

ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATIONReport Date: 5/18/82
Date Received: 3/31/82

SOIL ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DATE	PARAMETER (UNITS OF MEASURE)
		TOTAL RECOVERABLE PHENOLICS ($\mu\text{g/g DRY}$)
R-209-08 1	3/31/82	1.6
R-209-15 2	3/31/82	8.6
R-209-17 3a	3/31/82	4.2
R-209-18 3b	3/31/82	0.77
R-209-19 3c	3/31/82	<0.3
R-209-20 4a	3/31/82	2.0
R-209-21 4b	3/31/82	4.9

COMMENTS: Refer to pages 1 through 9.

FOR RECRA RESEARCH, INC.

DATE

D. V. Finn
5/18/82

ANALYTICAL RESULTS

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATIONReport Date: 5/18/82
Date Received: 3/31/82

SOIL ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DATE	PARAMETER (UNITS OF MEASURE)
		DRY WEIGHT (%)
R-209-08 1	3/31/82	44
R-209-15 2	3/31/82	14
R-209-17 3a	3/31/82	62
R-209-18 3b	3/31/82	77
R-209-19 3c	3/31/82	83
R-209-20 4a	3/31/82	89
R-209-21 4b	3/31/82	67
R-210-04	3/31/82	51

COMMENTS: Refer to pages 1 through 9.

FOR RECRA RESEARCH, INC.

DATE

Heborah J. Tracie
5/18/82

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ecology and environment

REFERENCE NO. 6



ecology and environment, inc.

195 SUGG ROAD, P.O. BOX D, BUFFALO, NEW YORK 14225, TEL. 716-632-4491, TELEX 91-9183

International Specialists in the Environment

September 11, 1987

Jack Gilbert
Town Engineer
Hamburg Water District
6100 South Park Avenue
Hamburg, New York 14075

Dear Mr. Gilbert:

The New York State Department of Environmental Conservation (NYSDEC) has required the contractor (Ecology and Environment, Inc.) for the Phase I Investigations to document all reference material used in the reports. Enclosed please find a summary of our telephone conversation on an Interview Acknowledgement Form. Please read this summary and sign at the bottom to verify its accuracy. Write in any revisions/or additions to this summary on the form, if necessary, and return as soon as possible in the envelope provided.

It was a pleasure talking with you. If you have any questions, please call at 633-9881.

Sincerely,

Pam Gunther

Pam Gunther

INTERVIEW ACKNOWLEDGEMENT FORM

SITE NAME	:		I.D. NUMBER	:	
PERSON CONTACTED	:	Jack Gilbert Town Engineer	DATE	:	9/3/87
AFFILIATION	:	Hamburg Water Dist.	PHONE NUMBER	:	649-6111
ADDRESS	:	5-6100 S. Park Ave., Hamburg, NY	CONTACT PERSON(S)	:	P. Gunther <i>PG</i>
TYPE OF CONTACT	:	Telephone			

INTERVIEW SUMMARY

Most everyone living in Blasdell and Hamburg utilizes ^{water furnished} City of ~~Buffalo municipal water.~~ *by Erie County Water Authority* The closest private well to either LSB Warehousing or Snyder Tank is a family residence at ~~the intersection of South Park Ave. and~~ ³⁷⁴² Mile Strip Road.

ACKNOWLEDGEMENT

I have read the above transcript and I agree that it is an accurate summary of the information verbally conveyed to Ecology and Environment, Inc. interviewer(s) (as revised below, if necessary).
Revisions (please write in any corrections needed to above transcript)

Signature:

J. Gilbert

Date:

9/27/87

REFERENCE NO. 7

CONTACT REPORT

AGENCY : USDA SOIL CONSERVATION SERVICE
ADDRESS : 21 S. GROVE RD., EAST AURORA, NY
TELEPHONE : (716) 652-8480
PERSON
CONTACTED : JOHN WHITNEY
TO : FRED MCKOSKY
FROM : PAM GUNTHER
DATE : AUGUST 25, 1987
SUBJECT : PRIME AGRICULTURAL LANDS THAT HAVE BEEN IN PRODUCTION
SINCE 1982 FOR DEC PHASE 1 INACTIVE HAZARDOUS WASTE
SITES OF ERIE CO.
XC : M. SIENKIEWICZ, G. FLORENTINO, J. SUNDQUIST, P. FARRELL,
FILE ND-2000

John Whitney can provide aerial photos (slides) for all hazardous waste sites in Erie Co. for the following years: 1938, 1958, 1966, 1978, 1981-1987. They cost \$1.00 each with a 2 week turnover time. Payment must be received in advance.

To obtain location on prime agricultural lands that have been in production over the past 5 years we looked at enlarged 1978 aerial photos that are updated annually from farmers that maintain crop records with the Agricultural Stabilization Conservation Service (ASCS). To receive federal subsidies the farmers must be in contact with ASCS. Therefore, the ASCS has a good record of who's growing what and where. Truck farmers do not receive federal subsidies and are excluded from ASCS records. Attached is a list of the distances to each prime agricultural farmland from the inactive hazardous waste site and the soil type that classifies the land as prime. Note that ASCS has fewer soil types classified as prime ag. lands than does the New York State classification system. New York State classifies all ASCS prime ag. lands as prime but also includes more soil types. Note this difference for the Gutenkist site. All other sites will have the same ag. land for both state and ASCS. Note this distance was calculated for up to 2 miles away from the site.

Mr. Whitney has also provided me with a bibliography of ground water resources for Erie County which is attached. I have also ordered the attached USGS reports that were recently published.

	<u>Distance</u>	<u>Soil Type</u>
Buffalo - Hopkins	> 2 miles	-
E.I. Dupont	> 2 miles	-
FMC Corp.	> 2 miles	-
Whiting Development Corp.	0	Collamer silt loam, Ag. land adjacent to site
Republic Steel	> 2 miles	-
Snyder Tank Co.	> 2 miles	Varysburg gravelly loam
Village of Springville	300 ft.	Varysburg gravelly loam
James Fox site	300 ft	Manlius shaly silt loam
Gutenkist State	1600 ft.	Farnham shaly silt loam
ASCS	6015 ft.	Blasdell shaly silt loam
Eden Sanitation Services	4950 ft.	Niagara silt loam (note: this land is only 2 acre
George Schreiber	700 ft.	Palmyra gravelly loam
Clarence Ready Mix	1700 ft.	-
Central Auto Wrecking	> 2 miles	Hamlen silt loam
H1 View Terrace	5280 ft.	-
Tift and Hopkins	> 2 miles	-
LSB Warehouse	> 2 miles	-
Berns Metals	> 2 miles	

REFERENCE NO. 8

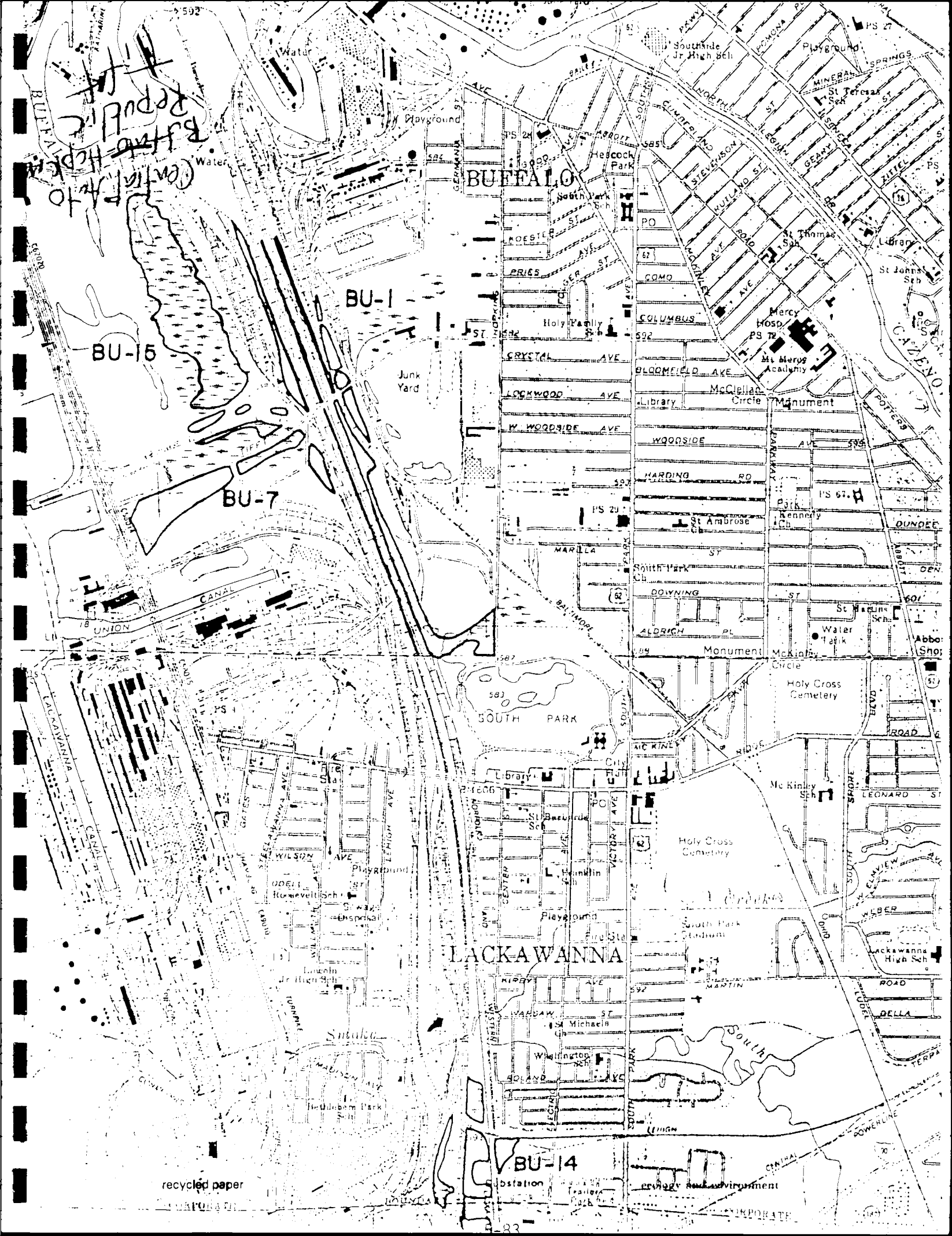
CONTACT REPORT
(TELEPHONE)

AGENCY : NYSDEC LANDS AND FOREST DIVISION
ADDRESS : 128 SOUTH ST., OLEAN, NY
PHONE NO. : 372-0888
PERSON CONTACTED : STEVE MOORADIAN, REGIONAL FISHERIES MANAGER
TO : F. MCKOSKY
FROM : P. GUNTHER
DATE : SEPTEMBER 2, 1987
SUBJECT : STATUS OF SMOKE CREEK
CC : CENTRAL AUTO WRECKING FILE, LSB WAREHOUSING FILE,
ND-2000

Smoke Creek is classified as Class C Creek. Walleye and other fish species temporarily utilize the creek during the spring, but the substrate is not presently conducive for fish spawning.

db

REFERENCE NO. 9



BUFFALO

LACKAWANNA

BU-1

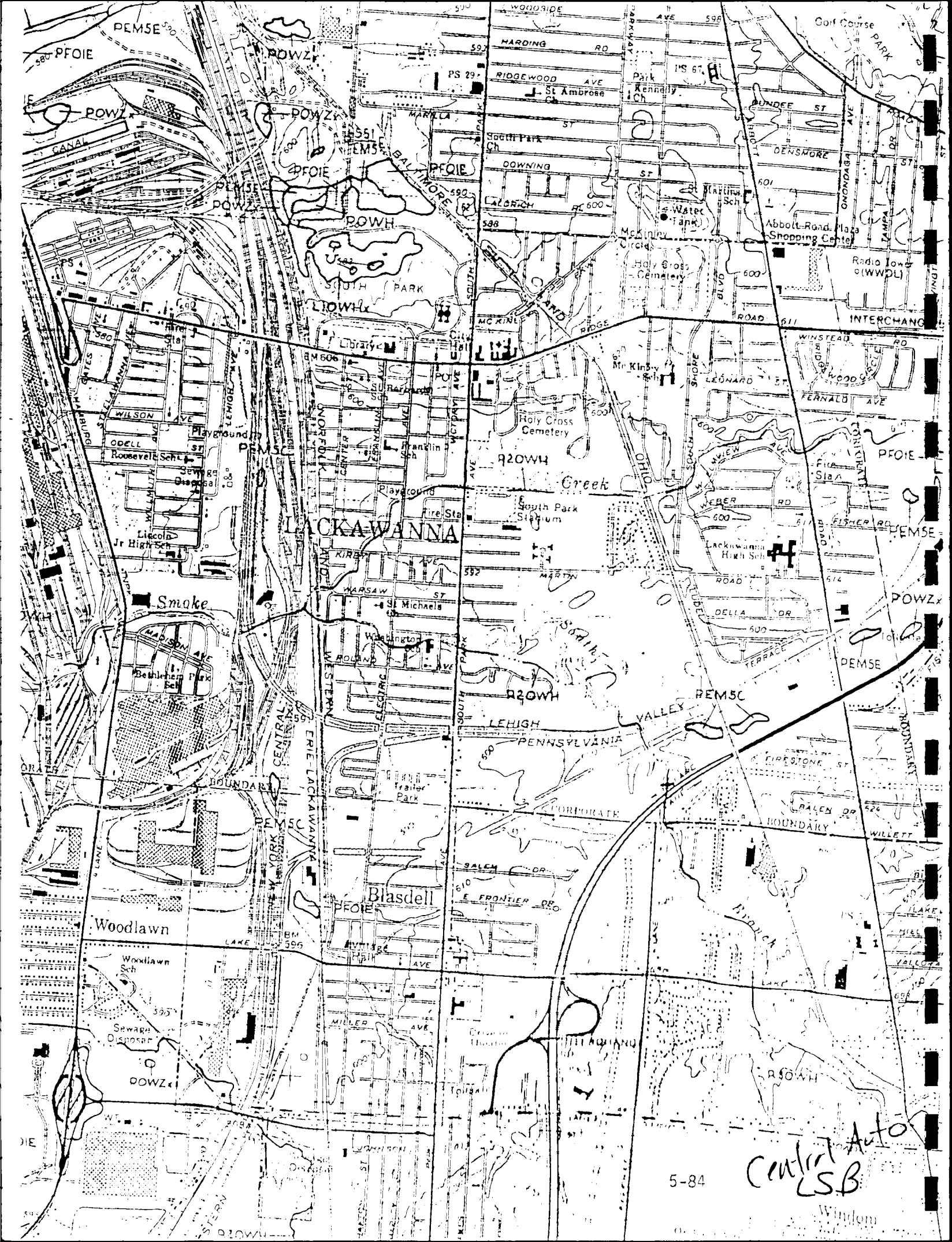
BU-15

BU-7

BU-14

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Central Auto
CSB

Windom

FRESHWATER WETLAND CLASSIFICATION

Down Republic C Auto
Tift Buttop

Instructions: Circle numbers of applicable classification characteristics and place check next to appropriate class. Note number of species to which characteristics 13, 14 or 15 apply shall be identified in parentheses with species considered separate Class II characteristic in determining item 7. Complete information on reverse side of form to substantiate your conclusions. A wetland with no Class I, II, or III characteristics is a Class IV wetland.

City/Town/Village) Buffalo
County Erie
Quad name Buffalo S.E.

Wetland name Tift Farm Wetlands
Wetland no. B01-15 DEC no. 715-01-0165
UTM Coord. 4751000m N. 1852000m E.

Inspection Dates _____
No. of sheets attached 2
Preparer _____ Date _____

CLASS I ☒

- Classic kettlehole bog
- Res. hab., thr./endg. anim. sp.
- Thr./endg. plant sp.
- Unus. abund./div. anim. sp. in region or state
- Significant flood protection for substantially developed area
- Adj./contig. to reservoir or public water supply or hydraulically connected to public water supply aquifer.

4 or more Class II characteristics

CLASS II ☐

- 8. Emgt. marsh: pur. loosestrife and/or phragmites max. 66% of covertype
- 9. 2 or more wetland structural groups
- 10. Contig. to tidal wetlands
- 11. Assoc. with ext. perm. open water
- 12. Adj./contig. C(t) or higher stream
- 13. () mig. hab. thr./endg. anim. sp.
- 14. () Res. hab. vuln. anim. sp.: state
- 15. () Vuln. plant sp.: state
- 16. Unus. abund./dv. anim. sp.: county
- 17. Archeo./paleo. significance
- 18. Unusual geologic feature
- 19. Flood protection value: agr., light or planned development area
- 20. Hydraulically connected to aquifer
- 21. Tertiary treatment capacity for a sewage disposal system
- 22. Within urbanized area
- 23. 1 of 3 lgst. wetlands: city, town, NYC Borough
- 24. In publicly owned recreation area

CLASS III ☐

- 25. Emgt. marsh: pur. loosestrife and/or phragmites min. 66% of covertype
- 26. Deciduous swamp
- 27. Shrub swamp
- 28. Floating and/or submergent veg.
- 29. Wetland open water
- 30. Contains island
- 31. Total alkalinity at least 50 ppm
- 32. Adj. to fert. upland: high base soils
- 33. Res./mig. hab. of vuln. anim. sp. Res. for region: mig. for region or state
- 34. Vuln. plant sp.: region
- 35. Part of significantly polluted permanent open water system in which pollution reduction occurs
- 36. Visible and aesthetic/open space value
- 37. 1 of 3 lgst. wetlands of same covertype within a town
- 38. Wetland acreage max. 1% of total town acreage
- 39. Publicly owned land open to public use

STRUCTURAL GROUPS

COMMENTS

APPLY?

AREA STRUCTURAL GROUPS

X 45% Herbaceous-emgt. marsh, wet
meadow min. 25% of wetland.
5% Woody - deciduous, coniferous,
shrub swamp min. 25%.
Water - submergent, floating veg.,
wetland open water min. 15%

COVERTYPE

APPLY?

AREA COVERTYPE (min. 50% of area)

Wet Meadow
45% Emergent marsh
5% Deciduous swamp
Coniferous swamp
Shrub swamp
Floating/submergent veg.
Wetland open water

If no single covertime is of at least 50% of the wetland area, add up all the separate covertime areas in each class and assign the wetland to the class representing the largest proportion of the wetland's area.

Class II

Emgt. marsh; pur. loosestrife and/or
phragmite max. 66% of covertime

TOTAL Class II

Class III

Emgt. marsh; pur. loosestrife and/or
phragmite min. 66% of covertime

Deciduous swamp

Shrub swamp

Floating/submergent veg.

Wetland open water

TOTAL Class III

Class IV

Wet meadow

Coniferous swamp

TOTAL Class IV

Wetland area is 95% open water

an open grid area

Covertime information is from the 1984 map

and covertime data is from the 1984 map

This wetland is in the T. 664 E. 1/4 N. 1/4

Preserve.

This wetland is a flooded pond

deep-water ponds.

Urbanized Area boundary is from the 1984

Bureau of Commerce Census of the

Black Star Line report

NOTE

NOTE

*****NOTICE*****

This wetland, FW No. 0V-15, is also classified as a significant coastal fish and wildlife habitat. SEE TIFFIN NATURAL PRESERVE file, under SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS, and habitat boundaries on coastal area maps.

NOTE

NOTE

FRESHWATER WETLAND CLASSIFICATION

NY 017, C.A.M.O., C.S. 10

Instructions: Circle numbers of applicable classification characteristics and place check next to appropriate class. Note number of species to which characteristics 13, 14 or 15 apply shall be identified in parentheses with species considered a separate Class II characteristic in determining item 7. Complete information on reverse side of form to substantiate your conclusions. A wetland with no Class I, II, or III characteristics is a Class IV wetland.

(V.) Blasdell, (T.) Hamburg
City, Town/Village) (C) Lackawanna
County Erie
Quad name Buffalo S.E.

Wetland name Percknall & Kahan Wetland
Wetland no. BA-14 DEC no. -
UTM Coord. 4746000m N. 186500m E.

Inspection Dates 4/13/77
No. of sheets attached 1
Preparer Date 4/13/77

CLASS I

- Classic kettlehole bog
- Res. hab., thr./endg. anim. sp.
- Thr./endg. plant sp.
- Unus. abund./div. anim. sp. in region or state
- Significant flood protection for substantially developed area
- Adj./contig. to reservoir or public water supply or hydraulically connected to public water supply aquifer.
- 4 or more Class II characteristics

CLASS II

- (8) Emerg. marsh: pur. loosestrife and/or phragmites max. 66% of covertype
- 9. 2 or more wetland structural groups
- 10. Contig. to tidal wetlands
- 11. Assoc. with ext. perm. open water
- 12. Adj./contig. C(t) or higher stream
- 13. () mig. hab. thr./endg. anim. sp.
- 14. () Res. hab. vuln. anim. sp.: state
- 15. () Vuln. plant sp.: state
- 16. Unus. abund./dv. anim. sp.; county
- (17) Archeo./paleo. significance
- 18. Unusual geologic feature
- 19. Flood protection value: agr., light or planned development area
- 20. Hydraulically connected to aquifer
- 21. Tertiary treatment capacity for a sewage disposal system
- (22) Within urbanized area
- (23) 1 of 3 best wetlands: city, town, NYC Borough
- 24. In publicly owned recreation area

CLASS III

- 25. Emerg. marsh, pur. loosestrife and/or phragmites min. 66% of covertype
- 26. Deciduous swamp
- 27. Shrub swamp
- 28. Floating and/or submergent veg.
- 29. Wetland open water
- 30. Contains island
- 31. Total alkalinity at least 50 ppm
- 32. Adj. to fert. upland high base soils
- 33. Res./mig. hab. of vuln. anim. sp.
- Res. for region; mig. for region or state
- 34. Vuln. plant sp.: region
- 35. Part of significantly polluted permanent open water system in which pollution reduction occurs
- 36. Visible and aesthetic/open space value
- (37) 1 of 3 best wetlands of same covertype within a town
- 38. Wetland acreage max. 1% of town town acreage
- 39. Publicly owned land open to public use

STRUCTURAL GROUPS

- herbaceous-emgt. marsh, wet meadow min. 25% of wetland.
- Woody - deciduous, coniferous, shrub swamp min. 25%.
- Water - submergent, floating veg., wetland open water min. 15%

COVERTYPE

- COVERTYPE (min. 50% of area)
- Wet meadow
- Emergent marsh
- Deciduous swamp
- Coniferous swamp
- Shrub swamp
- Floating/submergent veg.
- Wetland open water

If no single covertypes is of at least 50% of the wetland area, add up the separate covertypes areas in each class and assign the wetland to the class representing the largest proportion of the wetland's area.

Class II

- Emgt. marsh; pur. loosestrife and/or phragmite max. 66% of covertypes

TOTAL Class II

Class III

- Emgt. marsh; pur. loosestrife and/or phragmite min. 66% of covertypes

- Deciduous swamp

- Shrub swamp

- Floating/submergent veg.

- Wetland open water

TOTAL Class III

Class IV

- Wet meadow

- Coniferous swamp

TOTAL Class IV

Wetland Inventory Report
 National Wetland Inventory Report
 Urbanized area boundaries from 1970
 Bureau of Commerce Census of Housing
 Block statistics report.

ecology and environment

5-89

recycled paper

The wetland area consists primarily of a deciduous shrub swamp interspersed with wet meadow. Approximately 75% consisting of ~~shrub~~ deciduous shrub with 25% wet meadow. A list of vegetation as observed at the site follows:

Red-osier dogwood -	<u>Cornus</u> <u>stolonifera</u>
Silky dogwood -	<u>Cornus</u> <u>amomum</u>
Trembling aspen -	<u>Populus</u> <u>tremuloides</u>
Black willow -	<u>Salix</u> <u>nigra</u>
Willows (various) -	<u>Salix</u> <u>spp.</u>
Sumach (Staghorn) -	<u>Rhus</u> <u>typhina</u>
Silver maple -	<u>Acer</u> <u>saccharinum</u>
Crab-apple -	<u>Pyrus</u> <u>coronaria</u>
Water willow -	<u>Justica</u> <u>americana</u>
Broad-leaf Cattail - (Common)	<u>Typha</u> <u>latifolia</u>
Narrow-leaf Cattail -	<u>Typha</u> <u>angustifolia</u>
Sedges -	<u>Carex</u> <u>spp.</u>

Other herbaceous vegetation is most likely present although amount of snow prevented identification of such.

Although a portion of the wetland has been disturbed the remaining portion is of a size (over 1214 acres) which warrants protection under Article 24. The location is in a highly populated area near an industrial complex and offers habitat for wildlife species / abundant.

WETLAND CLASSIFICATION FIELD DATA SHEET

Wetland Name Proctinal + Kiatra Wetland

Quad Buffalo SE

Files _____ dir _____ from In City of Lachawanna

County Erie

Town Lachawanna & Hamburg

Acres 35

SOIL TYPES

Not determined at time of report

WETLAND VEGETATION COVERTYPES (approximate percentage)

1. Wet meadow _____ %
2. Emergent marsh 55 %
3. Deciduous swamp 33 %
4. Coniferous swamp _____ %
5. Shrub swamp 12 %
6. Submergent &/or floating _____ %
7. Wetland open water _____ %

COVERTYPE GROUPS

1. & 2. = 88 %

2. & 4. & 5. = 98 %

6. & 7. = _____ %

(do not enter totals less than 15%)

OTHER CLASSICAL ASSOCIATIONS

Classic kettlehole bog

Associated with open water

(name)

HUMAN INFLUENCE - DEGRADATION

- Con rail Tracks dissect the wetland
- Existing Land fill in a portion of the wetland

TOTAL ALKALINITY

(1) _____ (2) _____ (3) _____

(4) _____ (5) _____ mean _____

Test performed by _____

Not enough water to sample _____

Name Procknal & Katne WetlandMiles — dir — from In Lockswanna and BledsoeTopo quad Buffalo SECounty ErieTown Hamburg City of LockswannaRegion 9 ☒ Natural ☐ ArtificialInterspersion 6 Vegetative Cover 95 %6-24" depth 40-50 %

WETLAND TYPES

Inland Fresh

1. Seasonally flooded basins/flats — %2. Fresh meadows — %3. Shallow fresh marshes — %4. Deep fresh marshes 55 %5. Open fresh marshes — %6. Shrub swamps 12 %7. Wooded swamps 33 %8. Bogs — %

Coastal Fresh

12. Shallow fresh marshes — %13. Deep fresh marshes — %14. Open fresh water — %

Coastal Saline

15. Salt flats — %16. Salt meadows — %18. Regularly flooded salt marshes — %19. Sounds and bays — %

VEGETATIVE CLASSES

Trees

1. Live deciduous trees 33 %2. Live evergreen trees — %3. Dead trees — %

Shrubs

4. Tall slender shrubs 12 %5. Bushy shrubs — %6. Low compact shrubs — %7. Low sparse shrubs — %8. Aquatic shrubs — %9. Broad shrubs — %

Emergents

10. Sub-shrubs — %11. Robust emergents 55 %12. Tall meadow emergents — %13. Short meadow emergents — %14. Narrow-leaved marsh emergents — %15. Broad-leaved marsh emergents — %

Surface Vegetation

16. Floating-leaved vegetation — %17. Floating vegetation — %

Submergents

18. Submergents — %

If open water, proportion of submergents:

☐ 0-1/3 ☒ 1/3-2/3 ☐ 2/3-1☐ Meadow portion grazedPurple loosestrife: ☐ None ☒ Ind. plants☐ Clumps < 1/2 m. diam. ☐ Clumps > 1/2 m. diam.☐ Adjoining clumps through an area☐ Solid, most of wetland

Green timber impoundment potential

Mature Trees ☐ or overmature trees ☐ 80-100'☐ 80% crown closure ☐ About 30" + thick☐ Red, Swamp Wn. Oak, Red Ash☐ Understory: Sensitive Fern/Arrow Arum

Water

Total alkalinity (1) — (2) — (3) —(4) — (5) — (6) — (7) —(8) — (9) — (10) — pH: —Water temp. (1) — (2) — (3) —(4) — (5) — (6) — (7) —(8) — (9) — (10) —☐ Not enough water to sampleInvestigator: J. SniderTitle: Sr. Wildlife BiologistDate: 4/13/79 Time: 9 a.m. - noon

Wetland Area:

35 acres

Wetland Soils

Info not off
at time of repo

FRESHWATER WETLAND CLASSIFICATION

Trif-Buf-Hop

Instructions: Circle numbers of applicable classification characteristics and place check next to appropriate class. Note number of species to which characteristics 13, 14 or 15 apply shall be identified in parentheses with species considered a separate Class II characteristic in determining item 7. Complete information on reverse side of form to substantiate your conclusions. A wetland with no Class I, II, or III characteristics is a Class IV wetland.

City, town, village) Buffalo
County Erie
Ad. name Buffalo S.E.

Wetland name Republic Steel Wetland
Wetland no. BU-1 DEC no. 915-01-0212
UTM Coord. 4750100m N: 186100m E.

Inspection Dates 7/20/77 7/29/77
No. of sheets attached 1
Preparer Kenn Lynch Date 4/12/81

CLASS I X

- Classic kettlehole bog
- Res. hab., thr./endg. anim. sp.
- Thr./endg. plant sp.
- Unus. abund./div. anim. sp. in region or state
- Significant flood protection for substantially developed area
- Adj./contig. to reservoir or public water supply or hydraulically connected to public water supply aquifer.
- 4 or more Class II characteristics

CLASS II

- ⑧ Emgt. marsh: pur. loosestrife and/or phragmites max. 66% of covertype
- ⑨ 2 or more wetland structural groups
- 10. Contig. to tidal wetlands
- 11. Assoc. with ext. perm. open water
- 12. Adj./contig. C(t) or higher stream
- 13. () mig. hab. thr./endg. anim. sp.
- 14. () Res. hab. vuln. anim. sp.: state
- 15. () Vuln. plant sp.: state
- 16. Unus. abund/dv. anim. sp.; county
- 17. Archeo./paleo. significance
- 18. Unusual geologic feature
- 19. Flood protection value: agr., light or planned development area
- 20. Hydraulically connected to aquifer
- 21. Tertiary treatment capacity for a sewage disposal system
- ②② Within urbanized area
- ②③ 1 of 3 lgst. wetlands: city, town, NYC Borough
- 24. In publicly owned recreation area

CLASS III

- 25. Emgt. marsh, pur. loosestrife and/or phragmites min. 66% of covertype
- 26. Deciduous swamp
- 27. Shrub swamp
- 28. Floating and/or submergent veg.
- 29. Wetland open water
- 30. Contains island
- 31. Total alkalinity at least 50 ppm
- 32. Adj. to fert. upland; high base soils
- 33. Res./mig. hab. of vuln. anim. sp. Res. for region; mig. for region or state.
- 34. Vuln. plant sp.; region
- 35. Part of significantly polluted permanent open water system in which pollution reduction occurs
- 36. Visible and aesthetic/open space value
- 37. 1 of 3 lgst. wetlands of same covertype within a town
- 38. Wetland acreage max. 1% of total town acreage
- 39. Publicly owned land open to public use

STRUCTURAL GROUPS

CONTENTS

APPLY?	AREA	STRUCTURAL GROUPS
X	65%	Herbaceous-emgt. marsh, wet meadow min. 25% of wetland.
	10%	Woody - deciduous, coniferous, shrub swamp min. 25%.
X	25%	Water - submergent, floating veg., wetland open water min. 15%

APPLY?	AREA	COVERTYPE
		COVERTYPE (min. 50% of area)
	%	Wet Meadow
X	65%	Emergent marsh
	10%	Deciduous swamp
	%	Coniferous swamp
	%	Shrub swamp
	25%	Floating/submergent veg.
	%	Wetland open water

If no single covertime is of at least 50% of the wetland area, add up all the separate covertime areas in each class and assign the wetland to the class representing the largest proportion of the wetland's area.

5-94	%	Class II
	%	Emgt. marsh; pur. loosestrife and/or phragmite max. 66% of covertime
	%	TOTAL Class II
	%	Class III
	%	Emgt. marsh; pur. loosestrife and/or phragmite min. 66% of covertime
	%	Deciduous swamp
	%	Shrub swamp
	%	Floating/submergent veg.
	%	Wetland open water
	%	TOTAL Class III
	%	Class IV
	%	Wet meadow
	%	Coniferous swamp
	%	TOTAL Class IV

Wetland area is 50% area determined by
area grid overlay.

Covertime information is from field inspection
Report. Accuracy on field report differs from
above acreage because 1 area on report
is included as part of another wetland
and another area is no longer part of
this wetland. (See enclosed map with notes)

Wetland within delineated area is from
using 1970 Bureau of Commerce
Housing Block Statistics report.

This wetland is near the
Nature Preserve

Name Republic Steel Wetland
Files 1 dir NW from Lackawana
Topo quad Buffalo SE
County Erie
Town City of Buffalo
Region 9 ☒ Natural ☐ Artificial
Interspersion 6 Vegetative Cover 80 %
6-24" depth 30 %

WETLAND TYPES

Inland Fresh

1. Seasonally flooded basins/flats _____ %
2. Fresh meadows 10 %
3. Shallow fresh marshes 55 %
4. Deep fresh marshes 10 %
5. Open fresh marshes 15 %
6. Shrub swamps _____ %
7. Wooded swamps 10 %
8. Bogs _____ %

Coastal Fresh

12. Shallow fresh marshes _____ %
13. Deep fresh marshes _____ %
14. Open fresh water _____ %

Coastal Saline

15. Salt flats _____ %
16. Salt meadows _____ %
18. Regularly flooded salt marshes _____ %
19. Sounds and bays _____ %

VEGETATIVE CLASSES

Trees

1. Live deciduous trees 10 %
2. Live evergreen trees _____ %
3. Dead trees _____ %

Shrubs

4. Tall slender shrubs _____ %
5. Bushy shrubs _____ %
6. Low compact shrubs _____ %
7. Low open shrubs _____ %

recycled paper

8. Aquatic shrubs _____ %
9. Dead shrubs _____ %
Emergents
10. Sub-shrubs _____ %
11. Robust emergents 55 %
12. Tall meadow emergents 8 %
13. Short meadow emergents 10 %
14. Narrow-leaved marsh emergents _____ %
15. Broad-leaved marsh emergents _____ %

Surface Vegetation

16. Floating-leaved vegetation 10 %
17. Floating vegetation _____ %

Submergents

18. Submergents 15 %

If open water, proportion of submergents:

☐ 0-1/3 ☒ 1/3-2/3 ☐ 2/3-1

☐ Meadow portion grazed

Purple loosestrife: ☐ None ☐ Ind. plants

☒ Clumps (<1m. diam.) ☐ Clumps (>1m. diam.)

☐ Adjoining clumps through an area

☐ Solid, most of wetland

Green timber impoundment potential

Mature Trees
☐ or overmature trees ☐ 80-100'

☐ 80% crown closure ☐ About 30"+ much

☐ Red, Swamp Wh. Oak, Red Ash

☐ Understory: Sensitive Fern/Arrow Arum

Water

Total alkalinity (1) _____ (2) _____ (3) _____

(4) _____ (5) _____ (6) _____ (7) _____

(8) _____ (9) _____ (10) _____ mean: _____

Water temp. (1) _____ (2) _____ (3) _____

(4) _____ (5) _____ (6) _____ (7) _____

(8) _____ (9) _____ (10) _____

☐ Not enough water to sample

Investigator: James Snider

Title: Sr. Wildlife Biologist

Date: 7/20/78 & 7/24/78 Micrology and environment

Wetland Size:58 acres

main influence

Min. Mod. Maj.

Several functioning railroad tracks ☒ ☐ ☐
 Disposal site for materials from Republic Steel ☒ ☐ ☐
 _____ ☐ ☐ ☐
 _____ ☐ ☐ ☐
 _____ ☐ ☐ ☐
 _____ ☐ ☐ ☐

Prod. loss to degradation 10-20%

Source: J. Snider

Vulnerability to destruction

-----low-----medium-----high-----
☐ ☐ ☐ ☐ ☒ ☐
 0 1 2 3 4 5

Reason for vulnerability classification

Portions of this wetland on both Republic Steel property & railroad property potential site for filling & storage of waste materials

Source: J. Snider

Enhancement possibility

☒ low ☐ medium ☐ high

Work needed: _____

Expected gain _____

Source: _____

Known ownership ☐ Federal ☐ State ☐ Local

☐ Conservation Organ. ☐ Sport ☒ Private

MISCELLANEOUS VALUES (use boxes to describe)

Unique Geology ☐

Source: _____
 Unique In Environments

Portions of this wetland near, Tiff Farm Nature Preserve
 J. Snider

Source: _____
 Flood Control ☐

Source: _____
 Sediment Filtering ☐

Source: _____
 Potential Use ☐

Source: _____
 Aesthetic/Open Space ☐

Source: _____
 Historical Value ☐

Source: _____
 Migration Distribution
 Flight lane ☐

Source: _____
 _____ ☐

Source: _____

FRESHWATER WETLAND CLASSIFICATION

Severn Republic photo
Tift Buf-Hop

Instructions: Circle numbers of applicable classification characteristics and place check next to appropriate class. Note number of species to which characteristics 13, 14 or 15 apply shall be identified in parentheses with species considered a separate Class II characteristic in determining item 7. Complete information on reverse side of form to substantiate your conclusions. A wetland with no Class I, II, or III characteristics is a Class IV wetland.

City, town, village) Buffalo
County Erie
Road name Buffalo S.E.

Wetland name Republic Steel Wetland
Wetland no. B11-1 DEC no. 915-01-0212
UTM Coord. 4750100m N: 186100m E.

Inspection Dates 7/1/77 - 7/2/77
No. of sheets attached 1
Preparer J. J. J. Date 7/2/77

CLASS I ☒

- Classic kettlehole bog
- Res. hab., thr./endg. anim. sp.
- Thr./endg. plant sp.
- Unus. abund./div. anim. sp. in region or state
- Significant flood protection for substantially developed area
- Adj./contig. to reservoir or public water supply or hydraulically connected to public water supply aquifer.
- 4 or more Class II characteristics

CLASS II ☐

- ⑧ Emgt. marsh; pur. loosestrife and/or phragmites max. 66% of covertype
- ⑨ 2 or more wetland structural groups
- 10. Contig. to tidal wetlands
- 11. Assoc. with ext. perm. open water
- 12. Adj./contig. C(t) or higher stream
- 13. () mig. hab. thr./endg. anim. sp.
- 14. () Res. hab. vuln. anim. sp.: state
- 15. () Vuln. plant sp.: state
- 16. Unus. abund./dv. anim. sp.: county
- 17. Archeo./paleo. significance
- 18. Unusual geologic feature
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- 20. Hydraulically connected to aquifer
- 21. Tertiary treatment capacity for a sewage disposal system
- ②② Within urbanized area
- ②③ 1 of 3 lgst. wetlands: city, town, NYC Borough
- 24. In publicly owned recreation area

CLASS III ☐

- 25. Emgt. marsh; pur. loosestrife and/or phragmites min. 66% of covertype
- 26. Deciduous swamp
- 27. Shrub swamp
- 28. Floating and/or submergent veg.
- 29. Wetland open water
- 30. Contains island
- 31. Total alkalinity at least 50 ppm
- 32. Adj. to fert. upland; high base soils
- 33. Res./mig. hab. of vuln. anim. sp. Res. for region; mig. for region or state.
- 34. Vuln. plant sp.: region
- 35. Part of significantly polluted permanent open water system in which pollution reduction occurs
- 36. Visible and aesthetic/open space value
- 37. 1 of 3 lgst. wetlands of same covertype within a town
- 38. Wetland acreage max. 15% of total town acreage
- 39. Publicly owned land open to public use

STRUCTURAL GROUPS

COMMENTS

APPLY?	AREA	STRUCTURAL GROUPS
X	65%	Herbaceous-emgt. marsh, wet meadow min. 25% of wetland.
	10%	Woody - deciduous, coniferous, shrub swamp min. 25%.
X	25%	Water - submergent, floating veg., wetland open water min. 15%

APPLY?	AREA	COVERTYPE
		COVERTYPE (min. 50% of area)
	%	Wet Meadow
X	65%	Emergent marsh
	10%	Deciduous swamp
	%	Coniferous swamp
	%	Shrub swamp
	25%	Floating/submergent veg.
	%	Wetland open water

If no single covertime is of at least 50% of the wetland area, add up all the separate covertime areas in each class and assign the wetland to the class representing the largest proportion of the wetland's area.

Class II

% Emgt. marsh; pur. loosestrife and/or phragmite max. 66% of covertime

TOTAL Class II

Class III

% Emgt. marsh; pur. loosestrife and/or phragmite min. 66% of covertime

% Deciduous swamp

% Shrub swamp

% Floating/submergent veg.

% Wetland open water

TOTAL Class III

Class IV

% Wet meadow

% Coniferous swamp

TOTAL Class IV

5-98

Wetland area is 100%

acre area is 100%

Covertime information

Report. According to report, the wetland

above acreage has been determined

is included as part of wetland area

and another area is no longer part of

this wetland. (See enclosed map with area)

Wetland within delineated area is 100%

using 1970 Bureau of Commerce

Housing Block Statistics report.

This wetland is near the 1000 ft

- Nature Preserve

WETLAND INVENTORY FIELD DATA SHEET

CLASSIFICATION

UTM _____
Additional
Comments

Name Republic Steel Wetland
Files 1 dir NW from Lackawana
Topo quad Buffalo SE
County Erie
Town City of Buffalo
Region 9 ☒ Natural ☐ Artificial
Interspersion 6 Vegetative Cover 80 %
6-24" depth 30 %

WETLAND TYPES

Inland Fresh

1. Seasonally flooded basins/flats _____ %
2. Fresh meadows 10 %
3. Shallow fresh marshes 55 %
4. Deep fresh marshes 10 %
5. Open fresh marshes 15 %
6. Shrub swamps _____ %
7. Wooded swamps 10 %
8. Bogs _____ %

Coastal Fresh

12. Shallow fresh marshes _____ %
13. Deep fresh marshes _____ %
14. Open fresh water _____ %

Coastal Saline

15. Salt flats _____ %
16. Salt meadows _____ %
18. Regularly flooded salt marshes _____ %
19. Sounds and bays _____ %

VEGETATIVE CLASSES

Trees

1. Live deciduous trees 10 %
2. Live evergreen trees _____ %
3. Dead trees _____ %

Shrubs

4. Tall slender shrubs _____ %
5. Bushy shrubs _____ %
6. Low/compact shrubs _____ %
recycled paper
7. Low open shrubs _____ %

8. Aquatic shrubs _____ %
9. Dead shrubs _____ %
- Emergents
10. Sub-shrubs _____ %
11. Robust emergents 55 %
12. Tall meadow emergents 8 %
13. Short meadow emergents 10 %
14. Narrow-leaved marsh emergents _____ %
15. Broad-leaved marsh emergents _____ %

Surface Vegetation

16. Floating-leaved vegetation 10 %
17. Floating vegetation _____ %

Submergents

18. Submergents 15 %
- *****
If open water, proportion of submergents:

☐ 0-1/3 ☒ 1/3-2/3 ☐ 2/3-1

☐ Meadow portion grazed

Purple loosestrife: ☐ None ☐ Ind. plants

☒ Clumps (<1m. diam.) ☐ Clumps (>1m. diam.)

☐ Adjoining clumps through an area

☐ Solid, most of wetland

Green timber impoundment potential

Nature ☐ or overmature trees ☐ Trees 80-100'

☐ 80% crown closure ☐ About 30"+ much

☐ Red, Swamp Wh. Oak, Red Ash

☐ Understory: Sensitive Fern/Arrow Arum

Water

Total alkalinity (1) _____ (2) _____ (3) _____

(4) _____ (5) _____ (6) _____ (7) _____

(8) _____ (9) _____ (10) _____

Water temp. (1) _____ (2) _____ (3) _____

(4) _____ (5) _____ (6) _____ (7) _____

(8) _____ (9) _____ (10) _____

☐ Not enough water to sample

Investigator: James Snider

Title: Sr. Wildlife Biologist

Date: 7/20/78 & 7/24/78 Ecology and environment

Wetland Size:
58 acres

Human Influence Min. Mod. Maj.

Several functioning ☒ ☐ ☐

railroad tracks ☐ ☐ ☐

Disposal site for ☒ ☐ ☐

materials from ☐ ☐ ☐

Republic Steel ☐ ☐ ☐

☐ ☐ ☐

☐ ☐ ☐

☐ ☐ ☐

Prod. loss to degradation 10-20%

Source: J. Snider

Vulnerability to destruction

-----low-----medium-----high-----

☐ ☐ ☐ ☐ ☒ ☐

0 1 2 3 4 5

Reason for vulnerability classification

Portions of this wetland

on both Republic Steel

property & railroad property

potential site for filling & storage

of waste materials

Source: J. Snider

Enhancement possibility

☒ low ☐ medium ☐ high

Work needed: _____

Expected gain _____

Source: _____

Known ownership ☐ Federal ☐ State ☐ Local

☐ Conservation Organ. ☐ Sport ☒ Private

MISCELLANEOUS VALUES (use boxes to describe)

Unique Geology ☐

Source: _____

Unique In Environs _____

Portions of this wetland

near, Tiff Farm Nature Preserve

J. Snider

Source: _____

Flood Control ☐

Source: _____

Sediment Filtering ☐

Source: _____

Potential Use ☐

Source: _____

Aesthetic/Open Space ☐

Source: _____

Historical Value ☐

Source: _____

Migration Distribution

Flight lane ☐

Source: _____

Source: _____

Source: _____

REFERENCE NO. 10

INTERVIEW ACKNOWLEDGEMENT FORM

SITE NAME	:		I.D. NUMBER	:	
PERSON	:	Allen Strycharz	DATE	:	9/3/87
CONTACTED	:	Senior Engineering Aide	PHONE NUMBER	:	827-6425
AFFILIATION	:	Lackawanna Water Dist.	CONTACT	:	
ADDRESS	:	714 Ridge Rd.	PERSON(S)	:	P. Gunther
TYPE OF CONTACT	:	Lackawanna, NY 14218			GA
	:	Telephone			

INTERVIEW SUMMARY

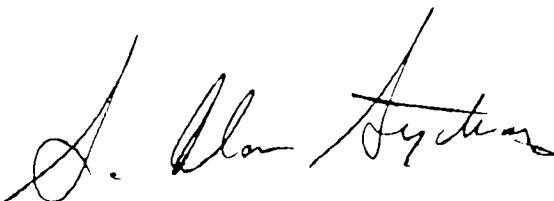
Everyone in the City of Lackawanna utilizes municipal water. The water source is Lake Erie at Sturgen Point - 15 miles south of Lackawanna.

ACKNOWLEDGEMENT

I have read the above transcript and I agree that it is an accurate summary of the information verbally conveyed to Ecology and Environment, Inc. interviewer(s) (as revised below, if necessary).

Revisions (please write in any corrections needed to above transcript)

Signature:



Date:

9/17/87

REFERENCE NO. 11

om Page No. _____

10.00 (Cindy weather 70°F - Sam Hunter and the Sheriff - Site Inspection)

James (Jackie) O'Connell

Acquired property in 1986

Start name is 303 3rd St.

new material that there was simply just here is the result of the
 property owner claim that it was because of other
 parked cars seen outside of the property boundaries
 He said it was political between the State and City and County officials

City County municipal water - water is on municipal water here
 that the O'Connell family of

James was just a little bit - Complaint about
 around the - He had a lot of cars here - but was not named
 out

James' car was always out frequently - his personal car.
 The vehicles in the yard are for storage of transmissions
 Cars in the back of the yard are James' but were formerly
 James'. The O'Connell family was running the yard.
 There is a yard for rebuilding or burned buildings in the yard.

Two buildings burned in the yard - about 40 years ago - He
 wants to build 2 buildings in the yard
 The ground is for under the concrete - foundation

He says neither have not completed this
 Owned 333 for 15 years (the transmission exchange shop)

The site appears to be used for storage only. There is a fence around
 the property site which is locked. There is a large DO NOT ENTER sign at the
 front gate. The frontage building at Central And Trucking appears unused
 stored at the site are different automobile parts including many
 transmissions. The site is level with little vegetation growing within property
 boundaries. There is a long row of cars against the south property fence.
 There were formerly Mrs. Shivers (the previous property owner's) cars
 There is a considerable amount of oil laying in puddles
 about the site. There does not appear to be any intermittent

To Page N

Witnessed & Understood by me,

Samuel Hunter

Date

17 Sept 87

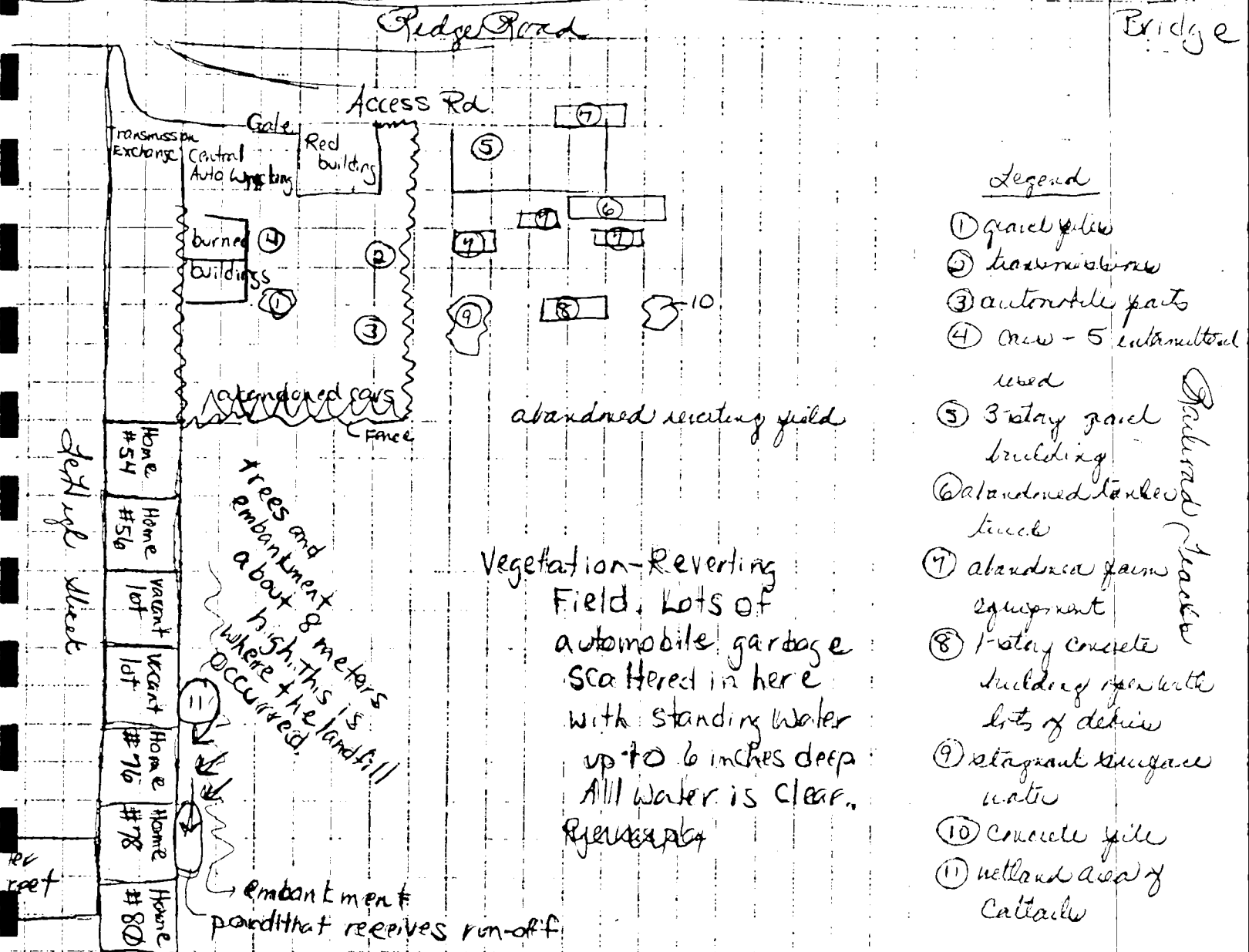
Invented by

Recorded by

Date

stream on site as any surface runoff.

↑ North



Outside the fenced area is property owned by Stanley Tomala. He is presently in a nursing home. He leased land to Mr. Richard Sheres. Mr. Sheres has constructed a landfill on the Tomala land. He deposited automobile debris in the landfill which can be seen coming out of the sides of the embankment. After the land was leveled, Mr. Sheres built up a large fill area so it is no longer level.

An HNW was used and no readings were detected above background level

n Page No. _____

Neighborhood Interviews

- 54 Lehigh - Home occupied, door open, none answered the doorbell.
- 56 Lehigh - owned by Stanley Marcy who moved into the house in 1985 - very rude - refused to answer questions. Stated that all wrecking companies here get problems and walked away.

78 Lehigh - owned by Helen Jaczko. Mrs. Jaczko stated that she has lived on her home with her husband since 1933. Her home abuts the Tomoka embankment. There is a continuous run-off from the embankment into her backyard. It becomes so severe that she has to operate a pump to pump the water out of the backyard, and into the front street. She has had contact with the Health Department since Mr. Shivers started using Tomoka's property as a landfill.

Mr. Shivers told her that he was going to form a large landfill on the Tomoka's property, and eventually the landfill would extend into the property of the homes along East Lehigh Street. This would include her backyard.

She said leachate continuously flowed out of the embankment into her backyard. She said that once it flooded her basement.

Mrs. Jaczko also said that the debris in the landfill was initially tires but later included automobiles, automobile parts, household demolition material, and toward the north end of the landfill Mrs. Jaczko believed that there were buried drums.

Mrs. Jaczko says that the landfill is about 70 feet wide but she didn't provide a length estimate. She said that the area was originally an agricultural field but there were trees on the west side of the lot that Mr. Shivers cut down. She said he wanted to cut down trees she owned too.

Mrs. Jaczko has a garden in her backyard where the leachate probably spread. She has tomatoes, peas, strawberries, raspberries and grapes.

78 Lehigh - William Dickson's owner lives in leachate yard.

To Page No. _____

Witnessed & Understood by me,

Date

Invented by

Date

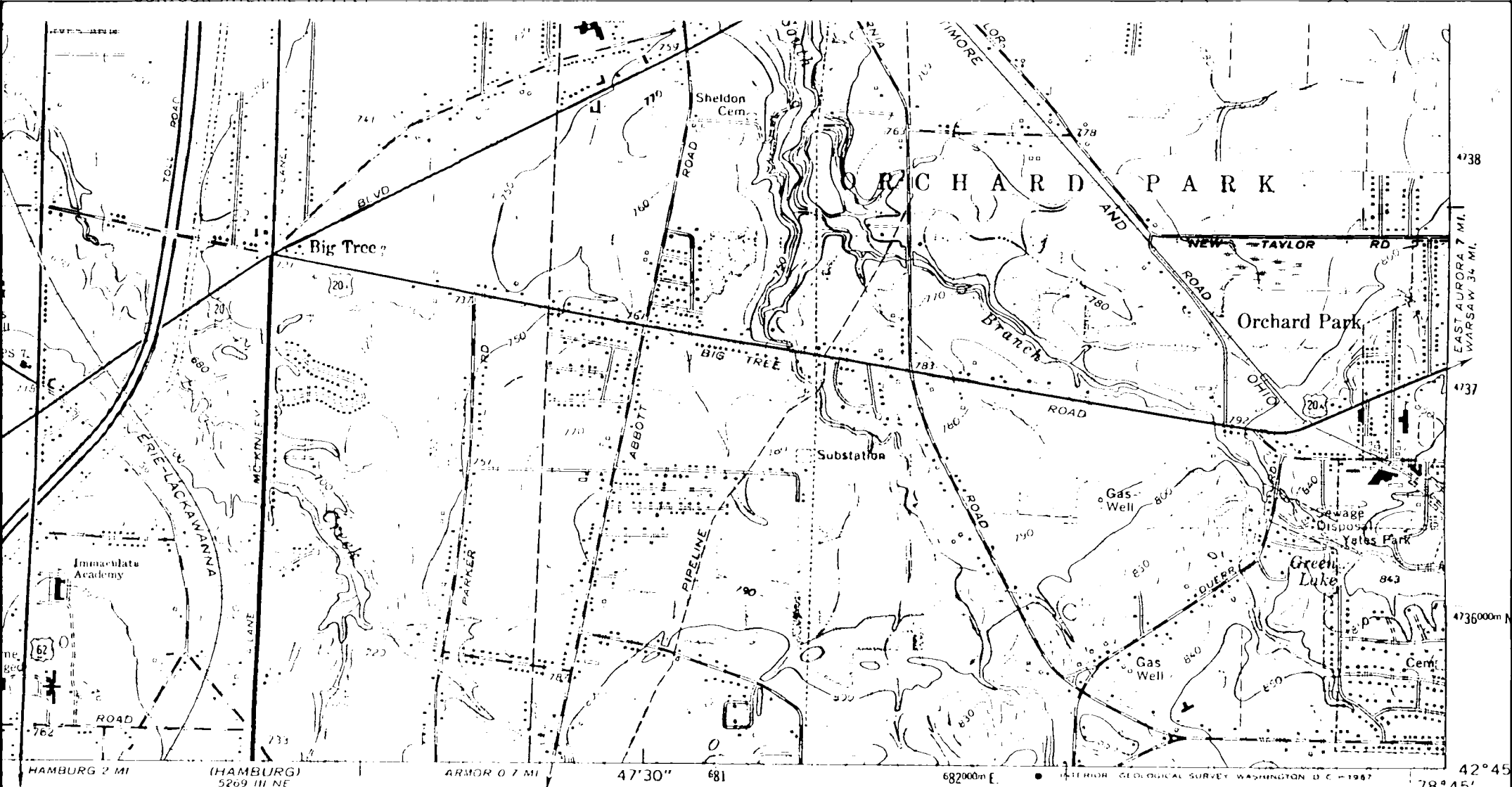
17 Sept 87

Recorded by

5-106

Doreen Hunter

REFERENCE NO. 12



SCALE 1:24,000



CONTOUR INTERVAL 10 FEET

DATUM IS MEAN SEA LEVEL

DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS LOW WATER 568.6 FEET



QUADRANGLE LOCATION

ROAD CLASSIFICATION

- | | | | |
|------------------|-------------|-----------------|--|
| Heavy duty | | Light duty | |
| Medium duty | | Unimproved dirt | |
| Interstate Route | U. S. Route | State Route | |

BUFFALO SE, N. Y.

SE/4 BUFFALO 15' QUADRANGLE

N4245—W7845/7.5

1965

AMS 5269 IV SE—SERIES V821

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
 FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242
 FOR DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

REFERENCE NO. 13

FINAL DRAFT
SITE INSPECTION REPORT
AND HAZARDOUS RANKING SYSTEM MODEL
CENTRAL AUTO WRECKING
LACKAWANNA, NEW YORK

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO.

02-8303-123A

CONTRACT NO. 68-01-6699

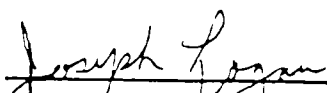
FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

REVISION 1, MARCH 18, 1985

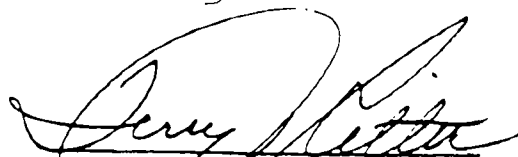
NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY



JOSEPH LOGAN
PROJECT MANAGER

REVIEWED/APPROVED BY



TERRY A. RITTER
REGIONAL PROJECT MANAGER

REFERENCE NO. 14

COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT & PLANNING
DIVISION OF ENVIRONMENTAL CONTROL

MEMORANDUM

FROM Cameron O'Connor *Cameron* DATE May 12, 1980
TO Robert Mitrey, NYSDEC
SUBJECT Central Auto Wrecking, 343 Ridge Road, City of Lackawanna
Illegal C & D Site and Complaint #01324 Investigation
(Landfilling of tires)

In response to a complaint the writer performed a May 8, 1980 field investigation of the above site.

The writer toured the area with James Scherer owner of Central Auto Wrecking, and no landfilling of tires was observed.

However, Mr. Scherer is filling the back of his property with construction and demolition debris without a permit pursuant to Part 360. Debris observed on site consisted of asphalt and concrete. No wood is being accepted. The source of the material is from the Ridge Road bridge reconstruction project. The purpose of the filling operation is site improvements.

Mr. Scherer has been filling the area for some time and the site looks well managed. Completed areas have been landscaped (seeding to grass and bushes). Mr. Scherer controls the type of debris accepted and its placement.

During the inspection, no adverse effect to any environmental sensitive areas were observed.

As per Mr. Scherer, the area is zoned appropriately and has City of Lackawanna approvals.

The writer contacted the City of Lackawanna Engineering Department and was advised that there is no specific permit requirement (from the City) for the use of concrete and asphalt for fill. However, the City is aware of the situation and approved of the operation.

There is a boundary feud with two neighbors in the area and Central Auto Wrecking. However it appears that any infringement is on the neighbors part. As per Mr. Scherer, a surveyors map is available.

The writer advised Mr. Scherer of the Rules and Regulation of Part 360 and application material sent. Mr. Scherer was not told to cease operations immediately.

Robert Mitrey
May 12, 1980
Page 2

Enclosed is a copy of the complaint card, letter to Mr. Scherer, site sketch, Locator Map, and field inspection report.

COC:ao
Attach.

cc: J. Scherer

REFERENCE NO. 15

COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT & PLANNING
DIVISION OF ENVIRONMENTAL CONTROL

MEMORANDUM

TO Robert Mitrey, Attention Chet Janik DATE July 23, 1980
FROM Cameron O'Connor *(initials)*
SUBJECT Central Auto Trucking, C & D Site #15S34

In response to a July 21, 1980 complaint, I performed a field inspection of the above area on July 22, 1980.

I met with Mayor Kuwik of Lackawanna, Mr. Collerno, City Chief Engineer and 20 residents of Lehigh Avenue (see attached list).

The landfill site was observed from several backyards located on Lehigh Avenue. Complaints about the landfilling operation included vectors, noise, dust, drainage problems, boundary problems and the disposal of tires (thousands). Photographs were available but none showed any great accumulation of tires.

As per Mr. Collerno, the City of Lackawanna does not ~~have~~ require a specific approval for the landfill operation. In addition, Mr. Collerno was not aware that Part 360 covered C & D operations for property improvements.

During my past conversations with City of Lackawanna officials, it seemed that they had no great concerns in regard to Mr. Scherer's operation, however during this inspection City officials seemed greatly concerned. Mayor Kuwik inquired as to the purpose of the Departments inspection and what action was going to be taken. (He also wants to be kept informed of all new developments).

I advised Mayor Kuwik about Part 360 and that a complaint investigation was being conducted. I also advised the Mayor of part investigations and that pursuant to DEC's July 9, 1980 letter, all dumping of C & D material is prohibited until approval is received from DEC.

During the inspection of the site, the following were observed:

- 1) The continued disposal of concrete (with retaining rods) asphalt, and rock. (Several trucks were observed).
- 2) Steep slopes were noted on the ^{west} ~~north~~ slope of the landfill.
- 3) Erosion was observed on the ^{west} ~~north~~ slope of the landfill.

Robert Mitrey, Attn: Chet Janik
July 23, 1980
Page 2

by people on enclosed list
Due to the excessive amount of loud discussions/during the inspection, I was unable to determine if noise is a nuisance off site.

After the inspection I received DEC's July 9, 1980, Notice of Incomplete Application with Mr. Scherrer and Mr. Scherrer was advised that all further disposal of C & D is prohibited until approved by DEC.

Mr. Scherrer contacted his lawyer so that the situation would be explained to him.

Enclosed is a copy of the field inspection report, site sketch, and letter to Central Auto Wrecking.

COC:ao
Enc.

cc: D. Campbell

REFERENCE NO. 16

New York State Department of Environmental Conservation

MEMORANDUM

TO: Robert Mitrey
FROM: Chester Janik
SUBJECT: Central Auto Wrecking (Mr. Russell Scherer)
Legal Proceeding Status and WORKS 12/45/80 STATUS REPORT
DATE: December 19, 1980

The subject proceeding has again been delayed. Mr. Burke advised this case was rescheduled for December 23, 1980.

Mr. Burke advised that (with Mr. Burke's approval) the respondent agreed to plead guilty providing the fine is suspended. He said he will under those circumstances provide remedial work required.

The unusual amount of time spent by DEC and ECDEP forces, the total lack of cooperation by the respondent, many extraneous circumstances and the proposed agreement prompts this report.

This investigation was initiated by ECDEP by Mr. C. O'Connor when he telephoned for assistance in a problem which resulted from his inspection of a demolition dumping violation.

Mr. O'Connor called because he was deluged during inspection by verbal complaints by many residents and some City officials demanding legal action to prevent continued environmental degradation of their community.

The writer went to meet with Mr. Scherer the following day. I reiterated a directive that Mr. O'Connor gave him the day before, namely, that he is in violation of Part 360 and must discontinue dumping demolition wastes until he receives written approval from this Department.

After a brief meeting with Mr. Scherer and as I was leaving, in view of Mr. Scherer I witnessed and he, three loaded demolition trucks entering Central Auto Wrecking. I drove around the block and returned to find all three unloading on Mr. Scherer's lot. I followed the unloaded trucks later and learned they were loading at the Ralston Purina demolition job.

I then contacted Mr. Burke for instructions on a best procedure for follow-up on this violation. He recommended I have a Conservation Officer give Mr. Scherer a citation. Subsequently, C.O. Becker arrived and during his arrival three more trucks were dumping; thus the legal action resulted.

Following are pertinent investigative facts which may govern continued policies and the writer's recommendation.

Mr. Scherer, who defied a directive not to dump within a half hour period further displayed the following actions which showed his disregard for regulations and the environment.

1. The demolition material, which he admitted, "he did not bother to learn the character of", was dumped on all properties bounding the property he leases - - including (according to Erie County Water Authority Engineer, Bob Bronkie) dumping on a water easement which Mr. Bronkie said was railroad properties according to Mr. Harry Weidman of ConRail.
2. During one inspection an adjoining resident complained to the writer that Mr. Scherer stored approximately 25 empty auto gasoline tanks less than 25 feet from his bedroom.
3. Mr. Scherer was found guilty in court of trespass on an adjoining property. My visual inspection indicated Mr. Scherer's demolition debris spilled onto the property of the lady that arrested Mr. Scherer for trespass. We have a photo of this area.
4. Before, during and after the dumping, no attention whatsoever was given to surface water drainage consequences.
5. The ingress and egress to ConRail property where a recent toxic tank car derailed is being restricted by what appears to be a storage area for Central Auto Wrecking construction equipment.
6. To date, after months of communications (since July, 1980) Mr. Scherer has not provided this Department with any remedial plan.
7. On the day the citation was issued, it is unknown who initiated the action but, a Mr. DeNisco identified as a Buffalo Housing representative telephoned here to request continuance of dumping all of Ralston Purina's debris on Mr. Scherer's two bit lot. The material incidentally is already 30' \pm higher than adjoining properties.

The following are data that must be addressed by the Department:

1. A County Legislator, ECDEP, DEC and City officials have all received complaints from residents in the area. We have on file eight (8) complaint letters and a complaint sheet signed by twenty (20) local residents.
2. The property boundaries surrounding the properties are not discernible at this time. However, visual inspections indicate the operator either knows not where his property is or simply ignores the boundaries. Dumping appears to have occurred on railroad property, Erie County Water Authority easement, on property with ownership unknown, etc.

3. The material dumped is of unknown origin and unknown chemical composition. The proximity of the waste to occupied residences makes it most conducive in generating an emotional and dramatic type of environmental degradation. This is in spite of all the mentioned complaints and Departmental documentation and records.
4. The hydrology involved on the site has not been addressed and/or determined. The writer and Erie County Water Authority engineer, Mr. Bronkie, agree there is a strong possibility that the elevation of the watertable has risen. This increased elevation can and usually is caused by embankment fill on any lands with a near surface watertable.
5. A water pooling problem does exist. Erie County Water Authority made an investigation by excavation on the site. Some people said the Authority determined by chemical analysis that the water contained fluoride thus was from E.C.W.A. water pipes but the leak too small to bother. E.C.W.A.'s Mr. Bronkie, however, advised the writer they have determined it is not their water. Complaints, verbal and in writing, were received by this office of:
 - a. water pooling on empty lots-stagnating-causing odors and mosquitos
 - b. sump operation periods have increased tremendously
 - c. previous to any dumping the site was a low area serving as a flood storage reservoir until water percolated.
 - d. rainwater which usually pooled on the dumping area now pools in adjacent yards

There have been many hours spent on this problem by DEC, ECWA, ECDEP etc.; the recommended \$1,000 fine would not nearly cover the payroll. However, if negotiating the fine to obtain maximum remedial work (environmental and aesthetic) can be achieved, it is recommended provided the fine is held in abeyance until the following work is completed and approved by DEC.

1. Provide a registered survey of all concerned areas
2. Provide appropriate land use approval permits for properties belonging to others
3. Provide an overall remedial construction plan and report which will in all respects conform to the requirements of Part 360.
4. The relevant hydrology and surface water drainage design must be prepared by a Registered Engineer.
5. Provide the Department with satisfactory documentation of the origin of all wastes on the site. The parameters and number of tests and locations of samples to be determined by the Department. Provide the Department with a chemical analysis of all the wastes dumped on the site.

CJ:egb

REFERENCE NO. 17

COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT & PLANNING
DIVISION OF ENVIRONMENTAL CONTROL

MEMORANDUM

TO Donald Campbell, P.E. DATE December 26, 1980
FROM Cameron O'Connor
SUBJECT Central Auto Wrecking (15D34)
Legal Proceeding Statue

On December 23, 1980 Russell Scherer owner of Central Auto Wrecking, with his attorney, pleaded guilty before City of Lackawanna Judge Mcquire to NYSDEC charges of operating a construction and demolition debris disposal site without approval after being told to cease all dumping operations. In return for Mr. Scherer's guilty plea it was agreed that the fine shall be suspended if Mr. Scherer cooperates fully with DEC in regard to providing and completing remedial work. The DEC will be contacting Mr. Scherer to discuss required submissions and a compliance schedule. Should the compliance schedule not be met by Mr. Scherer, he will be subject to resentencing.

As per Chet Janik the DEC may request the following:

1. Provide a registered survey of all concerned areas
2. Provide appropriate land use approval permits for properties belonging to others
3. Provide an overall remedial construction plan and report which will in all respects conform to the requirements of Part 360.
4. The relevant hydrology and surface water drainage design must be prepared by a Registered Engineer.
5. Provide the Department with satisfactory documentation of the origin of all wastes on the site. The parameters and number of tests and locations of samples to be determined by the Department.
6. Provide the department with a chemical analysis of all the wastes on site.
7. Completion of all work to be determined by DEC.

Chet Janik and the writer went to the landfill site on December 23, 1980 to determine its condition. No further dumping has occurred. Erosion and drainage problems to adjacent properties is quite evident.

Donald Campbell, P.E.
December 26, 1980
Page 2

During the inspection it was noted that a pump was pumping water from her basement.

Because of the environmental problems caused by this landfill, the writer recommends expedient action by DEC to ensure correction of this problem.

COC:aj

REFERENCE NO. 18

COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT & PLANNING
DIVISION OF ENVIRONMENTAL CONTROL

MEMORANDUM

FROM Cameron O'Connor *CO* DATE 4/3/81
TO Robert Mitrey, Attn: Chet Janik, NYSDEC
SUBJECT Central Auto Wrecking 15D34, City of Lackawanna

On March 31, 1981, the writer performed a field inspection at the above site to determine if any remedial work has been performed in accordance with City of Lackawanna Judge McGuire's December 23, 1980 order.

As of the date of the inspection, no remedial work of any kind has been performed at the landfill site by Mr. Schermer of Central Auto Wrecking.

During the inspection the following conditions were noted:

- 1) No additional fill material has been brought on site.
- 2) There has been a great increase in the number of junk cars and area used for their placement.
- 3) Leachate exfiltration is occurring on top and along the west slope of the landfill. The leachate seep on the west slope is leaving the site and settling in the vacant lot adjacent to the Tojck property.
- 4) There is a great quantity of uncompacted, ungraded, and uncovered construction and demolition material on top of the landfill.
- 5) Erosion of the western side slope and drainage problems to adjacent Lehigh Street properties are evident.

During the inspection, the writer met with Mrs. Tojck and Mrs. Paljon of Lehigh Street who continued to voice their concerns (and anger) over the encroachment of the landfill on their properties, drainage and flooding problems, and the general condition of the landfill. The writer was shown an operating pump which was pumping water from the Tojck basement. At the time of the inspection there was not a great quantity of water in the Tojck's basement (1/2 to 1 inch in depth in the north and east sections).

Strongly recommend reinstituting legal action against Central Auto Wrecking if no compliance of requested remedial measures are performed by the April 15, 1981 deadline. Attached are two

copies of Facility Inspection Report, site sketch and photographs.

No correspondence in regard to this field inspection has been sent to Mr. Scherrer as he is well aware what must be done and when it must be done by.

COC/cs

REFERENCE NO. 19

COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT & PLANNING
DIVISION OF ENVIRONMENTAL CONTROL

MEMORANDUM

FROM Lawrence G. Clare by Cameron O'Connor DATE June 5, 1981
TO Legislator Francis J. Pordum
SUBJECT Central Auto Wrecking - 343 Ridge Road - City of Lackawanna
Construction & Demolition Debris Disposal Site

This memorandum shall serve to confirm your June 5, 1981 telephone conversation with departmental representative Cameron O'Connor, relative to the above.

The following synopsis of actions taken by this department, as well as the New York State Department of Environmental Conservation, will bring you up to date on the violations and problems noted:

- 1) May 8, 1980 - This department was first notified of problem by an anonymous complainant. A field investigation was conducted and it was determined that Mr. Scherrer, owner of Central Auto Wrecking, was operating a solid waste management facility without a permit from the NYSDEC. This is a violation of Part 360 of the Environmental Conservation Law. Mr. Scherrer, at the time, was running a well managed operation and no environmental sensitive areas were being disturbed. Consequently, Mr. Scherrer was not told to cease operations immediately; however, he was advised that he must obtain the appropriate permit. This is a standard practice of handling.
- 2) July 1, 1980 - Due to numerous complaints by residents living on Lehigh Street, another field inspection was conducted on July 1, 1980 to determine conditions on site. Problems noted included ponding, steep side slopes and possible encroachment onto adjacent Lehigh Street property. Mr. Scherrer was requested to correct these problems and to ensure that no encroachment onto adjacent properties occurred. The City of Lackawanna was contacted in regard to this operation. The City reported no objections to the landfill.
- 3) July 1, 1980 - Application for Permit arrived at DEC. On July 9, 1980, DEC deemed the application incomplete and requested additional information.
- 4) July 23, 1980 - This department responded to another complaint about the operation. During the inspection, it was noted the conditions on site had deteriorated badly, (i.e. steep side slopes, drainage problems, height, erosions, uncontrolled disposal). Mr. Scherrer was advised that all operations must immediately cease until permit/approval was given by DEC. During this

inspection, approximately 20 residences of Lehigh Street were on site, as well as the Mayor and engineer of the City of Lackawanna. At this time, the City started to show some concern.

- 5) July 24, 1980 - Chet Janik of the NYSDEC performed a field inspection. Mr. Janik observed continued dumping. Mr. Scherrer was given a citation for this violation.
- 6) Additional complaints, mostly involving drainage and erosion problems, were investigated by this department. All information was sent to NYSDEC to help prepare for court appearance.
- 7) On December 23, 1980, Russell Scherrer, owner of Central Auto Wrecking, with his attorney, pleaded guilty before City of Lackawanna Judge McKenzie to NYSDEC charges of operating a construction and demolition debris disposal site without approval after being told to cease all dumping operations. In return for Mr. Scherrer's guilty plea, it was agreed that the fine shall be suspended if Mr. Scherrer cooperates fully with DEC in regard to providing and completing remedial work. This work was to be completed by April 15, 1981.
- 8) March 17, 1981 - Judge McKenzie asked whether or not Mr. Scherrer has started clean-up.
- 9) March 31, 1981 - Field inspection by this department determined that absolutely NO corrective actions started. In addition to previous poor conditions, leachate was observed leaving site. This was reported to NYSDEC on April 3, 1981.
- 10) April 17, 1981 - Letter from DEC to City of Lackawanna advised that order was not met and requesting resentencing. Both DEC and this department are waiting word from the City of Lackawanna.
- 11) May 5, 1981 - In answer to another complaint, this department field investigated. Still no remedial actions taken.

- continued -

Hon. Produm
June 5, 1981
Page 3

In conclusion, the site, as it stands today, represents environmental, aesthetic as well as safety hazards to the residents of the area. Further enforcement proceedings, however, rest with Judge McKenna, Lackawanna City Court for resentencing of Central Auto Wrecking.

If you have any questions, please do not hesitate to call Mr. Cameron O'Connor at 846-6148.

Lawrence G. Clare, P.E.
Asst. Deputy Commissioner
Environmental Control

LGC:COC:dp

cc: A. Voell
P. Burke, DEC

REFERENCE NO. 20

COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT & PLANNING
DIVISION OF ENVIRONMENTAL CONTROL

MEMORANDUM

FROM Cameron O'Connor **DATE** November 4, 1981
TO Lawrence G. Clare, P.E.
SUBJECT Central Auto Wrecking

The issue with Central Auto Wrecking is apparently caught up in the Supreme Court.

Central Auto Wrecking has taken the City of Lackawanna the court charging that the City has interfered with its ability to carry out remedial work that would have satisfied NYSDEC's clean-up agreement (as ordered by the City of Lackawanna Court).

It seems the problem stems from the fact that in order to properly close out the landfill, Conrail property would have to be used in order to create a gradual sloping of surface runoff and maintain drainage. Apparently, City of Lackawanna Officials had written to Conrail about the entire matter and for some reason Conrail cancelled their lease agreement for use for their property with Central Auto Wrecking.

As per a 11/4/81 telephone conversation with Peter Burke, NYSDEC, the City of Lackawanna cannot resentence Central Auto Wrecking for failure to comply with the original court order until the outcome of the Supreme Court is settled. At that time a new City court date will be set.



Cameron O'Connor
Env. Quality Technician

COC:amj

REFERENCE NO. 21

BEN 9/25/81

State Court To Hear Suit By Wrecker

By BILL MEEKS

A Ridge Road junk-car dealer is taking Lackawanna to State Supreme Court in the latest round of a 10-year battle.

Russell J. Scherrer, owner of Central Auto Wrecking, has accused city officials of interfering improperly with a City Court proceeding brought against him by the state Department of Environmental Conservation and of scuttling an agreement that would have satisfied the department.

Court papers filed by Mr. Scherrer's attorney, Bernard J. Stillman, allege that at the suggestion of city officials materials taken from Ridge Road during a resurfacing project were dumped on a portion of Mr. Scherrer's land that he had planned to fill and pave.

The attorney said the official told Mr. Scherrer that he did not need a license to "hard surface" the property but that he was subsequently charged by the department with an improper landfill without a state permit.

Mr. Scherrer hired a landscape architect, who found a water runoff problem and suggested establishing a 25-foot "green belt" to absorb part of the water and create a gradual sloping runoff toward Smokes Creek, the papers said.

Mr. Stillman said additional land was needed to implement the plan and that an agreement was reached with Conrail to lease adjoining property.

He said the plan was accepted by the department and that when Mr. Scherrer appeared in Lackawanna City Court to answer the violation, the case was adjourned in contemplation of dismissal when work was completed.

The attorney alleged that city officials wrecked the plan by writing to Conrail and causing it to cancel the lease agreement. This placed his client in a position where he was unable to comply with his agreement with the department and the court, he said.

He asked the court to make the city a codefendant in the action brought by the department, to pay all court costs, to assume the costs of paving and draining, to reimburse Mr. Scherrer for loss of income and expenses and to enjoin the city from interfering with his client's business operation.

REFERENCE NO. 22

COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT & PLANNING
DIVISION OF ENVIRONMENTAL CONTROL

MEMORANDUM

TO Peter Burke, NYSDEC DATE March 16, 1982
FROM Lawrence G. Clare, P.E., Asst. Deputy Commissioner
SUBJECT Central Auto Wrecking, 343 Ridge Road, City of Lackawanna.

We are again experiencing problems with the above firm. This time it involves surface runoff, which is contaminated with oil, flowing from the landfill site onto adjacent properties on LeHigh Street. This runoff is also entering the City of Lackawanna storm water system.

Attached is a copy of this department's field investigation report.

In addition to the oil runoff problem, leachate was observed leaving the landfill and ponding in a vacant lot.

Each time our department inspects or responds to a complaint in regard to this area the site appears to be in worse condition.

All problems (leachate, drainage, oil contamination, erosion, etc.) will require extensive corrective action.

We request that the NYSDEC, again, contact the City of Lackawanna so that the appropriate actions, as required in the December 23, 1980 court decision, can be satisfied.

Please be advised that this department has been dealing with this problem for close to two years.



LAWRENCE G. CLARE, P.E.
Asst. Deputy Commissioner

LGC:CO'C:rb

cc: B. Wager, NYSDEC
J. Hennessey, NYSDOT

REFERENCE NO. 23

9/1/83

COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT & PLANNING
DIVISION OF ENVIRONMENTAL CONTROL

MEMORANDUM

TO Donald Campbell DATE Aug. 30, 1983
FROM Cameron O'Connor
SUBJECT Central Auto Wrecking

On August 30, 1983, I field inspected the above site to determine if remedial action has been started.

Approximately 90% of the C & D material and all junk cars have been removed from the top of the landfill.

The scrap is being taken to Roblin and/or Hurwitz Bros.

Work was ongoing on the day of the inspection. The bulldozer operator said he expects to cover, grade and seed the area in about 2 weeks.

I will reinspect the week of September 19, 1983.

COC

CAMERON O'CONNOR
Env. Quality Technician
Div. of Environmental Control

CO'C:rb

cc: P. Burke, NYSDEC

REFERENCE NO. 24

INTERVIEW ACKNOWLEDGEMENT FORM

SITE NAME	: Central Auto Wrecking	I.D. NUMBER	: 915125
PERSON CONTACTED	: Helen Pacjon	DATE	: 9/17/87
AFFILIATION	: Resident	PHONE NUMBER	: 823-8771
ADDRESS	: 76 LeHigh Street Lackawanna	CONTACT PERSON(S)	: P. Gunther <i>GP</i>
TYPE OF CONTACT	: Interview		

SUBJECT: Complaints about leachate from the Central Auto Wrecking landfill.

INTERVIEW SUMMARY

Mrs. Pacjon stated that she has lived in her home with her husband since 1933. Her home abuts the Tomaka embankment. There is continuous run-off from the embankment into her backyard. It becomes so severe that she has to operate a pump to pump the water out of the backyard, and into the front street. She has had contact with the Health Department since Mr. Sherrer started using Tomaka's property as a landfill.

Mr. Sherrer told her that he was going to form a large landfill on the Tomaka property and eventually the landfill would extend into the property of the homes along East LeHigh Street; this would include her backyard.

She said leachate continuously flowed out of the embankment into her backyard. She said that once it flooded her basement. There are pipes and automobile parts visible from the sides of the embankment.

Mrs. Pacjon stated that the debris in the landfill was initially tires, but later included automobiles, automobile parts, household demolition material, and towards the north end of the landfill Mrs. Pacjon believed that there were buried drums.

Mrs. Pacjon says that the landfill is about 70 feet wide but she didn't provide a length estimate. She said that the area was originally an agricultural field but that there were trees on the west side of the

ACKNOWLEDGEMENT

I have read the above transcript and I agree that it is an accurate summary of the information verbally conveyed to Ecology and Environment, Inc. interviewer(s) (as revised below, if necessary).

Revisions (please write in any corrections needed to above transcript)

Signature:

Date:

lot that Mr. Sherrer cut down. She said Mr. Sherrer also wanted to cut down trees that she owned.

Mrs. Pacjon has a garden in her backyard where the leachate probably spread. She has tomatoes, peas, strawberries, raspberries and grapes. Mrs. Pacjon utilizes municipal water. She knows of no neighbor who has a private well.

djr

REFERENCE NO. 25

The National Register of Historic Places

1976

dows set in almost round recesses, decorative brickwork and bargeboards, stone quoins and trim, 1st-story window with stained glass transom. Original L-shaped structure enlarged and redecorated with Queen Anne elements, late-19th C. *Private*.

Poughkeepsie. LOCUST GROVE (SAMUEL F. B. MORSE HOUSE), 370 South St., 1830. Frame, clapboarding; 2 stories, modified T shape, gabled roof, interior chimneys, bracketed cornice, projecting octagonal wings, 4-story stuccoed end tower with round arched windows, porch with latticework fascia and posts, carriage house extension with large round arched openings; substantially expanded during Morse's ownership. Italianate. Home after 1847 of Samuel F. B. Morse, inventor of the telegraph and a noted artist who had studied and traveled in England and Europe. *Private; not accessible to the public; NHL*.

Poughkeepsie. MAIN BUILDING, VASSAR COLLEGE, Vassar College campus, Mid-19th C., James Renwick, architect. Brick, 4 stories with 5-story pavilions, U-shaped, mansard roof punctuated by towers and central convex mansard section. One of the earliest Second Empire buildings in the U.S.; reputedly designed after 16th C. Tuileries Palace. School founded by Matthew Vassar, Poughkeepsie philanthropist who pioneered higher education for women. *Private*.

POUGHKEEPSIE. MILL STREET-NORTH CLOVER STREET HISTORIC DISTRICT, 19th-20th C. Residential area containing primarily 2-3-story brick houses from post-Civil War period in styles ranging from Greek Revival to those of the Victorian period; notable are the numerous Second Empire structures and the Queen Anne Italian Center (see also Italian Center, NY). Eastern section became city's civic and cultural center under direction of the Vassar family. *Multiple public/private*.

Poughkeepsie. POUGHKEEPSIE CITY HALL, 228 Main St., 1831. Brick, 2 stories, rectangular, gabled roof, denticulated cornice, front open balustraded frame belvedere with hipped roof, rear cupola with pyramidal roof, front center entrance with transom and side lights; brownstone trim including wide belt course between stories, lintels, and sills; 2 brick additions; altered. Greek Revival. Built as market and village hall, presumably with open 1st-floor market area; served as post office, 1865-1886. *Municipal*.

Poughkeepsie. SECOND BAPTIST CHURCH, 36 Vassar St., Mid-19th C., Brick base, frame, flush siding; 1 1/2 stories over high basement, rectangular temple-form, gabled roof, interior end chimneys, entablature surrounding building; front tetrastyle Doric pedimented portico with balustrade, oculus in tympanum, and 2 entrances with shouldered architraves; side pilasters; side rectangular windows, each with cornice and shouldered architrave; altered. Greek Revival. Property originally purchased from Matthew Vassar's family; building has

been used for Protestant and Jewish worship. *Private*.

Poughkeepsie. UNION STREET HISTORIC DISTRICT, About 8 blocks in downtown Poughkeepsie centered around Union St., 19th C., Working class urban neighborhood containing 173 historical commercial and residential structures; features numerous 2 1/2-story brick buildings in styles from Federal to those of the Victorian period, long narrow lots, and backyards. City's oldest section; settled largely by German, Irish, Italian, and Slavic immigrants, and by Blacks. *Multiple public/private*.

Poughkeepsie. VASSAR HOME FOR AGED MEN, 1 Vassar St., 1880. Brick, 3 stories over high basement, rectangular, low hipped roof with deck, interior end chimney, gabled section rises above cornice line on each side, bracketed cornice with narrow arched corbel tables below, stairway leads to front entrance with transom; 1-story balustraded porch with slender columns, similar side and rear porches with entrances; granite banding connects granite architraves and sills. Italianate. Built on the site of Matthew Vassar's town residence as home for men 65 and over, as established by Matthew Vassar, Jr., and John Guy Vassar. *Public*.

Poughkeepsie. VASSAR INSTITUTE, 12 Vassar St., 1882, J. A. Wood, architect. Brick, 2 1/2 stories, rectangular, convex mansard and hipped roof sections, interior chimney, round arched dormers with raised ridge, bracketed cornice with decorative frieze, front center 3-story tower, entrance porch with paired columns, recessed brick paneling, segmental arched openings, granite trim, rear lower wing with round arched windows houses auditorium; tower dome removed. High Victorian Italianate with Second Empire elements. Built for Matthew Vassar Jr. and John Guy Vassar; contained natural history museum and library. *Private*.

Poughkeepsie. VASSAR, MATTHEW, ESTATE (SPRINGSIDE), Academy and Livingston Sts., 1850-1852, Andrew Jackson Downing, architect. Rural estate containing a 2-story cottage with board-and-batten siding, gabled roof, bay windows, and decorative bargeboards, shutter trim, and bracketing; a gatehouse in similar style; and the remains of an L-shaped barn complex. Picturesque Gothic Revival. Home of Matthew Vassar, Poughkeepsie brewer and Vassar College founder (see also Main Building, Vassar College, NY). Grounds also designed by early landscape architect Andrew Jackson Downing. *Private; not accessible to the public; NHL, NAB5*.

Red Hook. MAIZEFIELD, 75 W. Market St., 18th-19th C., Brick, 3 stories, rectangular main block with later additions, flat roof, 4 interior end chimneys, 1-story front entrance portico with Palladian window above, heavy cornice with block modillions. Federal. Only extant dependency-2-story, hipped roof board-and-batten cottage designed by Alexander Jackson Davis. Residence of Gen. David Van Ness,

prominent military and political leader in late-18th and early 19th C. *Private*.

Rhinebeck. DELAMATER, HENRY, HC, 44 Montgomery St., 1844, Alexander Jackson Davis, architect. Frame, board-and-batten siding; modified rectangle; hipped roof with gable, each end with final; interior chimney; carved scalloped bargeboards; 3 front Tudor arched openings, 1-story 3-bay-wide porch with carved flat posts and brackets forming arches, balustraded deck; center 2nd story attic, each with rectangular window under pointed arch with tracery; each side with bay window; interior designed by architect to harmonize with exterior design; rear veranda closed and extended; board-and-batten carriage house. Excellent example of Gothic Revival cottage design advocated by Alexander Jackson Davis and Andrew Jackson Downing. *Private*.

Sylvan Lake vicinity. SYLVAN LAKE ROCK SHELTER, 5000 B.C.-700 A.D. Undisturbed stratified rock shelter; served as winter camp for Archaic hunters beginning c. 5000 B.C.; excavations between 1964 and 1966 revealed numerous remains of the Sylvan Lake Culture (c. 2500 B.C.), elements of the Susquehanna Tradition (c. 1500-1000 B.C.), and Middle Late Woodland deposits. *Private*.

ERIE COUNTY

Buffalo. ALBRIGHT-KNOX ART GALLERY, 1285 Elmwood Ave., in Delaware Park, 1900-1905, Edward B. Green, architect. Partially marble faced, 2 stories, modified H shape, gabled roof sections; E pedimented Ionic entrance portico flanked by colonnaded wings ending in pavilions, each with caryatids by Augustus Saint Gaudens; W semicircular long porch flanked by colonnaded sections; interior sculpture courtyard. Neo-Classical Revival. Built to permanently house the collection of the Buffalo Fine Arts Academy. *Private*.

Buffalo. BUFFALO STATE HOSPITAL, Forest Ave., 1874-1890, Henry Horn Richardson, architect. Random rough ashlar sandstone, brick, 3 1/2 stories above high basement, main block with 5 W wards and 2 E wards, gabled and hipped roof sections, gables and flared hipped dormers, front entrance recessed under 3-bay arcade flanked by projecting pavilion, 2 main-block towers with steeply hipped roofs, shed dormers, and cupolas, machicolations, rectangular and segmental arched windows, wings with projecting cross-gable sections, 3 wards removed, 1860s, 4 service buildings; site plan by Frederick L. Olmsted. Richardsonian Romanesque elements. Early development example of Henry Horn Richardson's work. *State; NHL*.

Buffalo. DELAWARE AVENUE HISTORIC DISTRICT, W side of Delaware Ave. between North and Bixant Sts., 19th-20th C. Remaining section of ante-residential area of predominantly turn-of-the-century grand dwellings. Era's Neo-Classical and Georgian Revival styles.

represented in designs by noted architects such as McKim, Mead, and White. Reflects overwhelmingly successful economic development stimulated by Pan-American Exposition, 1901. Prominent residents included Anson C. Goodyear and Millard Fillmore. *Multiple public/private.*

Buffalo. GUARANTY BUILDING (PRUDENTIAL BUILDING), Church and Pearl Sts., 1894-1895, Louis Sullivan, architect. Steel frame, terra cotta sheathing; 12 1/2 stories, U-shaped, flat roof; front and side entrances, each with large lunette at 2nd-story level; first 2 stories topped by narrow cornice form base for upper levels, upper-story fenestration organized in vertical bands under round arches, oculi in coved section below cornice, decorative terra cotta ornament in low relief covers entire building; interior lobby with cast iron and leaded glass skylight, mosaic frieze and cast iron stairway; 1st-story store windows altered 1970 to form flat plane behind piers, Sullivan-esque. A milestone in modern skyscraper development by Louis Sullivan, building successfully integrates structural clarity with ornamentation. *Private; NHL; HABS.*

Buffalo. MACEDONIA BAPTIST CHURCH, 511 Michigan Ave., 1845. Brick, 1 story, rectangular, gabled roof, enclosed entrance vestibule flanked by round, arched windows in recessed rectangular panels, rounded and inscribed stone plaque above entrance; modified meetinghouse plan with apse; 20th C. alterations. Social and religious center for Black community for 125 years. Parish of Dr. J. Edward Nash, a founder of the Buffalo Urban League and the local branch of the NAACP. *Private.*

Buffalo. PIERCE ARROW FACTORY COMPLEX, Elmwood and Great Arrow Aves., 1906, Albert Kahn, architect. Factory complex containing 14 major buildings mainly of reinforced concrete steel with brick and glass curtain walls; saw-tooth roof sections, large spans up to 60'; some Arts and Crafts decorative elements on Administration Building front. Represents synthesis of trends foreshadowing developments in factory design, owned and operated by Pierce Arrow Co. until 1938; buildings later converted for diversified commercial use. *Multiple private.*

Buffalo. ST. PAUL'S EPISCOPAL CATHEDRAL, 125 Pearl St., 1850-1851, Richard Upjohn, architect. Sandstone ashlar, 1 story, irregular shape, gabled roof sections; cornice sections, some with modillions, some with trefoil arcading; front 3-stage tower with tall spire, entrance porch, transept chapel with entrance and adjacent 3-stage bell tower with spire, nave lancet windows with label molds, buttresses; towers completed 1870's; 1888 fire destroyed interior; new interiors designed by English architect, Robert Gibson; clerestory added. Fine example of Gothic Revival building adapted to unusual triangular site. *Private; HABS.*

Buffalo. THEODORE ROOSEVELT INAUGURAL NATIONAL HISTORIC SITE, Delaware Ave., 1838. Site includes Ansley Wilcox house: brick, 2 1/2 stories, modified rectangle; gabled roof sections, some with end returns; interior end chimney; front full-width 2-story pedimented portico, center entrance with fanlight, Palladian window in tympanum; 1863 remodeling, portico moved; 1890's additions; 20th C. interior alterations; restored. Greek Revival. Built for officers' quarters as part of Poinsett Barracks; site of Theodore Roosevelt's inauguration Sept. 14, 1901 after William McKinley's assassination. Museum. *Federal/NPS.*

Buffalo. U.S. POST OFFICE, 121 Ellicott St., 1897-1901, James Knox Taylor, architect. Rock-faced granited base, granite ashlar; 4 1/2 stories over high basement, modified rectangle, gabled and pyramidal roof sections, numerous gabled dormers, modillion cornice; front center tall tower with corner turrets, gargoyles, and spire with crockets and finial; front 3 entrances recessed under 3-bay entrance porch with elaborate Gothic detailing, each side with 3-bay entry and 1-3 entrances; rear cast iron porte-cochere, string courses, windows grouped under pointed arches; molded and carved detail including foliate capitals and buffalo heads; 4-story-high central courtyard above 1st floor with steel and glass roof surrounded by galleries with rectangular, segmental, and pointed arched openings; 1936 remodeling included roofing of 1st floor of courtyard and skylight. Later Gothic Revival. Excellent example of late-19th C. dual-nature architecture combining revivalist style with technological innovations; designed by James Knox Taylor, Supervising Architect of the U.S. Treasury. *Federal/GSA; HABS.*

East Aurora. FILLMORE, MILLARD, HOUSE, 24 Shearer Ave., 1826. Frame, clapboarding; 1 1/2 stories, modified L shape, gabled roof sections, exterior end chimneys, 1-story full-width front terrastyle Doric porch, front center entrance; moved, 1915 and 1930; altered, c. 1930. Greek Revival elements. Built by Millard Fillmore, lawyer, state and U.S. representative, and U.S. Vice President who became President upon the death of Zachary Taylor in 1850. *Private; not accessible to the public; NHL.*

East Aurora. ROYCROFT CAMPUS, Main and W. Grove Sts., late-19th C.-1938. Complex containing approximately 9 structures, the majority of which feature crenelated towers, half-timbered gables, and stone or shingled exteriors. Built as part of Arts and Crafts artistic community established in late-19th C. by writer Elbert Hubbard after visiting a similar English community organized by Arts and Crafts movement leader William Morris, utilized Medieval organization and building concepts as inspired by the writings of John Ruskin; in operation until 1938. *Multiple public/private.*

Irving. THOMAS INDIAN SCHOOL, NY 438 on Cattaraugus Reservation, 1900, Barney and Chapman, architects. Educational complex

consisting of 9 principal brick Georgian Revival buildings and 25 dependencies; notable is the elaborate Administration Building with its ornate stone trim and decorative use of Indian related motifs and subject matter. Built by NY on reservation as a self-sufficient educational facility; school began, mid-18th C., as the Thomas Asylum of Orphan and Destitute Indian Children and developed into a successful, accredited educational institution, in operation until 1958 when closed as result of centralization of the public school system. *Tribal.*

ESSEX COUNTY

ADIRONDACK FOREST PRESERVE, Reference—see Clinton County

Crown Point. FORT ST. FREDERIC, lot of NY 8 and 9N, 1731. Limestone ruins of fort established by French to guard Lake Champlain route into Canada. Abandoned in 1759 after Lord Jeffrey Amherst captured nearby Fort Carillon, which the British renamed Fort Ticonderoga (see also Fort Ticonderoga, NY), during the French and Indian War. *State; NHL.*

Crown Point vicinity. FORT CROWN POINT, Crown Point Reservation, SW of Lake Champlain Bridge and NY 8, 1760. Limestone walls of 5-sided fort containing 6.5-acre parade ground and 2 of 3 original barracks, and surrounded by dry moat. Constructed by British as Fort Crown Point or Amherst after Lord Jeffrey Amherst who drove French from area during the French and Indian War. Damaged in 1773 when powder magazine exploded; reconstruction interrupted by Revolution was never completed. Occupied alternately by Americans and British during Revolution. *State; NHL.*

Essex vicinity. CHURCH OF THE NAZARENE, W of Essex on NY 22, 1855. Frame, board-and-batten siding, gabled roof with double pitch and end returns, front shoulder arched entrance, lancet windows, trefoil in gable, interior wooden arches spring from unengaged wooden posts to form primary roof support. Gothic Revival. Simple design apparently based upon small mission chapel prototype in Richard Upjohn's *Rural Architecture*, published 1852. *Private.*

Essex vicinity. OCTAGONAL SCHOOLHOUSE, On Rte. 22 in Bouquet, 1826, Benjamin Gilbert, builder. Rubble sandstone, 1 story, modified octagon, polygonal roof, octagonal open bellry with polygonal roof, front entrance with shed porch, rear entrance leads to frame vestibule addition; porch added. Octagon Model. Probably state's oldest schoolhouse, served as school until 1952. *Municipal.*

Ironville. IRONVILLE HISTORIC DISTRICT, 19th C. Rural residential area includes local Penfield Homestead (1828), other houses, church, boardinghouse, Grange Hall, inn, schoolhouse, and ruinous remains of ironworks. Est. 1807; developed major iron industry; pioneered in industrial use of electricity. Museum. *Multiple private.*

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 State
NY02 Site Number
915125

II. SITE NAME AND LOCATION

01 Site Name (Legal, common, or descriptive name of site)
Central Auto Wrecking02 Street, Route No., or Specific Location Identifier
343-345 Ridge Road

03 City

Lackawanna

04 State

NY

05 Zip
Code

14218

06 County

Erie

07 County
Code

029

08 Cong.
Dist.

37

09 Coordinates

Latitude

49 30 05.0

Longitude

078 50 30.4

10 Type of Ownership (Check one)

☒ A. Private☐ B. Federal☐ C. State☐ D. County☐ E. Municipal☐ F. Other☐ G. Unknown

III. INSPECTION INFORMATION

01 Date of Inspection

9 / 17 / 87
Month Day Year

02 Site Status

☐ Active☒ Inactive

03 Years of Operation

1976

1986

☐ Unknown

Beginning Year

Ending Year

04 Agency Performing Inspection (Check all that apply)

☐ A. EPA☐ B. EPA Contractor☐ C. Municipal☐ D. Municipal Contractor☐ E. State☐ F. State Contractor☐ G. Other

(Specify)

05 Chief Inspector

Pamela Gunther

06 Title

Env. Scientist

07 Organization

Ecology & Environment

08 Telephone No.

(716) 684-8060

09 Other Inspectors

Eugene Florentino

10 Title

Geologist

11 Organization

Ecology & Environment

12 Telephone No.

(716) 684-8060

13 Site Representatives Interviewed

Louis Fadale

14 Title

Property owner

15 Address

333 Ridge Road, Lackawanna 14218

16 Telephone No.

(716) 824-2600

17 Access Gained By (Check one)

☒ Permission☐ Warrant

18 Time of Inspection

10:00

19 Weather Conditions

Cloudy, cool, lower 70's F.

IV. INFORMATION AVAILABLE FROM

01 Contact

Walter Demick

02 Of (Agency/Organization)

NYSDEC

03 Telephone No.

(518) 457-9538

04 Person Responsible for Site Inspection Form

M.J. Farrell

05 Agency

06 Organization

E & E

07 Telephone No.

(716) 684-8060

08 Date

9 / 21 / 87
Month Day Year

PART 2 - WASTE INFORMATION

02 Site Number
915125

<input checked="" type="checkbox"/> A. Toxic	<input type="checkbox"/> H. Ignitable
<input type="checkbox"/> B. Corrosive	<input type="checkbox"/> I. Highly volatile
<input type="checkbox"/> C. Radioactive	<input type="checkbox"/> J. Explosive
<input checked="" type="checkbox"/> D. Persistent	<input type="checkbox"/> K. Reactive
<input checked="" type="checkbox"/> E. Soluble	<input type="checkbox"/> L. Incompatible
<input type="checkbox"/> F. Infectious	<input type="checkbox"/> M. Not applicable
<input type="checkbox"/> G. Flammable	

Category	Substance Name	01 Gross Amount	02 Unit of Measure	03 Comments
SLU	Sludge			Waste itself is not known, but
OLW	Oilly waste			soil and water have been sampled.
SOL	Solvents			
PSD	Pesticides			
OCC	Other organic chemicals			
IOC	Inorganic chemicals			
ACD	Acids			
BAS	Bases			
MES	Heavy Metals			

01 Category	02 Substance Name	03 CAS Number	04 Storage/Disposal Method	05 Concentration* (Maximum)	06 Measure of Concentration
OCC	PCB	1336-36-3	Landfill	0.51	ug/g
MES	Lead	7439-92-1	Landfill	2,700	ug/g
MES	Iron	1309-37-1	Landfill	160,000	ug/g
MES	Nickel		Landfill	190	ug/g
MES	Zinc		Landfill	860	ug/g
MES	Selenium	7782-49-2	Landfill	0.6	ug/g
MES	Silver	7440-22-4	Landfill	3.7	ug/g
MES	Arsenic		Landfill	2.7	ug/g
MES	Beryllium		Landfill	0.77	ug/g
MES	Cadmium		Landfill	4.9	ug/g
MES	Chromium		Landfill	290	ug/g
MES	Copper		Landfill	290	ug/g
OCC	Phenol		Landfill	8.6	ug/g
OCC	Anthracene		Landfill	16	ug/g
OCC	Benzo(a)anthracene		Landfill	26	ug/g
OCC	Benzo(a)pyrene		Landfill	0.1	ug/g
OCC	Benzo(b)fluorene		Landfill	0.14	ug/g
OCC	Benzo(g,h,i)perylene		Landfill	0.29	ug/g

OCC	Benzo(k)fluoranthene		Landfill	0.05	ug/g
OCC	Chrysene		Landfill	24	ug/g
OCC	Fluoranthene		Landfill	260	ug/g
OCC	Fluorene		Landfill	23	ug/g
OCC	Phenanthrene		Landfill	72	ug/g
OCC	Pyrene		Landfill	310	ug/g

V. FEEDSTOCKS (See Appendix for CAS Numbers)

Category	01 Feedstock Name	02 CAS Number	Category	01 Feedstock Name	02 CAS Number
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC Region 9 files

Maximum concentrations found in soil samples; not necessarily the concentrations found throughout the landfill.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 State
NY

02 Site Number
915125

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. Groundwater Contamination 02 [] Observed (Date _____) [X] Potential [] Alleged
03 Population Potentially Affected Unknown 04 Narrative Description:

Groundwater is near land surface and surface water was shown to be contaminated.

01 [X] B. Surface Water Contamination 02 [X] Observed (Date 3/17/82) [] Potential [] Alleged
03 Population Potentially Affected 40 04 Narrative Description:

Surface water was analyzed by Erie County Laboratory, Public Health Division.

01 [X] C. Contamination of Air 02 [] Observed (Date _____) [X] Potential [] Alleged
03 Population Potentially Affected Unknown 04 Narrative Description:

Contaminated surface water will evaporate into surrounding neighborhood. Potential vapors from storage of 25 empty gasoline tanks.

01 [X] D. Fire/Explosive Conditions 02 [X] Observed (Date 12/19/80) [] Potential [] Alleged
03 Population Potentially Affected 4 04 Narrative Description:

A neighbor complained that Russell Sherrer, owner of Central Auto Wrecking, stored 25 empty auto gasoline tanks less than 25 feet from the bedroom of his home.

01 [X] E. Direct Contact 02 [] Observed (Date _____) [X] Potential [] Alleged
03 Population Potentially Affected 21 (block) 04 Narrative Description:

Leachate stream/pool is adjacent to backyards of several homes.

01 [X] F. Contamination of Soil 02 [X] Observed (Date 9/5/82) [] Potential [] Alleged
03 Area Potentially Affected 8 04 Narrative Description:
(Acres)

Soil was sampled and found to be contaminated.

01 [X] G. Drinking Water Contamination 02 [] Observed (Date _____) [X] Potential [] Alleged
03 Population Potentially Affected _____ 04 Narrative Description:

Potential exists, groundwater used for drinking within 3 miles of site.

01 [] H. Worker Exposure/Injury 02 [] Observed (Date _____) [] Potential [] Alleged
03 Workers Potentially Affected _____ 04 Narrative Description:

None reported.

01 [X] I. Population Exposure/Injury 02 [] Observed (Date _____) [X] Potential [] Alleged
03 Population Potentially Affected Unknown 04 Narrative Description:

Potential exists for population exposure; runoff from landfill has migrated off site to adjacent properties.

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

01 State NY	02 Site Number 915125
----------------	--------------------------

01 ☒ J. Damage to Flora
04 Narrative Description:

02 ☐ Observed (Date _____) ☒ Potential ☐ Alleged

01 [X] K. Damage to Fauna
04 Narrative Description: 02 [] Observed (Date _____) [X] Potential [] Alleged

01 [X] L. Contamination of Food Chain 02 [] Observed (Date _____) [X] Potential [] Alleged
04 Narrative Description:

01	(X)	M. Unstable Containment of Wastes (Spills/Runoff/Standing liquids, Leaking drums)	02	(X)	Observed (Date <u>1982</u>)	()	Potential	()	Alleged
----	-----	--	----	-----	------------------------------	-----	-----------	-----	---------

01 [X] N. Damage to Offsite Property 02 [X] Observed (Date 1982) [] Potential [] Alleged
04 Narrative Description:

01 ☒ Contamination of Sewers, Storm Drains, WWTPs 02 ☒ Observed (Date 1982) ☐ Potential ☐ Alleged

One resident pumps the flooded leachate and runoff from her backyard into the street, which then flows into municipal sewers.

01 ☒ P. Illegal/Unauthorized Dumping 02 ☒ Observed (Date 5/2/80) ☐ Potential ☐ Alleged
04 Narrative Description:

Use of broken concrete and asphalt for fill and property improvements that required a Demolition Debris Disposal Permit, which owner did not possess.

III. TOTAL POPULATION POTENTIALLY AFFECTED: Assume 3.8 people/household, 8 occupied homes on the immediate block; thus, 30 people in the immediate vicinity of Central Auto Wrecking.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC Region 9 files and site inspection.

ecology and environment

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 State
NY

02 Site Number
915125

II. PERMIT INFORMATION: No landfill (Part 360) permits were issued to Central Auto Wrecking.

01 Type of Permit Issued (Check all that apply)	02 Permit Number	03 Date Issued	04 Expiration Date	05 Comments
<input type="checkbox"/> A. NPDES				
<input type="checkbox"/> B. UIC				
<input type="checkbox"/> C. AIR				
<input type="checkbox"/> D. RCRA				
<input type="checkbox"/> E. RCRA Interim Status				
<input type="checkbox"/> F. SPCC Plan				
<input checked="" type="checkbox"/> G. State (Specify)	Unknown	Unknown	Unknown	These permits are to operate
<input checked="" type="checkbox"/> H. Local (Specify) City	Unknown	Unknown	Unknown	a junkyard.
<input type="checkbox"/> I. Other (Specify)				
<input type="checkbox"/> J. None				

III. SITE DESCRIPTION

01 Storage Disposal (Check all that apply)	02 Amount	03 Unit of Measure	04 Treatment (Check all that apply)	05 Other
<input type="checkbox"/> A. Surface Impoundment			<input type="checkbox"/> A. Incineration	<input checked="" type="checkbox"/> A. Buildings On Site
<input type="checkbox"/> B. Piles			<input type="checkbox"/> B. Underground Injection	
<input type="checkbox"/> C. Drums, Above Ground			<input type="checkbox"/> C. Chemical/Physical	3
<input type="checkbox"/> D. Tank, Above Ground			<input type="checkbox"/> D. Biological	
<input type="checkbox"/> E. Tank, Below Ground			<input type="checkbox"/> E. Waste Oil Processing	
<input checked="" type="checkbox"/> F. Landfill	Unknown		<input type="checkbox"/> F. Solvent Recovery	06 Area of Site
<input type="checkbox"/> G. Landfarm			<input type="checkbox"/> G. Other Recycling Recovery	
<input type="checkbox"/> H. Open Dump			<input type="checkbox"/> H. Other (Specify)	3 Acres
<input type="checkbox"/> I. Other (Specify)				

07 Comments: Acreage was determined by summing both the property of Stanley Tomata and Louis Fadale. No waste or waste containers were observed on the site.

IV. CONTAINMENT

01 Containment of Wastes (Check one)
<input type="checkbox"/> A. Adequate, Secure <input type="checkbox"/> B. Moderate <input checked="" type="checkbox"/> C. Inadequate, Poor <input type="checkbox"/> D. Insecure, Unsound, Dangerous
02 Description of Drums, Diking, Liners, Barriers, etc.

The landfill has been incompletely covered with dirt. At the periphery of the landfill automobile parts can be seen protruding.

V. ACCESSIBILITY

01 Waste Easily Accessible: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
02 Comments: Waste is covered with soil, but is accessible to nearby residential population.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site Inspection, NYSDEC Region 9 files

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 State
NY

02 Site Number
915125

VI. ENVIRONMENTAL INFORMATION

01 Permeability of Unsaturated Zone (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. Greater Than 10^{-3} cm/sec

02 Permeability of Bedrock (Check one)

☐ A. Impermeable (Less than 10^{-6} cm/sec) ☒ B. Relatively Impermeable ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. Relatively Permeable ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. Very Permeable (Greater than 10^{-2} cm/sec)

03 Depth to Bedrock

14 - 25 (ft)

04 Depth of Contaminated Soil Zone

Unknown (ft)

05 Soil pH

6.0 - 6.5

06 Net Precipitation

9 (in)

07 One Year 24-Hour Rainfall

2.1 (in)

08 Slope

Site Slope

3 %

Direction of Site Slope

South

Terrain Average Slope

3 %

09 Flood Potential

10

Site is in NA Year Floodplain

☐ Site is on Barrier Island, Coastal High Hazard Area, Riverline Floodway

11 Distance to Wetlands (5 acre minimum)

ESTUARINE

OTHER

A. NA (mi) B. 0.3 (federal) (mi)

12 Distance to Critical Habitat (of Endangered Species)

NA (mi)

Endangered Species:

13 Land Use in Vicinity

Distance to:

COMMERCIAL/INDUSTRIAL

RESIDENTIAL AREAS, NATIONAL/STATE
PARKS, FORESTS, OR WILDLIFE RESERVES

AGRICULTURAL LANDS
PRIME AG LAND

AG LAND

A. On-site (mi)

B. 1.2 (Tlft Farm) (mi)

C. 5 (mi)

D. 5 (mi)

14 Description of Site in Relation to Surrounding Topography

The site is on nearly level land next to railroad tracks in Lackawanna. Land use on the block is both residential and commercial. The landfill is constructed 10-15 feet above grade.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC Region 9 files; USGS topographical maps; site inspection; Federal Emergency floodplain maps; geological references (see Bibliography); Soil Survey of Erie County; Kosalka, et al., Preliminary Evaluation of Chemical Migration to Groundwater and the Niagara River from Selected Waste Disposal Sites, USEPA Report EPA-905/4-85-001.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 State
NY

02 Site Number
915125

II. SAMPLES TAKEN: No samples taken by E & E.

Sample Type	01 Number of Samples Taken	02 Samples Sent to	03 Estimated Date Results Available
Groundwater			
Surface Water			
Waste			
Air			
Runoff			
Spill			
Soil			
Vegetation			
Other			

III. FIELD MEASUREMENTS TAKEN

01 Type	02 Comments
HNu - air monitoring	No readings recorded that were above background.

IV. PHOTOGRAPHS AND MAPS

01 Type	<input checked="" type="checkbox"/> Ground <input type="checkbox"/> Aerial	02 In Custody of <u>Ecology and Environment</u> (Name of organization or individual)
03 Maps	04 Location of Maps	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>Ecology and Environment</u>	

V. OTHER FIELD DATA COLLECTED (Provide narrative description of sampling activities)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC Region 9 files, site inspection

recycled paper

ecology and environment

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 State
NY

02 Site Number
915125

II. CURRENT OWNER(S)				PARENT COMPANY (If applicable)			
01 Name Louis Fadale		02 D+B Number		08 Name		09 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.) 333 Ridge Road		04 SIC Code		10 Street Address (P.O. Box, RFD #, etc.)		11 SIC Code	
05 City Lackawanna		06 State NY	07 Zip Code 14218	12 City		13 State	14 Zip Code
01 Name Stanley G. Tomaka		02 D+B Number		08 Name		09 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.) 345 Ridge Road		04 SIC Code		10 Street Address (P.O. Box, RFD #, etc.)		11 SIC Code	
05 City Lackawanna		06 State NY	07 Zip Code 14218	12 City		13 State	14 Zip Code
01 Name Elizabeth Zoladz		02 D+B Number		08 Name		09 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.) Unknown		04 SIC Code		10 Street Address (P.O. Box, RFD #, etc.)		11 SIC Code	
05 City		06 State	07 Zip Code	12 City		13 State	14 Zip Code
01 Name		02 D+B Number		08 Name		09 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code		10 Street Address (P.O. Box, RFD #, etc.)		11 SIC Code	
05 City		06 State	07 Zip Code	12 City		13 State	14 Zip Code
III. PREVIOUS OWNER(S) (List most recent first)				IV. REALTY OWNER(S) (If applicable, list most recent first)			
01 Name Russell Scherrer		02 D+B Number		01 Name		02 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.) 343 Ridge Road		04 SIC Code		03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code	
05 City Lackawanna		06 State NY	07 Zip Code 14218	05 City		06 State	07 Zip Code
01 Name Elizabeth Zoladz		02 D+B Number		01 Name		02 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.) Unknown		04 SIC Code		03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code	
05 City		06 State	07 Zip Code	05 City		06 State	07 Zip Code
01 Name		02 D+B Number		01 Name		02 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code		03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code	
05 City		06 State	07 Zip Code	05 City		06 State	07 Zip Code
V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)							
Erie County Real Property Tax Division							

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 State NY	02 Site Number 915125
----------------	--------------------------

II. CURRENT OPERATOR (Provide if different from owner) OPERATOR'S PARENT COMPANY (if applicable)

01 Name		02 D+B Number		10 Name		11 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code		12 Street Address (P.O. Box, RFD #, etc.)		13 SIC Code	
05 City		06 State	07 Zip Code	14 City		15 State	16 Zip Code
08 Years of Operation		09 Name of Owner					

III. PREVIOUS OPERATOR(s) (List most recent first; provide only if different from owner)

PREVIOUS OPERATORS' PARENT COMPANIES (if applicable)

01 Name R. Scherrer		02 D+B Number		10 Name		11 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.) 503 Seneca Street		04 SIC Code		12 Street Address (P.O. Box, RFD #, etc.)		13 SIC Code	
05 City Buffalo		06 State NY	07 Zip Code 14204	14 City		15 State	16 Zip Code
08 Years of Operation Approx. 8		09 Name of Owner During This Period Stanley Tomaka (1977-1985)					

01 Name		02 D+B Number		10 Name		11 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code		12 Street Address (P.O. Box, RFD #, etc.)		13 SIC Code	
05 City		06 State	07 Zip Code	14 City		15 State	16 Zip Code
08 Years of Operation		09 Name of Owner During This Period					

01 Name		02 D+B Number		10 Name		11 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code		12 Street Address (P.O. Box, RFD #, etc.)		13 SIC Code	
05 City		06 State	07 Zip Code	14 City		15 State	16 Zip Code
08 Years of Operation		09 Name of Owner During This Period					

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 State
NY

02 Site Number
915125

II. ON-SITE GENERATOR

01 Name		02 D+B Number			
03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code			
05 City	06 State	07 Zip Code			

III. OFF-SITE GENERATOR(S)

01 Name		02 D+B Number		01 Name		02 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code		03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code	
05 City	06 State	07 Zip Code		05 City	06 State	07 Zip Code	

01 Name		02 D+B Number		01 Name		02 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code		03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code	
05 City	06 State	07 Zip Code		05 City	06 State	07 Zip Code	

IV. TRANSPORTER(S)

01 Name		02 D+B Number		01 Name		02 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code		03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code	
05 City	06 State	07 Zip Code		05 City	06 State	07 Zip Code	

01 Name		02 D+B Number		01 Name		02 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code		03 Street Address (P.O. Box, RFD #, etc.)		04 SIC Code	
05 City	06 State	07 Zip Code		05 City	06 State	07 Zip Code	

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

I. IDENTIFICATION

01 State
NY

02 Site Number
915125

PART 10 - PAST RESPONSE ACTIVITIES

II. PAST RESPONSE ACTIVITIES

01 I 1 A. Water Supply Closed 02 Date _____ 03 Agency _____
04 Description:

01 I 1 B. Temporary Water Supply Provided 02 Date _____ 03 Agency _____
04 Description:

01 I 1 C. Permanent Water Supply Provided 02 Date _____ 03 Agency _____
04 Description:

01 I 1 D. Spilled Material Removed 02 Date _____ 03 Agency _____
04 Description:

01 I 1 E. Contaminated Soil Removed 02 Date _____ 03 Agency _____
04 Description:

01 I 1 F. Waste Repackaged 02 Date _____ 03 Agency _____
04 Description:

01 [X] G. Waste Disposed Elsewhere 02 Date 8/30/88 03 Agency ECDEP
04 Description: Approximately 90% of construction and demolition materials and all junk cars were removed from top of landfill.

01 I 1 H. On Site Burial 02 Date 1982 03 Agency Central Auto Wrecking
04 Description: Landfill contained tires, automobiles, automobile parts, construction and demolition debris.

01 I 1 I. In Situ Chemical Treatment 02 Date _____ 03 Agency _____
04 Description:

01 I 1 J. In Situ Biological Treatment 02 Date _____ 03 Agency _____
04 Description:

01 I 1 K. In Situ Physical Treatment 02 Date _____ 03 Agency _____
04 Description:

01 I 1 L. Encapsulation 02 Date _____ 03 Agency _____
04 Description:

01 I 1 M. Emergency Waste Treatment 02 Date _____ 03 Agency _____
04 Description:

01 I 1 N. Cutoff Walls 02 Date _____ 03 Agency _____
04 Description:

01 I 1 O. Emergency Diking/Surface Water Diversion 02 Date _____ 03 Agency _____
04 Description:

01 I 1 P. Cutoff Trenches/Sump 02 Date _____ 03 Agency _____
04 Description:

01 I 1 Q. Subsurface Cutoff Wall 02 Date _____ 03 Agency _____
04 Description:

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 State
NY

02 Site Number
915125

II. PAST RESPONSE ACTIVITIES (Cont.)

01 ☐ R. Barrier Walls Constructed
04 Description:

02 Date _____

03 Agency _____

01 ☒ S. Capping/Covering
04 Description:

02 Date 1982

03 Agency Central Auto Wrecking

On-site covering, grading, and seeding work scheduled approximately 2 weeks from inspection date

01 ☐ T. Bulk Tankage Repaired
04 Description:

02 Date _____

03 Agency _____

01 ☐ U. Grout Curtain Constructed
04 Description:

02 Date _____

03 Agency _____

01 ☐ V. Bottom Sealed
04 Description:

02 Date _____

03 Agency _____

01 ☐ W. Gas Control
04 Description:

02 Date _____

03 Agency _____

01 ☐ X. Fire Control
04 Description:

02 Date _____

03 Agency _____

01 ☐ Y. Leachate Treatment
04 Description:

02 Date _____

03 Agency _____

01 ☐ Z. Area Evacuated
04 Description:

02 Date _____

03 Agency _____

01 ☐ 1. Access to Site Restricted
04 Description:

02 Date _____

03 Agency _____

01 ☐ 2. Population Relocated
04 Description:

02 Date _____

03 Agency _____

01 ☐ 3. Other Remedial Activities
04 Description:

02 Date _____

03 Agency _____

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 11 - ENFORCEMENT INFORMATION

1. IDENTIFICATION

01 State
NY

02 Site Number
915125

II. ENFORCEMENT INFORMATION

01 Past Regulatory/Enforcement Action ☒ Yes ☐ No

02 Description of Federal, State, Local Regulatory/Enforcement Action

1980 - Operating without a Part 360 Permit--\$1,000 fine and ordered to remediate site.

September 1981 - Mr. Scherrer filed court papers alleging interference by the City of Lackawanna in his attempt to conduct remedial work.

1983 - Remediation plans were found to be incomplete by NYSDEC.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC Region 9 files

6. ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

Determination of the extent and location of surface and sub-surface contamination and the presence or absence of surface- and groundwater contamination is necessary for the Central Auto Wrecking site. Samples should be collected at various locations in the vicinity of the landfill to assess the source and migration route of contamination. Recommendations for the Phase II sampling program include the following:

- o Collection of surface and subsurface soil samples from adjacent properties as well as in the Central Auto Wrecking yard and landfill;
- o Installation of groundwater wells and subsequent collection of groundwater samples; and
- o Collection of surface water and sediment samples from drainage swales located at the base of the landfill.

Samples should be analyzed for priority pollutants.

Remediation of the drainage problems at the landfill is necessary. This will minimize the potential for direct contact and the potential for contaminant migration.

7. REFERENCES

- Buehler, E.J., 1966, Geology of Western New York, State University of New York Press, Albany, New York.
- Buehler, E.J. and I.H. Tesmer, 1963, Geology of Erie County New York, Bulletin, Buffalo Society of Natural Sciences, Vol. 21, No. 3.
- Campbell, D., 1980, personal communication, Erie County Department of Environment and Planning, letter to James Scherrer.
- Federal Emergency Management Agency, 1982, Flood Insurance Rate Maps, National Flood Insurance Program, Baltimore, Maryland.
- General Sciences Corporation, 1986, Graphical Exposure Modeling System (GEMS) Volume 3, Graphics and Geodata Handling, prepared for USEPA Office of Pesticides and Toxic Substances, Exposure Evaluation Division.
- Gilbert, J., 1987, personal communication, Town Engineer for Hamburg Water District, Hamburg, New York.
- Janik, C., 1980, personal communication, NYSDEC, memorandum to Robert Mitrey, NYSDEC.
- Koszalka, E.J., J.E. Paschal, Jr., T.S. Miller, and P.B. Duran, 1985, Preliminary Evaluation of Chemical Migration to Groundwater and the Niagara River from Selected Waste-Disposal Sites, prepared by the United States Geological Survey, Washington, D.C. for the United States Environmental Protection Agency, Chicago, Illinois, EPA Report EPA-405/4-85-001.
- LaSala, A.M., 1968, Groundwater Resources in the Erie-Niagara Basin, U.S. Department of Interior, New York State Conservation Department, Albany, New York.

- NUS Corporation, 1985, Final Draft Site Inspection Report and Hazardous Ranking System Model - Central Auto Wrecking, Lackawanna, New York, prepared for USEPA Region II.
- Malcolm Pirnie, 1985a, Closure Plan for Marilla Street Landfill BOF Dust Area, prepared for LTV Steel Company, Buffalo, New York.
- _____, 1985b, Marilla Street Landfill Conceptual Site Closure Plan, prepared for LTV Steel Company, Buffalo, New York.
- Mooradian, S., 1987, personal communication regarding stream classification and fishery information, Regional Fisheries Manager for NYSDEC, Olean, New York.
- Murtagh, W.J., 1976, The National Register of Historic Places, USDI National Park Service, Washington, D.C., with updates from the Federal Register in 1979, 1980, 1981, and 1982.
- New York State Department of Environmental Conservation, 1987, State and Federal Regulated Wetland Maps, Critical Habitats, and File Information, Buffalo, New York.
- New York State Office of Parks, Recreation, and Historic Preservation, 1986, Base Map of New York State Archaeological Site Locations, New York State Department of Transportation, Albany, New York.
- O'Connor, C., 1980a, personal communication, Erie Co. Department of Environment and Planning (ECDEP), to Robert Mitrey, NYSDEC.
- O'Connor, C., 1980b, personal communication, ECDEP, memorandum to Robert Mitrey, NYSDEC.
- O'Connor, C., 1980c, personal communication, ECDEP, memorandum to C. Janik.
- O'Connor, 1981, personal communication, ECDEP, memorandum to Lawrence Clare, NYSDEC.
- Owens, D.W., W.L. Pittman, J.P. Wulforst, and W.E. Hanna, December 1986, Soil Survey of Erie County, New York, USDA Soil Conservation Service.
- Pacjon, Helen, 1987, personal communication, resident, Lackawanna, New York.
- Strycharz, A., 1987, personal communication, Lackawanna Water District, Lackawanna, New York.
- Wehran Engineering and Recra Research, Inc., 1978, Hydrogeological Investigation of Alltiff Landfill, Buffalo, New York, in Preliminary Evaluation of Chemical Migration to Groundwater and The Niagara River from Selected Waste-Disposal Sites, United States Environmental Protection Agency, 1985, Chicago, Illinois.
- Whitney, J., 1987, USDA Soil Conservation Service, Prime Agricultural Lands Currently Under Production, Elicottville, New York.

APPENDIX A

PHOTOGRAPHIC RECORD

ecology and environment, inc.

PHOTOGRAPHIC RECORD

Client: New York State Dept. of Environmental Conservation Phase I investigation E & E Job No.: ND2021

Camera: Make Nikon SN: _____



Photographer: P. Gunther
Date/Time: 9/17/87; 10:30
Lens: Type: 50 mm
SN: _____
Frame No.: 1
Comments*: Southeast corner
of property of Central Auto
Wrecking. Debris is of
automobile parts.



Photographer: P. Gunther
Date/Time: 9/17/87; 10:30
Lens: Type: 50 mm
SN: _____
Frame No.: 2
Comments*: Southwest corner
of Central Auto Wrecking
property. In the foreground
is asphalt for building
foundation.

*Comments to include location

ecology and environment, inc.
P H O T O G R A P H I C R E C O R D

Client: New York State Dept. of Environmental Conservation Phase 1 investigation E & E Job No.: ND2021

Camera: Make Nikon SN: _____



Photographer: P. Gunther
Date/Time: 9/17/87; 10:30
Lens: Type: 50 mm
SN: _____
Frame No.: 3
Comments*: Demolition
debris at the property site
of Central Auto Wrecking
(west side).



Photographer: P. Gunther
Date/Time: 9/17/87; 10:30
Lens: Type: 50 mm
SN: _____
Frame No.: 4
Comments*: Northeast corner
of Central Auto Wrecking
property. Grey building is
on Stanley G. Tomaka's land.

*Comments to include location

ecology and environment, inc.

PHOTOGRAPHIC RECORD

Client: New York State Dept. of Environmental Conservation Phase I Investigation E & E Job No.: ND2021

Camera: Make Nikon SN: _____



Photographer: P. Gunther
Date/Time: 9/17/87; 10:30
Lens: Type: 50 mm
SN: _____
Frame No.: 5
Comments*: Eastern end of
Central Auto Wrecking yard
where transmissions are
stored.



Photographer: P. Gunther
Date/Time: 9/17/87; 10:30
Lens: Type: 50 mm
SN: _____
Frame No.: 6
Comments*: Northwestern end
of Central Auto Wrecking
yard, where roofing material
cans were placed.

*Comments to include location

ecology and environment, inc.
P H O T O G R A P H I C R E C O R D

Client: New York State Dept. of Environmental Conservation Phase 1 investigation E & E Job No.: ND2021

Camera: Make Nikon

SN: _____



Photographer: P. Gunther

Date/Time: 9/17/87; 11:00

Lens: Type: 50 mm

SN: _____

Frame No.: 7

Comments*: North section of
Tomaka property with
scattered demolition debris.



Photographer: P. Gunther

Date/Time: 9/17/87; 11:00

Lens: Type: 50 mm

SN: _____

Frame No.: 8

Comments*: Surface water at
Tomaka property.

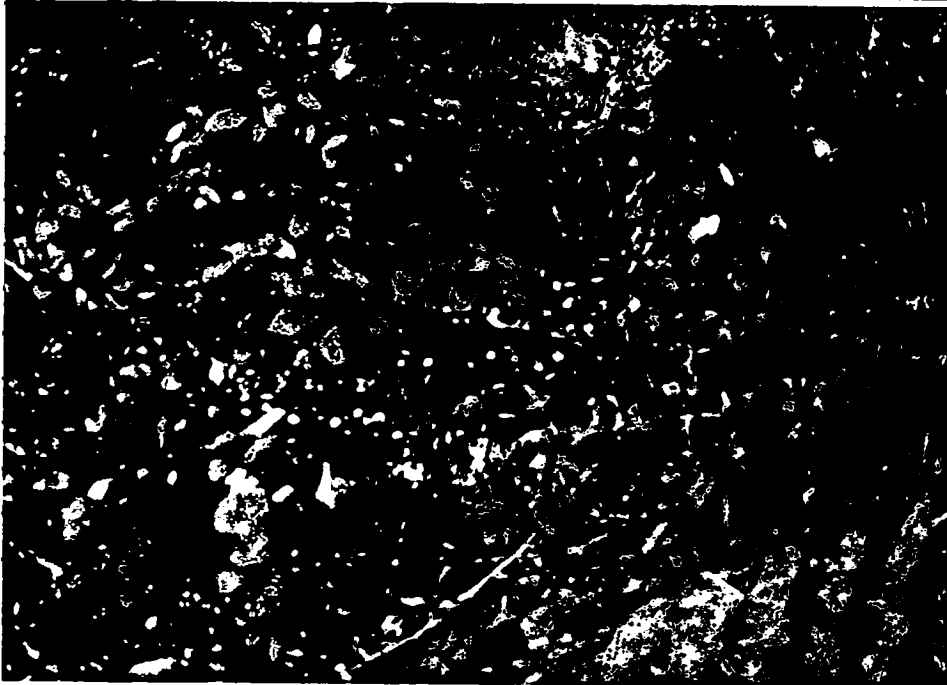
*Comments to include location

ecology and environment, Inc.
P H O T O G R A P H I C R E C O R D

Client: New York State Dept. of Environmental Conservation Phase I Investigation E & E Job No.: NO2021

Camera: Make Nikon

SN: _____



Photographer: P. Gunther

Date/Time: 9/17/87; 11:00

Lens: Type: 50 mm

SN: _____

Frame No.: 9

Comments*: Surface water
pool at 78 LeHigh St., a
property adjacent to Central
Auto Wrecking. The pool was
encircled with a fence.



Photographer: P. Gunther

Date/Time: 9/17/87; 11:00

Lens: Type: 50 mm

SN: _____

Frame No.: 10

Comments*: Front of Trans-
mission Exchange and Central
Auto Wrecking.

*Comments to include location

ecology and environment, inc.
P H O T O G R A P H I C R E C O R D

Client: New York State Dept. of Environmental Conservation Phase I Investigation E & E Job No.: ND2021

Camera: Make Nikon SN: _____



Photographer: P. Gunther

Date/Time: 9/17/87; 11:00

Lens: Type: 50 mm

SN: _____

Frame No.: 11

Comments*: Overview of

Tomaka's property next to

Conrail railroad tracks -

southern end of property.



Photographer: P. Gunther

Date/Time: 9/17/87; 11:00

Lens: Type: 50 mm

SN: _____

Frame No.: 12

Comments*: Overview of

Tomaka's property (fore-

ground) Central Auto Wreck-

ing background, and resi-

dential homes.

*Comments to include location

APPENDIX B

UPDATED NYSDEC INACTIVE HAZARDOUS WASTE
DISPOSAL SITE REGISTRY FORM

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE
INACTIVE HAZARDOUS WASTE
DISPOSAL SITE REPORT

Priority Code:	<u>2a</u>	Site Code:	<u>915125</u>
Name of Site:	<u>Central Auto Wrecking</u>	Region:	<u>9</u>
Street Address:	<u>343 - 345 Ridge Road</u>		
Town/City:	<u>Lackawanna</u>	County:	<u>Erie</u>
Name of Current Owner of Site:	<u>Louis Fadale</u>		
Address of Current Owner of Site:	<u>333 Ridge Road, Lackawanna, NY 14218</u>		
Type of Site:	<input type="checkbox"/> Open Dump <input type="checkbox"/> Structure <input type="checkbox"/> Lagoon <input checked="" type="checkbox"/> Landfill <input type="checkbox"/> Treatment Pond		
Estimated Size:	<u>3</u> acre(s)		
Site Description:			
<p>The landfill has contaminated runoff draining into nearby residences. The landfill is mounded with automobile parts and construction and demolition debris protruding out of the periphery of the landfill which is now 10-15 feet higher than surrounding property.</p>			
Hazardous Waste Disposed: <input type="checkbox"/> Confirmed <input checked="" type="checkbox"/> Suspected			
Type and Quantity of Hazardous Wastes Disposed:			
<u>Type</u>		<u>Quantity</u> (Pounds, Drums, Tons, Gallons)	
<u>Unknown</u>			

Time Period Site was Used for Hazardous Waste Disposal:

_____, 19 76 To _____, 19 83

Owner(s) During Period of Use: Russell Scherrer & Stanley Tomaka

Site Operator During Period of Use: Russell Scherrer

Address of Site Operator: Central Auto Wrecking, 503 Seneca Street, Buffalo, NY

Analytical Data Available: ☐ Air ☒ Surface Water ☐ Groundwater
☒ Soil ☐ Sediment ☐ None

Contravention of Standards: ☐ Groundwater ☐ Drinking Water
☒ Surface Water ☐ Air

Soil Type: Urban land - Lima complex and urban land - Churchville complex

Depth to Groundwater Table: 15 - 20 feet

Legal Action: Type: City Court Order ☐ State ☐ Federal

Status: ☒ In Progress ☐ Completed

Remedial Action: ☒ Proposed by R. Scherrer ☐ Under Design
☐ In Progress ☐ Completed

Nature of Action: Mr. Scherrer was ordered by NYSDEC to remediate the surface
water drainage problems at the Central Auto Wrecking Land-
fill.

Assessment of Environmental Problems:

Contamination of nearby residential homes from the landfill leakage.

Assessment of Health Problems:

Unknown

Person(s) Completing This Form:

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

NEW YORK STATE DEPARTMENT OF HEALTH

Name: _____

Name: _____

Title: _____

Title: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____
recycled paper

Date: _____
ecology and environment

APPENDIX C

PHOTOCOPIED REFERENCES

COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT & PLANNING
DIVISION OF ENVIRONMENTAL CONTROL

MEMORANDUM

TO Robert Mitrey, NYSDEC DATE October 21, 1980
FROM Cameron O'Connor
SUBJECT Central Auto Wrecking (15034)

As per your request, the writer went to the above site on October 20, 1980 to measure possible encroachment of the landfill onto adjacent private properties.

The distances, which were paced off, are as follows:
(Please refer to Site Sketch for the locations where the measurements were taken.)

- 1) From right side of Lehigh Street to the western edge of the landfill is about 162+ feet.
- 2) From the west side of the landfill, going east, to what appeared to the eastern edge of the filling operation is about 165+ft.
- 3) From what appeared to the east edge of the landfill to the railroad tracks is about 16+ft.
- 4) From the southern edge of the landfill to the access road entering Central Auto Wrecking is about 750 feet.

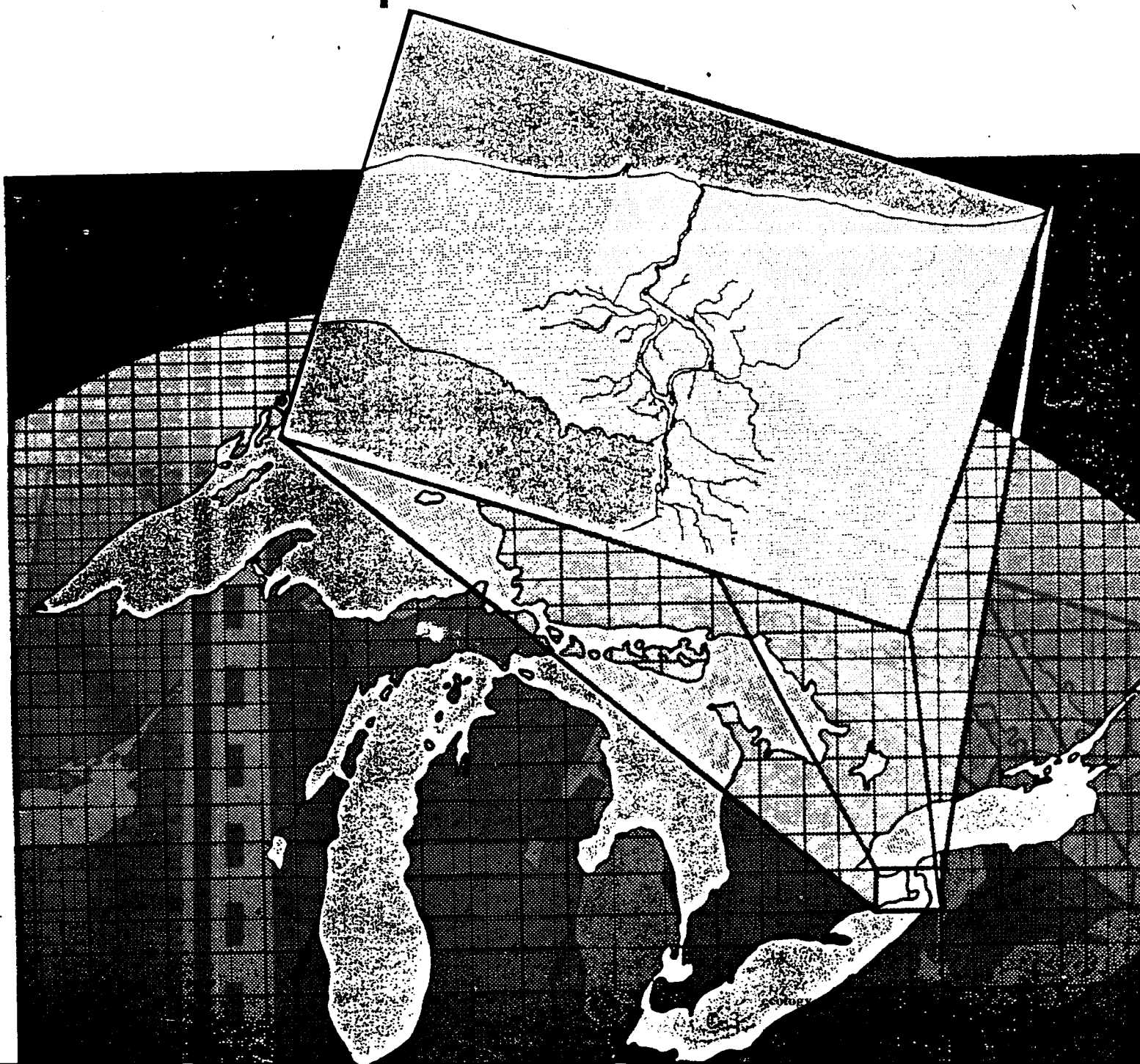
Although, at first it would appear that there is encroachment to adjacent properties on the south and east sides and no encroachment to the west, it is this writers opinion that due to the method of measurement, lack of investigators knowledge (I am not a licensed surveyor) and poor quality of the deed map, a realistic evaluation of the degree of encroachment, if any, onto adjacent properties is not possible.

If you have any questions please call.

COC:aj
Attach.



Preliminary Evaluation Of Chemical Migration To Groundwater and The Niagara River from Selected Waste- Disposal Sites



"Preliminary Evaluation of Chemical
Migration to Groundwater and the Niagara River from
Selected Waste-Disposal Sites"

By

Edward J. Koszalka, James E. Paschal, Jr.,

Todd S. Miller and Philip B. Duran

Prepared by the U.S. Geological Survey
in cooperation with the
New York State Department of Environmental Conservation
for the
U.S. ENVIRONMENTAL PROTECTION AGENCY

General information and contaminant-migration potential.--The Alltift Landfill, a 25-acre area south of the city of Buffalo, has been a disposal site since the 1950's. From the 1950's to the early 1970's, the site was used to dispose of bulk loads of dye, oil sludges, phenolic compounds, chrome sludge, copper sulfate, nitrobenzene, monochlorobenzene, and naphthalene. The amount of material deposited is unknown.

The landfill was inactive from the early 1970's to the late 1970's. Since then it has been used for the disposal of auto-demolition shredder waste, core sands, fly ash, and sand waste at a rate of 40,000 to 60,000 yd³/yr. The disposal area is now in the northern third of the site (fig. A-12).

Chemical data suggest that inorganic contaminants are migrating through the clay unit. The concentration of phenols, arsenic, mercury, chlorides, and sulfates in the zone above the clay greatly exceed ground-water standards; therefore, the potential for contaminant migration would become major if the contaminants were to move through the clay and into the lower aquifer.

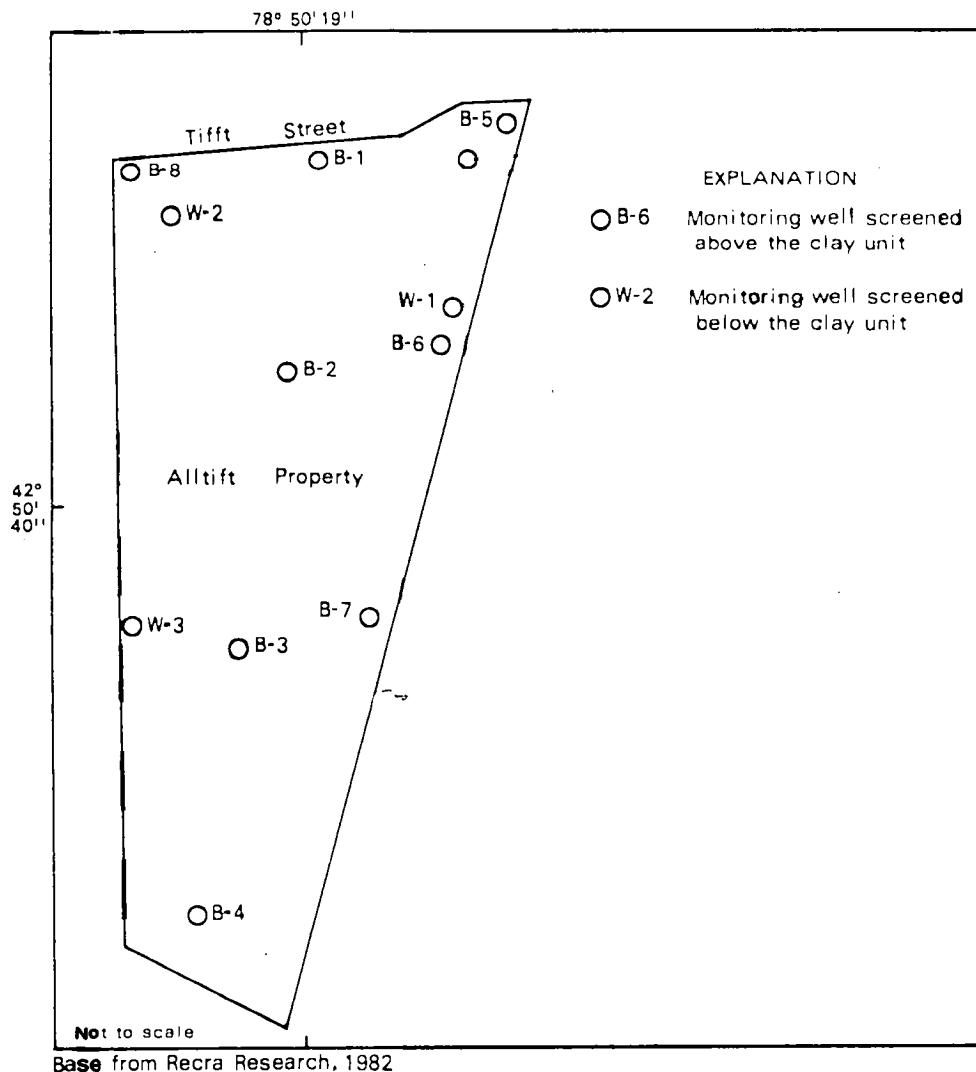


Figure A-12. Location of sampling holes at Alltift Landfill, site 162, Buffalo.

Geologic information.--The site consists of alluvium and fill of recent age underlain by till and lacustrine clay, which are in turn underlain by limestone and shale of Devonian age. Two consulting reports--Wehran Engineering and Recra Research (1978) and Recra Research (1982)--discuss these units in detail and include geologic cross sections. A generalized geologic column is shown in figure A-13.

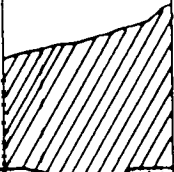


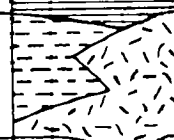
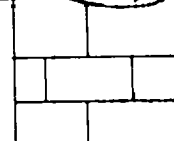

PERIOD	PERIOD	FORMATION	COLUMNAR SECTION	THICKNESS IN FEET	CHARACTER
QUATERNARY	RECENT	Fill		0-18	Refuse, wood, concrete, cinders, fly ash, decomposed vegetation, sand, metal fragments; highly permeable
		Unconformable Alluvium		0-6	Fine sand, silt; Marginally permeable
	PLEISTOCENE (WISCONSIN AGE)	Conformable Glaciolacustrine clay		6-43	Grey varved clay, occasional laminations of silt or fine sand, stiff at upper contact, soft to very soft below; highly impermeable
		Conformable Basal glaciolacustrine/ glacial till		0-12.5	Clayey silts, some sand and gravel; marginally permeable
		Unconformable Skaneateles formation; Stafford limestone member		<15	Grey limestone
DEVONIAN		Marcellus formation; Oatka Creek shale member		30-55	Black calcareous shale

Figure A-13. Generalized geologic column of formations underlying the Alltft Landfill, site 162, Buffalo. (Site location is shown in fig. A-12. Modified from Recra Research, Inc., 1982.)

Hydrologic information.--A water-table map of the shallow fill and alluvium by Wehran and Recra (1978) indicates a ground-water mound near the eastern boundary of the site. Water levels in the eight borings used to construct the map ranged from 580.8 to 584.8 ft above NGVD. This mound is probably the result of the relatively impermeable glaciolacustrine clay, which inhibits vertical flow and causes water infiltrating from the surface soils and alluvium to move laterally away from the site.

Permeability tests on two samples of the glaciolacustrine clay by Wehran and Recra (1978) indicated permeabilities of 5.8×10^{-8} cm/s and 6.4×10^{-8} cm/s. The report concluded that the permeability of the clay was sufficiently low to prevent vertical migration of contaminants from the upper unconsolidated water-bearing zone to the lower aquifers.

In 1982, the site owner drilled four borings to the upper part of the bedrock aquifer, collected water-level data, and constructed a potentiometric-contour map. The potentiometric surface slopes gently northward and ranges from 576.3 ft to a low of 574.9 ft above NGVD. Comparison of the water-table and potentiometric-surface maps indicates that the heads beneath the clay are lower and that a vertical flow component is present; however, the rate of movement through the unit would be slow. Additional data would be needed to define the vertical ground-water gradients at the site.

Chemical information.--In 1978, the site owner collected seven ground-water samples from wells screened above the glaciolacustrine clay for inorganic constituent analysis; results are given in table A-14.

In 1982, the site owner drilled four wells screened below the clay and collected water samples for chemical analysis. Well locations are shown in fig. A-12. The samples were analyzed by Recra Research; results are given in table A-15.

Sources of data

Wehran Engineering and Recra Research, Inc., 1978, Hydrogeological investigation of Alltift Landfill, Buffalo, N.Y.: 50 p., 1 appendix, 2 maps, 5 figs., 10 tables.

Recra Research Inc. and Sodarholm Engineering, 1980, Part 360 application for permit to operate a solid waste management facility; Buffalo, N.Y.: Alltift Company, Inc., 22 p., 1 appendix.

Recra Research Inc., 1982, Supplemental hydrogeological investigation, Buffalo, N.Y.: Alltift Company, Inc., 17 p., 1 appendix, 3 tables, 1 fig., 3 prints.

INTERVIEW ACKNOWLEDGEMENT FORM

SITE NAME	: Central Auto Wrecking	I.D. NUMBER	: 915125
PERSON CONTACTED	: Helen Pacjon	DATE	: 9/17/87
AFFILIATION	: Resident	PHONE NUMBER	: 823-8771
ADDRESS	: 76 LeHigh Street Lackawanna	CONTACT PERSON(S)	: P. Gunther <i>DP</i>
TYPE OF CONTACT	: Interview		

SUBJECT: Complaints about leachate from the Central Auto Wrecking landfill.

INTERVIEW SUMMARY

Mrs. Pacjon stated that she has lived in her home with her husband since 1933. Her home abuts the Tomaka embankment. There is continuous run-off from the embankment into her backyard. It becomes so severe that she has to operate a pump to pump the water out of the backyard, and into the front street. She has had contact with the Health Department since Mr. Sherrer started using Tomaka's property as a landfill.

Mr. Sherrer told her that he was going to form a large landfill on the Tomaka property and eventually the landfill would extend into the property of the homes along East LeHigh Street; this would include her backyard.

She said leachate continuously flowed out of the embankment into her backyard. She said that once it flooded her basement. There are pipes and automobile parts visible from the sides of the embankment.

Mrs. Pacjon stated that the debris in the landfill was initially tires, but later included automobiles, automobile parts, household demolition material, and towards the north end of the landfill Mrs. Pacjon believed that there were buried drums.

Mrs. Pacjon says that the landfill is about 70 feet wide but she didn't provide a length estimate. She said that the area was originally an agricultural field but that there were trees on the west side of the

ACKNOWLEDGEMENT

I have read the above transcript and I agree that it is an accurate summary of the information verbally conveyed to Ecology and Environment, Inc. interviewer(s) (as revised below, if necessary).

Revisions (please write in any corrections needed to above transcript)

Signature:

Date:

lot that Mr. Sherrer cut down. She said Mr. Sherrer also wanted to cut down trees that she owned.

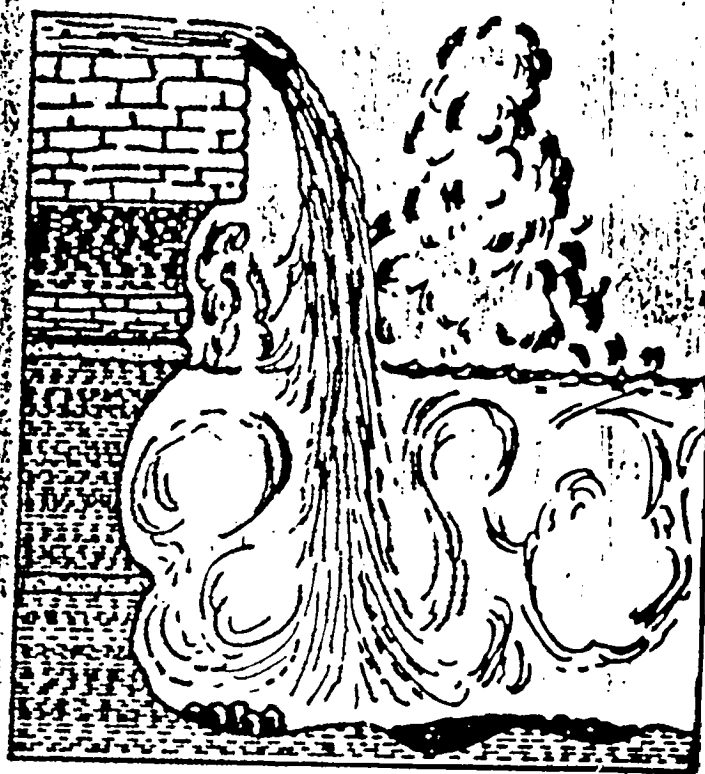
Mrs. Pacjon has a garden in her backyard where the leachate probably spread. She has tomatoes, peas, strawberries, raspberries and grapes. Mrs. Pacjon utilizes municipal water. She knows of no neighbor who has a private well.

djr

QE
146
N9

GEOLOGY OF WESTERN NEW YORK

GUIDE BOOK



NEW YORK STATE GEOLOGICAL ASSN.

38th ANNUAL MEETING

1966

DEPARTMENT OF GEOLOGICAL SCIENCES
STATE UNIVERSITY OF NEW YORK AT BUFFALO
BUFFALO, N. Y.

E. J. Buehler, ^{C-10} Editor

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ecology and environment

NEW YORK STATE GEOLOGICAL ASSOCIATION

38th Annual Meeting

April 29 - May 1, 1966

GUIDEBOOK

Geology of Western New York
Edward J. Buehler, Editor

Department of Geological Sciences
State University of New York at Buffalo

Additional copies are available from the permanent secretary of the New York State Geological Association: Dr. Kurt E. Lowe, Department of Geology, City College of the City University of New York, 139th St. at Convent Ave., New York, N. Y.

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Throughout most of the subsurface and presumably along the outcrop belt as well, the Vernon may be subdivided into three parts. Significant facies changes occur. In all three divisions these changes involve the lateral replacement of red shale in the east by mixed red and green shale, then green or gray shale and dolomites, and finally dolomites with anhydrite and halite in the west.

Syracuse Formation

The Syracuse Formation of Clarke, 1903, has recently been redefined, described and traced along the Silurian outcrop belt by Leutze (1955, 1959). The name originally was proposed for the subsurface salt beds of the Salina Group, but it is now also applied to the associated dolomites, anhydrites and shales. Thus the formation can be recognized along the outcrop belt where the salt beds have been dissolved by ground water.

In Onondaga County, Leutze subdivided the Syracuse into five members, some of which are exposed in the standard reference section, a railroad cut near Manlius Center. These consist of gray shales and gray or brown dolomites with interbedded clay (leached salt beds) and gypsum. The formation is about 160 feet thick. Leutze discovered fossils in several horizons within the formation and assembled a collection of brachiopods, pelecypods, ostracodes, gastropods, cephalopods, and eurypterids. He was able to map the Syracuse Formation and to recognize its subdivisions eastward into southernmost Herkimer County but was unable to carry his detailed work west of Cayuga Lake where the formation is virtually unexposed.

In the vicinity of Buffalo, the Syracuse consists of dolomites and anhydrite but lacks significant beds of salt. It is about 100 feet thick and is not known to be exposed in the Niagara Frontier.

In the subsurface the Syracuse is a readily recognizable portion of the Salina Group but it cannot be subdivided into the five members distinguished by Leutze along the outcrop. The majority of the halite and anhydrite beds of the subsurface Salina Group occur in the Syracuse Formation. Thicknesses in excess of 1000 feet are attained in the center of the Salina basin.

Camillus Shale

The upper portion of the Salina Group in Onondaga County and eastward consists of a chunky green shale, unfossiliferous, with some red beds in southernmost Herkimer County. Leutze (1959) restricted the application of the name Camillus (Clarke, 1903) to this portion of the Salina. It is about 200 feet thick in the type area, somewhat thinner both east and west of there.

In the Niagara Frontier the Camillus is 80-100 feet thick and includes the Oatka beds of Chadwick (1917), formerly assigned to the overlying Bertie Formation. The Predominate lithology is a green shale, but dolomite, anhydrite and siltstone, also occur. Eurypterids have been reported from a dolomite bed near the top of the formation in

ecology and environment

Chadwick's O-atka beds. This uppermost portion of the Camillus is exposed at Akron Falls, Indian Falls, Morganville and Oatka Falls. Another exposure of the Camillus is a small section along Murder Creek north of Akron.

At several localities along the Silurian outcrop belt there are underground mines for gypsum formed by conversion of the subsurface anhydrite of the Salina Group to gypsum through hydration by ground water. The National Gypsum Company has a mine at Clarence Center, the Bestwall Gypsum Company at Akron and the United State Gypsum Company at Oakfield. The stratigraphic position of the gypsum beds mined by these companies has, in the past, been assigned to the Camillus. They are located about 200 feet below the base of the Onondaga Limestone. In nearby gas wells, the Camillus is anhydritic but significant beds of anhydrite occur only in the Syracuse Formation, 150 to 200 feet below the Onondaga. Further study is needed but it appears that the gypsum mines may be in the Syracuse rather than the Camillus. The thickness of the Camillus in the subsurface appears to be quite uniform but the formation has several facies. Dolomite and anhydrite comprise significant portions of the Camillus in the center of the Salina basin; red shales become predominate in the east.

Bertie Formation

The type section of the Bertie Formation (Chapman, 1864) is located in Bertie township, Welland County, Ontario. In an abstract Chadwick (1917) subdivided the Bertie of western New York into four members, in descending order: Buffalo cement bed, Scajaquada shale and dolomite, Falkirk dolomite and O-atka shale (here included in the underlying Camillus). Chadwick later (see Clarke, 1918, p. 42) renamed the upper member Williamsville as the term Buffalo was preoccupied. The Bertie of western New York is everywhere underlain by the Camillus Shale and overlain, where complete sections are found, by the Akron Dolomite. Owing to the relief of a pre-Onondaga unconformity, however, exposures are found where the Onondaga Limestone directly overlies the Williamsville Member of the Bertie or some lower member. Chadwick was first to point this out.

The thickness of the Bertie Formation in western New York is uncertain because few exposures continue downward into the underlying Camillus Shale. It is believed to be about 50 feet thick where all members are present. Its thickness will, of course, vary from place to place depending upon the amount removed by erosion prior to deposition of the Onondaga Limestone. The contact of the Bertie with the overlying Akron Dolomite is gradational. Its contact with the underlying Camillus is much less clearly understood because of the lack of good exposures. Some authors (Grabau, 1901, p. 115) and Ailing (1928, pp. 27-28) have suggested that this contact possibly is disconformable.

The Falkirk Member of the Bertie is composed of massive beds of dark gray dolomite, weathering yellowish brown, which are characterized by coarse conchoidal fracturing, a small marine fauna and a basal eurypterid horizon. Owing to its greater resistance the Falkirk

commonly produces a waterfall where exposed in streambeds. Its thickness varies from 18 to 25 feet. The overlying Scajaquada Member consists of dark shales or blocky waterlimes, less resistant than the Williamsville above or the Falkirk below, and presumably contains more argillaceous material than those two members. It varies from 3 to 10 feet in thickness and, in southern Ontario, eurypterids occur near its base ("Bridgeburg horizon").

The Williamsville Dolomite, because it formerly was mined for natural cement in the vicinity of Buffalo, is perhaps the best known member of the Bertie. It consists of laminated, fine-grained dolomite, up to 5 or 8 feet thick, which weathers light gray. Its pronounced conchoidal fracture, among other criteria, serves to distinguish it from the overlying Akron Dolomite which has an irregular fracture. According to Monahan (1931, p. 379) most of the fossils, especially the eurypterids, of the Bertie Formation cited by Ruedemann (1925) and others have been obtained from the Williamsville Member.

The Bertie Formation is noted for its abundance of well-preserved eurypterids, most of which apparently were obtained from the upper or Williamsville Member. In addition to these, bryozoans, brachiopods, gastropods, cephalopods, ostracodes, and graptolites also have been found.

Exposures of the Bertie Formation and the overlying Akron Dolomite are fairly common in the Niagara Frontier region. Outcrops in Buffalo are located near the Main Street entrance to Forest Lawn Cemetery, in the storm sewer on East Amherst (old Bennett quarry), and in a New York Central Railroad cut between Kensington and Morris Avenues. East of the city important localities are in Ellicott Creek at Williamsville, in the Louisville Cement quarry near Clarence, at the falls in Akron Falls Park, at Indian Falls, at Morganville and along Route 19 and in Oatka Creek at North LeRoy.

Akron Dolomite

The highest rock unit of the Silurian in the Niagara Frontier is the Akron Dolomite (Lane and others, 1908). The type section is an outcrop in Murder Creek, at Akron, New York, where the formation is about 8 feet thick. Other exposures are cited in the discussion of the Bertie (except Indian Falls, Morganville and North LeRoy).

The Akron consists of gray to buff, mottled and banded dolomite, fine-grained and often pitted by the solution of fossil corals. The lower contact with the Bertie is gradational and difficult to identify. The upper contact with the Onondaga Limestone is a conspicuous disconformity broadly undulating, with occasional channels or "dikes" of sandstone or arenaceous limestone extending down into the underlying Akron (or Bertie where the Akron is absent). Although not an abundantly fossiliferous rock, the Akron is the most fossiliferous portion of the entire Cayuga Series in western New York. Its fauna includes corals, brachiopods, gastropods, cephalopods, and ostracodes. Eurypterids and graptolites also have been reported but are relatively rare.

The Akron Dolomite of western New York appears to be a continuation of the Cobleskill Limestone of Eastern New York. Doubts regarding the tracing and correlation of these units, particularly the Akron, across Ontario, Monroe and Genesee Counties persist despite the efforts of several stratigraphers (Schuchert, 1903; Hartnagel, 1903; Ailing, 1928; Hoffman, 1949; Rickard, 1953; Leutze, 1959). In the subsurface it frequently is not possible to separate the Akron-Cobleskill from the underlying Bertie in sample logs because the lithologic differences are slight. However, where the Cobleskill is a fossiliferous limestone, the separation is more easily made. Radioactivity logs provide an additional means of differentiating these formations in some parts of the subsurface.

THE HAMILTON GROUP IN WESTERN NEW YORK

By Edward J. Buehler

State University of New York at Buffalo

Circumstances which developed at the last minute left us without a paper on the Hamilton Group of Western New York. There was, of course, no intent to slight this most interesting and richly fossiliferous section of rock. Therefore, a column (fig. 1) a few notes and references are inserted here.

The two post-Hall classical works on the Hamilton are Grabau's (1898) *Geology and Paleontology of Eighteen Mile Creek*, and Cooper's (1930) *Stratigraphy of the Hamilton Group of New York*. deWitt (1956) describes the upper Hamilton of the Eden quadrangle. Buehler and Tesmer (1963) summarize the data on the paleontology and stratigraphy of the Hamilton group in Erie County. The chart "Correlation of the Devonian in New York State" by Rickard (1964) gives correlation across the state and the depositional phases as well as other stratigraphic information.

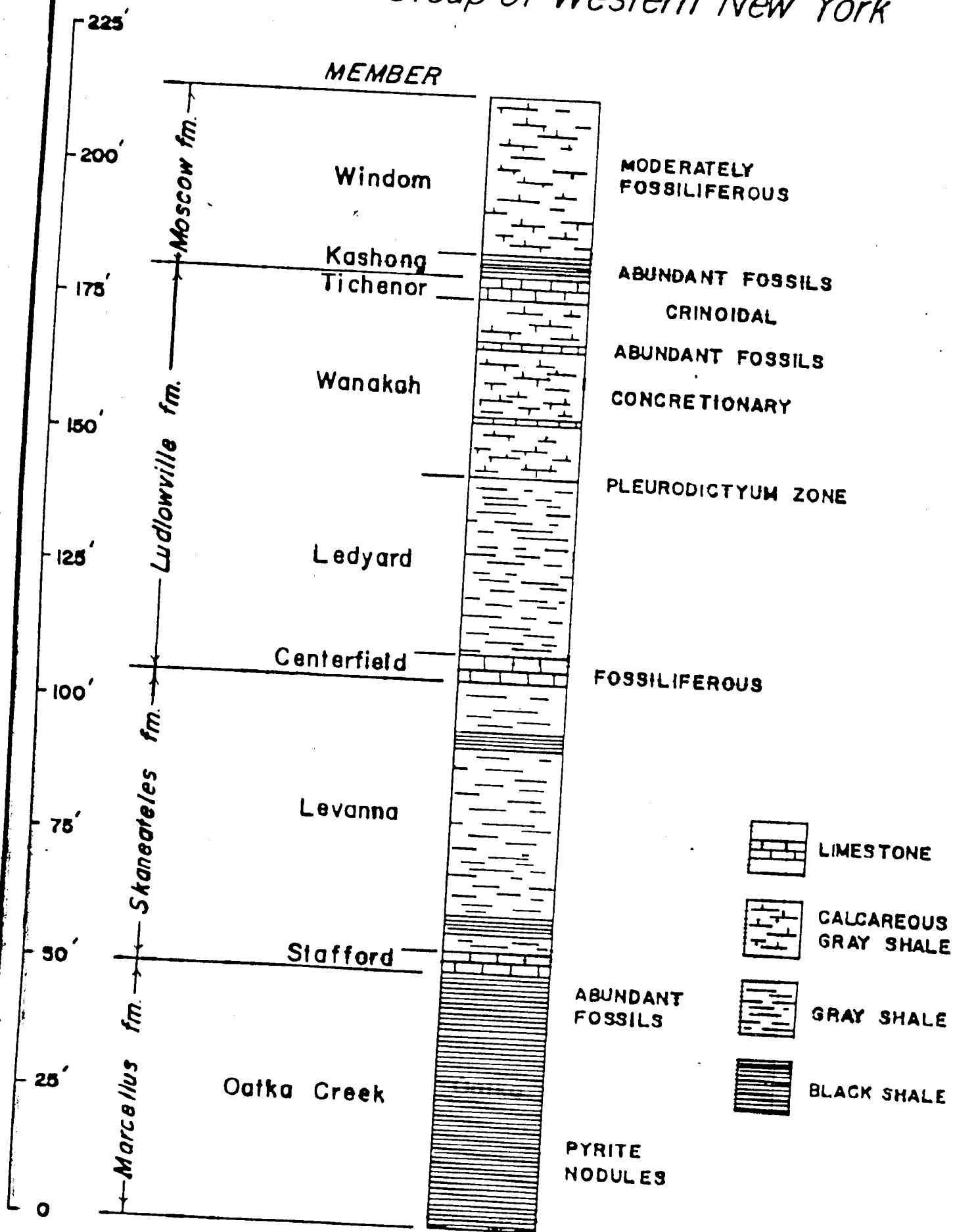
The Hamilton sediment of western New York was deposited at the western, seaward extremity of the Catskill Delta. This facies situation is described, with varying degrees of accuracy, in every textbook on stratigraphy and historical geology and should be familiar to all. The Marcellus and Skaneateles Formations are black and bluish-gray shale with thin limestone beds. They are separated by the Stafford Limestone, regarded as the base of the Skaneateles. Large pyrite nodules are common near the base of the Oatka Creek Shale and the brachiopod *Leiorhynchus limitare* is abundant near the top. Portions of these units, especially near the top of the Oatka Creek, are fossiliferous; other are not.

The Ludlowville and Moscow Formations consist of calcareous gray shale which may weather to a clayey consistency. Concretionary layers and thin limestone beds are common. Two of these limestones, the Centerfield and Tichenor are used as key beds in correlation and subdivision of the Hamilton Group. The upper Hamilton, especially the upper part of the Ludlowville, is richly fossiliferous. The fauna is predominantly one of corals, bryozoans, and brachiopods. Some of the particularly abundant species are *Stereolasma rectum*, *Athyris spiriferoides*, *Mucrospirifer mucronatus*, and *Favosites hamiltoniae*. The tabulate *Pleurodictyum americanum* is common at the base of the Wanakah shale and the brachiopod *Ambocoelia umbonata* is abundant at the base of the Moscow shale. Some beds contain common specimens of the trilobite *Phacops rana*. The Tichenor is a crinoidal limestone. Molluscs, ostracodes and tentaculitids are also common in the upper Hamilton and there is a modest amount of plant material. Many of the fossils are extremely delicate and show little or no evidence of transportation. The fossiliferous pyrite (?) concretions occur in the Ledyard member. The Middle Devonian is separated from the Upper Devonian by the lensatic Leicester Pyrite.

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Hamilton Group of Western New York



UPPER DEVONIAN STRATIGRAPHY AND PALEONTOLOGY OF SOUTHWESTERN NEW YORK STATE (ERIE, CHAUTAUQUA AND CATTARAUGUS COUNTIES)

by Dr. Irving H. Tesmer

State University of New York College at Buffalo

Upper Devonian rocks in southwestern New York State consist of about 2500 feet of largely detrital material associated with the Catskill Clastic Wedge. During Late Devonian time, clastic sediment gradually spread westward and northwestward across New York State and Pennsylvania, eventually filling the epicontinental seas that occupied the Appalachian Trough and adjacent areas.

There is some disagreement as to the exact boundaries that mark the base and top of the Upper Devonian in southwestern New York State but the present writer includes all strata from the base of the Genesee Member of Genesee Formation to the top of the Cattaraugus Formation (Cooper et al., 1942; Rickard, 1964). The overlying Knapp Conglomerate is considered to be Lower Mississippian (Holland, 1959).

Some authors have subdivided Upper Devonian strata into two series, an earlier Senecan and a later Chautauquan. Although there may be some paleontological evidence (especially cephalopods) to suggest this, the present writer does not see strong justification for such a division in southwestern New York State and therefore assigns all Upper Devonian units to a single series, the Chautauquan.

Within the Chautauquan Series, three groups are recognized (Tesmer, 1955), in ascending order the Seneca (600 feet), Arkwright (1250 feet) and Conewango (650 feet). The boundaries between these groups are based upon lithologic changes and facies differences that are persistent throughout the three counties of southwestern New York, namely Erie (Buehler and Tesmer, 1963), Chautauqua (Tesmer, 1963) and Cattaraugus. The Seneca Group extends from the base of the Genesee Member of the Genesee Formation to the top of the Hanover Member of the Java Formation. The Arkwright Group includes strata from the base of the Dunkirk Member of the Canadaway Formation to the top of the Ellicott Member of the Chadakoin Formation. Locally assigned to the Conewango Group is the Cattaraugus Formation. It includes redbeds, conglomerates and coarse buff sandstones interbedded with marine siltstones and shales.

The Seneca Group includes in ascending order the Genesee, Sonyea, West Falls, and Java Formations. These units are largely gray and black shales although a few limestone and siltstone beds also occur. Although the Genesee Formation varies only from about 10 to 20 feet in thickness, various members have been recognized including the Genesee Shale (2 inches to 2 feet of black shale), Penn Yan Shale (9 inches of dark gray shale) [deWitt and Colton, 1959], Genundewa Limestone (2 inches to 2 feet of light to dark gray limestone) and West River Shale (8 to 14 feet of gray shale). The Genundewa and West River Members include numerous species of conodonts and fish but the faunal content of the thin Genesee and Penn Yan Members is less well known in Erie County.

faunal assemblage, almost all mollusks content of the Nunda Siltstone Member, limited to eastern Erie County, is as yet unknown locally.

The Java Formation (Pepper and deWitt, 1950; deWitt and Colton, 1953; deWitt, 1960) is divided into an older Pipe Creek and a younger Hanover Member. The Pipe Creek contains from one to two feet of black shale with some carbonized plant remains and conodonts. In the 85 to 95 feet of Hanover, some conodonts and mollusks have been collected. The Hanover is largely composed of gray shales but also includes some interbedded dark gray shales and thin limestones, as well as several zones of calcareous nodules. It is similar in appearance to the older Angola Shale Member of the West Falls Formation.

The Arkwright Group (Tesmer, 1955) includes an older Canadaway and younger Chadakoin Formations. These units consist of black and gray shales interbedded with an increasing percentage of gray siltstone toward the top of the group. Seven members are recognized in the Canadaway Formation of Chautauqua County, the Dunkirk (oldest), South Wales (Pepper and deWitt, 1951), Gowanda, Laona, Westfield, Shumla and Northeast (youngest). The Dunkirk Shale is composed of about 40 feet of black shale containing a few carbonized plants and conodonts. The overlying South Wales Member includes from 60 to 80 feet of interbedded gray and black shales with a limited faunal and floral content similar to the underlying Dunkirk Shale Member. Above the South Wales are found from 120 to 230 feet of mostly gray shales and siltstones with some black shale beds, assigned to the Gowanda Member. Although Gowanda fossils are not numerous nor widely distributed stratigraphically, a considerable number of species have been collected, largely mollusks and conodonts. The faunal assemblage and accompanying lithologies are quite like the older Angola Member of the West Falls Formation and the Hanover Member of the Java Formation. This marks the last appearance of the "Naples Fauna" of Clarke (1904).

The Laona Siltstone Member of the Canadaway Formation contains many species introduced for the first time in southwestern New York State. These include the brachiopods *Ambocoelia gregaria*, *Athyris angelica*, *Camarotoechia contracta* and *Tylothyris mesacostalis* as well

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and conodonts. Many of the species were first introduced to the area during Laona times when a similar environment must have prevailed.

Much work remains to be done on the Conewango Group, which is locally the Cattaraugus Formation. This formation exhibits great variations in lithology, ranging from typical marine gray shales and siltstones through near-shore coarse buff sandstones and conglomerates to non-marine red shales, siltstones and sandstones. Total thickness is about 650 feet, within which there are many sandstone-conglomerate lenses. These lenses cannot be distinguished from one another in the field and must be separated by careful plotting as to geographic location and elevation. It is hoped that eventually the Cattaraugus Formation may be divided into an appropriate number of formal members (Tesmer, 1958) but presently the Cattaraugus is largely undifferentiated,

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GEOLOGY OF ERIE COUNTY New York

By

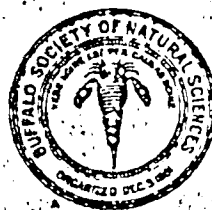
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The Early Devonian sea did not extend into the ongoing erosion. Thus, Devonian and part of

record in western New York warm, clear salt water. A portion of the fine reef was along Kensington Avenue in

was replaced by muddy Hamilton Group. This was uplifted during the Taconic orogeny. They constitute

the Marcellus Formation. This was followed by beds that are quite barren of fossils, record a sea bottom. The Paleozoic marine record is a brief clearing of which may have formed immense sand dunes. These are an important part of the shale. This is succeeded by a thin, remarkable dwarfed water environment.

The deposition in western New York through a thickness of sediment to the west and east and forth with time, are relatively scarce in the region inhabited by certain fish. The uppermost is siltstone. This coarsens with migration of the Devonian

of the Mesozoic and Tertiary New York. This is that time, and subject to the Pleistocene Epoch. It is described in the following

Surficial Geology

PHYSIOGRAPHY

Both the altitude and relief of the land surface tend to increase from north to south. The lowest elevation is 565 feet above sea level at the northern tip of Grand Island and the highest, 1,945 feet above sea level, is in Sardinia township, southeastern Erie County. On the basis of physiography the county may be divided into three parts: the flat Lake Tonawanda plain in the north, followed by the Lake Erie plain, and the Allegheny plateau in the south.

The Onondaga escarpment is a conspicuous topographic feature. This north-facing cliff, formed by the outcropping northern edge of the resistant Onondaga Limestone and Upper Silurian dolostone, can be traced from Buffalo eastward through Akron. In Erie County it seldom exceeds 40 feet in height. Some of the streams which cross the escarpment form waterfalls, but many of the smaller streams disappear in fissures and caves and reappear on the plain to the north.

Between the Onondaga escarpment and the parallel Niagara escarpment to the north is the Lake Tonawanda plain, so named because in late Pleistocene time it was occupied by now extinct Lake Tonawanda. This plain actually is a shallow east-west trending trough, 10 to 15 miles in width, which is drained along its axis by Tonawanda Creek.

The Lake Erie plain, so called because it was covered by glacial lakes ancestral to the present Lake Erie, is an area 6 to 12 miles in width between the Onondaga escarpment and the hilly region to the south. This plain is smooth or gently rolling and rises in elevation toward its southern border where much of it is 900 to 1,000 feet above sea level.

The southern third of the county lies within the maturely dissected Allegheny plateau, the northern border of which is sometimes referred to as the Lake Erie or Portage escarpment. The hilly topography of this region appears to be largely the result of stream erosion for there are no appreciable folds or faults. Glacial erosion has modified the shape of some of the larger valleys and has produced a general rounding of the topography. The amount of glacial drift is commonly so great as to obscure the topography of the underlying bedrock.

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Erie County has no large lakes other than bordering Lake Erie. The major streams, all of which flow west or northwest into Lake Erie, are Tonawanda, Ellicott, Cayuga, Buffalo, Cazenovia, Eighteenmile, and Cattaraugus Creeks. Tonawanda Creek, part of which coincides with the Erie Barge Canal, flows over the flat bottom of extinct Lake Tonawanda. Ellicott Creek crosses the Onondaga escarpment at Williamsville where it forms a waterfall, as does Murder Creek at Akron. Cayuga, Buffalo, Cazenovia, and Eighteenmile Creeks flow northwest from the hills of the Allegheny plateau to the Lake Erie plain and cut post-glacial gorges which expose thick sections of Middle and Upper Devonian rock. Cattaraugus Creek flows essentially westward, part of it through the picturesque gorge known locally as Zoar Valley.

PLEISTOCENE GEOLOGY

INTRODUCTION

The surficial geology of Erie County consists largely of the effects of the Pleistocene glaciation (Fig. 2). The Pleistocene geology of western New York provides a fertile field for research, not only from the scientific viewpoint of understanding more of this last phase of geologic history, but also from the practical aspect of engineering geology and sand and gravel resources.

Following is a list of the glacial and interglacial stages of the Pleistocene Epoch. Although erosion by earlier glacial stages undoubtedly played a role in shaping the topography of Erie County, all the identified features date from the Wisconsin Stage, and a more detailed breakdown of that stage is provided. The most conspicuous of these features are the moraines deposited by the retreating ice sheet and the strand lines of the late Wisconsin lakes. Hough (1958, pp. 90 - 109) describes the subdivisions given below:

Wisconsin Glacial Stage

Valders Substage

Two Creeks Interval

Mankato (Port Huron) Substage

Cary Substage

Tazewell Substage

Iowan Substage

Farmdale Substage

Sangamon Interglacial Stage

Illinoian Glacial Stage

Yarmouth Interglacial Stage

Kansan Glacial Stage

Aftonian Interglacial Stage

Nebraskan Glacial Stage

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Erie-Niagara Basin

Ground-Water Resources

ERIE-NIAGARA BASIN REGIONAL WATER
RESOURCES PLANNING BOARD

THE NEW YORK STATE WATER RESOURCES COMMISSION
CONSERVATION DEPARTMENT OF DIVISION OF WATER RESOURCES

GROUND-WATER RESOURCES OF THE ERIE-NIAGARA BASIN, NEW YORK



**Prepared for the
Erie-Niagara Basin Regional Water Resources
Planning Board**

by

A. M. La Sala, Jr.

**UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

in cooperation with

**THE NEW YORK STATE CONSERVATION DEPARTMENT
DIVISION OF WATER RESOURCES**

**STATE OF NEW YORK
CONSERVATION DEPARTMENT
WATER RESOURCES COMMISSION**

Basin Planning Report ENB-3

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GEOLOGY AND TOPOGRAPHY

The Erie-Niagara basin is underlain by layers of sedimentary bedrock which are largely covered with unconsolidated deposits. Descriptions of the various bedrock units are given in figure 2. The bedrock consists mainly of shale, limestone, and dolomite; the Camillus Shale contains a large amount of interbedded gypsum. All the bedrock units were built up by fine-grained sediments deposited in ancient seas during the Silurian and Devonian Periods and, therefore, are bedded or layered. The dip of the rocks (inclination of the bedding planes) is gently southward at from 20 to 60 feet per mile, but the average dip is between 30 and 40 feet per mile. The dip is so gentle that it is hardly perceptible in outcrops.

The unconsolidated deposits are mostly glacial deposits formed during Pleistocene time about 10,000-15,000 years ago when an ice sheet covered the area. The glacial deposits consist of: (1) till, which is a nonsorted mixture of clay, silt, sand, and stones deposited directly from the ice sheet; (2) lake deposits, which are bedded clay, silt, and sand that settled out in lakes fed by the melting ice; and (3) sand and gravel deposits, which were laid down in glacial streams. The glacial sand and gravel deposits are of both the ice-contact and outwash types, as will be explained later in the report. The glacial deposits generally are less than 50 feet thick in the northern part of the basin. They are considerably thicker in some valleys in the southern part and reach a maximum known thickness of 600 feet near Chaffee. Other unconsolidated deposits are alluvium formed by streams in Recent times and swamp deposits formed by accumulation of decayed plant matter in poorly drained areas.

Relief of the present land surface is due to preglacial erosion of the bedrock and subsequent topographic modification by glaciation. In contrast to the southward dip of the rocks, the land surface rises to the south largely because preglacial erosion was more vigorous in the northern part of the basin. The shale in the southern part of the basin is somewhat more resistant to erosion than the rocks in the northern part of the basin but not significantly so. Figure 3 shows the relationship of the topography and rock structure and delineates the two topographic provinces of the basin: the Erie-Ontario Lowlands and the Appalachian Uplands. The rocks crop out in belts which trend generally east-west. The bedrock geologic map, plate 2, shows that the outcrop belts bend around to the southwest near Lake Erie. They assume this direction mainly because of relatively intense erosion in the Erie-Ontario Lowland near Lake Erie has exposed the rock at lower elevations than farther east. The Lockport Dolomite and the Onondaga Limestone, because they are relatively resistant to erosion, form low ridges in the northern part of the basin. Tonawanda, Murder, and Ellicott Creeks descend the escarpment of the Onondaga at falls and cataracts.

In the hilly southern half of the basin (the Appalachian Uplands), preglacial valleys, deepened by glacial erosion, are cut into the shale. The valleys are partly filled with glacial deposits so that some of the present streams flow 200 to 600 feet above the bedrock floors of the valleys as shown in figure 3.

System	Series	Group	Formation	Thickness in feet	Section
Devonian	Upper	Connoaut Group of Chadwick (1934)		500	Shale, siltstone, and fine-grained sandstone. Top is missing in area.
		Camarlaway Group of Chadwick (1933)	Undivided	600	Gray shale and siltstone, interbedded. (Section broken to save space)
			Perrysburg	400- 450	Gray to black shale and gray siltstone containing many zones of calcareous concretions. Lower 100 feet of formation is olive-gray to black shale and interbedded gray shale containing shaly concretions and pyrite.
			Java	90 115	Greenish-gray to black shale and some interbedded limestone and zones of calcareous nodules. Small nodules of pyrite occur in the lower part.
			West Falls	400- 520	Black and gray shale and light-gray siltstone and sandstone. The lower part is particularly porous. Throughout the formation are numerous zones of calcareous concretions, some of which contain pyrite and marcasite.
	Middle	Hamilton	Sonyea	45-85	Olive-gray to black shale.
			Genesee	10-20	Dark-gray to black shale and dark-gray limestone. Beds of nodular pyrite are at base.
			Moscow Shale	12-55	Gray, soft shale.
			Ludlowville Shale	65-130	Gray, soft, fissile shale and limestone beds at top and bottom.
			Skaneateles Shale	60-90	Olive-gray, gray and black, fissile shale and some calcareous beds and pyrite. Gray limestone, about 10 feet thick is at the base.
			Marcellus Shale	30-55	Black, dense fissile shale.
			Onondaga Limestone	108	Gray limestone and cherty limestone.
			Akron Dolomite	8	Greenish-gray and buff fine-grained dolomite.
			Barton Limestone	50-60	Gray and brown dolomite and some interbedded shale.
			Salina	400	Gray, red, and green thin-bedded shale and massive mudstone. Gypsum occurs in beds and lenses as much as 5 feet thick. Subsurface information indicates dolomite (or perhaps, more correctly, magnesium-lime rock) is interbedded with the shale (shown schematically in section). South of the outcrop area, at depth, the formation contains thick salt beds.
			Camillus Shale		
Silurian	Niagara		Lockport Dolomite	150	Dark-gray to brown, massive to thin-bedded dolomite, locally containing algal reef and gypsum nodules. At the base are light-gray limestone (Gasport Limestone Member) and gray shaly dolomite (DeCew Limestone Member).
	Clinton		Rochester Shale	60	Dark-gray calcareous shale.

Figure 2.--Bedrock units of the Erie-Niagara basin.

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