



FINAL RCRA FACILITY INVESTIGATION REPORT

Former Bethlehem Steel Corporation Facility
Lackawanna, New York

PART II - APPENDICES

- Appendix A.1: Summary Report of Monitoring Well Program. 2/16/81
- Appendix A.2: NYSDEC Spill Records
- Appendix A.3: Climatological Data
- Appendix A.4: Potable Water Well Survey

October 2004

Submitted by:
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Richfield, Ohio 44286-9000



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APPENDIX A.1

SUMMARY REPORT OF MONITORING WELL PROGRAM 2/16/81

SUMMARY REPORT
MONITORING WELL PROGRAM
0120-079-10
FEBRUARY 16, 1981

Dames & Moore

CRANFORD, NEW JERSEY



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SUMMARY REPORT MONITORING WELL PROGRAM

1.0 INTRODUCTION

This summary report presents the results of the monitoring well program designed to provide limited geohydrologic and ground water quality data as part of the requirements by New York State Department of Conservation (NYSDEC) to operate a Solid Waste Disposal Facility of the Bethlehem Steel Lackawanna plant.

1.1 PURPOSE AND SCOPE

A report prepared by Dames & Moore entitled "Surface and Ground Water Monitoring Program for the Solid Waste Disposal Area", dated October 1978 provided background data and a proposed monitoring program to satisfy the 1978 NYSDEC requirements for obtaining a permit to operate a solid waste facility. A monitoring program, based upon the recommendations of the above report, was submitted to NYSDEC for review. This program was conditionally accepted and provided the design criteria for the ground water monitoring portion of the program. This included, the construction of eleven (11) monitoring wells at eight (8) locations, and limited test pumping and water sampling at regular intervals (Plate 1). Subsequent to the installation of the 11 wells, two additional wells were installed to further define ground water conditions in the Solid Waste Disposal Area.

Dames & Moore was retained by the Bethlehem Steel Company (BSC) to; provide drawings and specifications for the purpose of securing bids for installation of the monitoring wells, provide field supervision for the construction of wells, obtain samples, construct descriptive/graphic logs of the subsurface strata, and provide a summary report of data obtained from the installation of monitoring wells and chemical analysis of water obtained therefrom.

Bethlehem Steel directly contracted for well construction, provided for site preparation and surveying, performed pump testing where required, sampled the monitoring wells and provided for chemical analysis of water samples. Bethlehem Steel further provided supervision of the last four wells drilled.

1.2 SITE DESCRIPTION

The Lackawanna Plant occupies an area of approximately 2200 acres on the eastern shore of Lake Erie south of metropolitan Buffalo but lying within the City of Buffalo, Lackawanna and the Town of Hamburg. Topographically it is a gently sloping erosion surface developed on glacio-fluvial/lacustrine sediments. The surface is dissected by three surface drainage systems; namely Blasdel and Smokes Creeks and the North Trench. Surface elevations vary from 590 ft near the eastern limits of the Lackawanna plant to 575 ft on the shore of Lake Erie to the west (Plate 1A). The Solid Waste Area has a maximum elevation of approximately 600 ft. Approximately 1/3 of the site area adjacent to the Lake is "made-land", having been reclaimed by the deposition of slag to a height of some 30 ft above former shorefront.

1.2.1 The Solid Waste Facility

This solid waste disposal facility is composed primarily of the slag produced from the operation of both the blast furnace and the open hearth/basic-oxygen furnace. The composition of the slag is predominantly calcium oxide with lesser quantity elements such as magnesium, iron, phosphorus, carbon, sulphur and minor constituents. Also disposed of in this solid waste facility is a relatively small percentage of other wastes, characteristic of the iron/steel making operation and some construction debris. Disposal in the solid waste area was begun early in the 20th Century at the inception of production at the Lackawanna facility. Disposal of slag (and probably early construction debris) was started near the original Lake Erie shoreline and progressed lakeward parallel to the original shoreline for a distance of || over 1,000 feet. The elevation was increased lakeward as the slag waste area enlarged, resulting in a wedge-shaped section (in profile) due to the increased depth of the lake with distance from the shoreline, and the increased elevation of slag above the lake with continued disposal. Apparently the slag fill was found to be a suitable base for building construction, in that today, some plant facilities exist over what originally was a nearshore slag waste area.

2.0 FIELD INVESTIGATION

A field program was implemented with the objectives and considerations outlined in Section 2 of the 1978 Dames & Moore report. While the present number of wells is insufficient to provide data necessary for a more comprehensive geohydrologic investigation, the information obtained from the limited number of wells appears sufficient to broadly characterize the water quality and ground water flow at the Lackawanna site.

Limited pump testing of three wells penetrating bedrock and five wells adjacent to Lake Erie, provided an indication of relative permeability in the upper bedrock aquifer and the solid waste, respectively. Water level data obtained during the sampling program permits a preliminary assessment of ground water gradients in the bedrock, in shallow sediments and within the Solid Waste Area. Thirteen weekly rounds of water samples have been obtained and analyzed. These data are presented in Table 1 and provide the basis for a preliminary evaluation of ground water quality.

2.1 MONITORING WELL CONSTRUCTION AND INSTALLATION

2.1.1 Solid Waste Area

The location of and design for monitoring wells was based upon the objectives in the Dames & Moore 1978 report to assess stratigraphy and ground water quality on the Solid Waste Area near Lake Erie and east and south of the main portion of the plant in both the shallow sediments and in the bedrock.

Because of the nature of the material in the disposal area a cable tool method of drilling was recommended wherein 8" or 12" steel casing would be driven to the desired depth. A PVC screen and casing was then installed inside this steel casing and the annulus backfilled with gravel and sealing material as the steel casing was removed.

Three types of wells were installed: 1) Type "A", designed to monitor water table conditions in the natural or artificial (slag) unconsolidated strata and installed with fully penetrating screens terminating on the first significant impermeable strata; 2) Type "B", designed to monitor water level and quality in the bedrock strata; and 3)

two steel wells with perforated casing installed in the central portion of the Solid Waste Area to provide for water level measurements.

Five Type "A" wells with fully penetrating screens were installed in the Solid Waste Area adjacent to Lake Erie, MW-1, 2, 3, 4 and 5 at depths ranging from 35 to 40 feet below the ground surface (see Appendix, Section A). The two steel monitoring wells 9 and 10 installed in the central portion of the Solid Waste Area were drilled to a depth of 87 and 57 feet respectively.

Construction of Well MW-1, located on the southwestern portion of the Solid Waste Area near the Buffalo Slag Plant, commenced on June 23 and was completed on June 25, 1980. Pinkish-gray clay was encountered after penetrating 35 feet of slag and fill.

Well MW-2 is situated near the Lake Erie shore adjacent to the sludge pits west of the spare parts storage area. Very difficult site conditions forced removal of the drilling equipment after the hole was partially completed due to severe shoreline surf conditions. This well was started on July 7 and completed on July 15, 1980 at a depth of 39 feet. Approximately 25 feet of slag was found overlying 10 feet of gray sand and a sequence of interlayered sandy gravel and clay. Brown Marcellus shale was encountered at 38 feet at which depth the well was terminated.

Well MW-3A was started on June 10 and completed at a depth of 39 feet on June 12, 1980. This well is situated just north of Smokes Creek on the shore of Lake Erie. Approximately thirty-three (33) feet of slag, scrap steel and fill overlies what may be material deposited in an earlier channel of Smokes Creek (gravel with fragments of hard gray shale, flint, wood, reworked till). This, in turn, overlies a pale pinkish-gray silty clay with some trace of gravel.

Well MW-4A is situated between Smokes Creek and the government containment area and west of the liquor disposal area. This well was started on June 4 and completed June 9, 1980 at a depth of 40 feet on a multicolored sandy clay. Approximately 30 feet of gray slag overlies a sequence of pale red silty clay with layers of coarse sand and red and gray sandy clayey gravel, a thin layer of quartzose sand more clayey gravel and finally silty clay. Water bailed from the hole during construction near the base of the slag fill was very dark, containing finely divided

black material. Also, an ignitable gas was observed escaping while drilling through the thin layer of sand found to occur between 36 and 37 feet.

Well MW-5A, situated on the shore south of the government containment area was started on May 27 and completed at a depth of 40 feet on June 2, 1980. Approximately 33 feet of slag and iron fragments overlie a gray silty clay and sand, with some gravel containing rounded fragments of shale.

Construction of wells MW-1 through MW-5 was almost identical. A fully penetrating 4" PVC screen was installed from the water table (Lake Erie) down to the first significant layer of clay in the underlying lake sediments. The annular space between the temporary steel construction casing and the PVC pipe was packed with an appropriately graded gravel and sealed with bentonite pellets and cement as the steel casing was removed. Because of the severe ice conditions expected on the shoreline, the 4" PVC casing terminated a few inches below grade and is protected with three (3) feet of eight (8) inch steel casing protected in turn by a concrete apron, the top of which is at grade. The PVC casing is fitted with a vented PVC cap, and the outer steel casing is fitted with a threaded steel cap. It is expected that the ice will override these wells, and, had they been constructed with casings extending above grade as is normal practice, it is believed the upper casing would be destroyed and the well choked with sediments, or obliterated.

2.1.2 Main Plant Area

The wells to the south and east of the main portion of the plant were installed as doublets. That is, one shallow Type "A" well designed to monitor the ground water quality of the water table in the natural shallow sediments adjacent to a deeper Type "B" well designed to monitor water quality in the upper bedrock. Shallow doublet Type "A" wells are installed with fully penetrating screens; the deeper bedrock Type "B" wells are constructed such that only the upper bedrock and where present, the immediately overlying sand is screened.

Type "A" and "B" wells are less than 10 feet apart, therefore only the deeper Type "B" well is logged. The Type "B" well was drilled first, to enable the field engineer to determine the exact depth and range for screen installation in the adjacent Type "A" well in advance of construction. Type "B" wells are gravel packed to an

elevation approximately two feet above the top of the screen. A minimum of two feet of bentonite pellets was placed over the gravel and the remainder of the annular space sealed with cement grout to isolate the upper bedrock ground water from overlying ground and surface water sources.

Doublet drilling began on April 29 with Well MW-6B and was completed by May 13, 1980 when the casing was in place for MW-8A. After completion of the monitoring wells, development was effected by bailing to remove fine grained portions of the gravel pack adjacent to the screen and to obtain an estimate of well yield.

After analysis of data resulting from the planned drilling program revealed the need for ground water level information in the central portion of the Solid Waste Area, two additional monitoring wells were installed (MW-9 and MW-10). Because the primary purpose of these additional wells is to provide only for water level measurements, well construction requirements were modified. After the steel cased wells were drilled to the desired depth, the casing was perforated at three levels within the solid waste with a "knife" designed for this use. The bottom of the casing was sealed by driving into clayey lake bottom sediments. Additionally, bentonite pellets were placed in the bottom of the casing to prevent any possible downward flow of degraded water through the open casing to underlying sediments.

Well MW-9 was completed in shale at a depth of 87 feet on November 18, 1980. Approximately 70 feet of slag and fill overlie lake sediments. The shale bedrock was encountered at a depth of 85.6 feet. Directly overlying this shale is an eight foot thick unit of clayey gravel, overlain by seven feet of gray gravel and sandy gravel. After perforating the casing the well was "bailed" at a rate of forty (40) gpm for approximately one-half hour.

Well MW-10 was completed on December 12, 1980 at a depth of 57 feet, in a dense brown clay. The surface elevation being approximately 25 feet lower than that of Well MW-9 results in encountering lake sediments at a depth of only 36 feet. The occurrence of fine gray gravel and slag between 36 and 42 feet may represent the transition to lake sediments. A section of interlayered fine sand and clayey gravel underlies this transition zone and overlies the six feet of dense brown clay penetrated before the well was terminated. After the casing was perforated this well was "bailed" at a rate of 20 gpm.

Bethlehem Steel Company personnel surveyed the completed wells to provide a reference for water level measurements to be used for evaluation of ground water flow direction and velocity.

2.2 PUMP TESTING

Provision was made by NYSDEC, in the conditional acceptance of the monitoring program submitted by Bethlehem Steel Company, for the installation of a downgradient bedrock well in the event a "significant" flow of water was encountered in any of the three planned Type "B" bedrock wells. Consequently, a limited test pumping program was performed to provide for an estimate of ground water flow.

It is important to note that pump tests performed on wells in fractured rock are difficult to meaningfully interpret because of the dependency on fracture intensity and direction. Such structural features will influence ground water flow within a rock aquifer system. Pump test results should only be used with caution in an evaluation of permeability. The inter-relationship between overlying (and possibly adjacent) sediments and the fractured bedrock is considered in the 1978 Dames & Moore Report on p. 10 and became apparent when testing MW-7B.

Dames & Moore provided Bethlehem Steel Company with a test procedure and completion form to guide their personnel in performing a 120 min. limited pumping test, with equipment purchased for the purpose of obtaining water samples for the monitoring program. Bethlehem Steel personnel were instructed and for the first test, assisted by a Dames & Moore field engineer. The submersible pump used for performing the test has a maximum capacity of eight (8) gallons per minute (GPM). This pump was installed at a depth determined by results obtained during the "bailer" test performed with the drilling equipment after completion of the well. A valve installed on the pump discharge pipe enabled a constant water flow to be maintained as the water level in the well dropped. Water levels were measured by the wetted tape method.

The results obtained from the pump testing of Type "A" MW-1, 2, 3, 4, 5, and Type "B" MW-6, 7 and 8, wells are discussed in Section 3 and included as Table 3. A wide range of transmissibility was observed between the three Type "B"

wells. However, these data do permit an evaluation at least sufficient to provide for a preliminary assessment of ground water flow characteristics.

2.3 SAMPLING

After completion of the monitoring wells, a program was initiated to obtain ground water samples on a bi-weekly interval commencing July 8, 1980. Thirteen sample rounds have been completed and the resulting chemical analyses are provided in Table 1. A sampling protocol was established part of which required that a minimum of three casing volumes of water be removed from the well before drawing the sample. Samples were delivered to the Bethlehem Steel laboratory within one hour of the time they were drawn to reduce the potential for deterioration before analysis. The submersible pump tentatively planned for obtaining water samples was difficult to use and maintain, consequently a small self-priming centrifugal pump was used.

3.0 GEOHYDROLOGY

Ground water migration is a function of hydraulic gradients and permeability of the material through which the water moves. Data obtained during the construction and monitoring program, although limited by the relatively few wells installed for a site of this size, does enable us to provide a preliminary evaluation of ground water flow at the Lackawanna Plant. Available data does not, however, permit a detailed analysis because of the wide range of permeabilities encountered; our limited knowledge of the sediments, the character of the upper bedrock topography, the amount, location and direction of bedrock fracturing and the heterogeneous nature of the solid waste.

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3.1 STRATIGRAPHY

An interpretation of the alluvial stratigraphy, based upon information available from previous borings, was presented in the form of cross sections I through IV in the 1978 Dames and Moore report. In the present summary report the stratigraphic interpretation is expanded to include data obtained during the monitoring well construction program (Plates 2 through 7).

Boreholes drilled for monitoring wells MW-1A through MW-5A adjacent to Lake Erie on the Solid Waste Disposal Area indicate that approximately eighteen (18) to twenty-five (25) feet of slag exists below the lake level. A gray silty sand and clay containing an occasional thin layer of clayey gravel underlies the slag fill. One boring, MW-2A, encountered the shale bedrock under twelve (12) feet of lake sediments (Plate 6). This occurrence is along the line of a projected bedrock high found in the offshore boring line and illustrated on cross section IV-IV' in the 1978 report (Plate 5).

If the elevations of the bottom of the slag obtained in borings represents the original lake bottom profile, the shallow depression in the sediments found to exist near MW-2A may be related to the possible existence of a former erosion channel caused by discharge from Smokes Creek. An apparent rise in the original lake bottom profile exists south of this depression directly over the assumed bedrock high.

If the fine grained clayey sediments found to exist in the boreholes MW-1A through 5A and MW 9 and 10 are indicative of sediments under the slag fill generally,

vertical flow downward into the underlying shale would probably be very slow and largely a function of the relative amount of clay present in the sediments. A sample of the clay encountered at a depth of 53.5 feet in the sediments underlying the solid waste in Well MW-10 was tested in the laboratory and found to have a vertical permeability of approximately 2×10^{-8} cm/sec. The possibility exists, however, that such relatively impermeable sediments may be absent in some areas, particularly over the bedrock shale high which may traverse the slag fill area.

Cluster wells MW-6A and B, 7A and B, and 8A and B were installed south and east of the main portion of the plant. Based upon a review of logs obtained during the construction of these wells and other available boring data (Plates 8A through 8I), a somewhat complex subsurface stratigraphy was found to exist. The Marcellus shale bedrock (which was found to contain intercalated dolomite limestone beds) was eroded by glacial ice apparently leaving a pronounced topographic relief on the bedrock surface. Although insufficient control exists to permit a definite analysis; it would appear the bedrock surface was deeply gouged in the vicinity of boring 210 and subsequently partially filled with glacial till. Superimposed upon this surface is a sequence of generally fine grained lake sediments. A significant effect of this gouging is the exposure to the sediments of up to fifty (50) feet of bedrock which may contain permeable fissures within beds of limestone, (see Plate 7).

3.2 GROUND WATER FLOW DIRECTION

Ground water level and pump test data obtained from the construction and testing of monitoring wells appears to provide an adequate data base for a limited assessment of permeability characteristics, gradient and direction of flow, within the Solid Waste Facility, the sediments and the bedrock at the Lackawanna site.

An evaluation of the ground water levels obtained from the Type "B" wells reveal a potentiometric surface in the upper bedrock which is approximately equal to, or slightly higher than the level of Lake Erie. Water table elevations obtained from the Type "A" wells illustrates the influence of surface elevations and the relative permeability of shallow sediments. Type "A" wells adjacent to Lake Erie reflect lake level, whereas Type "A" wells east of the plant approach a ten (10) foot positive difference in water table/Lake Erie level elevation. This difference in vertical gradient suggests that the fine grained lake sediments act to retard the vertical

movement of water (aquiclude - perhaps leaky) downward, to the upper bedrock ground water regime.

Direction of ground water flow in the upper bedrock in the vicinity of well MW-6B would probably be southward toward Blasdell Creek. The difference in hydraulic head is approximately 2.8 feet. The horizontal distance between the well and the creek is approximately 800 feet. The direction of flow in the water table sediments at the MW-6 location is probably also toward Blasdell Creek.

No apparent gradient exists between the piezometric head in MW-7B and the level of Lake Erie; therefore, direction of flow in the vicinity of the well is uncertain. However, the upper bedrock would probably be hydraulically closely connected to the adjacent sediments (see Plate 7). The water table elevation in the shallow MW-7A well is approximately 5.5 feet higher than the Lake level. Ground water flow in the upper sediments would tend to be toward Smokes Creek.

The piezometric surface in well MW-8B is only slightly higher than the Lake level (approximately one foot). The direction of flow could be either toward Buffalo Harbor, or directly toward Lake Erie. Well MW-8A encountered the highest water table elevation observed in all monitoring wells; approximately 583.4 feet, or 8.9 feet above the Lake. Flow direction of the water table in the vicinity may be to the northwest and west.

Lackawanna's Solid Waste Facility, (the slag fill area) has become, over the years, a man-made water table aquifer of considerable proportions. Rainfall on the fill area provides recharge in sufficient quantity to establish a ground water gradient from the higher elevations in the fill to the Lake level and to other low lying drainage areas surrounding this fill; for example, Blasdell Creek, Smokes Creek, the Ship Canal, North Trench, etc.

Water levels observed in all wells installed along the lake shore, MW-1A through MW-5A, are essentially equal to Lake level as would be expected with wells in relatively permeable fill adjacent to the Lake.

Two wells, MW-9 and 10 were drilled in the central Solid Waste Area to determine ground water elevations at these locations in order to assess gradients

between the central area and Lake Erie. Wells MW-9 and 10 were found to have levels of 2.4 feet and 2.0 feet higher than the lake, respectively on December 18, 1980. If an approximate distance of 1,000 feet is used to represent the distance from the ground water level at these locations to the Lake or Creek banks then the estimated gradient is approximately 1.7×10^{-3} (dimensionless). Ground water flow direction would be away from the ground water table high toward the lake and other adjacent drainage features. Generally, the water table is a subtle reflection of the surface topography and consequently, contours drawn on this water table surface would probably appear to be elongated parallel to Lake Erie within the central Solid Waste Area.

3.3 PERMEABILITY

Short term, pump tests performed on wells MW-6B, MW-7B, and MW-8B were sufficient to establish preliminary permeability data to assess ground water flow rate in the upper bedrock. Well MW-6B was pumped down and a subsequent recovery test indicated a permeability (K) in the upper bedrock of approximately 0.62 gallons/day/square foot (gpd/ft²). This relatively low permeability is consistent with the steeper gradient found between this well and the Lake level. $2.93 \times 10^{-5} \text{ cm/s}$

A short pump test of well MW-7B revealed an unexpectedly high permeability of approximately 1400 gpd/ft². The only plausible explanation for this high value may be the possible existence of solution channels in the limestone, or very fractured bedrock. The potentiometric level in this well is very close to that of Lake Erie, as would be expected with the high transmissibility encountered. $6.62 \times 10^{-2} \text{ cm/s}$

MW-8B is the deepest of the monitoring wells and encountered limestone and shale and terminated at a depth of 71 feet, in shale. Apparently this well is drilled into what appears to be a buried valley, see Figure 7. Permeability of the upper limestone bedrock in the vicinity of this well is estimated to be 137 gpd/ft². This is reasonable in consideration of the presence of an overlying sand layer and possible connection with adjacent sediments. $6.48 \times 10^{-3} \text{ cm/s}$

In order to assess ground water flow out of the solid waste and into Lake Erie it was necessary to obtain a permeability estimate for the slag fill. A limited (120 min.) pump test was performed on each of the five lakeside wells, MW-1A through MW-5A. Although proximity to the lake resulted in stabilization after a few minutes,

sufficient data was obtained to provide an adequate level of confidence in time-drawdown curves.

Analysis of that, apart from zones (solution cavities) of unusually high permeability results, indicate the permeability ("K") of the solid/waste pump test is approximately 800 gpd/ft. (see Table 3). By applying; 1) the 800 gpd/ft. value of K, 2) the estimated saturated thickness of the solid waste at discharge areas; 3) the approximate length of discharge zones, and 4) the gradient found to exist between the central area and the discharge zones, in a calculation for total estimated ground water flow, it would appear that approximately 80,000 ft.³/day of ground water is entering Lake Erie from the Solid Waste Facility. This appears to correlate with the estimate for recharge to the ground water system by rainfall. See Appendix A.

52003 173 100 GPD/FT 578450 GAL/DAY

52 = 5 GPD

1440
66

80,000 FT³/DAY \approx 1 CFS

4.0 MONITORING WELL WATER ANALYSES EVALUATION

Monitoring wells MW-1A through MW-5A adjacent to Lake Erie, fully penetrate the saturated portion of the slag of the solid waste facility. Therefore, the chemical analyses should be representative of the liquids draining from the disposal areas upgradient of each well and toward the lake.

The analysis of samples obtained from these wells indicate a very high pH. This indicates free hydroxide, which may originate from waste lime disposal or possibly the slag. Slaked lime can have a pH slightly above 12 and analysis of samples obtained in wells MW 1A through 5A consistently have a pH in the range of 11 to 12.

(224-305) There are strong indications of other types of contamination, since the total dissolved solids are several times that of any other water samples taken in the monitoring program. The lake shore wells, particularly Wells 1, 2 and 3 also have (significantly high) cyanide content and both Wells 2 and 3 have (significantly high) phenol content, which probably originates from the tar bottoms disposed of over the years.

At Well Location 6 and 7, there does not seem to be a significant difference in the chemical analysis between the shallow and deep well. (Therefore, it appears that contamination in the area has penetrated down through the surficial soils into the underlying bedrock.)

In the case of Well Location 8, the shallow well seems to be very high in total dissolved solids, particularly sulfates, while the deep well (much deeper than any of the other monitoring wells) has a significant but small amount of contamination.

5.0 DILUTION ANALYSIS

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5.1 INTRODUCTION

The Solid Waste Facility begins at the southernmost end of the Lackawanna plant, near Blasdell Creek and extends over a shorefront distance of approximately 13,000 feet due north towards Buffalo Harbor. Contaminants can enter the Lake through two routes; surface runoff from the disposal area entering Blasdell Creek and Smokes Creek (which eventually discharges into the lake) and leachate through the ground water system. The purpose of this study is to investigate and evaluate the dispersion effect of the Lake Erie flow regime on these possible sources of pollutant input into the lake environment under normal flow conditions.

The complex flow dynamics and turbulent dispersion mechanisms in the coastal area of the Great Lakes have attracted attention of many investigators. Circulation in the Great Lakes is wind-driven in nature. Data collected by USGS gauging stations show that normal flows in the Niagara River is about 200,000 cfs. Wind-driven circulation in Lake Erie results in a generally west to east, near-surface flowing direction in response to an eastward surface wind stress. Plate 9 shows the stream-line pattern in Lake Erie from a model study (Silberman, et al. 1969).

In the coastal area, the surface wind stresses act as the main driving force coupled with effects due to Coriolis force, inertial acceleration, friction and sometimes stratification (Csanady 1972 a and b). A nearshore band becomes a unique kind of coastal boundary layer in which the offshore mid-lake motions adjust to the presence of the shore. Currents are shore-parallel and relatively persistent within this boundary layer zone and are in direct response to wind shifts. Sheng (1975) showed that the effect of horizontal diffusion and advective transport are more important in the narrow coastal boundary layer where streamlines generally follow the shorelines than the offshore area. The width of the boundary layer is on the order of less than $\frac{1}{4}$ mile for Lake Erie. Contaminant dispersion in the coastal zone result in "coastal entrapment" of pollutants with the formation of a polluted effluent plume generally following the shorelines (Csanady, 1970). Observations made in Lake Huron (Murthy, 1972) have shown that pollutant discharged near the shoreline could form a well-defined plume hugging the shoreline. Relatively quick dispersal occurred offshore followed by reversals in plume direction in response to reversals in wind direction.

Agree

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The general understanding of the complex nearshore flow and mixing mechanisms has therefore led us to investigate the effects of pollutant input into the Lake from the site's slag disposal area by using two models; a two-dimensional circulation model for the nearshore hydraulic regime and a stream-tube dispersion model for the dispersion effect within the narrow coastal boundary layer. The effect of dispersion on pollutants discharged into the lake in response to a northward flow towards Niagara River (Plate 9) was investigated. Discussions of the models and results are presented in the following sections.

5.2 METHODOLOGY

5.2.1 Two-Dimensional Steady-State Numerical Circulation Model

A two-dimensional model was used to produce shore-parallel streamline pattern within the nearshore zone of the lake at the Lackawanna site. This model describes the steady-state circulation in a surface water system. The input data include total flow through the system, boundary locations and depth field. Plate 10 shows the boundary of the study area. The total flow across the southernmost boundary near Blasdell Creek is 20,000 cfs, approximately 10% of the flow through Lake Erie to Niagara River between the shorelines of the site and the easternmost boundary (Plate 9). Normal discharge from Smokes Creek is 200 cfs (Appendix B, Reference 5.6) and was treated as lateral inflow into the system. Hence, the total flow out of the northernmost boundary is 20,200 cfs. Discharge from Blasdell Creek (46 cfs) was small compared to the total flow and was therefore neglected. Normal discharge into the lake from the ground water system along the shorefront section occupied the solid waste area is expected to be small (less than 1 cfs) and was therefore also neglected in the model. Depth field of the study area is obtained from Reference 5.4 (Appendix B). A uniform grid size of 500 ft. x 500 ft. was used. The depth field was assigned at each grid cell representative of this grid size. Boundary conditions were assigned along the boundaries of the study area. The total flow was normalized such that the stream function value is 0.0 along the westernmost boundary and 1.0 along the shoreline representing the total flow through the system. The numerical model then computes stream function value and depth-averaged velocity field at each grid cell by successive iterations. Results from the model, thus show average conditions representative, of a unit dimension of the grid cell size.

5.2.2 Stream-Tube Dispersion Model

Results from the circulation model provided input data for the dispersion model (Appendix B, Reference 5.7). These parameters include flow quantity within the narrow near-shore coastal boundary layer, the average depth-averaged velocity and typical depth of flow. A flow of 1000 to 1010 cfs representing 5% of the total flow is confined to the nearshore zone with a width of 1500 feet, approximately $\frac{1}{4}$ mile which represents typical width of the coastal boundary layer in Lake Erie. Steady-state currents generally follow the shoreline within this stream-tube bounded by streamline value 0.95 and the shoreline (Plate 10). The dispersion model was then applied to this stream tube to evaluate the nearshore downstream effluent concentration. A turbulent diffusion coefficient value of $1.1 \text{ ft.}^2/\text{sec.}$ ($1000 \text{ cm}^2/\text{sec.}$) was chosen to be representative of the conditions in the nearshore area of Lake Erie (Csanady, 1970).

Results of the dispersion model (Plate 11) considers a vertical line source or a unit plane source at the shoreline discharging at a continuous, steady-state rate. This was used because the downstream concentration of the effluent plume resulted from discharges from a unit plane source or a creek (a line source) into the lake. Leachate through the ground water system enters the lake as a plane area source. A unit length of the shorefront section, 500 feet, was used as the unit plane source dimension since input parameters to the dispersion model obtained from the results of the circulation model represent averaged conditions of the grid cell. The solution shown on Plate 11 was then applied in successive 500 foot intervals along the shorefront face from the southernmost end of the disposal area near Blasdell Creek towards Buffalo Harbor, covering a total distance of 13,000 feet. This enabled us to obtain the downstream effluent concentrations from the discharge locations as shown on Table 4. Assuming each line or plane source discharges at a constant uniform rate, we were able to obtain the cumulative downstream dispersion effects. A summary of the parameters for the dispersion model is shown on Table 5.

5.3 RESULTS

5.3.1 Flow Field

The streamline pattern in the nearshore area obtained from the circulation model and Lake Erie currents from a physical model study (Silberman et al., 1969) are

illustrated on Plate 10. It can be noted that results of the numerical model are in close agreement to the flow pattern obtained from the physical model. Within a distance of approximately 1500 feet from the shoreline, a flow quantity of about 5% of the total flow through the system occurs, as represented by the streamline function value 0.95. Flow velocity was fairly uniform with an average value of about 0.06 ft./sec. in this coastal zone where average depth of flow was found to be about 11 feet.

5.3.2 Dispersion Effects

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Table 4 shows the downstream nearshore dimensionless concentration from the discharge locations. The method of obtaining these results is explained in Section 5.2.2. A unit plane source dimension of 500 feet was used and is equivalent to a dimensionless unit distance of 4×10^{-3} . Therefore, the second discharge point is located at 4×10^{-3} units downstream from the southernmost end of the disposal area at Blasdell Creek (Table 4). The last line of the table shows the cumulative effect at a certain point along the effluent plume as a result of contaminant discharges upstream of that point. It is assumed that all sources discharge at an identical constant rate of W lbs./sec. A plot of these results are illustrated on Plate 12.

Two curves are shown on Plate 12. The dotted line was obtained by plotting and joining the results in the last line of Table 4. The "zig-zag" behavior is the result of numerical instability — a mathematical consequence of the numerical method. The solid line was drawn to represent interpolated idealized conditions along the downstream effluent plume. It can be noted that the nearshore downstream effluent concentration increases as the total quantity of pollutant discharged increases along the shorefront from Blasdell Creek towards the northernmost end of the disposal area.

The peak dimensionless concentration of about 1000 occurs at the shoreline in the vicinity of the northernmost end, Point C (see Plate 12). Downstream of that point, effluent concentration decreases rapidly towards the entrance of Niagara River to a dimensionless concentration value of about 570. From the entrance to Niagara River at Peace Bridge towards Grand Island, an almost linear decrease in dimensionless concentration occurs which results from using a turbulent diffusion coefficient representative of coastal areas of Lake Erie. In reality, flow quantity in Niagara

River is, orders of magnitude higher than the flow within the coastal boundary layer of the lake and the velocity of flow is much higher. The highly turbulent flow of Niagara River can therefore generate more intense diffusion and mixing conditions which cause more rapid dilution of lakeshore contaminants entering the river. Dimensionless concentration on the farshore of the streamtube away from the shoreline is much less than those found on the nearshore side. The results therefore show that contaminant discharged from the shoreline can result in a "coastal entrapped" effluent plume with relatively minor impacts on the Paulsboro regime.

With reference to Table 6 (equation 1), the dimensionless concentration \bar{C} is obtained by normalizing resultant effluent concentration C by a ratio of the rate of contaminant loading W (lbs./sec.) to the total flow Q (1000-1010 cfs) in the coastal zone. Rate of waste loading W can be obtained if the unit contaminant concentration (lbs./volume) and the normal volume discharge rate (cfs) are known. From a study on the normal flow conditions in the coastal ground water system, it was found that normal contaminant discharge rate is about 1.0 cfs. The peak effluent concentration occurs in the vicinity of Point C (Plate 12) and is therefore on the order of W lbs./cu. ft. where W is the typical concentration of the contaminant loading. At the entrance to Niagara River, the concentration is about 0.57 W lbs./cu. ft., i.e. 57% of the contaminant loading concentration. The complete mixing zone where a homogeneous state of the nearshore and farshore concentration field exists will most likely occur at a certain location in the Niagara River south of Grand Island. At that location, the concentration is reduced to approximately $0.03 W$ lbs./cu. ft, i.e., 3% of the contaminant loading concentration. On Table 7, the dilution analysis for concentration of three selected contaminants, chloride, phenol, and sulphate is illustrated and indicated maximum concentration of 230, .09, and 48.5 ppm respectively.

6.0 CONCLUSIONS

1. The monitoring program as presently designed ~~appears to~~ provide the data necessary to permit an assessment of site ground water conditions, as required by the New York State Department of Environmental Conservation, in the BSC application to operate a Solid Waste Management Facility (the slag disposal area) in accordance with Title 6, Chapter 360 "Solid Waste Management Facility".

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~~It should be emphasized, however, that~~ ^T the purpose of this assessment is to broadly characterize site geohydrology and further detail would be recommended for an evaluation of ground water conditions at a particular site within the study area.

- 13* 2. Stratigraphy underlying the Lackawanna Plant is complex resulting in complex ground water movement.

- 12* 3. The upper bedrock aquifer has a variable permeability which may be a function of stratigraphic control, structure, solution channels, bedrock surface topography and the character of adjacent or overlying sediments.

- 4* 4. Hydraulic gradients within the upper bedrock regime are very low, generally resulting in relatively low seepage velocities generally toward Lake Erie.

5. An aquatard (leaky aquaclude) appears to exist between the water table regime *See Notes* ☒ in the upper sediments and the upper bedrock aquifer. *NEAR #7 ONLY*

6. Sediments and fill overlying the relatively impermeable fine grained lake sediments are variable in permeability; therefore, the seepage velocity under the influence of the low to moderate hydraulic gradients found to exist in these sediments and fill is quite ~~variable~~. *VARIA BL E*

7. Leachate from the Solid Waste Area, after moving downward to the water table, is migrating toward established natural and man-made drainage features and Lake Erie. Downward migration to the bedrock aquifer may be minor due to the relative impermeability of the natural lake bottom sediments which appear prevalent, lakeward of the original shoreline.

8. Groundwater quality in the upper bedrock aquifer appears to be degraded. Contaminant levels are in excess of NYSDEC drinking water standards.
9. Ground water collected from monitoring wells screened in the shallow sediments and fill south and east of the plant appear to be degraded.
10. The solid waste facility (the slag landfill) is generating a caustic leachate which is probably entering Lake Erie via the shoreline, Blasdel Creek, Smokes Creek and the Ship Channel.
11. The volume of ground water discharged from the solid waste/slag fill is estimated to be approximately $80,000 \text{ ft}^3/\text{day}$ (1 cfs) based upon a limited test pumping of wells MW 1A through 5A and the gradient found to exist between the lake and wells MW 9 and 10 in the central solid waste area. This is in approximate agreement with estimates for recharge to the Solid Waste Area by rainfall.
12. Analysis of lake shore currents indicate approximately 1,000 cfs (cubic feet/second) is flowing adjacent to the Solid Waste Area. The discharge of ground water from the Solid Waste Area is approximately 1 cfs, consequently the dilution analysis shows that peak concentration at the north of the Solid Waste Area is on the same order of magnitude as the weighted average contaminant concentration entering the lake and elsewhere along the shore should be some value less than that.
13. The dilution study would seem to indicate there is no imminent danger caused by the 1 cfs discharge of contaminated ground water to Lake Erie provided all other factors remain constant.

CHANGE TO No 1

TABLE 1
GROUND WATER CHEMICAL ANALYSIS

Date of sample	WELL NUMBER										
	MW-1A	MW-2A	MW-3A	MW-4A	MW-5A	MW-6A	MW-6B	MW-7A	MW-7B	MW-8A	MW-8B
<u>IRON (PPM)</u>											
7-08-80	8.00	—	13.8	0.16	0.16	2.40	2.40	4.90	4.80	1.70	0.84
7-21-80	0.71	0.71	0.23	4.12	0.23	0.23	0.23	0.23	0.65	0.23	0.23
8-04-80	0.32	0.32	1.79	0.38	0.32	7.17	0.32	0.64	1.27	3.36	0.49
8-18-80	0.10	0.10	0.10	0.59	0.10	4.48	1.20	2.84	6.36	0.38	0.17
9-05-80	0.24	0.28	0.75	0.46	0.22	5.50	0.60	1.55	3.80	1.40	0.30
9-11-80	0.26	0.20	0.26	0.42	0.24	4.64	0.48	1.26	3.50	0.84	0.24
<u>DISSOLVED IRON (PPM)</u>											
10-01-80	0.05	0.05	0.05	0.10	0.05	0.17	0.72	0.12	2.60	0.20	0.10
10-15-80	0.08	0.07	0.13	0.15	0.23	0.09	0.70	0.20	3.31	0.17	0.12
10-29-80	0.05	0.05	0.05	0.05	0.05	0.30	0.72	0.10	2.60	0.05	0.05
11-12-80	0.11	0.08	0.16	0.11	0.08	0.13	0.71	0.16	6.03	0.18	0.08
11-19-80	0.05	0.13	0.15	0.18	0.13	0.13	0.13	0.13	1.55	0.35	0.13
12-08-80	0.09	0.03	0.09	0.10	0.11	0.13	0.11	0.11	1.13	0.35	0.21
12-17-80	0.06	—	0.11	0.07	0.10	0.13	0.15	0.11	0.83	0.24	0.15
Average	0.07	0.06	0.11	0.11	0.11	0.15	0.46	0.13	2.58	0.22	0.12
<u>ZINC (PPM)</u>											
7-08-80	0.35	—	0.40	0.12	0.13	0.22	0.18	0.71	0.10	0.17	0.12
7-21-80	0.49	0.38	0.15	0.14	0.19	0.35	0.12	0.10	0.09	0.11	1.30
8-04-80	0.08	0.08	0.15	0.11	0.08	0.35	1.06	0.25	0.05	0.53	0.06
8-18-80	0.12	0.12	0.14	0.26	0.15	0.27	0.15	0.17	0.15	0.15	0.12
9-05-80	0.11	0.12	0.15	0.18	0.12	0.15	0.18	0.11	0.15	0.13	0.10
9-17-80	0.16	0.09	0.05	0.10	0.15	0.42	0.18	0.20	0.14	0.11	0.10
<u>DISSOLVED ZINC (PPM)</u>											
10-01-80	0.02	0.02	0.04	0.07	0.02	0.02	0.02	0.02	0.02	0.02	0.02
10-15-80	0.03	0.02	0.03	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.02
10-19-80	0.01	0.01	0.01	0.03	0.01	0.13	0.03	0.02	0.01	0.02	0.01
11-12-80	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.03	0.02	0.01
11-19-80	0.03	0.07	0.13	0.11	0.08	0.08	0.08	0.06	0.06	0.06	0.05
12-08-80	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.02	0.01
12-17-80	0.01	—	0.03	0.03	0.03	0.08	0.10	0.06	0.05	0.06	0.06
Average	0.02	0.02	0.04	0.04	0.03	0.05	0.04	0.03	0.03	0.03	0.03
<u>LEAD (PPM)</u>											
7-08-80	0.11	—	0.13	0.08	0.06	0.01	0.02	0.02	0.01	0.01	0.01
7-21-80	0.20	0.12	0.22	0.39	0.27	0.04	0.17	0.10	0.05	—	0.05
8-04-80	0.10	0.10	0.18	0.38	0.20	0.17	0.15	0.11	0.12	0.24	0.10
8-18-80	0.10	0.10	0.13	0.18	0.10	0.19	0.10	0.10	0.10	0.16	0.10
9-05-80	0.08	0.13	0.18	0.20	0.15	0.15	0.25	0.08	0.23	0.10	0.04
9-17-80	0.09	0.10	0.26	0.36	0.28	0.39	0.10	0.08	0.09	0.08	0.04
<u>DISSOLVED LEAD (PPM)</u>											
10-01-80	0.06	0.06	0.17	0.26	0.12	0.05	0.05	0.05	0.07	0.05	0.05
10-15-80	0.07	0.08	0.22	0.32	0.14	0.11	0.05	0.08	0.08	0.09	0.05
10-29-80	0.08	0.08	0.16	0.33	0.15	0.08	0.08	0.07	0.07	0.08	0.10
11-12-80	0.05	0.04	0.15	0.25	0.10	0.06	0.05	0.08	0.06	0.08	0.07
11-19-80	0.05	0.05	0.08	0.10	0.05	0.08	0.06	0.05	0.05	0.07	0.10
12-08-80	0.05	0.05	0.05	0.15	0.10	0.05	0.05	0.07	0.08	0.07	0.07
12-17-80	0.05	—	0.05	0.10	0.05	0.06	0.06	0.05	0.08	0.07	0.06
Average	0.06	0.06	0.13	0.21	0.10	0.07	0.06	0.10	0.07	0.07	0.07

Within discharge limits of NYS effluent to Class GA waters.

*New York State Department of Environmental Conservation, Title 6, Official Compilation of Codes, Rules and Regulations, Part 703, "Ground Water Classifications, Quality Standards and/or Limitations," effective September 1, 1978. The best use of Class "GA" waters is a source of potable water supply. Effluent standards...apply to discharge from a point source or outlet of any other discharge...which discharge will or may enter the unsaturated or saturated zones.

TABLE 1 (Continued)

Date of Sample	WELL NUMBER										
	MW-1A	MW-2A	MW-3A	MW-4A	MW-5A	MW-6A	MW-6B	MW-7A	MW-7B	MW-8A	MW-8B
	CHROMIUM (PPM)										
7-08-80	0.15	—	0.11	0.06	0.05	0.03	0.03	0.04	0.03	0.02	0.02
7-21-80	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
8-04-80	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
8-18-80	0.10	0.10	0.13	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10
9-05-80	0.02	0.02	0.03	0.04	0.03	0.02	0.02	0.03	0.02	0.02	0.02
9-17-80	0.01	0.02	0.02	0.03	0.03	0.14	0.02	0.01	0.01	0.01	0.01
DISSOLVED CHROMIUM (PPM)											
10-01-80	0.01	0.01	0.01	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01
10-15-80	0.01	0.01	0.02	0.02	0.01	0.01	0.03	0.01	0.03	0.01	0.01
10-29-80	0.01	0.01	0.10	0.08	0.05	0.01	0.02	0.01	0.01	0.01	0.01
11-12-80	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01
11-19-80	0.01	0.01	0.02	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01
12-08-80	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
12-17-80	0.01	—	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Average	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
AMMONIA (N) (PPM)											
7-08-80	9.2	—	7.0	1.3	8.0	2.5	2.4	0.3	1.1	0.7	1.7
7-21-80	3.0	12.0	27.0	2.0	5.8	5.4	2.5	0.3	1.2	0.5	1.7
8-04-80	1.9	12.5	30.0	4.6	5.3	2.4	2.6	0.36	1.2	0.53	1.7
8-18-80	1.0	5.7	15.6	3.8	3.6	0.2	1.1	0.2	0.8	0.6	1.0
9-05-80	5.0	17.0	40.0	9.8	8.0	1.2	4.2	0.9	2.4	0.9	2.4
9-17-80	4.5	11.6	32.0	3.2	3.6	2.3	1.3	2.1	1.5	4.5	1.5
10-01-80	3.8	24.0	28.5	6.8	6.0	4.8	3.3	0.05	2.0	0.1	3.0
10-15-80	7.0	16.5	35.0	8.5	7.0	4.0	1.6	1.2	1.3	0.3	2.4
10-29-80	1.2	20.9	32.8	5.1	3.2	2.0	1.7	0.8	1.2	1.6	1.4
11-12-80	1.6	3.3	8.2	6.9	1.5	0.5	0.8	0.4	0.7	1.4	1.2
11-19-80	3.8	4.2	12.0	5.2	4.8	0.3	2.2	0.1	1.1	0.1	1.1
12-08-80	4.0	3.6	11.5	6.3	4.6	0.5	2.4	0.2	1.6	0.1	1.4
12-17-80	3.3	—	9.0	8.3	6.0	1.4	5.6	2.0	2.4	1.6	1.8
Average	3.8	11.9	22.2	5.5	5.1	2.1	2.4	0.7	1.4	1.2	1.7
SULFIDES (PPM)											
7-08-80	46.4	—	44.4	2.4	3.6	0.1	0.1	0.4	1.6	0.1	0.1
7-21-80	37.0	127.2	28.0	3.6	4.0	0.1	0.1	0.1	2.4	0.4	0.1
8-04-80	34.0	104.0	31.0	3.8	2.2	0.1	0.1	0.1	0.1	0.1	0.1
8-18-80	52.8	88.8	41.2	4.1	4.0	0.1	0.1	0.8	0.16	5.2	0.1
9-05-80	51.2	208.0	40.0	8.0	4.0	0.4	0.8	0.4	0.4	2.0	0.8
9-17-80	56.0	148.0	36.0	4.8	4.0	0.8	0.4	0.8	0.4	64.0*	0.4
10-01-80	48.0	210.0	44.0	5.2	3.4	0.2	0.2	0.2	0.4	1.2	0.4
10-15-80	53.5	224.0	51.5	6.0	5.6	1.2	0.1	0.5	0.2	0.5	0.2
10-29-80	28.4	128.0	21.2	5.6	2.0	0.1	0.1	0.1	0.1	0.1	0.2
11-12-80	30.8	109.2	24.0	6.4	3.2	0.6	0.4	0.1	0.1	0.1	0.1
11-19-80	33.6	280.0	36.0	9.6	3.2	0.5	0.1	0.5	0.1	0.5	0.1
12-08-80	19.2	141.0	31.2	8.0	3.0	0.1	0.2	0.3	0.1	0.1	0.1
12-17-80	18.8	—	18.0	6.4	3.2	0.1	0.1	0.1	0.1	0.1	0.1
Average	39.2	160.7	34.3	5.7	3.5	0.3	0.2	0.3	0.5	0.9	0.2
PHENOL (PPM) ^{(1),(2)}											
7-08-80	0.06	—	0.85	0.006	0.09	0.005	0.005	0.004	0.004	0.004	0.004
7-21-80	0.009	6.40	1.20	0.09	1.60	0.006	0.008	0.008	0.008	0.009	0.006
8-04-80	0.01	0.50	0.75	0.10	0.30	0.009	0.011	0.011	0.015	0.009	0.010
8-18-80	0.05	0.60	1.60	0.09	0.11	0.005	0.005	0.006	0.007	0.150	0.006
9-05-80	0.06	0.90	1.10	0.25	0.13	0.006	0.009	0.006	0.010	0.009	0.010
9-17-80	0.09	0.83	0.64	0.16	0.14	0.009	0.009	0.012	0.010	0.220	0.010
10-01-80	0.03	0.83	1.65	0.19	0.11	0.040	0.010	0.030	0.080	0.010	0.020
10-15-80	0.01	0.60	1.80	0.20	0.22	0.010	0.010	0.020	0.010	0.020	0.010
10-29-80	0.30	1.60	1.10	0.27	0.22	0.120	0.090	0.120	0.150	0.130	0.009
11-12-80	0.01	0.25	0.10	0.03	0.23	0.010	0.010	0.015	0.015	0.009	0.010
11-19-80	0.10	0.09	1.60	0.41	0.47	0.007	0.009	0.006	0.006	0.006	0.006
12-08-80	0.01	0.05	1.10	0.54	0.009	0.050	0.006	0.030	0.016	0.010	0.010
12-17-80	0.01	—	0.86	0.45	0.23	0.020	0.050	0.050	0.030	0.020	0.020
Average	0.06	1.15	1.10	0.21	0.30	0.040	0.018	0.024	0.028	0.047	0.010

(1) Some results reported through to only tenths by Bethlehem.

(2) Used in dilution analysis.

TABLE 1 (Continued)

Date of Sample	WELL NUMBER										
	MW-1A	MW-2A	MW-3A	MW-4A	MW-5A	MW-6A	MW-6B	MW-7A	MW-7B	MW-8A	MW-8B
CYANIDE (PPM)											
7-08-80	0.36	—	0.33	0.14	0.15	—	—	0.18	0.30	0.091	0.026
7-21-80	0.59	0.73	0.26	0.18	0.10	0.025	0.013	0.039	0.039	0.039	0.052
8-04-80	0.52	0.10	0.22	0.13	0.052	0.013	0.026	0.039	0.052	0.039	0.026
8-18-80	0.43	0.31	0.40	0.09	0.16	0.07	0.039	0.23	0.30	0.10	0.013
9-05-80	0.46	0.26	0.40	0.10	0.10	0.20	0.013	0.30	0.208	0.60	0.013
9-17-80	0.27	0.37	0.21	0.08	0.08	0.10	0.10	0.10	0.08	0.39	0.05
10-01-80	0.52	0.30	0.44	0.42	0.12	0.16	0.10	0.04	0.10	0.68	0.02
10-15-80	0.90	0.10	0.46	0.12	0.10	0.78	0.08	0.78	0.08	0.52	0.03
10-29-80	0.29	0.24	0.60	0.21	0.16	0.09	0.07	0.12	0.31	0.29	0.03
11-12-80	0.37	0.39	1.30	1.10	0.28	0.07	0.065	0.07	0.14	0.07	0.065
11-19-80	0.47	0.36	0.59	0.16	1.20	0.09	0.12	0.08	0.12	0.07	0.09
12-08-80	0.08	0.16	0.12	0.05	0.05	0.50	0.04	0.09	0.03	0.10	0.08
12-17-80	0.42	—	0.18	0.14	0.04	0.026	0.03	0.013	0.05	0.026	0.04
Average	0.44	0.30	0.42	0.22	0.19	0.16	0.05	0.16	0.13	0.23	0.04
OIL AND GREASE (PPM)											
7-08-80	2.8	—	4.6	0.3	0.2	0.2	0.4	0.6	0.4	0.3	0.2
7-21-80	3.4	2.1	3.8	0.5	0.3	2.0	2.6	3.0	2.4	3.6	3.0
8-04-80	2.5	3.2	0.7	0.8	0.5	1.1	7.5	1.5	6.1	2.4	3.6
8-18-80	1.6	2.2	6.9	1.4	1.5	1.5	5.4	1.3	4.1	2.4	2.8
9-05-80	1.9	2.4	3.8	1.3	1.0	1.2	3.2	1.1	2.8	2.1	2.5
9-17-80	1.3	1.8	2.0	1.1	1.3	0.8	3.8	1.4	3.2	1.8	2.4
10-01-80	1.1	0.8	2.4	1.0	1.8	1.2	9.0	1.4	4.4	1.2	3.6
10-15-80	2.0	1.1	1.8	1.2	1.2	1.0	3.0	0.8	2.4	0.8	2.0
10-29-80	2.2	1.8	2.4	1.0	1.1	0.9	0.7	1.2	2.1	1.0	1.9
11-12-80	3.0	2.6	2.8	1.4	1.0	0.7	1.2	0.9	2.4	0.9	2.2
11-19-80	2.1	1.9	2.5	1.2	0.9	1.5	1.2	1.0	2.4	1.4	1.8
12-08-80	1.8	1.1	3.2	1.1	2.0	1.9	1.6	1.4	1.1	1.0	0.9
12-17-80	0.6	—	0.8	2.2	0.6	2.0	1.4	1.2	1.0	0.8	1.2
Average	2.0	1.90	2.9	1.1	1.03	1.23	3.15	1.29	2.67	1.51	2.16
pH											
7-08-80	11.3	—	10.8	11.6	12.1	7.1	7.0	7.2	7.2	7.7	7.8
7-21-80	11.5	11.6	11.3	12.0	12.6	7.4	7.1	7.2	7.1	7.6	7.5
8-04-80	11.4	11.3	11.2	11.9	12.4	7.7	7.3	7.5	7.2	7.8	7.6
8-18-80	11.5	11.6	11.3	12.0	12.6	7.4	7.1	7.2	7.1	7.6	7.5
9-05-80	11.3	11.5	11.2	11.9	12.5	7.0	7.2	7.1	7.2	7.7	8.2
9-17-80	11.6	11.7	11.0	11.8	12.5	7.6	7.1	7.6	7.3	10.5	7.9
10-01-80	11.6	11.6	11.0	11.8	12.5	7.6	7.2	7.6	7.3	8.0	7.8
10-15-80	11.5	11.6	11.0	11.9	12.5	7.8	7.3	7.7	7.3	8.0	8.0
10-29-80	11.7	11.7	11.4	12.2	12.7	7.1	7.2	8.6	8.0	10.3	8.6
11-12-80	11.5	11.5	11.2	12.0	12.4	7.8	7.2	7.6	7.1	7.9	8.1
11-19-80	11.7	11.5	10.9	12.0	12.5	7.3	7.0	7.5	7.0	7.8	7.9
12-08-80	11.5	11.5	10.8	11.9	12.4	7.5	7.1	7.6	7.0	7.9	7.8
12-17-80	11.8	—	11.2	12.0	12.6	7.5	8.0	7.6	7.3	7.6	7.7
Average	11.53	11.31	11.1	11.9	12.48	7.44	7.22	7.53	7.23	8.18	7.87
T.O.C. (PPM)											
7-08-80	5.5	—	60.1	4.4	19.3	63.3	52.2	22.1	11.1	17.1	9.2
7-21-80	—	—	—	—	—	—	—	—	—	—	—
8-04-80	4.65	39.15	38.35	4.55	6.75	14.6	20.25	6.25	5.65	10.75	2.85
8-18-80	3.5	47.1	53.8	2.8	5.1	15.0	20.7	18.9	8.5	24.5	7.5
9-05-80	4.0	62.1	53.6	4.1	9.3	6.1	8.3	28.05	12.48	14.65	5.0
9-17-80	5.8	57.4	56.5	6.3	11.6	84.8	17.0	25.0	15.8	41.5	7.4
10-01-80	—	—	—	—	—	—	—	—	—	—	—
10-15-80	5.25	52.4	60.95	6.9	9.9	12.25	14.0	8.2	7.0	9.05	3.4
10-29-80	4.8	84.0	45.0	8.1	9.5	13.3	49.1	15.5	14.9	12.8	10.2
11-12-80	5.7	40.1	44.9	11.2	9.8	22.2	8.0	3.5	9.5	6.7	6.3
11-19-80	2.0	26.6	53.0	8.3	12.5	10.2	16.2	8.5	11.0	4.6	10.7
12-08-80	4.2	25.3	36.0	12.0	8.5	17.2	19.6	19.3	12.6	9.1	8.7
12-17-50	—	—	—	—	—	—	—	—	—	—	—
Average	4.54	48.24	50.22	6.87	10.23	25.90	22.54	15.53	10.84	15.08	7.13

TABLE 1 (Continued)

Date of mple	WELL NUMBER										
	MW-1A	MW-2A	MW-3A	MW-4A	MW-5A	MW-6A	MW-6B	MW-7A	MW-7B	MW-8A	MW-8B
CHLORIDE (PPM) ⁽²⁾											
7-08-80	56	—	60	110	104	51	49	44	36	112	138
7-21-80	480	1140	900	1186	164	52	104	39	165	141	107
8-04-80	145	460	1150	3200	179	32	104	44	156	160	118
8-18-80	84	410	1420	3930	181	45	91	47	146	178	105
9-05-80	65	115	1230	3820	410	56	96	52	160	160	112
9-17-80	40	130	1500	1980	170	57	88	62	136	360	107
10-01-80	70	250	1500	2450	90	46	84	74	144	120	86
10-15-80	110	94	1410	2950	104	58	81	71	126	114	98
10-29-80	110	750	1680	6250	95	88	82	134	176	102	108
11-12-80	66	390	1040	1240	150	36	74	54	134	174	103
11-19-80	70	740	1480	3240	250	40	124	128	132	136	108
12-08-80	61	410	968	1138	138	42	76	112	138	104	104
12-17-80	96	—	1058	1174	144	56	74	98	130	92	102
Average	111.77	444	1184	2512	167	51	87	74	137	150	107
SULFATE (PPM) ⁽²⁾											
7-08-80	794	—	136	32	215	30	23	120	223	405	129
7-21-80	508	418	119	68	86	205	23	143	152	454	16
8-04-80	737	284	267	111	103	221	21	159	222	462	27
8-18-80	970	371	233	273	171	226	146	179	222	385	78
9-05-80	1008	259	139	131	100	212	29	164	172	358	26
9-17-80	950	402	205	191	157	148	86	279	287	439	76
10-01-80	901	343	158	166	107	130	63	198	207	294	59
10-15-80	854	330	121	141	92	115	107	133	258	320	106
10-29-80	1337	249	159	139	40	16	44	307	255	179	26
11-12-80	773	532	150	195	97	138	44	198	292	251	84
11-19-80	783	443	129	160	123	240	41	371	325	354	48
12-08-80	738	516	164	145	94	210	52	338	214	298	80
12-17-80	589	—	146	206	175	202	194	313	363	280	180
Average	842	377	163	151	120	161	67	223	245	337	935
T.D.S. (PPM)											
7-08-80	2064	—	4798	1190	1656	708	700	60	1030	980	472
7-21-80	2210	2202	4474	4437	991	414	497	347	655	739	341
8-04-80	2086	2126	5268	9706	2026	298	670	364	985	1040	480
8-18-80	2404	2158	4394	7622	2010	340	954	550	1288	1060	624
9-05-80	2620	3520	4540	6930	3604	756	680	618	874	1082	490
9-17-80	1932	1920	3850	2932	1664	420	612	754	912	1390	392
10-01-80	1906	2408	3260	4340	1440	520	832	734	1188	960	506
10-15-80	2416	2066	2770	5290	1380	454	730	530	1020	1040	410
10-29-80	1714	1914	2874	5910	1340	482	450	488	902	466	388
11-12-80	1576	2328	2468	6544	1384	424	794	622	1056	854	496
11-19-80	1660	2064	3100	5800	1614	608	966	940	1000	860	472
12-08-80	1122	1920	2208	4720	1542	496	1272	1140	1112	268	560
12-17-80	1054	—	2160	10,820	1812	486	786	662	720	938	482
Average	1905	2239	3551	5865	1728	493	765	605	980	898	470
T.S.S. (PPM)											
7-08-80	1179	—	1199	4	4	1238	927	908	287	647	409
7-21-80	76	34	95	34	21	650	554	267	37	1712	75
8-04-80	44	29	77	5	12	960	673	2250	225	9350	88
8-18-80	10	16	20	63	19	3143	305	640	459	1232	196
9-05-80	10	12	15	21	13	240	212	392	210	588	176
9-17-80	14	87	44	20	36	2072	436	2156	380	572	82
10-01-80	4	26	2	4	4	175	301	184	288	122	140
10-15-80	6	14	3	2	2	361	192	422	252	512	112
10-29-80	34	30	15	20	17	1593	209	574	37	594	84
11-12-80	12	258	18	36	9	284	76	72	305	68	100
11-19-80	7	32	20	32	5	261	142	282	418	261	20
12-08-80	6	98	8	26	7	2	86	2	224	1	34
12-17-80	8	—	109	34	32	525	94	285	208	283	32
Average	108	58	125	23	14	885	324	649	256	1225	119

TABLE 2

GROUND WATER LEVELS OF MONITORING WELLS
(in feet above mean sea level)

Mean Lake Level 573.5'

Date of Sample	WELL NUMBER										
	MW-1A	MW-2A	MW-3A	MW-4A	MW-5A	MW-6A	MW-6B	MW-7A	MW-7B*	MW-8A	MW-8B
7/9-11/80	575.8	574.1	574.9	574.3	582.4	877.5	577.3	578.9	572.9	583.4	574.6
7/23-24/80	575.0	573.9	574.7	574.3	574.5	577.5	571.3	579.0	572.4	583.3	574.6
8/6-7/80	575.8	574.5	575.0	574.3	574.5	577.6	571.3	579.1	572.9	583.4	574.6
8/20-21/80	575.8	574.1	574.8	574.3	574.3	577.3	577.5	578.8	572.8	582.8	574.6
9/3-4/80	575.8	574.1	574.8	574.3	574.8	577.8	577.3	579.1	572.5	583.4	574.6
9/19/80	576.3	574.0	574.6	575.9	574.5	587.9	577.9	579.1	572.9	583.3	574.7
10/1/80	575.9	574.0	574.5	573.8	574.6	577.6	577.6	578.9	572.5	583.1	574.5
10/15/80	575.5	573.4	574.2	572.5	573.9	577.5	577.3	578.9	572.4	582.9	574.8

*An apparent discrepancy exists in these levels in that they are consistently lower than Lake Erie by approximately 1 foot and there is no known well operating in the vicinity of MW-7B.

TABLE 3
PUMP TEST DATA

Date	Well Number	Drawdown or Recovery	Time	Water Level	Pumpage Rate (gpm)
10/9/80	1A	DRAWDOWN	0	9.25	20
			1	9.33	20
			2	9.42	20
			3	9.46	20
			4	9.50	20
			6	9.50	
			8	9.50	
			12	9.50	20
			16	9.50	20
			32	9.50	20
			64	9.50	20
			128	9.50	20
		RECOVERY	0	9.50	
			1	9.33	
			2	9.29	
			3	9.25	
			4	9.25	
			6	9.25	
10/21/80	2A	DRAWDOWN	0	7.33	20
			1	9.92	20
			2	9.92	20
			3	9.67	20
			4	9.75	20
			6	9.83	20
			8	9.83	20
			12	9.75	20
			16	9.75	20
			32	9.83	20
			64	9.67	20
			128	9.67	20
			182	9.25	Stopped Test
		RECOVERY	0	9.25	
			1	7.83	
			2	7.33	
			3	7.33	
			4	7.33	
			6	7.33	
			8	7.33	
			12	7.33	
			16	7.33	
			32	7.33	
			64	7.33	
			128	7.33	
			256	7.33	

TABLE 3 (Continued)

Date	Well Number	Drawdown or Recovery	Time	Water Level	Pumpage Rate (gpm)
9/25/80	3A	DRAWDOWN	0	4.31	10
			1	4.48	10
			2	4.49	10
			3	4.49	10
			4	4.49	10
			6	4.50	10
			8	4.50	10
			12	4.50	10
			16	4.50	10
			32	4.50	10
			32	4.50	10
			64	4.50	10
			128	4.50	Shut Pump Off
		RECOVERY	0	4.50	
			1	4.30	
			2	4.30	
			3	4.31	
			4	4.31	
			6	4.31	
			8	4.31	
			12	4.31	
			16	4.31	
9/24/80	4A	DRAWDOWN	0	7.60	10
			1	7.58	10
			2	7.59	10
			3	7.66	10
			4	7.66	10
			6	7.66	10
			8	7.71	10
			12	7.75	10
			16	7.75	10
			32	7.75	10
			64	7.75	10
			128	7.75	10
			188	7.66	Shut Pump Off
		RECOVERY	0	7.66	
			1	7.60	
			2	7.60	
			3	7.60	
			4	7.60	
			6	7.60	
			8	7.60	
			12	7.60	
			16	7.60	
			32	7.60	

TABLE 3 (Continued)

Date	Well Number	Drawdown or Recovery	Time	Water Level	Pumpage Rate (gpm)
10/17/80	5A	DRAWDOWN	0	8.83	20
			.1	8.92	20
			2	8.92	20
			3	8.92	20
			4	8.92	20
			6	8.92	20
			8	8.92	20
			12	9.0	20
			16	8.92	20
			32	8.83	20
			64	8.92	20
			128	8.92	20
			192	8.92	Pump Stopped
		RECOVERY	0	8.92	
			1	8.88	
			2	8.85	
			3	8.83	

Summary

Pump Test Data

Lake Shore Wells

Well Number	Transmissibility	Permeability (K)		Thickness Saturated
	Gal./Day/Ft. X 10 ³	Gal./Day/Ft. ²	Ft./Day	Section Ft.
MW-1A	18.8	626	84	30'
MW-2A	19.5	557	74	35'
MW-3A	90	2571	344	35' (Void at 12')
MW-4A	18.9	756	101	25' (Void at 12')
MW-5A	33.0	1320	176	25'
Avg. Trans.	36.0			
Avg. Trans. less 3A	22.6	814		30' Avg.

Seepage VelocityAssume — Porosity 30%, Gradient 1.7×10^{-3}

Well Number	Seepage Velocity
1A	.47 ft./day
2A	.72 ft./day
3A	1.95 ft./day.
4A	.57 ft./day
5A	.99 ft./day
Average	.88 ft./day

TABLE 3 (Continued)

Date	Well Number	Drawdown or Recovery	Time	Water Level	Pumpage Rate (gpm)
6/25/80	6B	DRAWDOWN	0	6.0	—
		RECOVERY	0	—	
			1	19.46	
			2	18.21	
			3	17.625	
			4	16.875	
			6	16.16	
			8	15.85	
			12	15.19	
			16	14.46	
			32	13.21	
			64	11.3	
6/17/80	7B	DRAWDOWN	0	12.96	0
			1	13.125	4
			2	13.34	4
			3	13.375	4
			4	13.44	4
			6	13.46	4
			8	13.46	4
			12	13.42	4
			16	13.50	4
			32	13.46	4
			64	13.54	4
			128	13.50	4
		RECOVERY	0	13.50	
			1	12.96	

TABLE 3 (Continued)

Date	Well Number	Drawdown or Recovery	Time	Water Level	Pumpage Rate (gpm)
7/1/80	7B	DRAWDOWN	0	12.54	10
			1	13.92	10
			2	13.96	10
			3	14.0	10
			4	14.0	10
			6	14.0	10
			8	14.0	10
			12	14.01	10
			16	14.05	10
			32	14.06	10
			68	14.14	10
			128	14.18	10
			240	14.30	10
		RECOVERY	0	14.30	
			1	13.0	
			2	12.83	
			3	12.83	
			4	12.83	
			6	12.83	
			8	12.83	
			12	12.83	
			16	12.82	
			32	12.80	
			64	12.73	
			120	12.71	
6/10/80	8B	DRAWDOWN	0	11.21	7
			1	19.125	7
			2	20.23	7
			3	20.80	7
			4	21.04	7
			6	21.625	7
			8	23.50	7
			12	23.875	7
			16	24.50	7
			20	24.60	7
			30	28.21	7
			67	34.10	7
		RECOVERY	0	28.83	
			1	28.30	
			3	22.64	
			6	19.50	
			12	13.60	
			24	10.97	
			36	11.5	

TABLE 3 (Continued)

Date	Well Number	Drawdown or Recovery	Time	Water Level	Pumpage Rate (gpm)
6/13/80	8B	DRAWDOWN	0	11.67	0
			1	15.0	5
			2	16.29	5
			3	16.34	5
			4	16.50	5
			6	16.625	5
			8	16.67	5
			12	16.82	5
			16	16.84	5
			32	17.17	5
			68	17.17	5
			128	17.92	5
			194	17.92	5
			210	17.92	5
		RECOVERY	0	17.94	
			1	13.67	
			2	13.50	
			3	13.34	
			4	12.75	
			6	12.34	
			8	12.125	
			12	11.50	
			16	11.875	
			26	11.70	
			32	11.67	

TABLE 4

DIMENSIONLESS NEARSHORE CONCENTRATION \bar{C} DOWNSTREAM OF THE DISCHARGE LOCATION

Dimensionless Downstream Distance \bar{X}																					
$g_e^{(1)}$ n		$(\times 10^{-4})$					$(\times 10^{-3})$					$(\times 10^{-2})$					$(\times 10^{-1})$				
		1	2	4	6	8	1	2	4	6	8	1	2	4	6	8	1	2	4	6	
1		57.0	40.0	28.0	23.0	20.0	18.0	13.0	9.0	7.3	6.4	5.7	4.0	3.3	2.3	2.0	1.7	1.3	1.1	1.0	
0 ⁻³									57.0	46.8	40.0	36.8	26.0	18.0	14.7	13.0	12.0	8.0	5.7	4.7	
0 ⁻³											57.0	52.0	36.0	25.2	20.8	18.0	16.0	11.4	8.0	6.6	
0 ⁻²													44.0	31.5	25.5	22.0	20.0	14.0	10.0	8.0	
0 ⁻²													52.0	36.0	29.5	25.5	23.0	16.0	11.6	9.4	
0 ⁻²													57.0	40.0	32.5	28.0	25.0	18.0	13.0	10.0	
0 ⁻²														42.0	36.0	31.0	27.5	19.8	13.8	11.4	
0 ⁻²														47.0	38.0	34.0	30.0	21.0	15.0	12.3	
0 ⁻²														53.0	42.0	37.0	33.0	23.0	16.0	13.2	
0 ⁻²														56.0	45.0	39.0	35.0	24.5	17.5	14.0	
0 ⁻²														57.0	47.0	40.0	36.0	25.5	18.0	14.7	
$\times 10^{-2}$															48.0	41.0	37.0	26.0	18.5	15.0	
0 ⁻²															51.0	43.0	39.0	28.0	20.0	16.0	
0 ⁻²															54.0	46.0	41.0	29.0	20.5	17.0	
0 ⁻²															55.0	47.0	42.0	30.0	21.0	18.0	
0 ⁻²															57.0	50.0	44.0	31.0	22.0	18.0	
0 ⁻²																51.0	44.0	32.0	22.5	18.5	
0 ⁻²																53.0	47.0	33.0	23.5	19.0	
0 ⁻²																54.0	49.0	34.0	24.0	20.0	
0 ⁻²																56.0	50.0	35.0	25.0	20.0	
0 ⁻²																57.0	51.0	36.0	25.5	21.0	
0 ⁻²																	54.0	37.0	26.4	21.5	
0 ⁻²																	55.0	38.0	27.0	22.0	
0 ⁻²																	56.0	39.0	27.5	22.5	
0 ⁻²																	57.0	40.0	28.0	23.0	
0 ⁻²																	57.0	40.3	28.5	23.5	
$\times 10^{-1}$																		40.5	29.0	23.8	

discharge locations are expressed in terms of dimensionless downstream distance \bar{X} due north from the southernmost end of the slag disposal area at $\bar{X} = 10^{-4}$

Southernmost end of slag disposal area at Blasdell Creek

Smokes Creek

Northernmost end of the slag disposal area

Values are shown on Table 5

TABLE 5

SELECTED CONTAMINANT DISCHARGE ESTIMATE.— SOLID WASTE FACILITY
(pounds/sec)

Method Used To Proportionate The Contributory Shorefront Length For
Different Area Sectors In Table 5

	Blasdell Creek		Smokes Creek		End of Waste Area	
	MW-1		MW-2	MW-3	MW-4	MW-5
Length (ft)	3600		2800	3200	3400	2200
Total (ft)	6400			8800		
Proportional shorefront length	0.56		0.44	0.36	0.39	0.25
	= 1.00			= 1.00		

Discharge Rate "Q" Of Ground Water From Zones Assigned To
Each Lake Shore Monitoring Well

	MW-1	MW-2	MW-3	MW-4	MW-5
Length (ft)	3600	2800	3200	3400	2200
Area* (k ft ²)	90	70	86.4	102	66
T	25	25	27	30	30
gal/day	1.22×10^5	$.95 \times 10^5$	1.17×10^5	1.39×10^5	$.90 \times 10^5$
ft ³ /sec	.19	.15	.18	.22	.14
Total	15,200	414.4		5.63×10^5	.88

*Based on assumed average thickness

TABLE 5 (Continued)

Average Concentration (ppm) Of Selected Contaminants
Found In Lake Shore Wells

	MW-1A	MW-2A	MW-3A	MW-4A	MW-5A
Phenol	.06	1.15	1.10	0.21	0.3
Chlorides	112	444	1184	2512	167
Sulfates	842	377	163	151	120

Calculation
Pounds of Selected Contaminants Per Cubic Foot Ground Water
For Zone Assigned to Each Lake Shore Monitoring Well

	MW-1	MW-2	MW-3	MW-4	MW-5
Phenol					
(lbs/ft ³)*	3.75×10^{-6}	7.19×10^{-5}	6.87×10^{-5}	1.3×10^{-5}	1.88×10^{-5}
(lbs/sec)	7.13×10^{-7}	1.08×10^{-5}	1.24×10^{-5}	2.88×10^{-6}	2.63×10^{-6}
Chloride					
(lbs/ft ³)	7×10^{-3}	2.78×10^{-2}	7.38×10^{-2}	1.57×10^{-1}	1.04×10^{-2}
(lbs/sec)	1.33×10^{-3}	4.17×10^{-3}	1.33×10^{-2}	3.45×10^{-2}	1.46×10^{-3}
Sulfates					
(lbs/ft ³)	5.26×10^{-2}	2.36×10^{-2}	1.02×10^{-2}	9.44×10^{-3}	7.5×10^{-3}
(lbs/sec)	9.99×10^{-3}	3.54×10^{-3}	1.84×10^{-3}	2.08×10^{-3}	1.05×10^{-3}
Q					
(ft ³ /sec)	.19	.15	.18	.22	.14

*Based upon Q-line

TABLE 6
LIST OF SYMBOLS FOR THE DISPERSION MODEL

C = contaminant concentration (activity/volume)
 d = typical flow depth (ft.)
 k_y = lateral turbulent diffusion coefficient (ft.²/sec.)
 u = depth-averaged velocity (ft. sec.)
 Q = total flow through the streamtube (cfs)
 W = rate of contaminant loading (activity/sec.)
 \bar{C} = dimensionless concentration
 X = downstream distance (feet)
 D = constant diffusion factor, $D = k_y \cdot u \cdot d^2$
 \bar{X} = dimensionless downstream distance, $\bar{X} = \frac{Dx}{Q^2}$

To find concentration C :

$$\bar{C} = \frac{C}{(W/Q)} \quad \text{equation (1)}$$

$$C = \bar{C} \times \left(\frac{W}{Q}\right) \quad \text{equation (2)}$$

Where

W = $\frac{1 \text{ b}}{\text{sec}}$ = rate of contaminant loading
 Q = flowrate in stream tube = 1000-1010 cfs
 C = concentration = $\frac{\text{lb}}{\text{cu. ft}}$
 \bar{C} = dimensionless

SELECTED CONTAMINANT CONCENTRATION NORTH END OF SOLID WASTE FACILITY

Discharge Location	Area Sector	DEAK Dimensionless Downstream Concentration $\bar{C}(2)$	Chloride		Phenol		Sulphate	
			Rate of Loading $w(5)$ (lb/sec)	Concentration $\bar{C}(3)$ (lb/cu ft)	Rate of Loading $w(5)$ (lb/sec)	Concentration $\bar{C}(3)$ (lb/cu ft)	Rate of Loading $w(5)$ (lb/sec)	Concentration $\bar{C}(3)$ (lb/cu ft)
10 ⁻⁴ (a)		1.7						
4.0 x 10 ⁻³		12.0						
8.0 x 10 ⁻³		16.0						
1.2 x 10 ⁻²	1	20.0	1.33 x 10 ⁻³	1.65 x 10 ⁻⁴	7.13 x 10 ⁻⁷	8.84 x 10 ⁻⁸	9.99 x 10 ⁻³	1.24 x 10 ⁻³
1.6 x 10 ⁻²		23.0						
2.0 x 10 ⁻²		25.0						
2.4 x 10 ⁻²		27.5						
		$\bar{C} = 125.2$						
2.8 x 10 ⁻²		30.0						
3.2 x 10 ⁻²		33.0						
3.6 x 10 ⁻²	2	35.0	4.17 x 10 ⁻³	7.06 x 10 ⁻⁴	1.08 x 10 ⁻⁵	182.85 x 10 ⁻⁸	3.54 x 10 ⁻³	0.60 x 10 ⁻³
4.0 x 10 ⁻²		36.0						
4.3 x 10 ⁻² (b)		37.0						
		$\bar{C} = 171.0$						
4.7 x 10 ⁻²		39.0						
5.1 x 10 ⁻²		41.0						
5.5 x 10 ⁻²	3	42.0	1.33 x 10 ⁻²	27.65 x 10 ⁻⁴	1.24 x 10 ⁻⁵	257.8 x 10 ⁻⁸	1.84 x 10 ⁻³	0.38 x 10 ⁻³
5.9 x 10 ⁻²		44.0						
6.3 x 10 ⁻²		44.0						
		$\bar{C} = 210.0$						
6.7 x 10 ⁻²		47.0						
7.1 x 10 ⁻²		49.0						
7.5 x 10 ⁻²	4	50.0	3.45 x 10 ⁻³	104.52 x 10 ⁻⁴	2.88 x 10 ⁻⁶	87.26 x 10 ⁻⁸	2.08 x 10 ⁻³	0.63 x 10 ⁻³
7.9 x 10 ⁻²		51.0						
8.3 x 10 ⁻²		54.0						
8.7 x 10 ⁻²		55.0						
		$\bar{C} = 306.0$						
9.1 x 10 ⁻²		56.0						
9.5 x 10 ⁻²		57.0						
9.9 x 10 ⁻²	5	57.0	1.46 x 10 ⁻³	2.46 x 10 ⁻⁴	2.63 x 10 ⁻⁶	44.27 x 10 ⁻⁸	1.05 x 10 ⁻³	0.18 x 10 ⁻³
1.03 x 10 ⁻¹ (c)		—						
		$\bar{C} = 170.0$						
			Peak Concentration = 230 ppm (4)	Peak Concentration = 581.04 x 10 ⁻⁸	Peak Concentration = 0.09 ppm	Peak Concentration = 3.03 x 10 ⁻³	Peak Concentration = 48.5 ppm	

(1) Each sector represents an area with approximate rate of contaminant loading along the shorefront face.

(2) From Table 5, Dimensionless downstream concentration at $\bar{X} = 1.0 \times 10^{-1}$

(a) Southernmost end of slag disposal area at Blasdel Creek

(b) Smokes Creek

(c) Northernmost end of the slag disposal area

(3) From equation (2) Table 6, using $Q = 1010$ cfs and \bar{C} values on Table 5, Part 3.

(4) Conversion factor 1 lb/cu ft = 1.602 x 10⁴ ppm (mg/litre)

(5) From Table 5

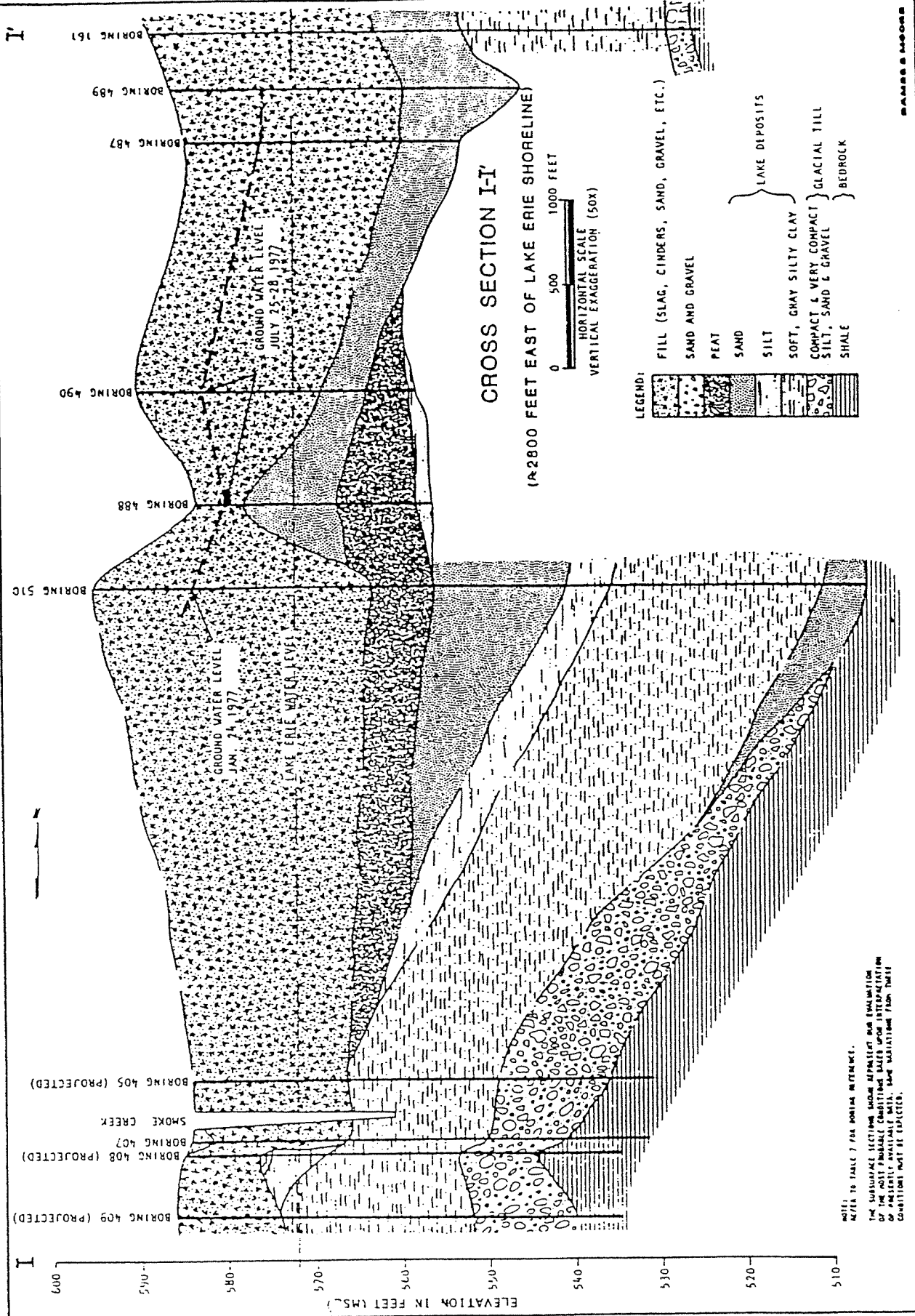
TABLE 8

AVAILABLE BORING INFORMATION

Location	Well No.	Date Drilled	Drilling Contractor and or Consulting Firm	Surface Elevation	Total Depth (ft)	Ground Water Elevation	Date Measured
(1) Solid waste area	MW-1A	June 25, 1980	Ehmke Drilling Company	585.31	35	575.80	7/11/80
Lake Erie shore by sludge pits	MW-2A	June 15, 1980	for Dames & Moore of	582.00	38	574.10	7/11/80
North of Smokes Creek	MW-3A	June 12, 1980	Cranford, N.J.	579.00	39	574.90	7/11/80
Between Smokes Creek and government containment area	MW-4A	June 9, 1980		582.10	40	574.3	7/11/80
Lake Erie shore south of containment area	MW-5A	June 2, 1980		582.90	40	582.4 (574.5)	7/11/80 7/23/80
Between Blasdel Creek and Smokers Creek	MW-6A	May 1, 1980		582.00	16	877.3 (574.5)	7/11/80 7/23/80
	MW-6B	April 30, 1980		582.00	28	577.3	7/11/80
Near the structural shipping yards	MW-7A	May 2, 1980		583.04	15	578.9	7/11/80
	MW-7B	May 2, 1980		583.04	28	572.9	7/11/80
North of open hearth No. 1	MW-8A	May 13, 1980		585.04	15	583.4	7/11/80
	MW-8B	May 9, 1980		585.04	71	574.6	7/11/80
Solid waste area	MW-9	Nov. 18, 1980		621.23	87	—	—
Solid waste area	MW-10	May 12, 1980		596.23	56	—	—
(2) Along the coke ovens	# 487	July 1977	Buffalo Testing Laboratories, Inc.	584	30+	575.5	7/25/77
	Test pit #1	July 1977		585	6	—	—
	# 488	July 1977		583	27	574.75	7/27/77
	# 489	July 1977		586	40	574.75	7/26/77
	# 490	July 1977		590	32	578.50	7/28/77
	# 159	June 1951	Sprague & Henwood, Inc.	583	72	—	—
	# 161	June 1951	Scranton, Pa.	588	63	—	—
(3) Proposed lime plant west of B.O.F.	# 401	Oct. 1964	Pittsburgh Testing Lab.,	588	48	WATER	
	# 402	Oct. 1964	Pittsburgh, Pa.	588	42		
	# 403	Oct. 1964		590	14.0	LEVEL	
	# 404	Oct. 1964		588	44		
	# 405	March 1965		584	52.6	NOT	
	# 406	March 1965		589	54.4		
	# 407	March 1965		584	52.5		
	# 408	March 1965		585	50	DETERMINED	
	# 409	March 1965		586	50.6		
(4) West of coke ovens	# 510	Jan. 1977	Empire Soil Investigations, Inc.	598	90	579.2	1/24/77
	# 511	Jan. 1977		588	25.5	579.6	2/08/77

TABLE 8 (Continued)

Location	Well No.	Date Drilled	Drilling Contractor and or Consulting Firm	Surface Elevation	Total Depth (ft)	Ground Water Elevation	Date Measured
(5) Containment area (east of site in Lake Erie)	# 1 # 2 # 3 # 4 # 5 # 6 # 7 # 8 # 9 # 10	Oct. 1972	Warren George, Inc., Jersey City, N.J. (for DeLeuw Cather of Buffalo, N.Y.)	540 537 537 537 539 540 544 543 546 545	46 33.5 33.5 20 20 45 56 34.5 45 31	DRILLED IN THE LAKE ERIE	
(6) West of Bar Mills	Disposal Well # 1 (never used)	1969?	?	583	4310		
(7) Proposed riparian enclosure	# 437 # 438 # 439 # 458 # 457 # 456 # 455 # 454 # 453 # 452 # 451 # 450 # 449 # 448 # 447 # 446	April 1970	Pittsburgh Testing Lab., Pittsburgh, Pa. (for Sverdrup Parcel & Associates of New York, N.Y.)	557 560 555 557 551 545 552 552 552 554 542 540 537 537 534 534	.28 3 0.5 21 13 12 35 51 46 24 40 50 32 32 40 31	DRILLED IN THE LAKE ERIE	
(8) North Office Building	Gas Well (abandoned)	Oct. 1911	Sayer & Streeter Buffalo, N.Y.				



NOTE: TO TABLE 7 FOR BORING INTERVALS.
THE SUBSURFACE SECTIONS SHOWN REPRESENT THE EVALUATION OF THE MOST PROBABLE CONDITIONS BASED UPON INTERPRETATION OF AVAILABLE DATA. SOME VARIATION FROM THESE CONDITIONS MUST BE EXPECTED.

EXTENSION OF I-I' SOUTH

I' NORTH

SOUTH

BLASDELL CREEK

540

550

560

570

580

590

600

ELEVATION IN FEET (MSL)

MT-6A (PROJECTED)

MT-6B

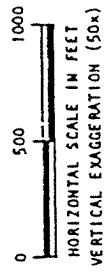
ESTIMATED LAND SURFACE

WATER LEVEL

1-30-80

BORING 409

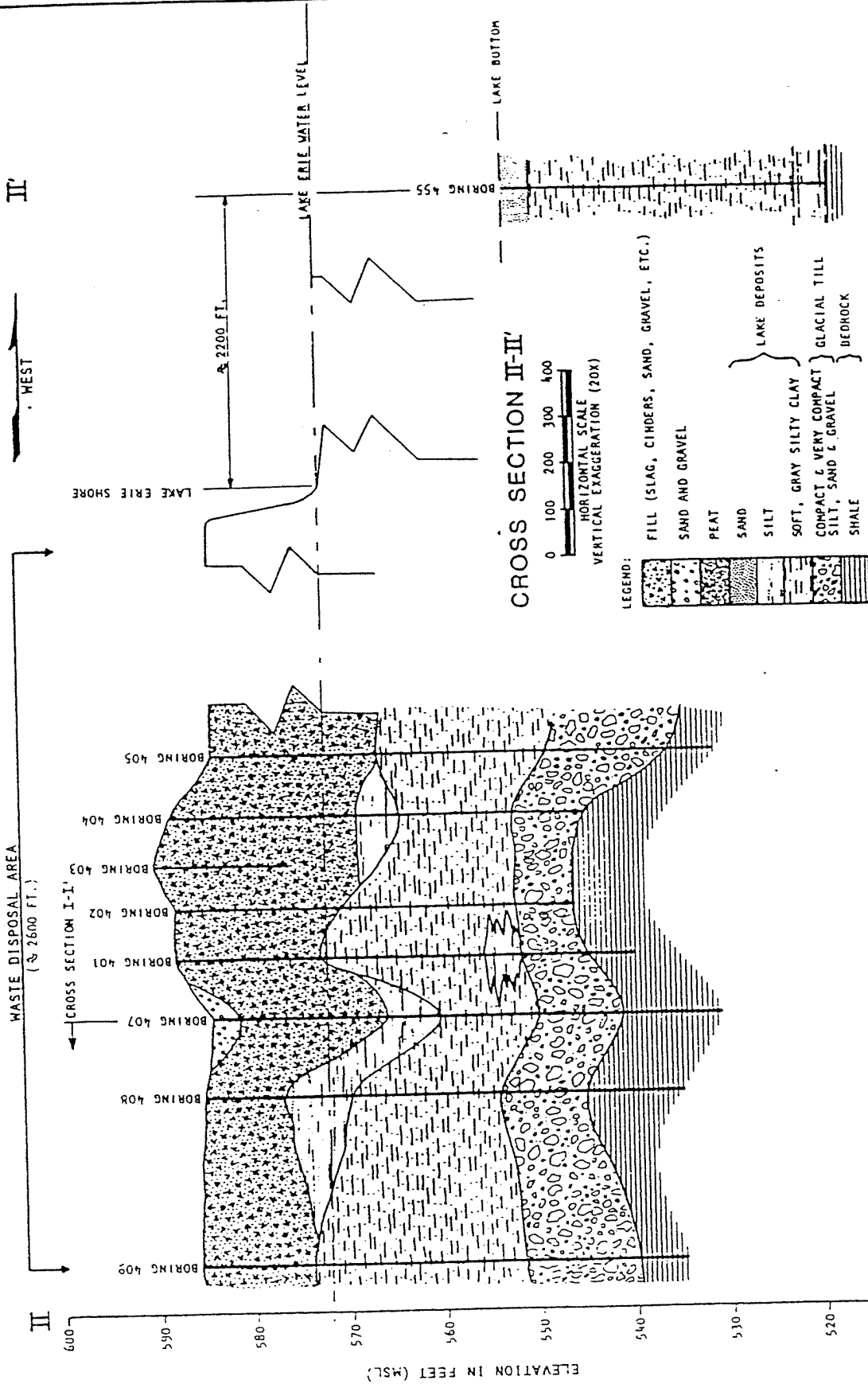
CROSS-SECTION I-I'



LEGEND:

- FILL (SLAG, CINDERS, SAND, GRAVEL, ETC.)
- SOFT, GRAY SILTY CLAY — LAKE DEPOSIT
- COMPACT & VERY COMPACT SILT, SAND & GRAVEL } GLACIAL TILL
- BROWN SHALE — BEDROCK
- DOLOMITIC LIMESTONE

NOTE: REFER TO TABLE 7 FOR BORING REFERENCE. THE UNDERGROUND CONDITIONS SHOWN REPRESENT AN EVALUATION OF THE AVAILABLE DATA. SOME VARIATIONS FROM THESE CONDITIONS MUST BE EXPECTED.

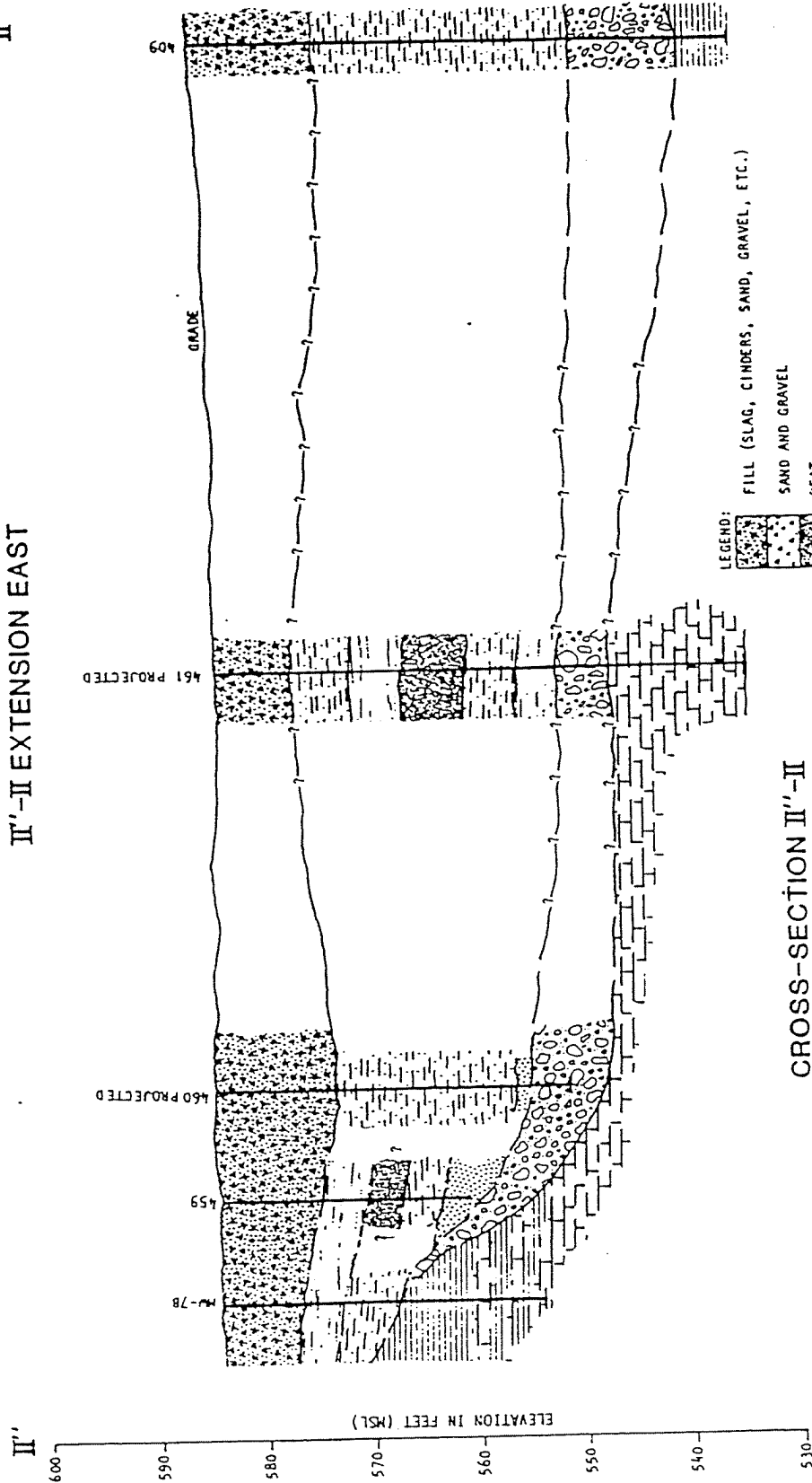


NOTE: IN TABLE 7 AND BORING REFERENCE, THE SURFACE ELEVATIONS SHOWN REPRESENT THE ELEVATION OF THE MOST PROBABLE CONDITIONS BASED UPON INTERPRETATION OF PRELIMINARY DATA. SOME VARIATIONS FROM THESE CONDITIONS MUST BE EXPECTED.

NOTE: GROUND WATER LEVELS NOT RECORDED IN BORINGS.

II

II'-II EXTENSION EAST

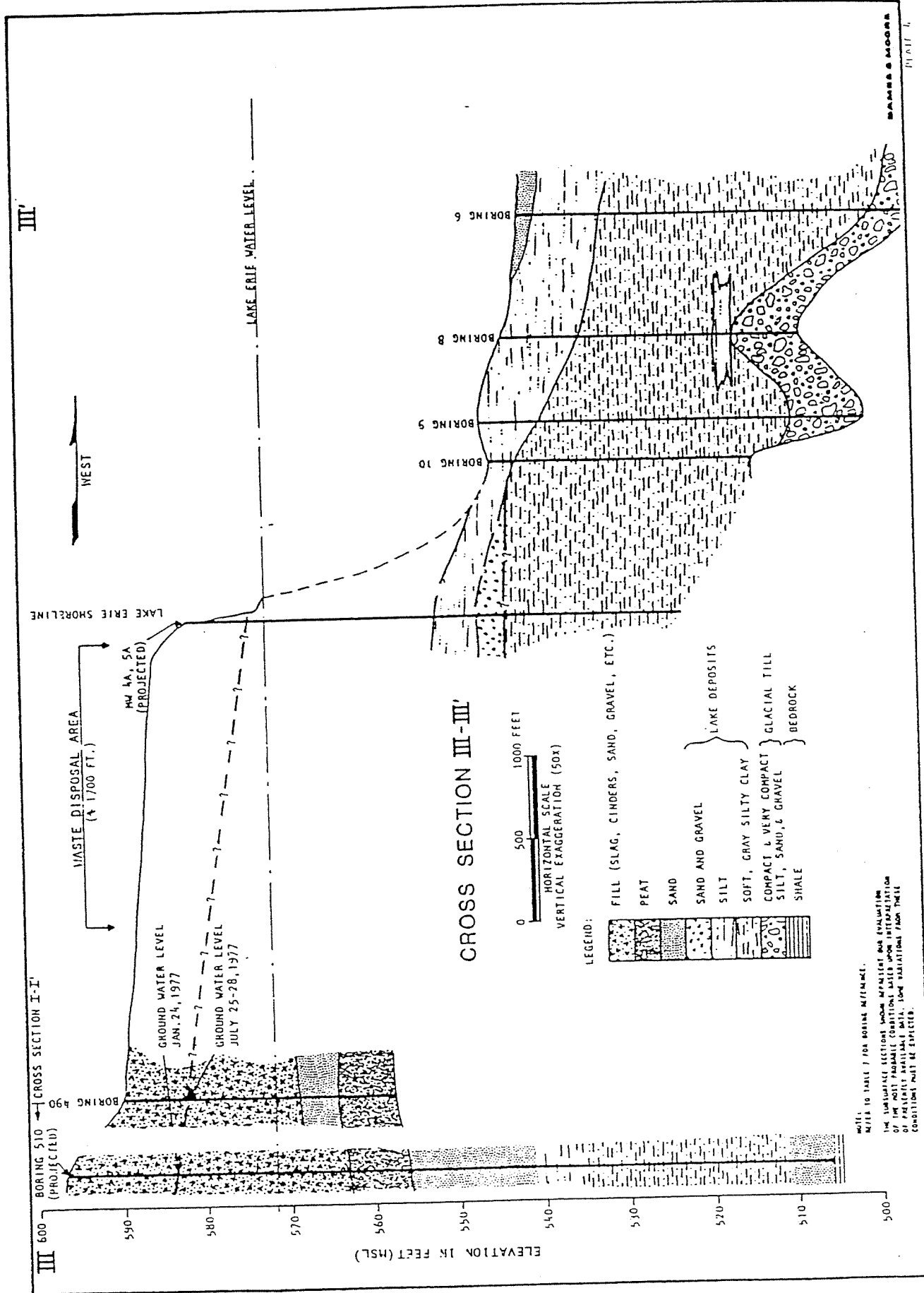


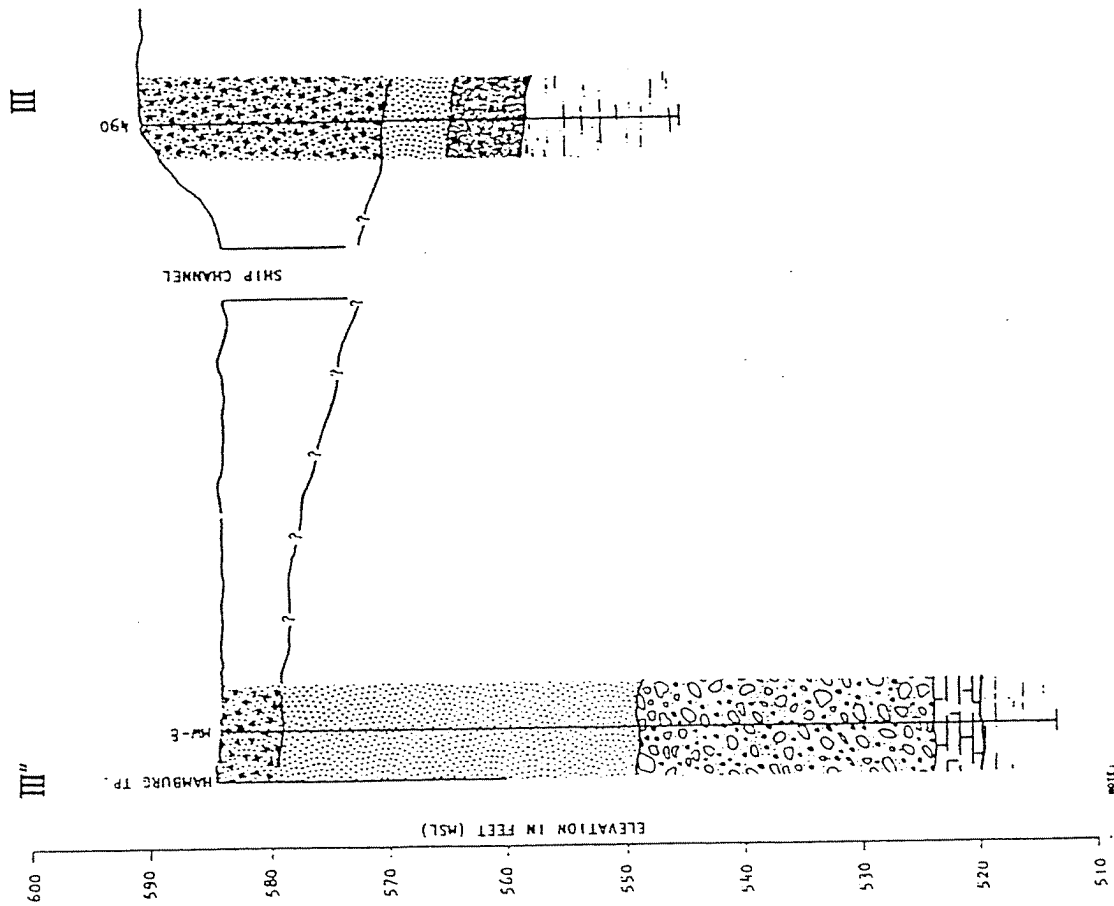
- LEGEND:
- FILL (SLAG, CINDERS, SAND, GRAVEL, ETC.)
 - SAND AND GRAVEL
 - PEAT
 - SAND
 - SILT
 - SOFT, GRAY SILTY CLAY
 - COMPACT & VERY COMPACT SILT, SAND & GRAVEL
 - SHALE
 - DOLOMITIC LIMESTONE
- LAKE DEPOSITS
- GLACIAL TILL
- NOTE: GROUND WATER LEVELS NOT RECORDED IN BORINGS.

CROSS-SECTION II'-II

HORIZONTAL SCALE
VERTICAL EXAGGERATION (50X)

NOTES:
REFER TO TABLE 1 FOR BORING REFERENCE.
THE SURFACE ELEVATIONS SHOWN REPRESENT OUR EVALUATION
OF THE SURFACE ELEVATIONS BASED UPON INTERPRETATION
OF PROBABLY AVAILABLE DATA. SOME VARIATIONS FROM THESE
CONDITIONS MUST BE EXPECTED.



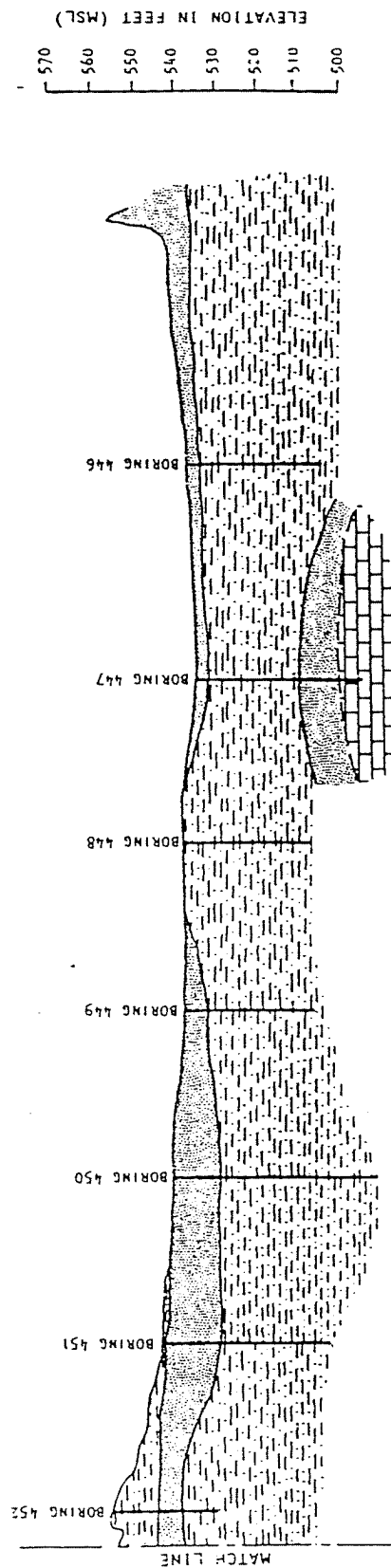
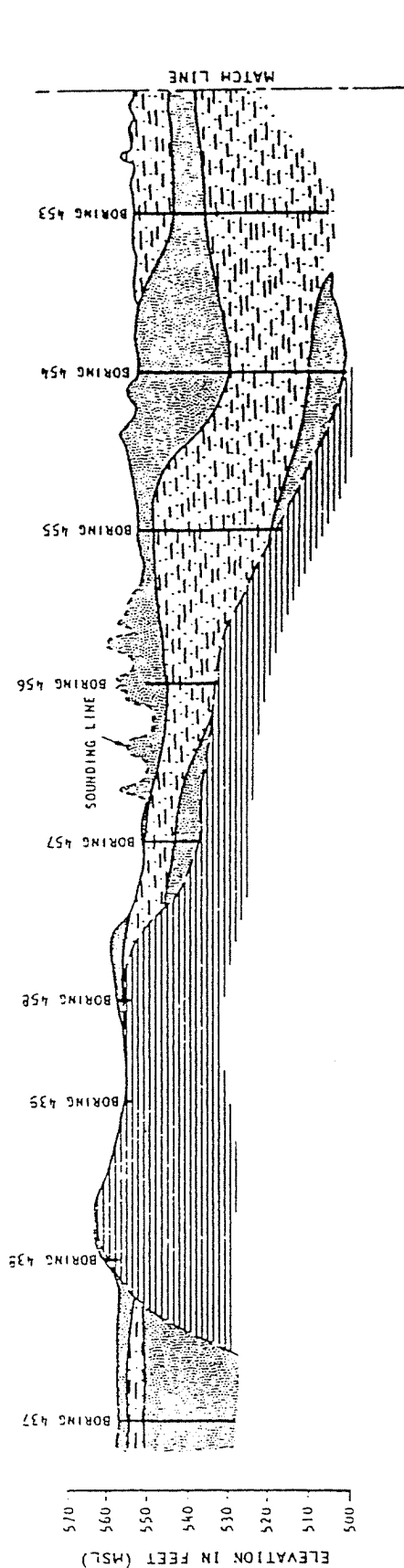


CROSS SECTION III' - III

0 500 1000 FEET
HORIZONTAL SCALE
VERTICAL EXAGGERATION (50x)

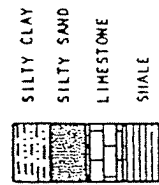
- LEGEND:
- FILL (SLAG, CINDERS, GRAVEL, ETC.)
 - PEAT
 - SAND
 - SILT
 - COMPACT & VERY COMPACT SILT, SAND, & GRAVEL
 - SHALE
 - LIMESTONE
 - LAKE DEPOSITS
 - GLACIAL TILL
 - BEDROCK

NOTE:
REFERS TO TABLE 7 FOR NOMINAL MEASUREMENTS.
THE UNSTRAINED SECTION SHOWN APPLICABLE FOR EVALUATION
OF THE MOST PROBABLE CONDITION. THE SECTION SHOWN IS
A REPRESENTATIVE SECTION. THE SECTION SHOWN IS NOT
A REPRESENTATIVE SECTION. THE SECTION SHOWN IS NOT
A REPRESENTATIVE SECTION.



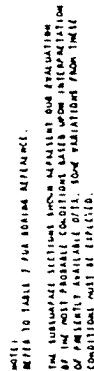
CROSS SECTION IV-IV

(NOT TO SCALE)



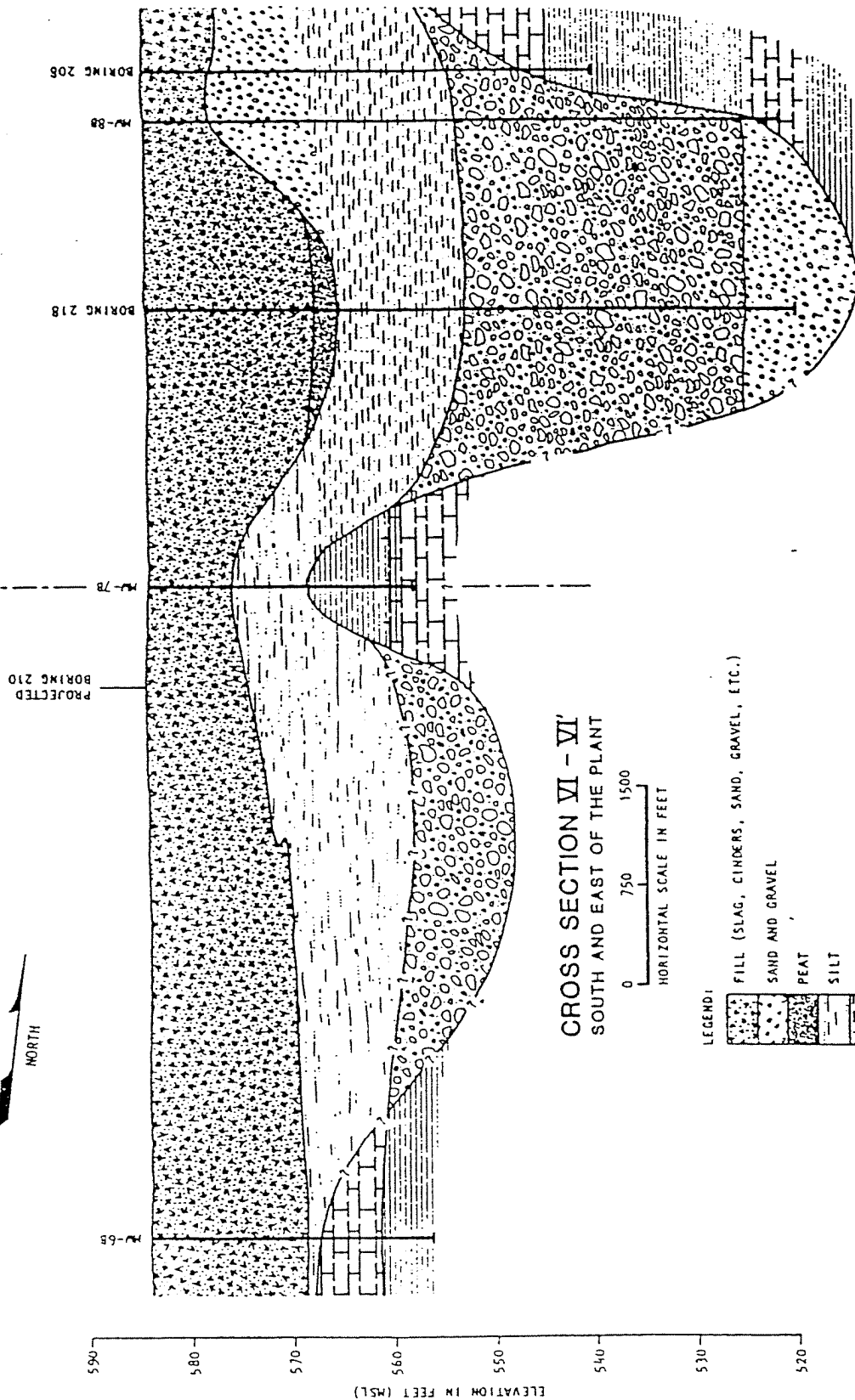
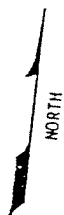
NOTED TO TABLE 3 FOR BORING REFERENCE.
THE SUBSURFACE SECTION IS AN APPROPRIATE AND EVALUATION
OF THE MOST PROBABLE CONDITIONS BASED UPON INTERPRETATION
OF PREVIOUSLY AVAILABLE DATA. SOME VARIATIONS FROM THESE
CONDITIONS MUST BE EXPECTED.

REFERENCE:
SVERDRUP & PARCEL & ASSOCIATES OF NEW YORK, INC.
RIPARIAN ENCLOSURE, DESIGN MEMORANDUM (PRELIMINARY)
APRIL, 1970.



VI

VI

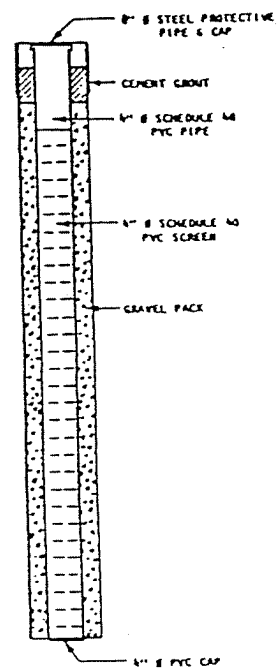
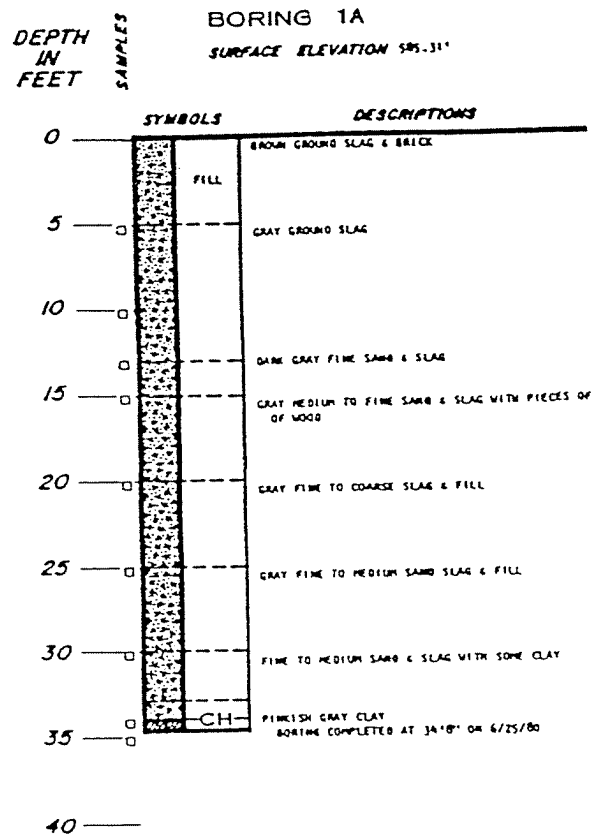


CROSS SECTION VI - VI'
SOUTH AND EAST OF THE PLANT

LEGEND:

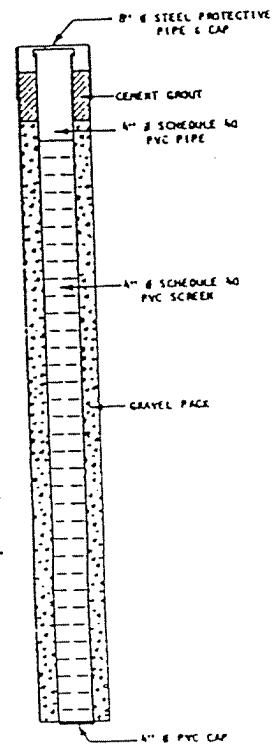
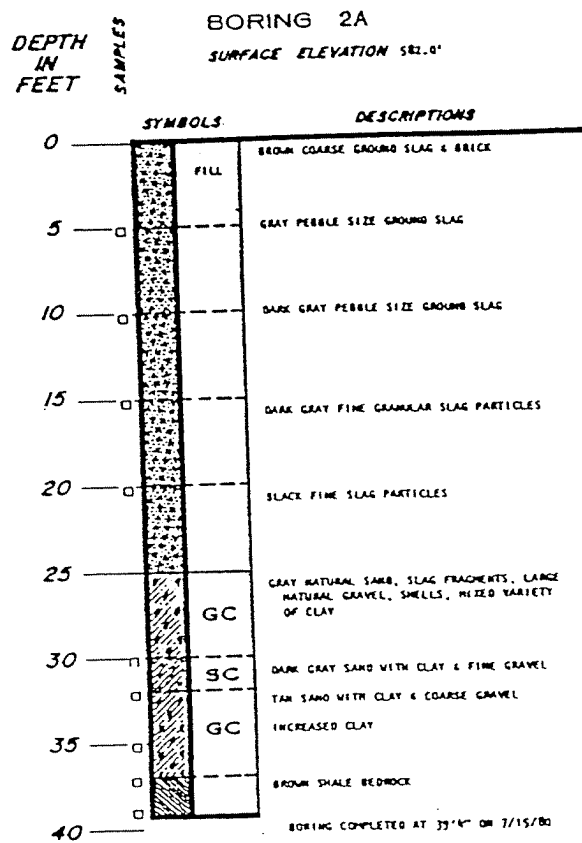
	FILL (SLAG, CINDERS, SAND, GRAVEL, ETC.)
	SAND AND GRAVEL
	PEAT
	SILT
	SOFT, GRAY SILTY CLAY
	COMPACT & VERY COMPACT SILT, SAND & GRAVEL
	WEATHERED LIMESTONE
	SHALE

NOTE: SEE TABLE 7 FOR BORING INTERVALS.
THE SURFACE SECTIONS SHOWN REPRESENT OUR EVALUATION
OF THE MOST PROBABLE CONDITIONS BASED ON AVAILABLE
DATA. SOME VARIATIONS FROM THESE
CONDITIONS MUST BE EXPECTED.

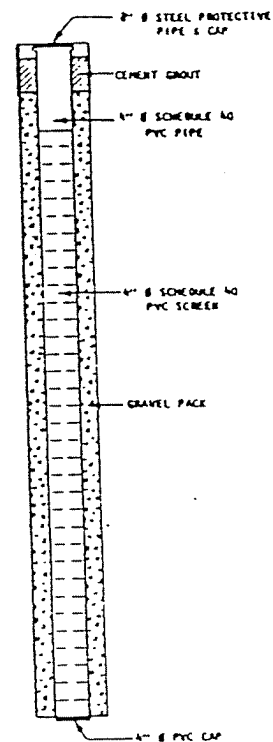
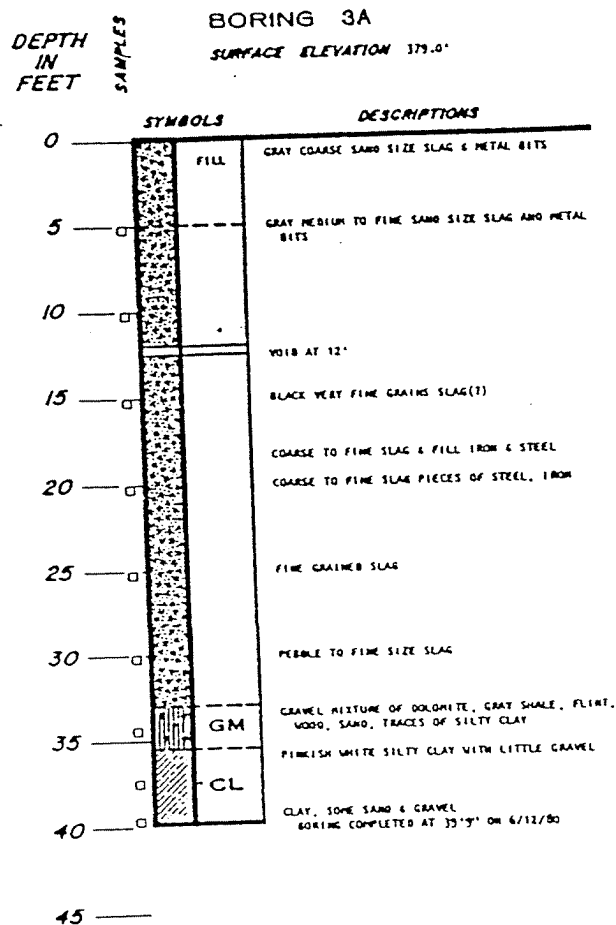


LOG AND MONITORING WELL DETAILS

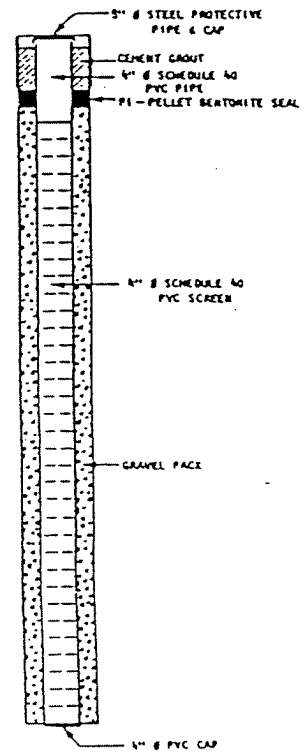
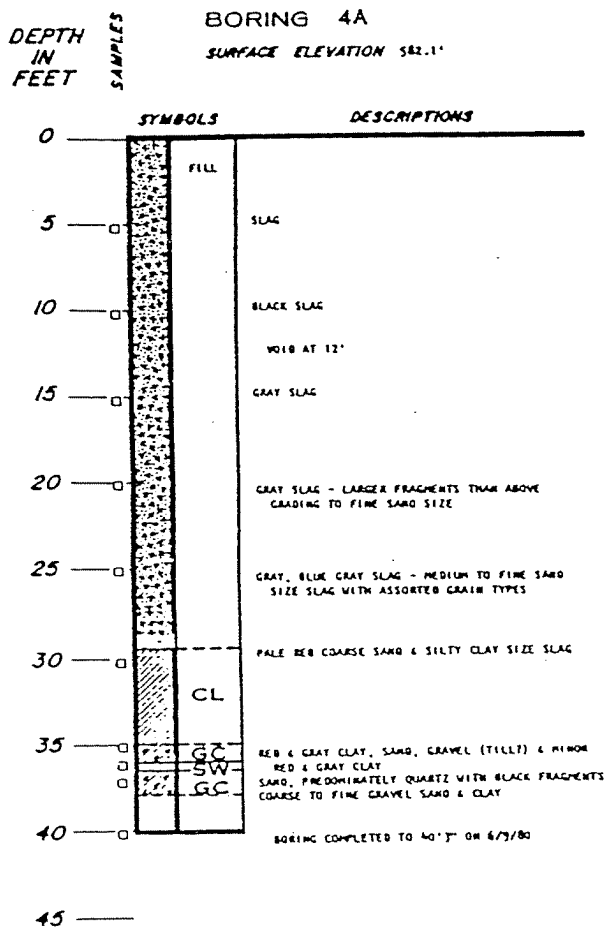
DAMES & MOORE



LOG AND MONITORING WELL DETAILS

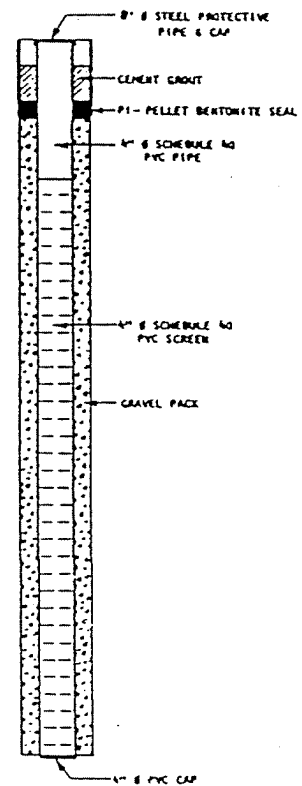
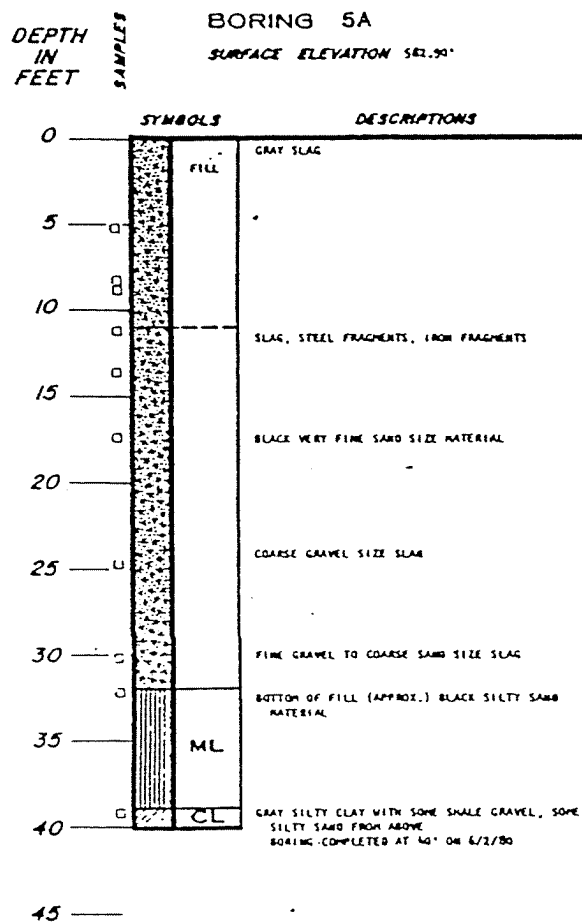


LOG AND MONITORING WELL DETAILS

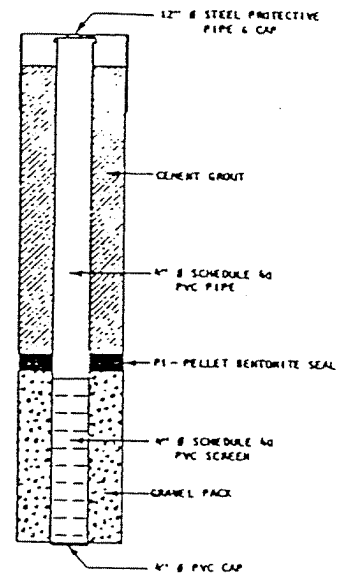
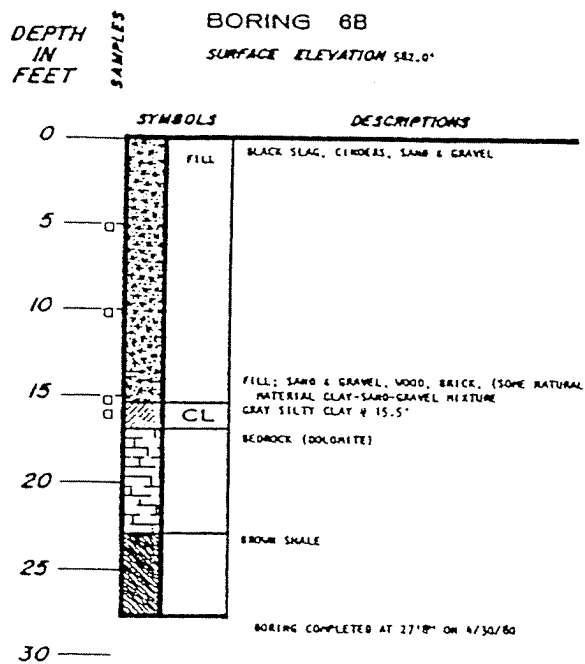
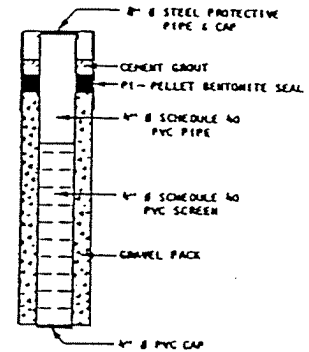
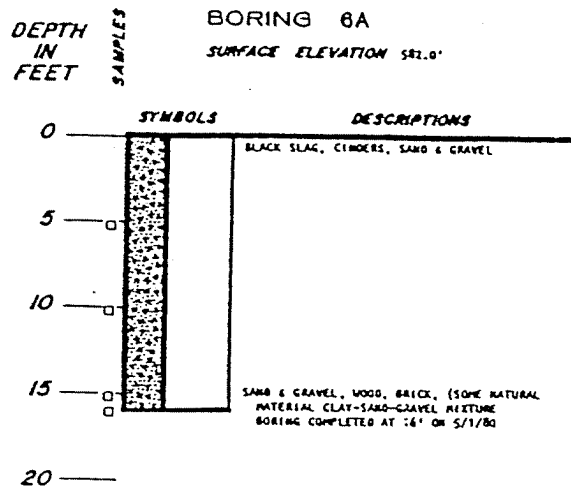


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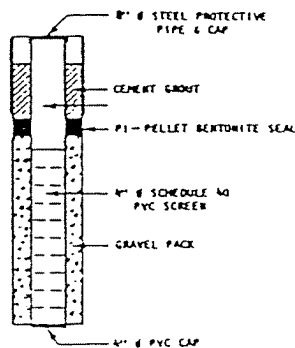
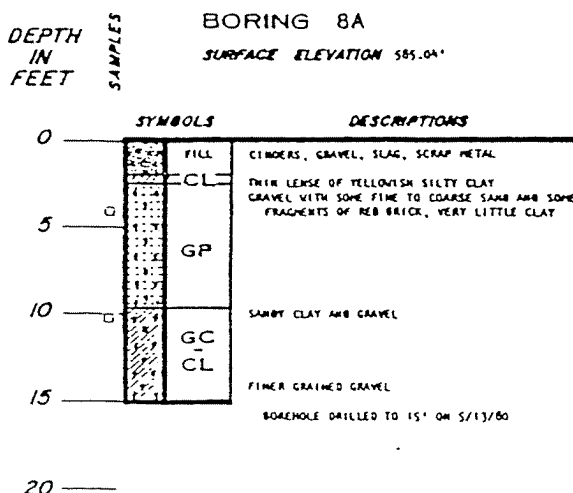
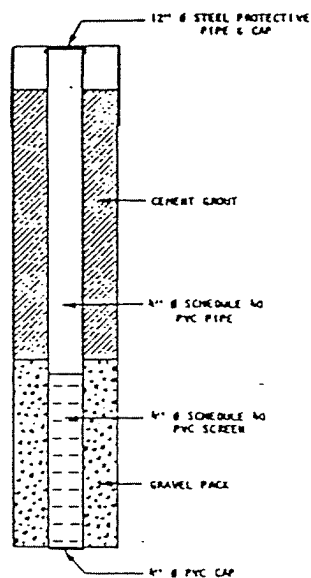
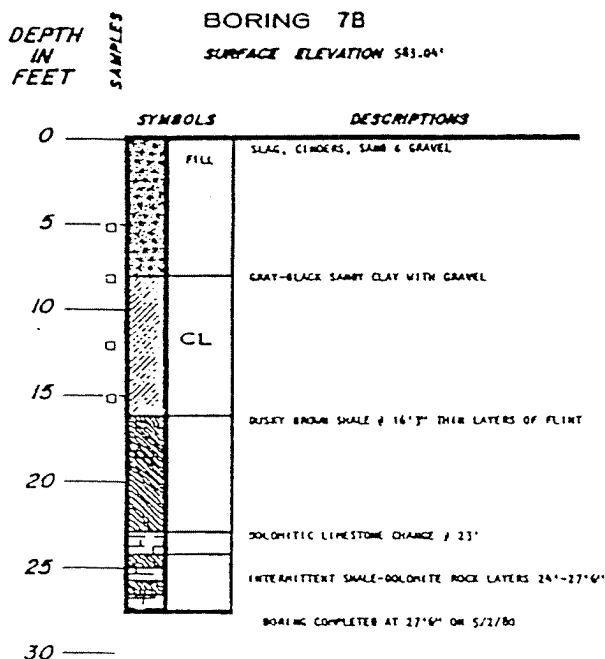
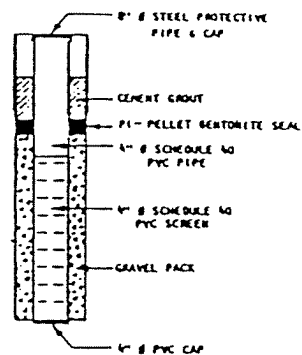
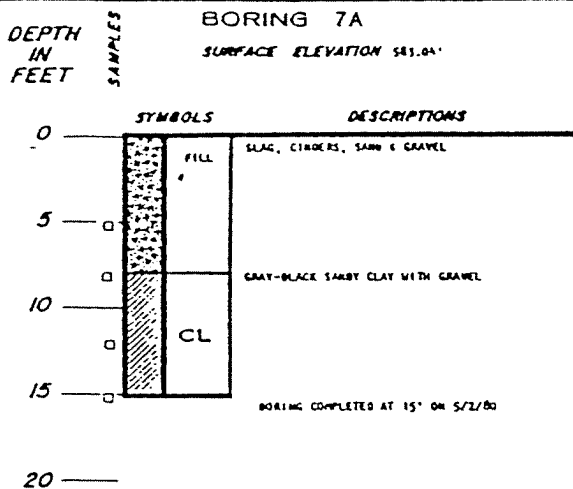


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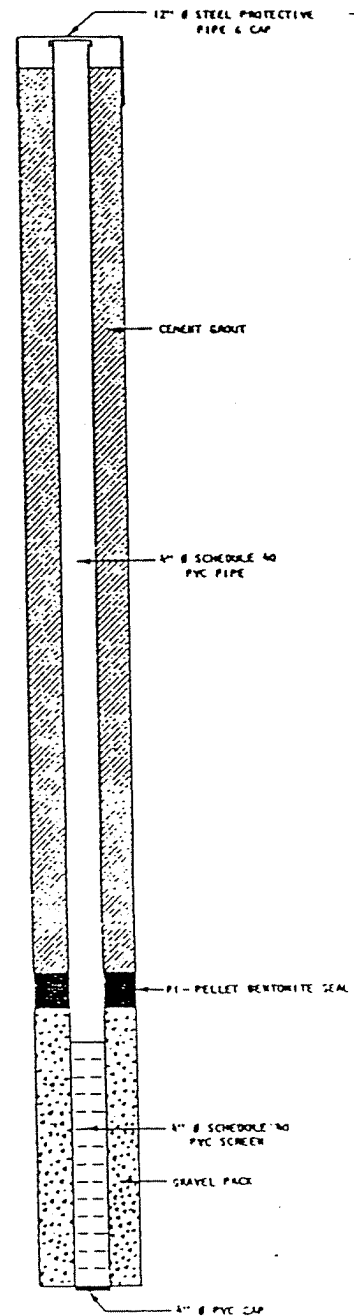
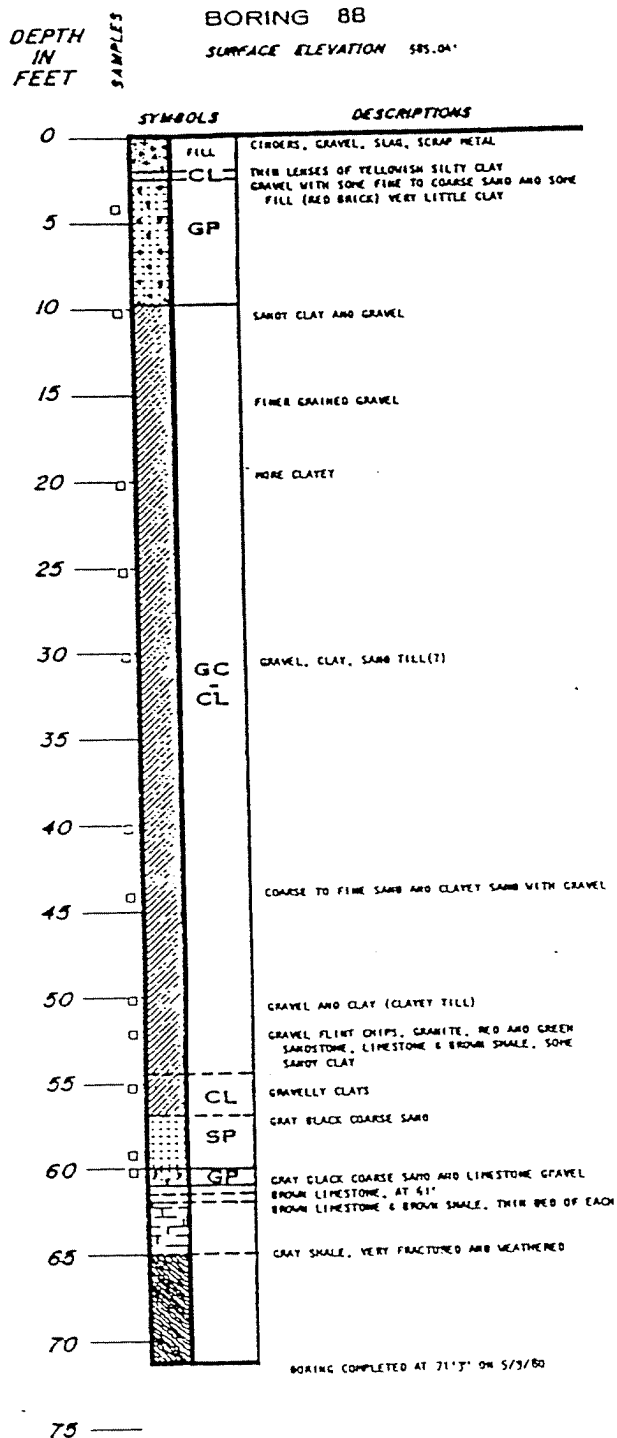
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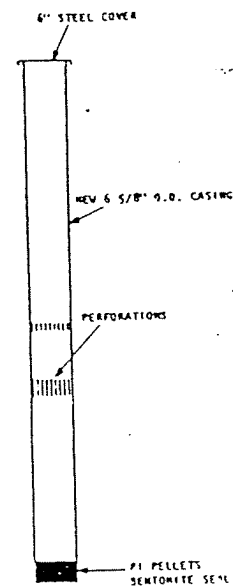
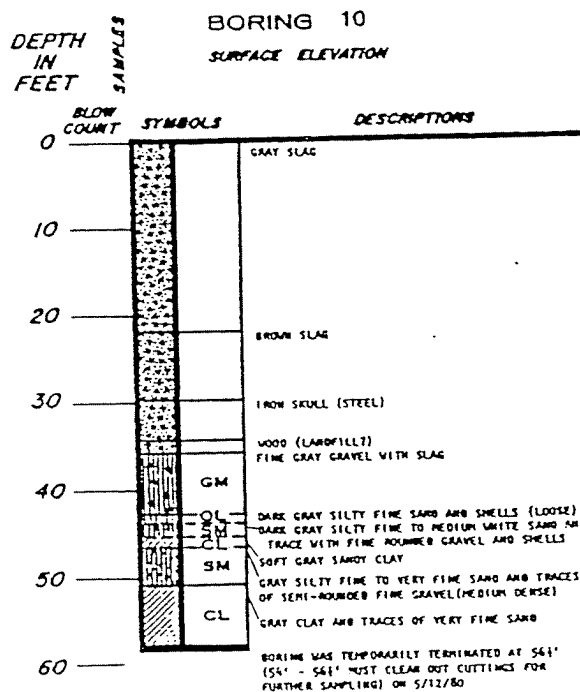
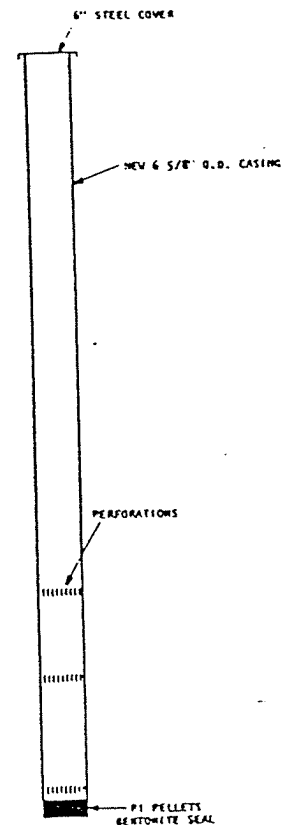
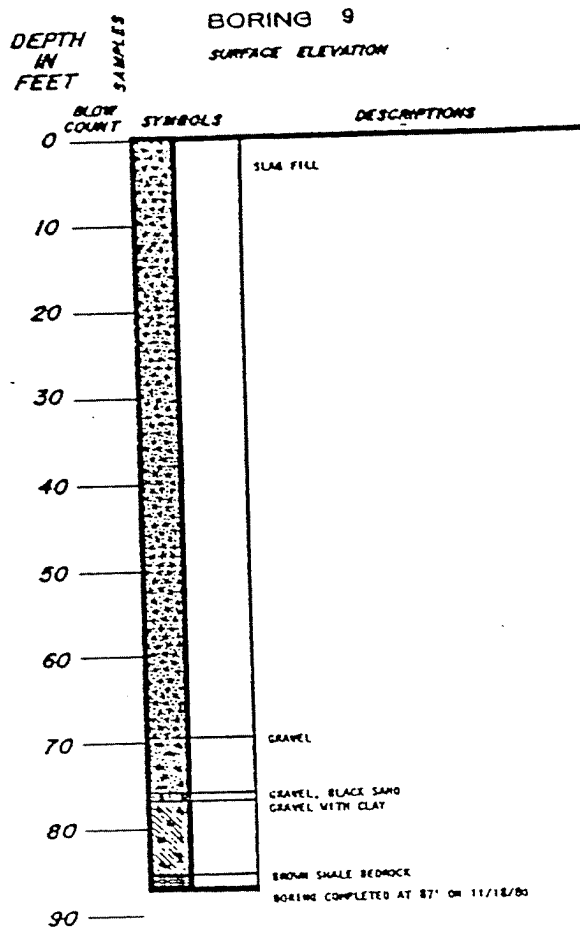
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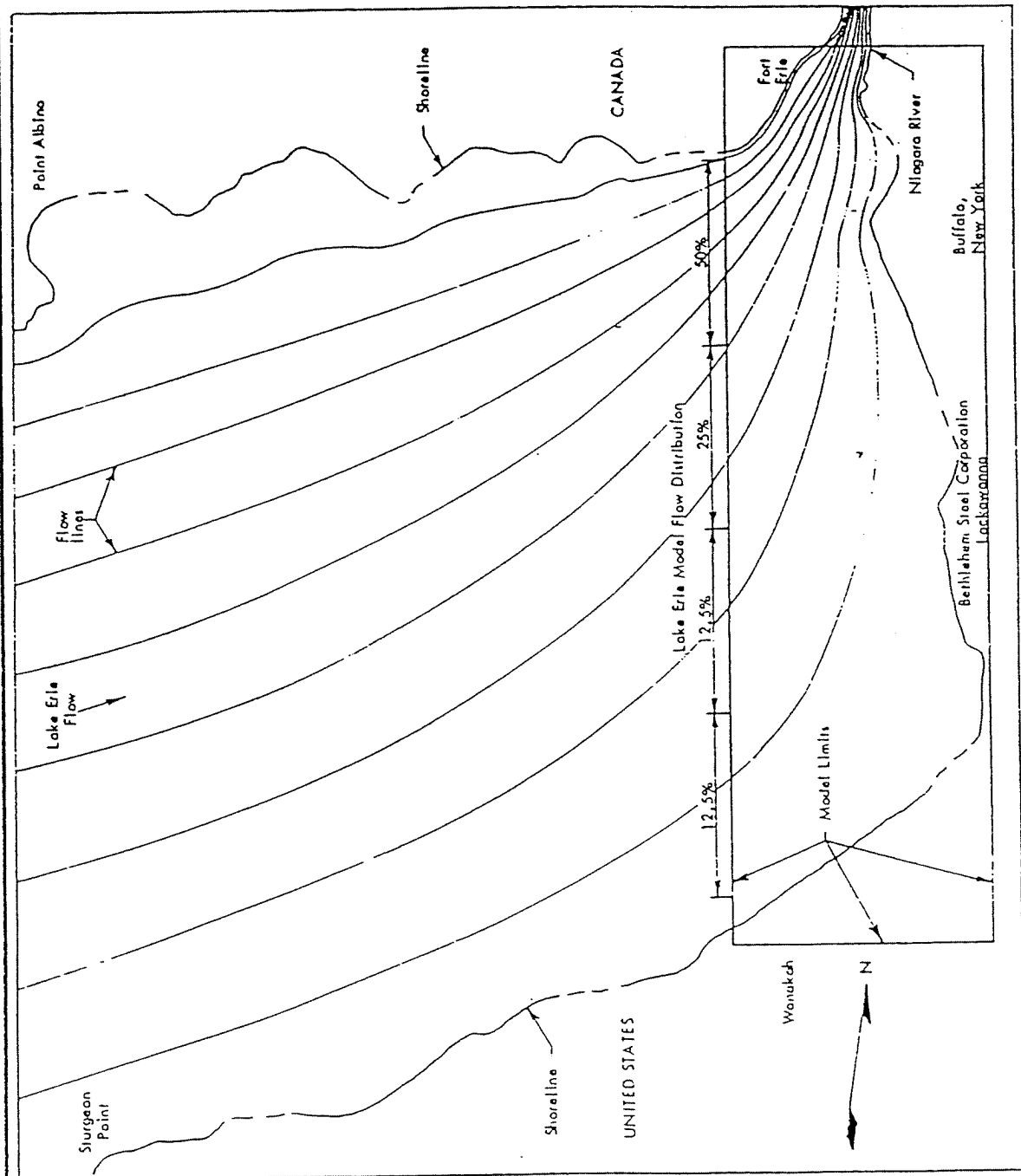
LOG AND MONITORING WELL DETAILS

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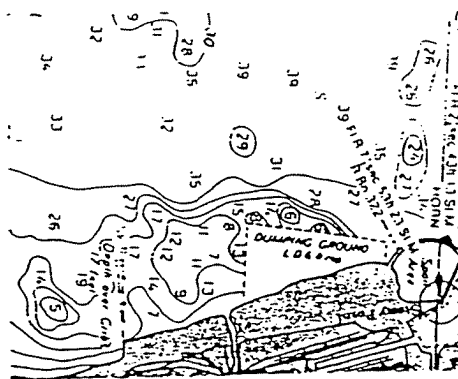


FLOW PATTERN
OBTAINED BY ELECTRIC
ANALOG FIELD
PLOTTER MODEL SCALE
1:600 HORIZONTAL,
1:120 VERTICAL

SOURCE: SILBERMAN,
ET. AL. 1969

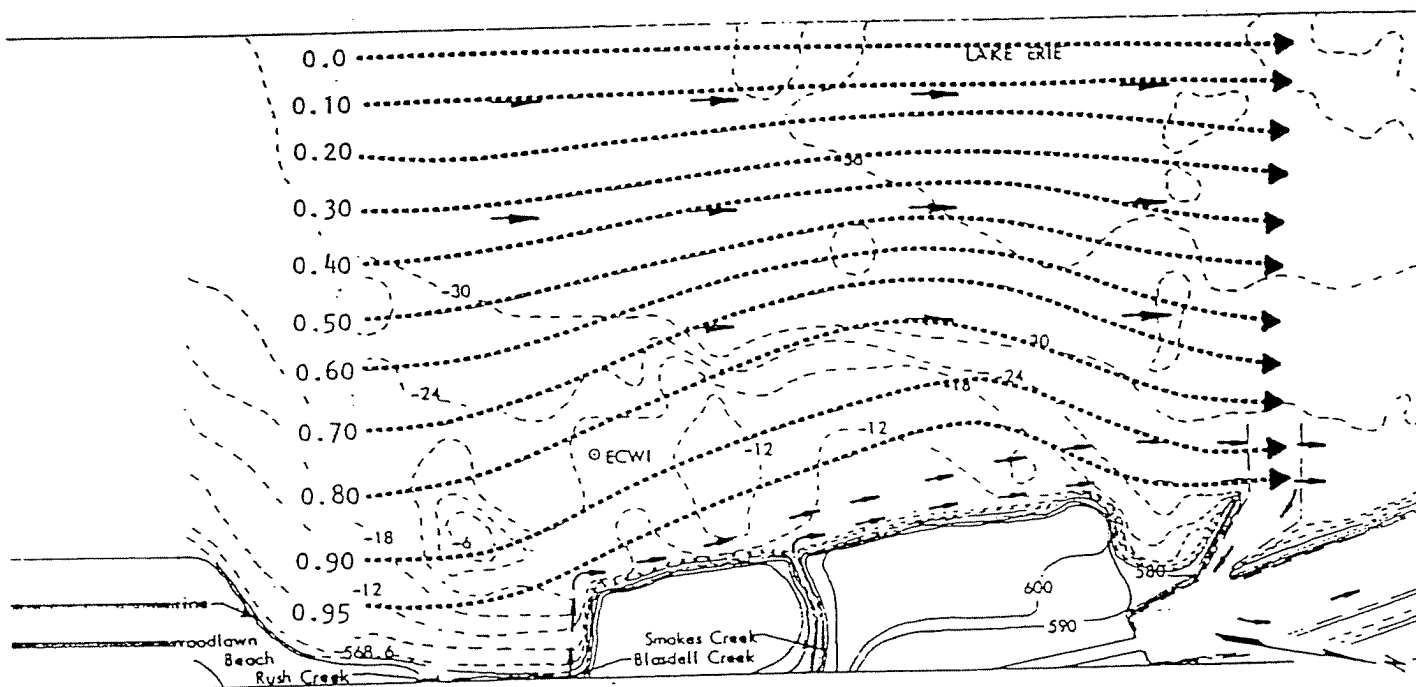
FLOW PATTERN FROM LAKE ERIE TO NIAGARA RIVER

DAMES & MOORE

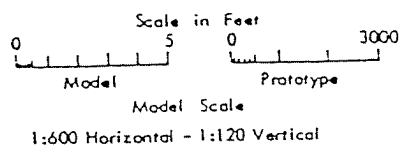


SOURCE: NOAA NAUTICAL
CHART #14822, 1978

BATHYMETRY OF THE STUDY AREA USED AS INPUT DATA TO THE TWO-DIMENSIONAL CIRCULATION MODEL



FLOW FIELD OF THE NEARSHORE AREA OBTAINED FROM A TWO-DIMENSIONAL CIRCULATION MODEL



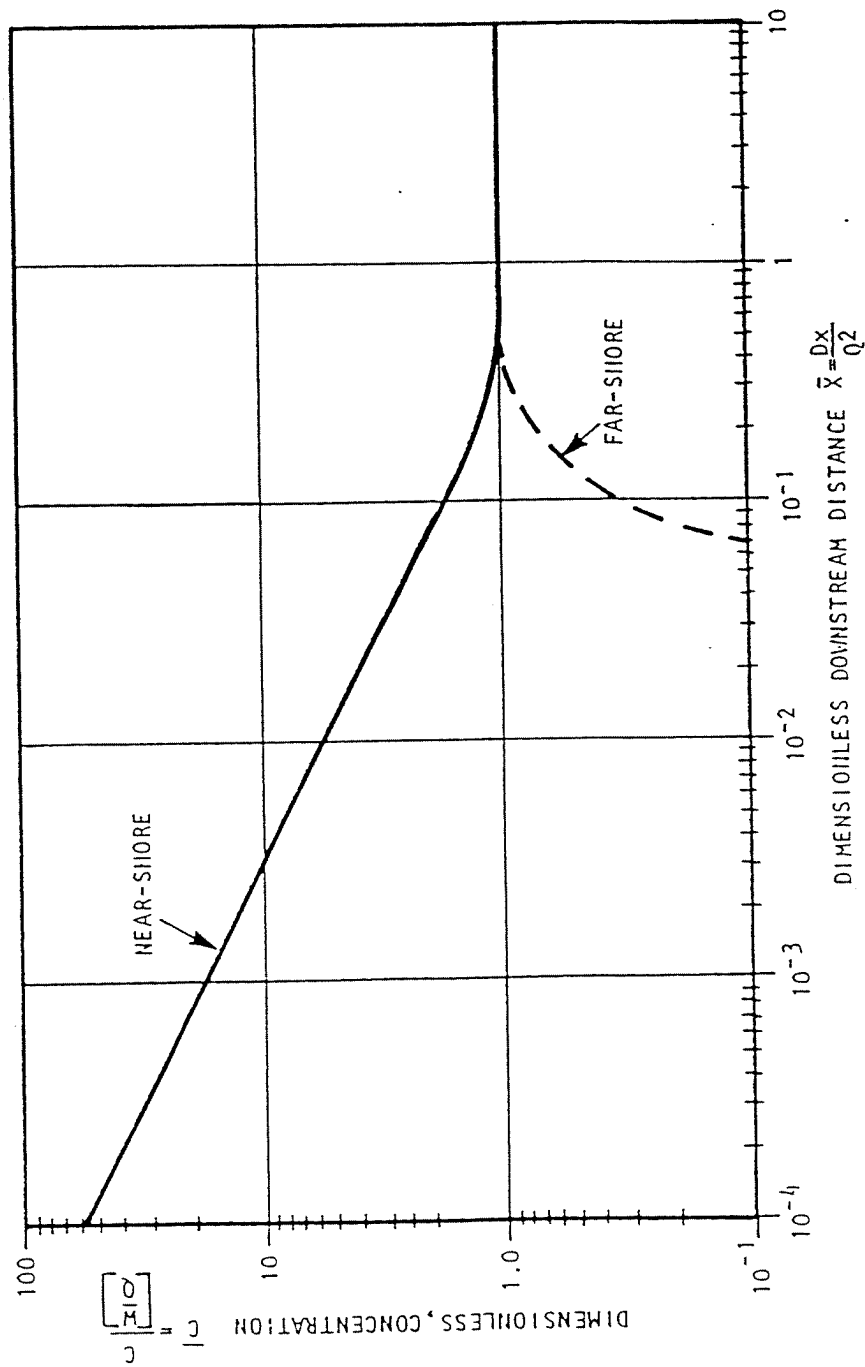
Flow Conditions
Lake Erie Elevation = 570.6 ft
Niagara River Discharge = 200,000 cfs
Smokes Creek Discharge = 200 cfs

KEY:

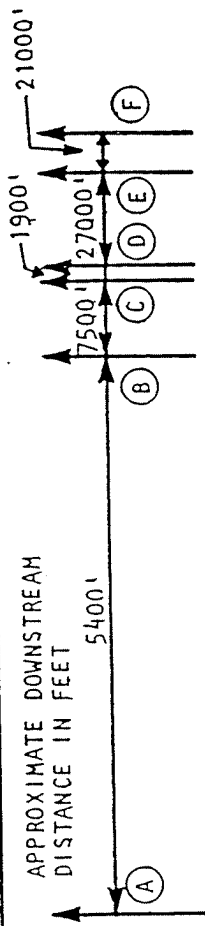
- LAKE ERIE CURRENTS } CURRENTS OBTAINED USING RED DYE AND PAPER CONFETTI. MODEL BEHAVIOR WITHOUT WAVES (SILBERMAN ET AL. 1969)
- CREEK CURRENTS }
- LAKE ERIE CURRENTS. TWO-DIMENSIONAL CIRCULATION MODEL

0.10 . STREAM FUNCTION VALUES

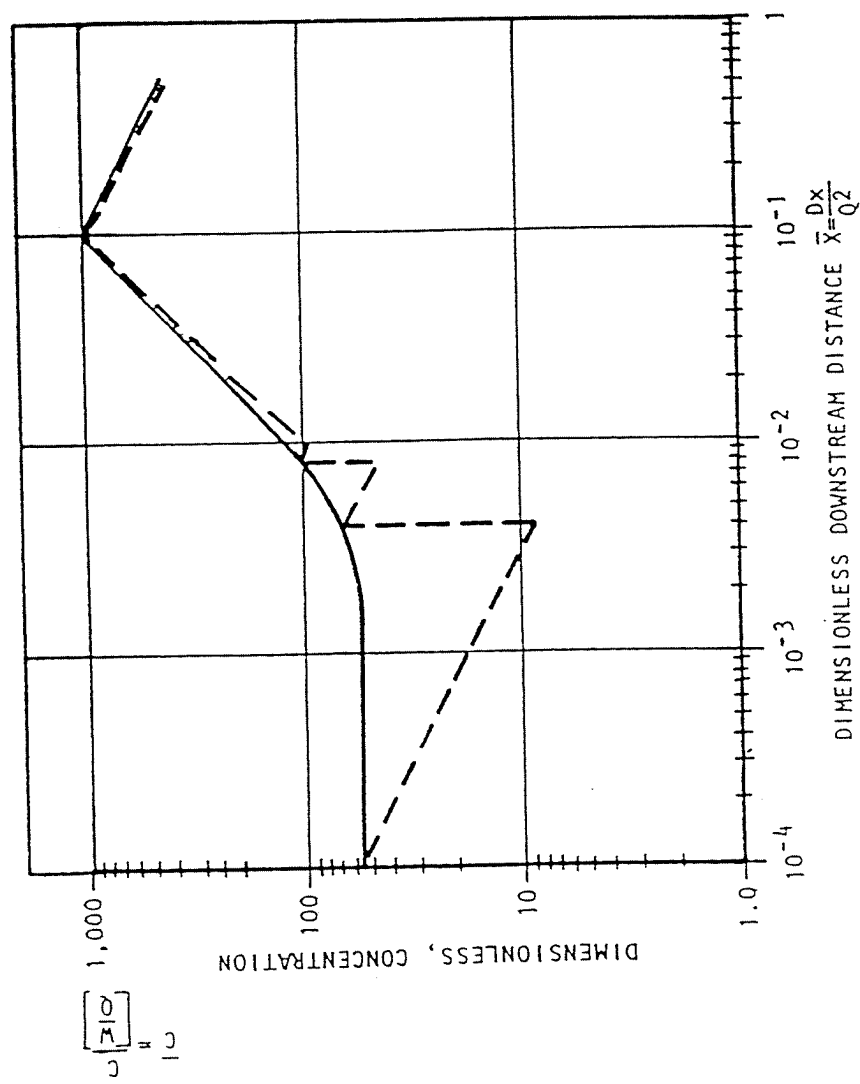
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DIMENSIONLESS CONCENTRATION OF NON-DECAYING CONTAMINANTS DISCHARGED
AT THE SHORELINE FROM A UNIT LINE SOURCE OR PLANE SOURCE VS
DIMENSIONLESS DOWNSTREAM DISTANCE



- KEY :
- (A) BLASDELL CREEK
 - (B) SMOKES CREEK
 - (C) NORTHERN MOST END OF
SLAG DISPOSAL AREA
 - (D) ENTRANCE TO BUFFALO HARBOR
 - (E) ENTRANCE TO NIAGARA RIVER
AT PEACE BRIDGE
 - (F) GRAND ISLAND
 - CONCENTRATION CURVE USING
DATA SHOWN ON TABLE 5.
 - CONCENTRATION CURVE
SHOWING INTERPOLATED
DOWNSTREAM DISPERSION
EFFECTS.



DIMENSIONLESS CONCENTRATION AT THE SHORELINE VS DIMENSIONLESS DOWNSTREAM DISTANCE ASSUMING EACH UNIT SOURCE DISCHARGES AT A CONSTANT UNIFORM RATE

APPENDIX A
ESTIMATE OF GROUND WATER DISCHARGE/RECHARGE
FOR THE SOLID WASTE FACILITY

Estimate: Ground Water Discharge/Recharge
 Solid Waste Facility

Area 5 — Ground Water Discharge

Lake Shore Portion

Assume: 7000 ft. Shore-line
 Transmissibility 22.6×10^3 gal/day w/30 ft section saturated thickness
 Gradient 1.7×10^3

Then: 22.6×10^3 gal/day/ft $\times 1.7 \times 10^3 \times 5 \times 10^3$ ft
 $= 2.7 \times 10^5$ gal/day

Stream-Bank Portion

Assume: 5000 ft shore line/creek bank length
 Transmissibility at 12×10^3 gal/day w/gradient 1.5×10^{-3}
 15 ft average saturated thickness

Then: 12×10^3 gal/day/ft $\times 1.5 \times 10^{-3} \times 5 \times 10^3$ ft
 $= .9 \times 10^5$ gal/day

Total Area 5: 2.7×10^5 gal/day $+ .9 \times 10^5$ gal/day =
 $= 3.6 \times 10^5$ gal/day (.56 ft³/sec)

Area 5 — Infiltration Estimate

Assume: Area⁽¹⁾ = .52 mi² (1.47×10^7 ft²)
 Rainfall⁽²⁾ = 3.0 ft/yr
 Infiltration % = .48⁽³⁾
 20% evaporation

Then: Total available recharge Area 5
 $1.47 \times 10^7 \text{ ft}^2 \times 3 \text{ ft} = 4.35 \times 10^7 \text{ ft}^3/\text{yr}$
 less run off to Lake/Creeks
 $4.35 \times 10^7 \text{ ft}^3/\text{yr} \times .48 = 2.09 \times 10^7 \text{ ft}^3/\text{yr}$
 less 20% evaporation
 $2.09 \times 10^7 \text{ ft}^3/\text{yr} \times .80 = 1.6 \times 10^7 \text{ ft}^3/\text{yr}$
 $= 3.27 \times 10^5 \text{ gal/day } (.51 \text{ ft}^3/\text{sec})$

Consequently: Recharge (.57 ft/sec) = Discharge (.56 ft/sec)

Notes:

Table 1 Surface Water Runoff Analysis Appendix B

(1) Area of influence

(2) Climatological data

(3) Table I Estimated % Infiltration

(100%-52% = 48%) Area 5

(100%-58% = 42%) Area 6 & 6A

Area 6 & 6A — Ground Water Discharge

Lake Shore Portion

Assume: 5000 ft shoreline
 Transmissibility $22.6 \times 10^3 \text{ gal/day/ft}$ w/
 30 ft of saturated section thickness
 Gradient = 1.7×10^{-3}

Then: $22.6 \times 10^3 \text{ gal/day/ft} \times 1.7 \times 10^{-3} \times 5 \times 10^3 \text{ ft}$
 $= 2.0 \times 10^5 \text{ gal/day } (.31 \text{ ft}^3/\text{sec})$

Stream Bank Portion

Assume: 5500 ft length of discharge along Smokes Creek and Blasdel Creek
 Transmissibility of $12.0 \times 10^3 \text{ gal/day/ft}$ using an approximate average
 saturated thickness of 15 ft
 Gradient = 1.5×10^{-3} (4)

Then: $12.0 \times 10^3 \text{ gal/day/ft} \times 1.5 \times 10^{-3} \times 5.5 \times 10^3$
 $= .99 \times 10^5 \text{ (.15 ft}^3\text{/sec)}$

Total Area

6 & 6A: $2.0 \times 10^5 \text{ gal/day} + .99 \times 10^5 \text{ gal/day}$
 $= 2.99 \text{ gal/day (.46 ft}^3\text{/sec)}$

Total Solid

Waste Area: $1.02 \text{ ft}^3\text{/sec}$

Area 6 & 6A — Infiltration Estimate

Assume: $\text{Area}^{(1)} = .57 \text{ mi}^{-2} = 1.47 \times 10^7 \text{ ft}^2$
 $\text{Rainfall}^{(2)} = 3.0 \text{ ft/yr}$
 $\text{Infiltration \%} = 42\%^{(3)}$
 $\text{Evaporation} = 20\%$

Then: Total available recharge Area 6 & 6A

$$1.56 \times 10^7 \text{ ft}^2 \times 3.0 \text{ ft/yr} = 4.77 \times 10^7 \text{ ft}^3\text{/yr}$$

less runoff to Lake/Creeks

$$4.77 \times 10^7 \text{ ft}^3\text{/yr} \times .42 = 2.0 \times 10^7 \text{ ft}^3\text{/yr}$$

less 20% evaporation

$$2.0 \times 10^7 \text{ ft}^3\text{/yr} \times .80 = 1.6 \times 10^7 \text{ ft}^3 \text{ to recharge}$$

$$= 3.28 \times 10^5 \text{ gal/day (.51 ft}^3\text{/sec)}$$

Consequently: Recharge $(.51 \text{ ft}^3\text{/sec})$ approximately = Discharge $(.46 \text{ ft}^3\text{/sec})$

Total Recharge $.51 = .51 = 1.02 \text{ ft/sec}$
 Discharge $.56 + .46 = 1.02 \text{ ft/sec}$

47425	21426
44494	51428
44411	51429
44404	51430
44403	51431
44402	51432
44401	51433
44400	51434
44399	51435
44398	51436
44397	51437
44396	51438
44395	51439
44394	51440
44393	51441
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44256	51578
44255	51579
44254	51580
44253	51581
44252	51582
44251	51583
44250	51584
44249	51585
44248	51586
44247	51587
44246	51588
44245	51589
44244	5

CONSULTANTS IN THE ENVIRONMENTAL AND APPLIED EARTH SCIENCES

The study area was first subdivided into sub-basins noting the passage of surface runoff and the discharge locations. This was done using the plant layout map and the U.S.G.S. topographic sheet of the area. The total distance of travel from the remotest point of a sub-basin to its discharge point was measured to estimate the time of concentration of the sub-basin. The time of travel from the sub-basin outlet point to the final discharge location, usually into Lake Erie was also estimated. Two types of flow were considered, the overland flow and channel flow. The overland flow velocity was estimated by considering the site's general topography, soil and land use type and using charts furnished in Reference 2. A value for channel flow velocity in

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creeks flowing into Lake Erie was estimated by assuming that there would be no excess head loss as the stream discharges into the lake and it would not result in an abrupt change in water surface elevation at the discharge point. This value is 4 ft/sec which approximately represents the full bank velocity of the streams in the study area. The overland flow velocity ranges from 1.2 to 2.5 ft/sec for general land slopes ranging from very flat slopes of less than 0.5% to about 3 to 4% in some areas.

The site's soil has a moderately high runoff potential except in those areas occupied by slag storage cells. The southern portion of the site has been heavily developed for industrial use and is covered by streets, roads and buildings. The rainfall quantity under the 10-year, 24-hour storm condition of this area is 3.5 inches (Reference 3). The Soil Conservation Service runoff rate computation procedures require an estimate of potential runoff quantity from the total rainfall quantity. This is usually done by assuming appropriate Runoff Curve Numbers (RCN) to the specific site soil and land use conditions and using equations provided in Reference 2. Due to the sparsity of RCN applicable to the specific site conditions, runoff coefficients generally used for the Rational Method for estimating peak runoff rates (Reference 1) were evaluated to develop the potential runoff quantity that approximates the site conditions. The runoff coefficients represent the fraction of rainfall that may become surface runoff. Hence, potential runoff quantity can be easily computed once the appropriate runoff coefficient values are derived.

Runoff coefficient values chosen are 0.8 for heavily industrial developed areas, 0.65 for moderately developed areas, and 0.5 for areas covered by slag storage cells with flat topography. Using the assumed runoff coefficients, the effective surface runoff quantity resulted closely agree to the runoff quantities obtained using Soil Conservation Service equation with Runoff Curve Numbers 82, 88 and 94 which approximately represent runoff conditions in industrial developed areas with soil conditions of moderately low, moderate and high runoff potentials. Table 1 presents the values of runoff coefficients and corresponding RCN chosen for the sub-basins. It should be noted that in basins where runoff coefficients were not uniformly assigned (e.g. Area Sector 5), a composite runoff coefficient was then derived.

The runoff rates at the discharge location were estimated using Soil Conservation Service Technique (Reference 2). Discharge rate is expressed as a function of the time of concentration of a sub-basin, time of travel from the sub-basin to its discharge location, contributing area and effective runoff quantity. Table 3 presents some details of this analysis.

RESULTS

Figure 1 shows the peak runoff rates at different discharge locations and the contributing area sectors. Table 2 presents these results in tabular form. It should be noted that there is always a time lag between the peak runoff rates from different sub-basins discharging into the same point (e.g., sub-basins 2 and 3). Therefore, the peak runoff rates are not directly additive. This is clearly illustrated in tabular form of the hydrograph computations on Table 3. Lakefront areas where overland runoff discharges directly into Lake Erie were not considered. They occupy approximately

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7% of the entire area. Topographic contours in these areas run almost parallel to the shoreline. The longest overland flow length ranges from approximately 800 to 1000 feet. Surface runoff from these areas occurs as turbulent overland sheet flows without defined channels. Runoff rates from these areas will be expected to be significantly less than those resulted from same areas if defined flow channels exist.

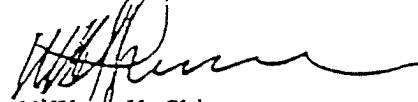
We appreciate this opportunity to be of service to you on this project. Should you have any further questions, please do not hesitate to contact us.

The following materials and attachments are enclosed and complete this report:

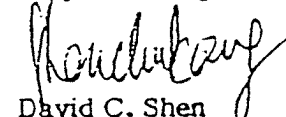
- Table 1 - Runoff Coefficients/Runoff Curve Numbers and Discharge Locations of the Sub-Basins on Lackawanna Plant
- Table 2 - Peak Runoff Rates Under the 10 Year, 24 Hour Storm Conditions
- Table 3 - Discharge Hydrographs
- Figure 1 - Peak Runoff Rates of On-Site Surface Runoff

Very truly yours,

DAMES & MOORE



William V. Skinner
Project Manager



David C. Shen
Staff Hydrologist

WVS:DCS:sh

Attachments

cc: Mr. D. Demo, Bethlehem Steel
Mr. J. Scherer, Bethlehem Steel

REFERENCES

1. Haan, C.T. and Barfield, B.J., Hydrology and Sedimentology of Surface Mined Lands, 1978, University of Kentucky Press, pp. 91-92.
2. Soil Conservation Service, January 1975, Urban Hydrology for Small Watersheds, U.S. Department of Commerce NTIS, PB-244 531.
3. U.S. Department of Commerce, Weather Bureau, May 1961, Rainfall Frequency Atlas of the United States, Tech. Paper No. 40.

TABLE 1

RUNOFF COEFFICIENTS/RUNOFF CURVE NUMBER AND
DISCHARGE LOCATIONS OF THE SUB-BASINS ON LACKAWANNA PLANT

Sub-Basin	Area (sq. mile)	Runoff Coefficient Runoff Curve Number	Discharge Location	Remarks
1	0.24	0.80/94	A	
2	0.14	0.80/94	B	
3	0.13	0.80/94	C	
4	0.12	0.80/94	A	
5 ⁽¹⁾	0.52	0.53/83	A	0.5 x 80% + 0.65 x 20% = 0.53 = composite runoff coefficient
5A ⁽¹⁾	0.04	0.65/84	D	
6 ⁽¹⁾	0.45	0.57/85	E	0.5 x 55% + 0.65 x 45% = 0.57 = composite runoff coefficient
6A ⁽¹⁾	0.12	0.65/88	A	
7	0.17	0.65/88	E	
8	0.19	0.80/94	E	
9	0.15	0.80/94	E	
10	0.12	0.80/94	E	
11	0.07	0.80/94	F	
12	0.04	0.80/94	F	

- A Smokeys Creek - Lake Erie
- B Union Canal - Buffalo Harbor
- C Ship Canal - Buffalo Harbor
- D Lake Erie
- E Blasdell Creek - Lake Erie
- F Un-named Creek-Lake Erie

(1) Sub-basins 5, 5A, 6, and 6A are Solid Waste Areas. No published data on Runoff Coefficient or Runoff Curve Numbers have been available. Therefore, the runoff coefficients used for these areas are based on our best judgement. However, they could vary from the worst case with extremely low runoff potential to about 70% of runoff.

TABLE 2
PEAK RUNOFF RATES UNDER THE 10 YEAR
24 HOUR STORM CONDITIONS

Sub-Basin	Total Contributing Area (sq. mile)	Peak* Runoff Rate (cfs)
2	0.14	150
3	0.13	170
5A	0.04	50
1, 4, 5 and 6A	1.00	580
6, 7, 8, 9, and 10	1.08	990
11 and 12	0.11	110

*Peak runoff rates were estimated using Soil Conservation Service method (Reference 2) and are expressed to the nearest tenth cfs.

TABLE 3

DISCHARGE HYDROGRAPHS

Sub-basin	Discharge Location (5)	Area (sq. miles)	Time of Concentration to Sub-basin Outlet Point (hr)	Time of Travel to Discharge Location (hr)	Effective Runoff Quantity (inches)	Runoff Rates 10-Year 24-Hour Rainfall (2)											
						Hydrograph Time in Hours (cfs)											
						11.5	11.8	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8
2	B	0.14	0.80	—	2.8	147 (3)											
3	C	0.13	0.55	—	2.8	174											
5A (1)	D	0.04	0.48	—	2.3	47											
1 and 4	A	0.36	1.00	0.22	2.8	70	116	180	208	210	280	208	208	260	270		
5 and 6A (1)	A	0.04	1.57	—	1.0	84	123	155	191	224	246	208	278	282	282		
Total Area = 1.00						473	526	584	570	572	552						
6 (1)	E	0.45	0.87	—	2.0	183	245	287	311	307	288	259					
7	E	0.17	1.12	0.07	2.3	98	134	171	205	227	241	231					
8, 9 and 10	E	0.45	0.70	0.17	2.8	218	309	387	438	468	443	408					
Total Area = 1.08						845	954	992	972								
11	F	0.07	0.57	0.34	2.8	8	13	23	37	52	65	71					
12	F	0.04	0.19	0.16	2.8	27	47	57	60	54	41	29					
Total Area = 0.11						35	60	80	97	106	106	100					

(1) Potential runoff quantity (inches) can be obtained by Soil Conservation Service equation (Reference 2) or by total 10-year 24-hour storm rainfall (inches) x runoff coefficient (expressed to the nearest 0.1 inches)

(2) Discharge rates are obtained by interpolation using tables in Reference 2, pp. 5-7 to 5-10

(3) The peak runoff rates are underlined.

(4) Solid Waste Areas

(5) Discharge Location

A: Snickers Creek Basin - Lake Erie

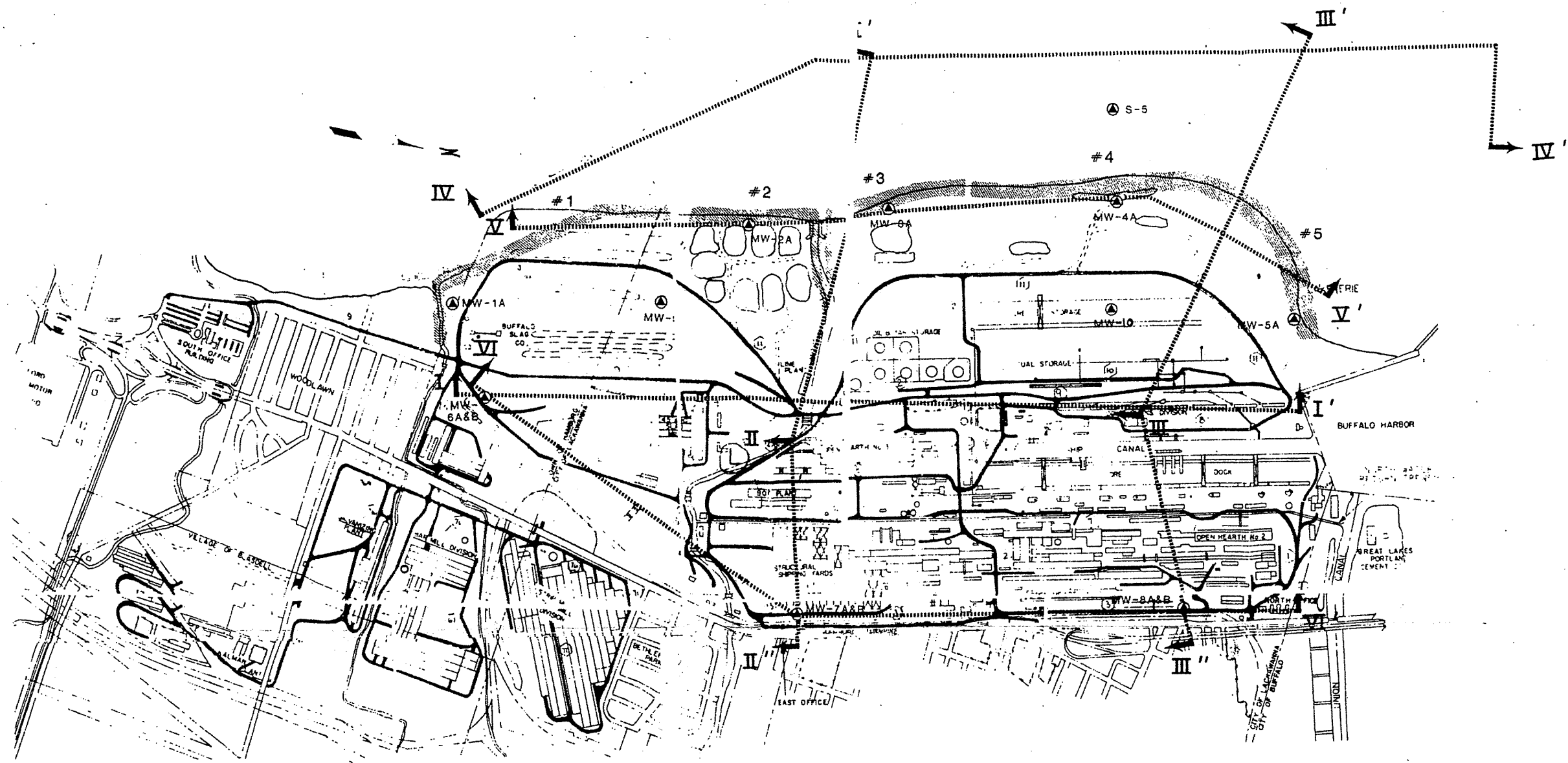
B: Union Canal - Buffalo Harbor

C: Ship Canal - Buffalo Harbor

D: Lake Erie

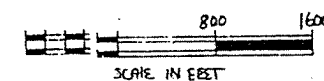
E: Blackwell Creek Basin - Lake Erie

F: On Tonawanda Creek - Lake Erie



LOCATION OF GROUND WATER MONITORING WELLS

BETHLEHEM STEEL CORPORATION
LACKAWANNA FACILITY



MW-1 (triangle symbol) GROUND WATER MONITORING WELL

(dashed line symbol) LINE OF CROSS SECTION

(dotted line symbol) SHORELINE SECTIONS ASSIGNED TO
IN TIDUAL MONITORING WELLS FOR
CONTAMINANT LOADING CALCULATIONS

APPENDIX A.2

NYSDEC SPILLS RECORDS

Spill Information

[New Search](#)

[Return to Spills Database Home Page](#)

Region:9

Spill Number:8503831

Spill Date:01/31/1986

Spill Time:

Call Received Date:

Time of Call Received:

Material Spilled

Spilled Units

GEAR OIL

0 lbs.

Spill Name:

Address:ROUTE 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Unknown

Resource:Surface Water

Waterbody:

Region Close Date:02/10/1986

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86/87

Spill Information

[New Search](#)

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Region:9

Spill Number:8600300

Spill Date:04/12/1986

Spill Time:10:15 AM

Call Received Date:04/12/1986

**Time of Call
Received:**10:51 AM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:RT. 5 AT WOODLAWN

City:HAMBURG

County:Erie

[View Map](#)

Cause:Traffic Accident

Source:Tank Truck

Resource:Surface Water

Waterbody:

Region Close Date:04/29/1986

[New Search](#)

[Return to Spills Database Home Page](#)

86/87

Spill Information

[New Search](#)

[Return to Spills Database Home Page](#)

Region:9

Spill Number:8605704

Spill Date:12/09/1986

Spill Time:10:00 AM

Call Received Date:12/09/1986

**Time of Call
Received:**10:52 AM

Material Spilled

Spilled Units

METAL SLUDGE

35 Gal.

Spill Name:BETHLEHEM STEEL

Address:ROUTE 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Commercial
Vehicle

Resource:On Land

Waterbody:

Region Close Date:12/18/1986

[New Search](#)

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Spill Information

[New Search](#)

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Region:9

Spill Number:8606504

Spill Date:01/20/1987

Spill Time:11:00 AM

Call Received Date:01/20/1987

**Time of Call
Received:**01:00 PM

Material Spilled

GASOLINE

Spilled Units

5 Gal.

Spill Name:BETHLEHEM STEEL

Address:GALVANISING DIVISION

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Tank Failure

Source:Other
Comm/Industrial

Resource:Groundwater

Waterbody:

Region Close Date:01/21/1987

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Spill Information

[New Search](#)

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Region:9

Spill Number:8701194

Spill Date:05/12/1987

Spill Time:11:00 AM

Call Received Date:05/12/1987

**Time of Call
Received:**05:00 PM

Material Spilled

Spilled Units

UNKNOWN PETROLEUM

5000 Gal.

WASH OIL

0 lbs.

Spill Name:BETHLEHEM STEEL

Address:ROUTE 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/08/1989

[New Search](#)

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1988

Spill Information

[New Search](#)

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Region:9

Spill Number:8710317

Spill Date:01/01/1988

Spill Time:12:00 PM

Call Received Date:03/09/1988

**Time of Call
Received:**02:30 PM

Material Spilled

Spilled Units

UNKNOWN MATERIAL

0 Gal.

Spill Name:SMOKES CREEK

Address:SOUTH SHORE BOULEVARD

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Unknown

Resource:Surface Water

Waterbody:SMOKES CREEK

Region Close Date:03/28/1988

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1988

Spill Information

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Region:9

Spill Number:8709873

Spill Date:02/22/1988

Spill Time:03:15 PM

Call Received Date:02/22/1988

**Time of Call
Received:**04:43 PM

Material Spilled

Spilled Units

UNKNOWN PETROLEUM

0 Gal.

Spill Name:BETHLEHEM STEEL

Address:SOUTH BLASDELL CREEK

City:HAMBURG

County:Erie

[View Map](#)

Cause:Other

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:SOUTH BLASDELL CREEK

Region Close Date:03/24/1988

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Spill Information

[New Search](#)

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Region:9

Spill Number:8802160

Spill Date:06/08/1988

Spill Time:08:00 AM

Call Received Date:06/08/1988

**Time of Call
Received:**08:00 AM

Material Spilled

Spilled Units

UNKNOWN PETROLEUM

1 Gal.

Spill Name:OIL IN SMOKES CREEK

Address:SOUTH SHORE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Unknown

Resource:Surface Water

Waterbody:SMOKES CREEK

Region Close Date:09/14/1988

[New Search](#)

[Return to Spills Database Home Page](#)

1988

Spill Information

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Region:9

Spill Number:8807350

Spill Date:12/02/1988

Spill Time:04:00 PM

Call Received Date:12/06/1988

**Time of Call
Received:**02:35 PM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

150 Gal.

Spill Name:BETHLEHEM STEEL/ COKE

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/08/1989

[New Search](#)

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Spill Information

[New Search](#)

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Region:9

Spill Number:8807779

Spill Date:12/21/1988

Spill Time:10:45 AM

Call Received Date:12/21/1988

**Time of Call
Received:**12:05 PM

Material Spilled

Spilled Units

Spill Name:PICKLE ACID

Address:ROUTE 5 GATE #6

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:

Region Close Date:12/23/1988

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1989

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Spill #	Date	Spill Name	County	City	Address
1. 8808085	01/10/1989	BETH STEEL COKE OVENS	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
2. 8808100	01/10/1989	ATLANTIC STATION	Erie	LACKAWANNA	1329 ABBOTT ROAD
3. 8808161	01/12/1989	BULKMATIC	Erie	LACKAWANNA	1951-25 HAMBURG TPK. - 5
4. 8808230	01/16/1989	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
5. 8808437	01/24/1989	FERRO CORPORATION	Erie	LACKAWANNA	661 WILLET ROAD
6. 8809587	03/14/1989	SOUTH BUFFALO RAILROAD	Erie	LACKAWANNA	2600 HAMBURG TURNPIKE
7. 8809622	03/14/1989	DICKIE'S DONUTS	Erie	LACKAWANNA	1785 ABBOTT ROAD
8. 8900467	04/15/1989	PIZZA HUT	Erie	LACKAWANNA	956 RIDGE ROAD
9. 8901080	05/03/1989	UNIMART ON SOUTH PARK	Erie	LACKAWANNA	SOUTH PARK AVENUE
10. 8901420	05/12/1989	BETHLEHEM STEEL	Erie	LACKAWANNA	ROUTE 5 - COKE OVENS

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Spill #	Date	Spill Name	County	City	Address
11. 8901786	05/22/1989	AUTOMOBILE ACCIDENT	Erie	LACKAWANNA	ROUTE 5
12. 8901882	05/24/1989	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
13. 8901881	05/24/1989	BUFFALO FUEL CORPORATION	Erie	LACKAWANNA	ROUTE 5 AND HOLBROOK ST
14. 8902156	06/01/1989	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
15. 8902556	06/12/1989	COAL DUST ON LAKE ERIE	Erie	LACKAWANNA	ROUTE 5 AT BETH. STEEL
16. 8903299	06/29/1989	BETHLEHEM STEEL	Erie	LACKAWANNA	ROUTE 5
17. 8904132	07/26/1989	BETHLEHEM STEEL	Erie	LACKAWANNA	ROUTE 5 STRIP MILL
18. 8904295	07/28/1989	FERRO ELECTRIC	Erie	LACKAWANNA	661 WILLETT ROAD
19. 8904995	08/18/1989	BETH-ENERGY COKE DIVISION	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE - 5
20. 8905329	08/29/1989	NATIONAL SCHOOL BUS	Erie	LACKAWANNA	2514 SOUTH PARK AVENUE

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Spill #	Date	Spill Name	County	City	Address
21. 8905654	09/08/1989	CAR GAS TANK	Erie	LACKAWANNA	RIDGE ROAD & STEELAWANNA
22. 8906132	09/21/1989	TANKS AT 1517 ABBOTT ROAD	Erie	LACKAWANNA	1517 ABBOTT ROAD
23. 8906411	09/25/1989	NORFOLK SOUTHERN	Erie	LACKAWANNA	FRONT ST. RAILROAD BRIDGE
24. 8906915	10/13/1989	SHELDON TAYLOR - RV	Erie	LACKAWANNA	I90 EB MP 431
25. 8907414	10/26/1989	BETHLEHEM STEEL/COKE OVEN	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
26. 8908347	11/22/1989	BETHLEHEM STEEL-COKE DIV	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
27. 8908385	11/22/1989	BETHELEM STEEL COKE DIV.	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
28. 8908838	12/07/1989	STOP-N-GO #2016	Erie	LACKAWANNA	1131 RIDGE @ LAKE SHORE
29. 8908993	12/12/1989	SANDYS AUTO AND TRUCK INC	Erie	LACKAWANNA	I90 MP 430.5
30. 8909275	12/22/1989	BETHLEHEM STEEL	Erie	LACKAWANNA	BETHLEHEM STEEL

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Spill #	Date	Spill Name	County	City	Address
31. 8909393	12/28/1989	TRAFFIC ACCIDENT	Erie	LACKAWANNA RIDGE ROAD & ROUTE 5	

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1989

Spill Information

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Region:9

Spill Number:8808085

Spill Date:01/10/1989

Spill Time:11:30 AM

Call Received Date:01/10/1989

**Time of Call
Received:**12:32 PM

Material Spilled

WASH OIL

Spilled Units

50 Gal.

Spill Name:BETH STEEL COKE OVENS

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Tank Overfill

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:06/26/1989

[New Search](#)

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1989

Spill Information

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Region:9

Spill Number:8808230

Spill Date:01/16/1989

Spill Time:01:00 AM

Call Received Date:01/16/1989

**Time of Call
Received:**09:55 AM

Material Spilled

WASH OIL

Spilled Units

30 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:06/26/1989

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1989

Spill Information

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Region:9

Spill Number:8901420

Spill Date:05/12/1989

Spill Time:10:30 AM

Call Received Date:05/12/1989

**Time of Call
Received:**11:18 AM

Material Spilled

UNKNOWN PETROLEUM

Spilled Units

7 Gal.

Spill Name:BETHLEHEM STEEL

Address:ROUTE 5 - COKE OVENS

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:11/13/1990

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1989

Spill Information

[New Search](#)

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Region:9

Spill Number:8901882

Spill Date:05/24/1989

Spill Time:07:00 AM

Call Received Date:05/24/1989

**Time of Call
Received:**11:18 AM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

300 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Tank Overfill

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:06/14/1989

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Spill Information

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Region:9

Spill Number:8902156

Spill Date:06/01/1989

Spill Time:09:00 PM

Call Received Date:06/01/1989

**Time of Call
Received:**10:00 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:Air

Waterbody:

Region Close Date:06/02/1989

[New Search](#)

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1989

Spill Information

[New Search](#)

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Region:9

Spill Number:8902556

Spill Date:06/12/1989

Spill Time:08:00 AM

Call Received Date:06/12/1989

**Time of Call
Received:**10:00 AM

Material Spilled

Spilled Units

UNKNOWN MATERIAL

0 lbs.

Spill Name:COAL DUST ON LAKE ERIE

Address:ROUTE 5 AT BETH. STEEL

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:LAKE ERIE

Region Close Date:06/12/1989

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Spill Information

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Region:9

Spill Number:8903299

Spill Date:06/29/1989

Spill Time:08:15 PM

Call Received Date:06/29/1989

**Time of Call
Received:**08:22 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:ROUTE 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Deliberate

Source:Other
Comm/Industrial

Resource:Air

Waterbody:

Region Close Date:07/20/1989

[New Search](#)

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1989

Spill Information

[New Search](#)

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Region:9

Spill Number:8904132

Spill Date:07/26/1989

Spill Time:10:01 AM

Call Received Date:07/26/1989

**Time of Call
Received:**10:20 AM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:ROUTE 5 STRIP MILL

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:SMOKES CREEK

Region Close Date:07/27/1989

[New Search](#)

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Spill Information

[New Search](#)

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Region:9

Spill Number:8904995

Spill Date:08/19/1989

Spill Time:03:30 PM

Call Received Date:08/18/1989

**Time of Call
Received:**05:12 PM

Material Spilled

Spilled Units

Spill Name:BETH-ENERGY COKE DIVISION

Address:1951 HAMBURG TURNPIKE - 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Tank Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:06/17/1991

[New Search](#)

[Return to Spills Database Home Page](#)

Spill Information

[New Search](#)

[Return to Spills Database Home Page](#)

Region:9

Spill Number:8907414

Spill Date:10/26/1989

Spill Time:02:00 PM

Call Received Date:10/26/1989

**Time of Call
Received:**02:43 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL/COKE OVEN

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/30/1989

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1989

Spill Information

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Region:9

Spill Number:8908347

Spill Date:11/22/1989

Spill Time:08:50 AM

Call Received Date:11/22/1989

**Time of Call
Received:**09:14 AM

Material Spilled

Spilled Units

#2 FUEL OIL

5 Gal.

Spill Name:BETHLEHEM STEEL-COKE DIV

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:11/22/1989

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Spill Information

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Region:9

Spill Number:8908385

Spill Date:11/22/1989

Spill Time:09:00 AM

Call Received Date:11/22/1989

**Time of Call
Received:**01:04 PM

Material Spilled

UNKNOWN PETROLEUM

COAL TAR PITCH VOLATILES

Spilled Units

4 Gal.

0 lbs.

Spill Name:BETHELEM STEEL COKE DIV.

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Tank Overfill

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:LAKE ERIE

Region Close Date:11/22/1989

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1989

Spill Information

[New Search](#)

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Region:9

Spill Number:8909275

Spill Date:12/22/1989

Spill Time:03:00 AM

Call Received Date:12/22/1989

**Time of Call
Received:**09:19 AM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:BETHLEHEM STEEL

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:01/24/1990

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Spill #	Date	Spill Name	County	City	Address
1. 8909764	01/10/1990	CANISTER ON ROAD	Erie	LACKAWANNA	I90 MP 430 WB
2. 8909830	01/12/1990	GASOLINE IN EXCAVATION	Erie	LACKAWANNA	3260 SOUTH PARK AVENUE
3. 8910950	02/16/1990	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TRPK ROUTE 5
4. 8911255	02/23/1990	BETHLEHEM STEEL - COKE PT	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
5. 8911292	02/28/1990	BETHELEM STEEL	Erie	LACKAWANNA	ROUTE 5 - FURHMANN BLVD
6. 8912343	03/28/1990	BETHLEHEM STEEL/GOETZ OIL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
7. 9000035	04/03/1990	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TRPK - RT. 5
8. 9000212	04/06/1990	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TRPK - RT 5
9. 9000367	04/11/1990	BETHLEHEM STEEL BY PROD.	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
10. 9000507	04/16/1990	COLLISION SHOP	Erie	LACKAWANNA	3375 SOUTH PARK AVENUE

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1990

Search Results

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Spill #	Date	Spill Name	County	City	Address
11. 9000829	04/23/1990	BETHLEHEM STEEL	Erie	LACKAWANNA	FURHMAN BLVD. - ROUTE 5
12. 9001021	04/27/1990	QUIKRETE CONCRETE	Erie	LACKAWANNA	7 STEELAWANNA BLVD
13. 9001098	04/30/1990	BETHLEHEM STEEL	Erie	LACKAWANNA	ROUTE 5
14. 9001280	05/02/1990	SAFETY KLEEN	Erie	LACKAWANNA	GATES AVENUE
15. 9001858	05/17/1990	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TRPK - RT. 5
16. 9002102	05/23/1990	BETHLEHEM STEEL	Erie	LACKAWANNA	UNION SHIP CANAL ROUTE 5
17. 9002693	06/08/1990	SERWAIKI COLLISION	Erie	LACKAWANNA	4375 SOUTH PARK AVENUE
18. 9003097	06/18/1990	LEHIGH PUMP STATION	Erie	LACKAWANNA	90 JACKSON STREET
19. 9003474	06/26/1990	ABBOTT MOTORS	Erie	LACKAWANNA	1645 ABBOTT ROAD
20. 9003580	06/28/1990	BETHLEMEN STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill #	Date	Spill Name	County	City	Address
21. 9004255	07/17/1990	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE - 5
22. 9004749	07/30/1990	PATERNOSTRA SHOP	Erie	LACKAWANNA	1230 ABBOTT ROAD
23. 9005779	08/24/1990	PAUL ROBEL	Erie	LACKAWANNA	1471 ABBOTT ROAD
24. 9006585	09/14/1990	BURNING PIPES	Erie	LACKAWANNA	1951 HAMBURG
25. 9007223	10/02/1990	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TRPK. RT 5
26. 9007537	10/10/1990	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TRPK. RT 5
27. 9007570	10/11/1990	FERRO ELECTRIC	Erie	LACKAWANNA	661 WILLET STREET
28. 9007661	10/12/1990	AIR COMPLAINT LACKAWANNA	Erie	LACKAWANNA	NELSON & CENTER STREETS
29. 9007792	10/16/1990	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TRPK. - RT 5
30. 9007939	10/20/1990	NATALZIA MOBILE HOME	Erie	LACKAWANNA	45 LISA LANE

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Search Results

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Spill #	Date	Spill Name	County	City	Address
31. 9008504	11/03/1990	PETRO SALES AND SERVICE	Erie	LACKAWANNA	2540 SOUTH PARK AVENUE
32. 9009849	12/11/1990	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE
33. 9009958	12/13/1990	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE

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1990

Spill Information

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Region:9

Spill Number:8910950

Spill Date:02/16/1990

Spill Time:11:30 AM

Call Received Date:02/16/1990

**Time of Call
Received:**12:07 PM

Material Spilled

Spilled Units

UNKNOWN MATERIAL

100 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TRPK ROUTE 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:04/11/1990

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Spill Information

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Region:9

Spill Number:8911255

Spill Date:02/21/1990

Spill Time:12:00 PM

Call Received Date:02/23/1990

**Time of Call
Received:**04:20 PM

Material Spilled

UNKNOWN MATERIAL

Spilled Units

Unknown Gal.

Spill Name:BETHLEHEM STEEL - COKE PT

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Deliberate

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:

Region Close Date:02/23/1990

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1990

Spill Information

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Region:9

Spill Number:8912343

Spill Date:03/28/1990

Spill Time:08:50 AM

Call Received Date:03/28/1990

**Time of Call
Received:**09:02 AM

Material Spilled

Spilled Units

DIESEL

50 Gal.

Spill Name:BETHLEHEM STEEL/GOETZ OIL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:06/17/1991

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Region:9

Spill Number:9000035

Spill Date:04/03/1990

Spill Time:07:30 AM

Call Received Date:04/03/1990

**Time of Call
Received:**08:32 AM

Material Spilled

Spilled Units

WASTE OIL

700 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TRPK - RT. 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:06/12/1990

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Spill Information

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Region:9

Spill Number:9000212

Spill Date:04/06/1990

Spill Time:11:45 AM

Call Received Date:04/06/1990

**Time of Call
Received:**12:16 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TRPK - RT 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:04/09/1990

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Spill Information

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Region:9

Spill Number:9000367

Spill Date:04/11/1990

Spill Time:12:15 PM

Call Received Date:04/11/1990

**Time of Call
Received:**01:15 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL BY PROD.

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:06/17/1991

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1990

Spill Information

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Region:9

Spill Number:9000829

Spill Date:04/23/1990

Spill Time:05:45 PM

Call Received Date:04/23/1990

**Time of Call
Received:**06:45 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:FURHMAN BLVD. - ROUTE 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:Air

Waterbody:

Region Close Date:04/24/1990

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1990

Spill Information

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Region:9

Spill Number:9001098

Spill Date:04/30/1990

Spill Time:08:46 AM

Call Received Date:04/30/1990

**Time of Call
Received:**08:50 AM

Material Spilled

Spilled Units

UNKNOWN PETROLEUM

100 lbs.

FLY ASH

0 lbs.

Spill Name:BETHLEHEM STEEL

Address:ROUTE 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:LAKE ERIE

Region Close Date:05/29/1990

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Spill Information

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Region:9

Spill Number:9001858

Spill Date:05/17/1990

Spill Time:11:00 AM

Call Received Date:05/17/1990

**Time of Call
Received:**11:00 AM

Material Spilled

Spilled Units

WASTE OIL

20 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TRPK - RT. 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:05/17/1990

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Spill Information

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Region:9

Spill Number:9002102

Spill Date:05/23/1990

Spill Time:12:45 PM

Call Received Date:05/23/1990

**Time of Call
Received:**01:05 PM

Material Spilled

Spilled Units

WASTE OIL

100 Gal.

Spill Name:BETHLEHEM STEEL

Address:UNION SHIP CANAL ROUTE 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Other

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:LAKE ERIE

Region Close Date:01/02/1991

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Spill Information

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Region:9

Spill Number:9003580

Spill Date:06/28/1990

Spill Time:04:45 PM

Call Received Date:06/28/1990

**Time of Call
Received:**04:45 PM

Material Spilled

Spilled Units

UNKNOWN PETROLEUM

0 Gal.

Spill Name:BETHLEMEN STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Unknown

Resource:Surface Water

Waterbody:LAKE ERIE

Region Close Date:06/28/1990

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1990

Spill Information

[New Search](#)

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Region:9

Spill Number:9004255

Spill Date:07/17/1990

Spill Time:01:30 PM

Call Received Date:07/17/1990

**Time of Call
Received:**03:35 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE - 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:12/03/1990

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Spill Information

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Region:9

Spill Number:9007223

Spill Date:10/02/1990

Spill Time:07:30 AM

Call Received Date:10/02/1990

**Time of Call
Received:**08:28 AM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TRPK. RT 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/02/1990

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Region:9

Spill Number:9007537

Spill Date:10/10/1990

Spill Time:02:36 PM

Call Received Date:10/10/1990

**Time of Call
Received:**03:25 PM

Material Spilled

Spilled Units

WASTE OIL

75 Gal.

WASH OIL

0 lbs.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TRPK. RT 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:

Region Close Date:10/10/1990

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Spill Information

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Region:9

Spill Number:9007792

Spill Date:10/16/1990

Spill Time:10:30 PM

Call Received Date:10/16/1990

**Time of Call
Received:**11:53 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TRPK. - RT 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:11/29/1990

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Spill #	Date	Spill Name	County	City	Address
1. 9010563	01/02/1991	BETHLEHEM STEEL 216 OUTFL	Erie	LACKAWANNA	3558 HAMBURG TURNPIKE RT5
2. 9012074	02/12/1991	353 RIDGE ROAD	Erie	LACKAWANNA	353 RIDGE ROAD
3. 9012459	03/05/1991	BETHLEHEM STEEL- COAL TAR	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
4. 9012631	03/09/1991	BETHLEHEM STEEL- NH4	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
5. 9012796	03/14/1991	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE - 5
6. 9012909	03/19/1991	BETH STEEL-COAL MIXER	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
7. 9013290	03/29/1991	NIAGARA MOHAWK	Erie	LACKAWANNA	1596 TO 1586 ABBOTT ROAD
8. 9100044	04/01/1991	BETH STEEL- BENZOIL YARD	Erie	LACKAWANNA	HAMBURG TURNPIKE - RT 5
9. 9100003	04/01/1991	BETHLEHEM STEEL- BP AREA	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE - 5
10. 9100575	04/15/1991	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE - 5

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Spill #	Date	Spill Name	County	City	Address
11. 9100859	04/18/1991	PETRO STATION	Erie	LACKAWANNA	2540 SOUTH PARK
12. 9100855	04/23/1991	BETH STEEL-COAL TAR	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
13. 9101094	04/26/1991	BETH STEEL- OUTFALL 411	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE - 5
14. 9101434	05/05/1991	BETHLEHEM STEEL- BY PROD.	Erie	LACKAWANNA	2558 HAMBURG TURNPIKE - 5
15. 9101522	05/07/1991	BETH STEEL-MUCK OIL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
16. 9101992	05/20/1991	BETHLEHEM STEEL- TANK FARM	Erie	LACKAWANNA	HAMBURG TURNPIKE ROUTE 5
17. 9102025	05/21/1991	BETHLEHEM STEEL- COKE OVEN	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE - 5
18. 9102209	05/25/1991	RUPTURED FUEL TANK	Erie	LACKAWANNA	MCKINLEY AVENUE BRIDGE
19. 9102305	05/29/1991	NEIGHBOR DUMPING	Erie	LACKAWANNA	53 GRANT STREET
20. 9102398	05/30/1991	IRENE URBANCZYK	Erie	LACKAWANNA	156 ELKHART STREET

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Spill #	Date	Spill Name	County	City	Address
21. 9102471	06/01/1991	SAMUEL SIEGEL	Erie	LACKAWANNA	2424 HAMBURG TURNPIKE
22. 9102582	06/04/1991	WILLAND DUMPING	Erie	LACKAWANNA	134 CLEVELAND AVENUE
23. 9102643	06/05/1991	ODOR AT 2424 HAMBURG	Erie	LACKAWANNA	2424 HAMBURG TURNPIKE
24. 9102756	06/09/1991	ATLANTIC 0364-1743	Erie	LACKAWANNA	1329 ABBOTT ROAD
25. 9103701	07/06/1991	BETH ENERGY	Erie	LACKAWANNA	ROUTE 5 LAKESHORE DRIVE
26. 9103769	07/08/1991	BETHLEHEM STEEL ODOR	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
27. 9104299	07/22/1991	PETRO GAS STATION	Erie	LACKAWANNA	2556 SOUTH PARK AVENUE
28. 9105325	08/16/1991	UNKNOWN PRIVATE AUTO	Erie	LACKAWANNA	ABBOTT & DORRANCE (PLAZA)
29. 9105841	08/29/1991	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
30. 9106150	09/09/1991	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill #	Date	Spill Name	County	City	Address
31. 9106430	09/15/1991	BETHLEHEM STEEL- OVENS	Erie	LACKAWANNA	HAMBURG TRPK - ROUTE 5
32. 9106868	09/26/1991	BETHLEHEM STEEL- NAPHALENE	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
33. 9107047	10/01/1991	ATLANTIC MINI MART	Erie	LACKAWANNA	ABBOTT ROAD
34. 9108143	10/30/1991	ASBESTOS - CONST. SITE	Erie	LACKAWANNA	18 CHURCH STREET
35. 9109075	11/25/1991	NIAGARA MOHAWK	Erie	LACKAWANNA	1406 RIDGE ROAD
36. 9109189	11/26/1991	TOM HIGGINS TANKS	Erie	LACKAWANNA	3473 SOUTH PARK AVENUE
37. 9109703	12/11/1991	ABBOTT ROAD PLAZA	Erie	LACKAWANNA	DORRENCE AVENUE

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Spill Information

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Region:9

Spill Number:9010563

Spill Date:01/02/1991

Spill Time:02:40 PM

Call Received Date:01/02/1991

**Time of Call
Received:**03:41 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL 216 OUTFL

Address:3558 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:SMOKES CREEK

Region Close Date:01/07/1991

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Spill Information

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Region:9

Spill Number:9012459

Spill Date:03/05/1991

Spill Time:08:30 AM

Call Received Date:03/05/1991

**Time of Call
Received:**11:48 AM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

200 Gal.

Spill Name:BETHLEHEM STEEL-COAL TAR

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/11/1991

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Spill Information

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Region:9

Spill Number:9012631

Spill Date:03/09/1991

Spill Time:03:30 AM

Call Received Date:03/09/1991

**Time of Call
Received:**06:11 AM

Material Spilled

AMMONIA

PHENOL

CARBOLIC ACID

Spilled Units

Unknown Gal.

Unknown Gal.

Unknown Gal.

Spill Name:BETHLEHEM STEEL-NH4

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/03/1991

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Region:9

Spill Number:9012796

Spill Date:03/14/1991

Spill Time:01:00 PM

Call Received Date:03/14/1991

**Time of Call
Received:**01:13 PM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

15 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE - 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Other

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/15/1991

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Region:9

Spill Number:9012909

Spill Date:03/19/1991

Spill Time:08:00 AM

Call Received Date:03/19/1991

**Time of Call
Received:**08:21 AM

Material Spilled

Spilled Units

#2 FUEL OIL

500 Gal.

Spill Name:BETH STEEL-COAL MIXER

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:08/12/1991

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Spill Information

[New Search](#)

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Region:9

Spill Number:9100003

Spill Date:04/01/1991

Spill Time:12:30 AM

Call Received Date:04/01/1991

**Time of Call
Received:**07:40 AM

Material Spilled

Spilled Units

TAR

50 Gal.

Spill Name:BETHLEHEM STEEL-BP AREA

Address:1951 HAMBURG TURNPIKE - 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:04/23/1991

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Spill Information

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Region:9

Spill Number:9100044

Spill Date:04/01/1991

Spill Time:03:00 PM

Call Received Date:04/01/1991

**Time of Call
Received:**03:45 PM

Material Spilled

Spilled Units

WASTE OIL

50 Gal.

Spill Name:BETH STEEL-BENZOIL YARD

Address:HAMBURG TURNPIKE - RT 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:08/12/1991

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Spill Information

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Region:9

Spill Number:9100575

Spill Date:04/15/1991

Spill Time:05:00 PM

Call Received Date:04/15/1991

**Time of Call
Received:**06:02 PM

Material Spilled

Spilled Units

WASTE OIL

25 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE - 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:05/22/1991

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Spill Information

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Region:9

Spill Number:9100855

Spill Date:04/23/1991

Spill Time:08:00 AM

Call Received Date:04/23/1991

**Time of Call
Received:**08:32 AM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

800 Gal.

Spill Name:BETH STEEL-COAL TAR

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:05/06/1991

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Spill Information

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Region:9

Spill Number:9101094

Spill Date:04/26/1991

Spill Time:09:30 AM

Call Received Date:04/26/1991

**Time of Call
Received:**10:28 AM

Material Spilled

UNKNOWN PETROLEUM

Spilled Units

Unknown lbs.

Spill Name:BETH STEEL-OUTFALL 411

Address:1951 HAMBURG TURNPIKE - 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:LAKE ERIE

Region Close Date:05/01/1991

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Spill Information

[New Search](#)

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Region:9

Spill Number:9101434

Spill Date:05/05/1991

Spill Time:11:30 AM

Call Received Date:05/05/1991

**Time of Call
Received:**02:32 PM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

75 Gal.

Spill Name:BETHLEHEM STEEL-BY PROD.

Address:2558 HAMBURG TURNPIKE - 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:05/17/1991

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Spill Information

[New Search](#)

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Region:9

Spill Number:9101522

Spill Date:05/07/1991

Spill Time:04:55 PM

Call Received Date:05/07/1991

**Time of Call
Received:**05:04 PM

Material Spilled

Spilled Units

MUCK OIL

25 Gal.

Spill Name:BETH STEEL-MUCK OIL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:08/12/1991

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Spill Information

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Region:9

Spill Number:9102025

Spill Date:05/21/1991

Spill Time:06:00 AM

Call Received Date:05/21/1991

**Time of Call
Received:**07:04 AM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

300 Gal.

Spill Name:BETHLEHEM STEEL-COKE OVEN

Address:1951 HAMBURG TURNPIKE - 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:05/21/1991

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Spill Information

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Region:9

Spill Number:9105841

Spill Date:08/29/1991

Spill Time:11:40 AM

Call Received Date:08/29/1991

**Time of Call
Received:**12:37 PM

Material Spilled

Spilled Units

WASTE OIL

15 Gal.

WASH OIL

0 lbs.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:01/12/1993

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Spill Information

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Region:9

Spill Number:9106150

Spill Date:09/09/1991

Spill Time:05:45 AM

Call Received Date:09/09/1991

**Time of Call
Received:**07:02 AM

Material Spilled

WASH OIL

Spilled Units

Unknown lbs.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:09/10/1991

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1991

Spill Information

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Region:9

Spill Number:9106430

Spill Date:09/15/1991

Spill Time:01:30 AM

Call Received Date:09/15/1991

**Time of Call
Received:**01:59 AM

Material Spilled

Spilled Units

KENSOL # 61

0 Gal.

WASH OIL

0 Gal.

Spill Name:BETHLEHEM STEEL-OVENS

Address:HAMBURG TRPK - ROUTE 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:04/09/1992

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Spill #	Date	Spill Name	County	City	Address
1. 9110640	01/10/1992	BETHLEHEM STEEL	Erie	LACKAWANNA	HAMBURG TURNPIKE ROUTE 5
2. 9112653	03/12/1992	BETHLEHEM STEEL- COKE OVEN	Erie	LACKAWANNA	3555 HAMBURG TURNPIKE
3. 9112821	03/17/1992	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
4. 9200437	04/11/1992	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
5. 9200462	04/13/1992	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE
6. 9200546	04/14/1992	OIL TANK LEAK AT LISA	Erie	LACKAWANNA	45 LISA LANE
7. 9200703	04/18/1992	MOBIL OIL 08-HA7	Erie	LACKAWANNA	1361 ABBOTT ROAD
8. 9201080	04/28/1992	BETHLEHEM/BOAT SLIP	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
9. 9202045	05/18/1992	SOUTH BUFFALO RAILWAY	Erie	LACKAWANNA	2600 HAMBURG TURNPIKE
10. 9202009	05/19/1992	MOBIL OIL	Erie	LACKAWANNA	1361 ABBOTT ROAD

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Spill #	Date	Spill Name	County	City	Address
11. 9202630	06/04/1992	BAR MILL BETHLEHEM STEEL	Erie	LACKAWANNA	1591 HAMBURG TURNPIKE - 5
12. 9203770	06/30/1992	ERIE COUNTY SD #6 WWTP	Erie	LACKAWANNA	LEHIGH AVENUE
13. 9204447	07/16/1992	BETHLEHEM STEEL- RETARDER	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
14. 9204544	07/20/1992	BETH ENERGY	Erie	LACKAWANNA	HAMBURG TURNPIKE ROUTE 5
15. 9204849	07/24/1992	TURNPIKE AUTO REPAIR	Erie	LACKAWANNA	2424 HAMBURG TURNPIKE - 5
16. 9205433	08/11/1992	BUFFALO SPECIALTY STEEL	Erie	LACKAWANNA	ROUTE 5
17. 9205674	08/17/1992	BETHLEHEM STEEL COKE OVEN	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
18. 9206342	08/31/1992	SPERDUTI - SUNOCO	Erie	LACKAWANNA	2654 HAMBURG TURNPIKE
19. 9206341	08/31/1992	JIM MULQUEEN RESIDENCE	Erie	LACKAWANNA	18 COOK STREET
20. 9208627	10/26/1992	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE

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Spill #	Date	Spill Name	County	City	Address
21. 9209900	11/18/1992	DRUM ON LAKE ERIE	Erie	LACKAWANNA	ROUTE 5
22. 9210776	12/17/1992	BETHLEHEM STEEL	Erie	LACKAWANNA	HMABURG TURNPIKE ROUTE 5
23. 9210978	12/21/1992	ED KRYPEL SERVICE STATION	Erie	LACKAWANNA	2993 SOUTH PARK AVENUE
24. 9211092	12/21/1992	ED KRYPEL SERVICE STATION	Erie	LACKAWANNA	2993 SOUTH PARK AVENUE

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Region:9

Spill Number:9112653

Spill Date:03/12/1992

Spill Time:01:30 AM

Call Received Date:03/12/1992

**Time of Call
Received:**02:10 AM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL-COKE OVEN

Address:3555 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:05/11/1992

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Spill Information

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Region:9

Spill Number:9112821

Spill Date:03/17/1992

Spill Time:01:00 PM

Call Received Date:03/17/1992

**Time of Call
Received:**01:45 PM

Material Spilled

Spilled Units

UNKNOWN MATERIAL

100 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/17/1992

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Spill Information

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Region:9

Spill Number:9200437

Spill Date:04/11/1992

Spill Time:10:00 AM

Call Received Date:04/11/1992

**Time of Call
Received:**10:20 AM

Material Spilled

Spilled Units

KENSOL # 61

50 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:11/11/1993

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Region:9

Spill Number:9201080

Spill Date:04/28/1992

Spill Time:09:30 AM

Call Received Date:04/28/1992

**Time of Call
Received:**10:00 AM

Material Spilled

Spilled Units

UNKNOWN PETROLEUM

200 Gal.

Spill Name:BETHLEHEM/BOAT SLIP

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Deliberate

Source:Vessel

Resource:Surface Water

Waterbody:LAKE ERIE

Region Close Date:07/21/1992

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Region:9

Spill Number:9202630

Spill Date:06/04/1992

Spill Time:07:30 AM

Call Received Date:06/04/1992

**Time of Call
Received:**08:08 AM

Material Spilled

Spilled Units

TAR

20 Gal.

Spill Name:BAR MILL BETHLEHEM STEEL

Address:1591 HAMBURG TURNPIKE - 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:06/04/1992

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Region:9

Spill Number:9204447

Spill Date:07/01/1992

Spill Time:12:00 PM

Call Received Date:07/16/1992

**Time of Call
Received:**03:40 PM

Material Spilled

Spilled Units

WASTE OIL

Unknown lbs.

Spill Name:BETHLEHEM STEEL-RETARDER

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:01/12/1993

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Region:9

Spill Number:9205674

Spill Date:08/17/1992

Spill Time:01:05 PM

Call Received Date:08/17/1992

**Time of Call
Received:**01:40 PM

Material Spilled

Spilled Units

WASH OIL

2700 Gal.

Spill Name:BETHLEHEM STEEL COKE OVEN

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

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Cause:Other

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:01/12/1993

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Region:9

Spill Number:9210776

Spill Date:12/17/1992

Spill Time:06:00 AM

Call Received Date:12/17/1992

**Time of Call
Received:**08:25 AM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:HMABURG TURNPIKE ROUTE 5

City:LACKAWANNA

County:Erie

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Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/11/1993

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Spill #	Date	Spill Name	County	City	Address
1. 9211353	01/04/1993	BETHLEHEM STEEL- WASH OIL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
2. 9211526	01/07/1993	BETHLEHEM STEEL- 8 BATTERY	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
3. 9212545	02/05/1993	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
4. 9212994	02/19/1993	ATLANTIC STATION	Erie	LACKAWANNA	1329 ABBOTT ROAD
5. 9213008	02/20/1993	BETHLEHEM STEEL - COKE	Erie	LACKAWANNA	3995 HAMBURG TURNPIKE RT5
6. 9213182	02/26/1993	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
7. 9213241	02/28/1993	BETHLEHEM STEEL- TAR TANKS	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
8. 9213728	03/12/1993	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE
9. 9300096	04/01/1993	STOYLE AUTO SPILLAGE	Erie	LACKAWANNA	246-248 MILLHURST
10. 9300883	04/16/1993	SOUTH BUFFALO RAILWAY	Erie	LACKAWANNA	2600 HAMBURG TURNPIKE

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Spill #	Date	Spill Name	County	City	Address
11. 9301630	05/05/1993	JOHN BROENEMAN TRUCK	Erie	LACKAWANNA	364 SUDBURY ROAD
12. 9302394	05/20/1993	BETH STEEL-COKE OVENS	Erie	LACKAWANNA	BETH STEEL-COKE OVENS
13. 9302694	05/28/1993	CONRAIL	Erie	LACKAWANNA	RIDGE ROAD
14. 9303064	06/07/1993	UNITED REFINING M-0330	Erie	LACKAWANNA	1131 RIDGE ROAD
15. 9303242	06/11/1993	BETHLEHEM STEEL-COKE OVEN	Erie	LACKAWANNA	BETHLEHEM STEEL-COKE OVEN
16. 9303842	06/24/1993	SAFETY KLEEN CORP.	Erie	LACKAWANNA	41 NORTH GATES AVENUE
17. 9304086	06/29/1993	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE
18. 9304459	07/09/1993	ABC PAVING	Erie	LACKAWANNA	11 STEELAWANNA
19. 9304877	07/12/1993	BAGS OF ASBESTOS	Erie	LACKAWANNA	ROUTE 5 WESTBOUND
20. 9304881	07/15/1993	BUFFALO FUEL - BETHLEHEM	Erie	LACKAWANNA	1951 HAMBURG TNPk.(RT.5)

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Spill #	Date	Spill Name	County	City	Address
21. 9305397	07/31/1993	SOUTH BUFFALO RAILWAY	Erie	LACKAWANNA	26 HAMBURG TURNPIKE
22. 9305739	08/09/1993	NOG I90	Erie	LACKAWANNA	I90 EXIT 55 MP 430.5
23. 9305878	08/12/1993	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE
24. 9305869	08/12/1993	NEIGHBOR OIL DUMPING	Erie	LACKAWANNA	39 ELM STREET
25. 9305937	08/13/1993	QUIK-CRETE	Erie	LACKAWANNA	11 STEELAWANNA AVENUE
26. 9306485	08/26/1993	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE
27. 9306555	08/28/1993	BETHLEHEM STEEL CORP.	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
28. 9307355	09/16/1993	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
29. 9307794	09/27/1993	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
30. 9308037	09/30/1993	CITY OF LACKAWANNA	Erie	LACKAWANNA	SOUTH PARK AVENUE

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Spill #	Date	Spill Name	County	City	Address
31. 9308397	10/12/1993	CONRAIL	Erie	LACKAWANNA	LAKE AVENUE
32. 9308411	10/12/1993	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
33. 9308615	10/13/1993	OIL SLICK ON ROADWAY	Erie	LACKAWANNA	RIDGE RD & SOUTH PARK AVE
34. 9309437	10/18/1993	SHENANGO STEEL	Erie	LACKAWANNA	RIDGE ROAD
35. 9308802	10/20/1993	BARREL IN CREEK	Erie	LACKAWANNA	19 HOME PLACE
36. 9308989	10/21/1993	TURTLES	Erie	LACKAWANNA	BELL STREET
37. 9309440	10/29/1993	SONNY'S SERVICE	Erie	LACKAWANNA	2368 HAMBURG TURNPIKE
38. 9309314	11/01/1993	AVIS 1205 RIDGE	Erie	LACKAWANNA	1205 RIDGE ROAD
39. 9309903	11/12/1993	PETROLEUM SALES & SERVICE	Erie	LACKAWANNA	3287 SOUTH PARK AVENUE
40. 9310366	11/26/1993	CITY OF LACKAWANNA	Erie	LACKAWANNA	ABBOTT & BELL STREET

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Spill #	Date	Spill Name	County	City	Address
41. 9310598	12/01/1993	PETROLEUM SALES AND SERVI	Erie	LACKAWANNA	3287 SOUTH PARK AVENUE
42. 9310743	12/04/1993	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
43. 9310756	12/05/1993	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
44. 9310819	12/07/1993	BETHLEHEM STEEL- COKE OVEN	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
45. 9311557	12/27/1993	COKE OVENS-RAIL CAR	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill Information

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Region:9

Spill Number:9211353

Spill Date:01/04/1993

Spill Time:09:30 AM

Call Received Date:01/04/1993

**Time of Call
Received:**10:10 AM

Material Spilled

WASH OIL

Spilled Units

100 Gal.

Spill Name:BETHLEHEM STEEL-WASH OIL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:01/12/1993

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Spill Information

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Region:9

Spill Number:9211526

Spill Date:01/07/1993

Spill Time:10:00 AM

Call Received Date:01/07/1993

**Time of Call
Received:**10:27 AM

Material Spilled

Spilled Units

WASTE OIL

50 Gal.

Spill Name:BETHLEHEM STEEL-8 BATTERY

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:01/21/1993

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Spill Information

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Region:9

Spill Number:9212545

Spill Date:02/05/1993

Spill Time:10:30 AM

Call Received Date:02/05/1993

**Time of Call
Received:**10:48 AM

Material Spilled

UNKNOWN PETROLEUM

Spilled Units

10 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:02/09/1993

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Region:9

Spill Number:9213008

Spill Date:02/20/1993

Spill Time:10:30 AM

Call Received Date:02/20/1993

**Time of Call
Received:**11:43 AM

Material Spilled

WASTEWATER

Spilled Units

15 Gal.

Spill Name:BETHLEHEM STEEL - COKE

Address:3995 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Other

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:02/26/1993

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Spill Information

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Region:9

Spill Number:9213182

Spill Date:02/26/1993

Spill Time:08:30 AM

Call Received Date:02/26/1993

**Time of Call
Received:**08:58 AM

Material Spilled

WASH OIL

Spilled Units

17 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/01/1993

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Spill Information

[New Search](#)

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Region:9

Spill Number:9213241

Spill Date:02/28/1993

Spill Time:11:00 AM

Call Received Date:02/28/1993

**Time of Call
Received:**03:49 PM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

50 Gal.

Spill Name:BETHLEHEM STEEL-TAR TANKS

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/01/1993

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Spill Information

[New Search](#)

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Region:9

Spill Number:9302394

Spill Date:05/20/1993

Spill Time:06:15 PM

Call Received Date:05/20/1993

**Time of Call
Received:**06:50 PM

Material Spilled

WASH OIL

Spilled Units

30 Gal.

Spill Name:BETH STEEL-COKE OVENS

Address:BETH STEEL-COKE OVENS

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:05/26/1993

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1993

Spill Information

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Region:9

Spill Number:9303242

Spill Date:06/11/1993

Spill Time:09:15 AM

Call Received Date:06/11/1993

**Time of Call
Received:**09:54 AM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL-COKE OVEN

Address:BETHLEHEM STEEL-COKE OVEN

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:LAKE ERIE

Region Close Date:06/14/1993

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Spill Information

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Region:9

Spill Number:9304881

Spill Date:07/15/1993

Spill Time:12:00 PM

Call Received Date:07/15/1993

**Time of Call
Received:**02:00 PM

Material Spilled

Spilled Units

HYDRAULIC OIL

0 lbs.

WASTE OIL

10 Gal.

Spill Name:BUFFALO FUEL - BETHLEHEM

Address:1951 HAMBURG TNPk.(RT.5)

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Commercial
Vehicle

Resource:On Land

Waterbody:

Region Close Date:09/24/1993

[New Search](#)

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Spill Information

[New Search](#)

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Region:9

Spill Number:9306555

Spill Date:08/28/1993

Spill Time:04:10 PM

Call Received Date:08/28/1993

**Time of Call
Received:**04:51 PM

Material Spilled

OTHER PETROLEUM

Spilled Units

Unknown Gal.

Spill Name:BETHLEHEM STEEL CORP.

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:11/21/1995

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1993

Spill Information

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Region:9

Spill Number:9307355

Spill Date:09/16/1993

Spill Time:11:00 AM

Call Received Date:09/16/1993

**Time of Call
Received:**02:24 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:09/24/1993

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1993

Spill Information

[New Search](#)

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Region:9

Spill Number:9308411

Spill Date:10/12/1993

Spill Time:09:30 AM

Call Received Date:10/12/1993

**Time of Call
Received:**11:20 AM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

3 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/19/1993

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1993

Spill Information

[New Search](#)

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Region:9

Spill Number:9310743

Spill Date:12/04/1993

Spill Time:04:15 PM

Call Received Date:12/04/1993

**Time of Call
Received:**05:53 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:12/08/1993

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1993

Spill Information

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Region:9

Spill Number:9310756

Spill Date:12/05/1993

Spill Time:05:00 PM

Call Received Date:12/05/1993

**Time of Call
Received:**07:18 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:12/08/1993

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1993

Spill Information

[New Search](#)

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Region:9

Spill Number:9310819

Spill Date:12/07/1993

Spill Time:05:00 AM

Call Received Date:12/07/1993

**Time of Call
Received:**06:29 AM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL-COKE OVEN

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:12/07/1993

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Spill Information

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Region:9

Spill Number:9311557

Spill Date:12/27/1993

Spill Time:09:00 PM

Call Received Date:12/27/1993

**Time of Call
Received:**10:31 PM

Material Spilled

Spilled Units

Spill Name:COKE OVENS-RAIL CAR

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Railroad Car

Resource:On Land

Waterbody:

Region Close Date:01/03/1994

[New Search](#)

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1994

Spill Information

[New Search](#)

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Region:9

Spill Number:9312621

Spill Date:01/26/1994

Spill Time:07:15 PM

Call Received Date:01/26/1994

**Time of Call
Received:**07:50 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL-BALL MILL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:02/01/1994

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Spill Information

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Region:9

Spill Number:9312717

Spill Date:01/28/1994

Spill Time:03:10 PM

Call Received Date:01/28/1994

**Time of Call
Received:**03:50 PM

Material Spilled

Spilled Units

WASTE OIL

100 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:02/01/1994

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Spill Information

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Region:9

Spill Number:9312773

Spill Date:01/29/1994

Spill Time:07:45 PM

Call Received Date:01/29/1994

**Time of Call
Received:**08:25 PM

Material Spilled

Spilled Units

WASTE OIL

275 Gal.

WASH OIL

0 lbs.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/28/1995

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Spill Information

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Region:9

Spill Number:9313611

Spill Date:02/19/1994

Spill Time:07:48 AM

Call Received Date:02/19/1994

**Time of Call
Received:**11:54 AM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:Air

Waterbody:

Region Close Date:02/22/1994

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Spill Information

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Region:9

Spill Number:9313949

Spill Date:02/26/1994

Spill Time:12:10 PM

Call Received Date:02/26/1994

**Time of Call
Received:**12:37 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:06/06/1994

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Spill Information

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Region:9

Spill Number:9313947

Spill Date:02/26/1994

Spill Time:09:10 AM

Call Received Date:02/26/1994

**Time of Call
Received:**10:35 AM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL-COKE OVEN

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:06/06/1994

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Spill Information

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Region:9

Spill Number:9314089

Spill Date:03/02/1994

Spill Time:10:45 AM

Call Received Date:03/02/1994

**Time of Call
Received:**12:11 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/07/1994

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Spill Information

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Region:9

Spill Number:9314214

Spill Date:03/05/1994

Spill Time:04:00 AM

Call Received Date:03/05/1994

**Time of Call
Received:**05:04 AM

Material Spilled

AMMONIUM SULFATE

Spilled Units

340 Gal.

Spill Name:BETHLEHEM STEEL-COKE OVEN

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/07/1994

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Region:9

Spill Number:9401711

Spill Date:05/05/1994

Spill Time:01:00 PM

Call Received Date:05/05/1994

**Time of Call
Received:**01:32 PM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

10 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:05/11/1994

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Region:9

Spill Number:9402491

Spill Date:05/20/1994

Spill Time:08:30 AM

Call Received Date:05/20/1994

**Time of Call
Received:**08:30 AM

Material Spilled

Spilled Units

DIESEL

50 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Commercial
Vehicle

Resource:On Land

Waterbody:

Region Close Date:05/23/1994

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Region:9

Spill Number:9402488

Spill Date:05/20/1994

Spill Time:04:45 AM

Call Received Date:05/20/1994

**Time of Call
Received:**06:24 AM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

200 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:05/23/1994

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Spill Information

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Region:9

Spill Number:9403309

Spill Date:06/07/1994

Spill Time:01:30 PM

Call Received Date:06/07/1994

**Time of Call
Received:**02:50 PM

Material Spilled

Spilled Units

WASTE OIL

15 Gal.

Spill Name:BETH STEEL-CONOMOS

Address:2600 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Housekeeping

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:08/24/1994

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Region:9

Spill Number:9403701

Spill Date:06/16/1994

Spill Time:07:50 AM

Call Received Date:06/16/1994

**Time of Call
Received:**08:03 AM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:07/05/1994

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Spill Information

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Region:9

Spill Number:9404226

Spill Date:06/26/1994

Spill Time:12:00 PM

Call Received Date:06/26/1994

**Time of Call
Received:**12:40 PM

Material Spilled

Spilled Units

AMMONIUM SULFATE

100 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:02/08/1995

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Region:9

Spill Number:9405497

Spill Date:07/01/1994

Spill Time:12:00 PM

Call Received Date:07/18/1994

**Time of Call
Received:**03:10 PM

Material Spilled

HYDRAULIC OIL

Spilled Units

40000 Gal.

Spill Name:BETHLEHEM STEEL-BOF

Address:3555 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:

Region Close Date:08/28/1996

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Spill Information

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Region: 9	Spill Number: 9405865
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Spill Date: 07/29/1994	Spill Time: 06:00 PM
-------------------------------	-----------------------------

Call Received Date: 07/29/1994	Time of Call Received: 06:50 PM
---------------------------------------	--

Material Spilled	Spilled Units
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Spill Name:COKE OVENS-BALL MILL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:08/04/1994

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1994

Spill Information

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Region:9

Spill Number:9408671

Spill Date:09/29/1994

Spill Time:12:05 PM

Call Received Date:09/29/1994

**Time of Call
Received:**01:05 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:02/02/1995

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Spill Information

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Region:9

Spill Number:9409187

Spill Date:10/11/1994

Spill Time:08:15 AM

Call Received Date:10/11/1994

**Time of Call
Received:**08:49 AM

Material Spilled

AMMONIUM SULFATE

Spilled Units

Unknown Gal.

Spill Name:BETHLEHEM STEEL/ENERGY

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/14/1994

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Spill Information

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Region:9

Spill Number:9411184

Spill Date:11/09/1994

Spill Time:12:00 PM

Call Received Date:11/02/1994

**Time of Call
Received:**03:02 PM

Material Spilled

NON PCB OIL

Spilled Units

200 Gal.

Spill Name:BETHLEHEM STEEL

Address:2558 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/09/1995

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Spill Information

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Region:9

Spill Number:9412000

Spill Date:12/08/1994

Spill Time:12:50 PM

Call Received Date:12/08/1994

**Time of Call
Received:**01:14 PM

Material Spilled

COAL TAR PITCH VOLATILES

Spilled Units

10 Gal.

Spill Name:BETHLEHEM STEEL-COKE OVEN

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:12/13/1994

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Spill Information

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Region:9

Spill Number:9406166

Spill Date:08/03/1994

Spill Time:12:00 PM

Call Received Date:08/03/1994

**Time of Call
Received:**01:45 PM

Material Spilled

UNKNOWN PETROLEUM

Spilled Units

Unknown lbs.

Spill Name:SMOKES CREEK-SPDES 216

Address:HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:SMOKES CREEK

Region Close Date:08/15/1994

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Spill #	Date	Spill Name	County	City	Address
1. 9413375	01/07/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
2. 9413583	01/11/1995	BETHLEHEM STEEL/ENERGY	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
3. 9414100	01/24/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
4. 9414733	02/08/1995	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE
5. 9414774	02/09/1995	ABANDONED DRUMS	Erie	LACKAWANNA	FISHER ROAD
6. 9414754	02/09/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
7. 9415804	03/07/1995	SAFETY KLEEN	Erie	LACKAWANNA	41 GATES AVENUE
8. 9415839	03/07/1995	^{ced} SMOKES CREEK- BETH STEEL	Erie	LACKAWANNA	2600 HAMBURG TURNPIKE
9. 9415961	03/09/1995	AMADORI CONSTRUCTION	Erie	LACKAWANNA	2560 HAMBURG TURNPIKE
10. 9500233	04/03/1995	SMOKES CREEK AT S. PARK	Erie	LACKAWANNA	SOUTH PARK AT SMOKES CREE

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Spill #	Date	Spill Name	County	City	Address
11. 9500112	04/03/1995	SMOKES CREEK	Erie	LACKAWANNA	SMOKES CREEK AT S. PARK
12. 9500247	04/06/1995	BETHLEHEM STEEL- BP AREA	Erie	LACKAWANNA	3555 HAMBURG TURNPIKE
13. 9500384	04/10/1995	JACK ADKINS FORD	Erie	LACKAWANNA	1212 ABBOTT ROAD
14. 9501179	04/27/1995	COKE OVENS-C&D BUILD	Erie	LACKAWANNA	1955 HAMBURG TURNPIKE
15. 9501595	05/08/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	255 HAMBURG TURNPIKE
16. 9501668	05/09/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	2900 HAMBURG TURNPIKE
17. 9503361	06/19/1995	BETHLEHEM STEEL COKE DIV.	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
18. 9503911	06/29/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
19. 9504347	07/11/1995	OAKGROVE CONSTRUCTION	Erie	LACKAWANNA	2654 HAMBURG TURNPIKE
20. 9504647	07/18/1995	BETH ENERGY-TAR TANK	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE

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Spill #	Date	Spill Name	County	City	Address
21. 9505392	07/28/1995	TRANSMISSION EXCHANGE	Erie	LACKAWANNA	333 RIDGE ROAD
22. 9505347	07/31/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
23. 9505358	07/31/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
24. 9506080	08/16/1995	BUFFALO CRUSHED STONE	Erie	LACKAWANNA	1941 FUHRMANN BLVD
25. 9507011	09/08/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
26. 9507543	09/19/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	2558 HAMBURG TURNPIKE RT5
27. 9507530	09/19/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	2558 HAMBURG TURNPIKE RT5
28. 9507775	09/25/1995	BETHLEHEM STEEL - BAR MILL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
29. 9508302	10/05/1995	AVIS LUBE	Erie	LACKAWANNA	1205 RIDGE ROAD
30. 9508367	10/09/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill #	Date	Spill Name	County	City	Address
31. <u>9508678</u>	10/16/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	2558 HAMBURG TURNPIKE RT5
32. <u>9508676</u>	10/16/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
33. <u>9508813</u>	10/18/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
34. <u>9509052</u>	10/23/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
35. <u>9509660</u>	11/03/1995	SUN STATION	Erie	LACKAWANNA	1329 ABBOTT ROAD
36. <u>9509692</u>	11/05/1995	NIAGARA MOHAWK	Erie	LACKAWANNA	160 RIDGE ROAD
37. <u>9509759</u>	11/06/1995	NYSDOT DRILLING RIG	Erie	LACKAWANNA	ROUTE 5
38. <u>9509824</u>	11/08/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
39. <u>9509954</u>	11/10/1995	CID REFUSE AT ECSD #6	Erie	LACKAWANNA	260 LEHIGH AVENUE
40. <u>9510250</u>	11/15/1995	NIAGARA MOHAWK	Erie	LACKAWANNA	51 GATES AVENUE

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Spill #	Date	Spill Name	County	City	Address
41. 9511330	12/08/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
42. 9511763	12/18/1995	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill Information

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Region:9

Spill Number:9413375

Spill Date:01/07/1995

Spill Time:10:00 AM

Call Received Date:01/07/1995

**Time of Call
Received:**10:14 AM

Material Spilled

AMMONIA

Spilled Units

Unknown Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:01/09/1995

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Spill Information

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Region:9

Spill Number:9413583

Spill Date:01/11/1995

Spill Time:08:30 PM

Call Received Date:01/11/1995

**Time of Call
Received:**09:25 PM

Material Spilled

Spilled Units

BENZENE

150 Gal.

BENZOL

150 Gal.

Spill Name:BETHLEHEM STEEL/ENERGY

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:01/11/1996

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1995

Spill Information

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Region:9

Spill Number:9414754

Spill Date:02/09/1995

Spill Time:10:30 AM

Call Received Date:02/09/1995

**Time of Call
Received:**11:39 AM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:UNION SHIP CANAL

Region Close Date:02/09/1995

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1995

Spill Information

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Region:9

Spill Number:9500247

Spill Date:04/06/1995

Spill Time:02:20 PM

Call Received Date:04/06/1995

**Time of Call
Received:**01:46 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL-BP AREA

Address:3555 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:04/17/1995

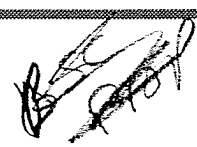
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Spill Information



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Region:9

Spill Number:9501179

Spill Date:04/27/1995

Spill Time:04:00 PM

Call Received Date:04/27/1995

**Time of Call
Received:**01:13 PM

Material Spilled

WASTE OIL

Spilled Units

Unknown lbs.

Spill Name:COKE OVENS-C&D BUILD

Address:1955 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Housekeeping

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:LAKE ERIE

Region Close Date:05/04/1995

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Spill Information

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Region:9

Spill Number:9501595

Spill Date:05/08/1995

Spill Time:01:00 PM

Call Received Date:05/08/1995

**Time of Call
Received:**02:33 PM

Material Spilled

Spilled Units

PICKLE LIQUOR

20 Gal.

Spill Name:BETHLEHEM STEEL

Address:255 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:08/02/1995

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Spill Information

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Region:9

Spill Number:9501668

Spill Date:05/09/1995

Spill Time:10:58 PM

Call Received Date:05/09/1995

**Time of Call
Received:**11:14 PM

Material Spilled

Spilled Units

GASOLINE

1 Gal.

Spill Name:BETHLEHEM STEEL

Address:2900 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Traffic Accident

Source:Passenger
Vehicle

Resource:On Land

Waterbody:

Region Close Date:05/11/1995

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Spill Information

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Region:9

Spill Number:9503911

Spill Date:06/29/1995

Spill Time:09:00 PM

Call Received Date:06/29/1995

**Time of Call
Received:**09:41 PM

Material Spilled

UNKNOWN PETROLEUM

Spilled Units

100 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/02/1995

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Spill Information

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Region:9

Spill Number:9505347

Spill Date:07/31/1995

Spill Time:09:45 PM

Call Received Date:07/31/1995

**Time of Call
Received:**10:11 PM

Material Spilled

Spilled Units

#2 FUEL OIL

5 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Railroad Car

Resource:On Land

Waterbody:

Region Close Date:08/02/1995

[New Search](#)

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1995

Spill Information

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Region:9

Spill Number:9505358

Spill Date:07/31/1995

Spill Time:09:45 PM

Call Received Date:07/31/1995

**Time of Call
Received:**10:11 PM

Material Spilled

Spilled Units

#2 FUEL OIL

5 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Railroad Car

Resource:On Land

Waterbody:

Region Close Date:08/01/1995

[New Search](#)

[Return to Spills Database Home Page](#)

1995

Spill Information

[New Search](#)

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Region:9

Spill Number:9507011

Spill Date:09/08/1995

Spill Time:12:05 PM

Call Received Date:09/08/1995

**Time of Call
Received:**12:35 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:09/08/1995

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Spill Information

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Region:9

Spill Number:9507530

Spill Date:09/19/1995

Spill Time:03:15 PM

Call Received Date:09/19/1995

**Time of Call
Received:**03:59 PM

Material Spilled

Spilled Units

PICKLE LIQUOR

15 Gal.

Spill Name:BETHLEHEM STEEL

Address:2558 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Tank Truck

Resource:On Land

Waterbody:

Region Close Date:11/28/1995

[New Search](#)

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1995

Spill Information

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Region:9

Spill Number:9507543

Spill Date:09/19/1995

Spill Time:03:15 PM

Call Received Date:09/19/1995

**Time of Call
Received:**04:05 PM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:2558 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Tank Truck

Resource:On Land

Waterbody:

Region Close Date:09/19/1995

[New Search](#)

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1995

Spill Information

[New Search](#)

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Region:9

Spill Number:9507775

Spill Date:09/01/1995

Spill Time:12:00 PM

Call Received Date:09/25/1995

**Time of Call
Received:**09:52 AM

Material Spilled

Spilled Units

#2 FUEL OIL

20 Gal.

LUBE OIL

100 Gal.

LUBRICATING OIL

100 Gal.

Spill Name:BETHLEHEM STEEL -BAR MILL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:Groundwater

Waterbody:

Region Close Date:08/14/1996

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Spill Information

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Region:9

Spill Number:9508367

Spill Date:10/09/1995

Spill Time:08:30 AM

Call Received Date:10/09/1995

**Time of Call
Received:**09:33 AM

Material Spilled

Spilled Units

UNKNOWN HAZARDOUS MATERIAL

15 Gal.

UNKNOWN NON-PETRO/NON-HAZ MATERIAL

0 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/26/1995

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1995

Spill Information

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Region:9

Spill Number:9508813

Spill Date:10/18/1995

Spill Time:11:45 AM

Call Received Date:10/18/1995

**Time of Call
Received:**12:32 PM

Material Spilled

AMMONIA

Spilled Units

75 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:11/02/1995

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Spill Information

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Region:9

Spill Number:9509052

Spill Date:10/22/1995

Spill Time:11:15 AM

Call Received Date:10/23/1995

**Time of Call
Received:**11:11 AM

Material Spilled

XYLENE (MIXED)

Spilled Units

150 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/23/1995

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Spill Information

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Region:9

Spill Number:9509824

Spill Date:11/08/1995

Spill Time:09:45 AM

Call Received Date:11/08/1995

**Time of Call
Received:**10:10 AM

Material Spilled

Spilled Units

WASTEWATER

10 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:11/24/1995

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Spill Information

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Region:9

Spill Number:9511330

Spill Date:12/08/1995

Spill Time:08:00 AM

Call Received Date:12/08/1995

**Time of Call
Received:**08:57 AM

Material Spilled

WASTEWATER

Spilled Units

75 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:12/08/1995

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Spill Information

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Region:9

Spill Number:9511763

Spill Date:12/18/1995

Spill Time:07:15 AM

Call Received Date:12/18/1995

**Time of Call
Received:**07:50 AM

Material Spilled

Spilled Units

AMMONIA

50 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:01/10/1996

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Spill #	Date	Spill Name	County	City	Address
1. 9512539	01/09/1996	BETHLEHEM STEEL / PVS	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
2. 9512795	01/15/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
3. 9514251	02/02/1996	STAROBA PLASTIC & METAL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
4. 9514050	02/04/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
5. 9514390	02/10/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
6. 9515897	03/07/1996	SCHINDER NATIONAL CARRIER	Erie	LACKAWANNA	I90
7. 9515770	03/09/1996	P&C FOOD - I90	Erie	LACKAWANNA	I90 MP 430.4 EB
8. 9515792	03/10/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
9. 9515910	03/12/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
10. 9516071	03/14/1996	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES

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Spill #	Date	Spill Name	County	City	Address
11. 9516181	03/18/1996	BETHLEHEM STEEL MACH SHOP	Erie	LACKAWANNA	1951 HAMBURG TRPK
12. 9516738	03/27/1996	BETHLEHEM STEEL PLANT	Erie	LACKAWANNA	ROUTE 5 AND GATE 1
13. 9600717	04/15/1996	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES
14. 9600747	04/16/1996	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES
15. 9602121	05/14/1996	GENERAL AUTO	Erie	LACKAWANNA	FRANKLIN & RIDGE ROAD
16. 9602137	05/14/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
17. 9603659	06/17/1996	BOYS ASSOCIATION BALL FIE	Erie	LACKAWANNA	SOUTH PARK AT AUTOMAKERS
18. 9604023	06/24/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
19. 9605230	07/22/1996	CONCRETE DELIVERY CO, INC	Erie	LACKAWANNA	7 NORTH STEELAWANNA AVE
20. 9606025	08/09/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE

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Spill #	Date	Spill Name	County	City	Address
21. 9606333	08/15/1996	RED MATERIAL IN SMOKES CR	Erie	LACKAWANNA	SOUTH PARK AVENUE
22. 9606490	08/20/1996	DOMES HEATING & COLLING	Erie	LACKAWANNA	51 RELICH STREET
23. 9606921	08/30/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
24. 9607510	09/13/1996	OIL IN STORM SEWER	Erie	LACKAWANNA	LEHIGH AND BAUDER STREETS
25. 9607520	09/14/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
26. 9607786	09/20/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	2551 HAMBURG TURNPIKE RT5
27. 9608394	10/07/1996	BETHLEHEM STEEL - K142	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
28. 9608821	10/15/1996	LACKAWANNA FIRE DEPT	Erie	LACKAWANNA	2990 SOUTH PARK AVE
29. 9609314	10/25/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
30. 9609478	10/29/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill #	Date	Spill Name	County	City	Address
31. 9609571	10/30/1996	TRANSFORMERS NIAGARA MOHA	Erie	LACKAWANNA	187-189 LEHIGH STREET
32. 9609882	11/07/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
33. 9610862	11/25/1996	DEVELOPMENT AREA	Erie	LACKAWANNA	NORTH STEELAWANNA EXT.
34. 9611091	12/09/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
35. 9611271	12/11/1996	ODOR AT POLCARNY RESIDENC	Erie	LACKAWANNA	15 VINCENT AVENUE
36. 9611386	12/16/1996	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill Information

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Region:9

Spill Number:9512795

Spill Date:01/15/1996

Spill Time:09:30 AM

Call Received Date:01/15/1996

**Time of Call
Received:**10:32 AM

Material Spilled

Spilled Units

OTHER PETROLEUM

20 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:01/22/1996

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Spill Information

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Region:9

Spill Number:9514050

Spill Date:02/04/1996

Spill Time:11:15 AM

Call Received Date:02/04/1996

**Time of Call
Received:**11:39 AM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

20 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:02/05/1996

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Spill Information

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Region:9

Spill Number:9514390

Spill Date:02/10/1996

Spill Time:02:35 PM

Call Received Date:02/10/1996

**Time of Call
Received:**03:33 PM

Material Spilled

UNKNOWN HAZARDOUS MATERIAL

Spilled Units

3 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:02/10/1996

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Spill Information

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Region:9

Spill Number:9515792

Spill Date:03/10/1996

Spill Time:11:55 AM

Call Received Date:03/10/1996

**Time of Call
Received:**12:52 PM

Material Spilled
WASTEWATER

Spilled Units
750 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/13/1996

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Spill Information

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Region:9

Spill Number:9515910

Spill Date:03/08/1996

Spill Time:08:00 AM

Call Received Date:03/12/1996

**Time of Call
Received:**02:09 PM

Material Spilled
UNKNOWN PETROLEUM

Spilled Units
Unknown Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:Groundwater

Waterbody:

Region Close Date:05/14/1996

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Spill Information

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Region:9

Spill Number:9516181

Spill Date:03/18/1996

Spill Time:08:00 AM

Call Received Date:03/18/1996

**Time of Call
Received:**08:36 AM

Material Spilled

Spilled Units

HYDRAULIC OIL

100 Gal.

Spill Name:BETHLEHEM STEEL MACH SHOP

Address:1951 HAMBURG TRPK

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Traffic Accident

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/22/1996

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Spill Information

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Region:9

Spill Number:9602137

Spill Date:05/14/1996

Spill Time:01:00 PM

Call Received Date:05/14/1996

**Time of Call
Received:**01:56 PM

Material Spilled

Spilled Units

OTHER PETROLEUM

10 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Other

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:05/17/1996

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1996

Spill Information

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Region:9

Spill Number:9604023

Spill Date:06/24/1996

Spill Time:03:30 PM

Call Received Date:06/24/1996

**Time of Call
Received:**03:46 PM

Material Spilled

DIPROPYLENE GLYCOL METHYL ETHER

Spilled Units

50 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:07/02/1997

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1996

Spill Information

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Region:9

Spill Number:9606025

Spill Date:08/09/1996

Spill Time:11:10 AM

Call Received Date:08/09/1996

**Time of Call
Received:**11:34 AM

Material Spilled
HYDRAULIC OIL

Spilled Units
20 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Railroad Car

Resource:On Land

Waterbody:

Region Close Date:01/09/1997

[New Search](#)

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1996

Spill Information

[New Search](#)

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Region:9

Spill Number:9606921

Spill Date:08/30/1996

Spill Time:10:30 AM

Call Received Date:08/30/1996

**Time of Call
Received:**11:15 AM

Material Spilled
HYDRAULIC OIL

Spilled Units
10 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Commercial
Vehicle

Resource:On Land

Waterbody:

Region Close Date:10/28/1996

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1996

Spill Information

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Region:9

Spill Number:9607520

Spill Date:09/14/1996

Spill Time:11:30 AM

Call Received Date:09/14/1996

**Time of Call
Received:**12:07 PM

Material Spilled

Spilled Units

#2 FUEL OIL

15 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:09/16/1996

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Spill Information

[New Search](#)

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Region:9

Spill Number:9607786

Spill Date:09/20/1996

Spill Time:10:50 AM

Call Received Date:09/20/1996

**Time of Call
Received:**11:20 AM

Material Spilled

UNKNOWN PETROLEUM

Spilled Units

Unknown Gal.

Spill Name:BETHLEHEM STEEL

Address:2551 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:Groundwater

Waterbody:

Region Close Date:

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1996

Spill Information

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Region:9

Spill Number:9608394

Spill Date:10/07/1996

Spill Time:06:50 AM

Call Received Date:10/07/1996

**Time of Call
Received:**07:33 AM

Material Spilled

Spilled Units

TAR

300 Gal.

K1

0 Gal.

Spill Name:BETHLEHEM STEEL - K142

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/15/1996

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Spill Information

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Region:9

Spill Number:9609314

Spill Date:10/25/1996

Spill Time:09:30 AM

Call Received Date:10/25/1996

**Time of Call
Received:**10:05 AM

Material Spilled

Spilled Units

KENSOL # 61

1 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/28/1996

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Spill Information

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Region:9

Spill Number:9609478

Spill Date:10/29/1996

Spill Time:12:30 PM

Call Received Date:10/29/1996

**Time of Call
Received:**01:29 PM

Material Spilled

Spilled Units

WASTEWATER

150 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:11/01/1996

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Spill Information

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Region:9

Spill Number:9609882

Spill Date:11/07/1996

Spill Time:01:30 PM

Call Received Date:11/07/1996

**Time of Call
Received:**02:10 PM

Material Spilled

UNKNOWN PETROLEUM

Spilled Units

Unknown Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:SMOKES CREEK

Region Close Date:11/06/1996

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1996

Spill Information

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Region:9

Spill Number:9611091

Spill Date:12/09/1996

Spill Time:09:00 AM

Call Received Date:12/09/1996

**Time of Call
Received:**09:53 AM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

5 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:12/11/1996

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Spill Information

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Region:9

Spill Number:9611386

Spill Date:12/16/1996

Spill Time:02:15 PM

Call Received Date:12/16/1996

**Time of Call
Received:**03:07 PM

Material Spilled

Spilled Units

TAR

25 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:12/30/1996

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Spill Information

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Region:9

Spill Number:9603223

Spill Date:06/07/1996

Spill Time:12:35 PM

Call Received Date:06/07/1996

**Time of Call
Received:**01:01 PM

Material Spilled

Spilled Units

CLAY

0 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACAWANA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:06/07/1996

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Spill #	Date	Spill Name	County	City	Address
1. 9612132	01/09/1997	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
2. 9612357	01/16/1997	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTHGATE AVENUE
3. 9612424	01/17/1997	PGT SERVICES, INC.	Erie	LACKAWANNA	ROUTE 5 AT MADISON AVENUE
4. 9612455	01/18/1997	BETHLEHEM BENZOL RECOVERY	Erie	LACKAWANNA	ROUTE 5
5. 9612510	01/21/1997	BETHLEHEM STEEL-COKE OVEN	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
6. 9612575	01/22/1997	YELLOW OIL ON SEAL STREET	Erie	LACKAWANNA	SEAL STREET
7. 9612711	01/25/1997	MOBIL OIL STATION	Erie	LACKAWANNA	1361 ABBOTT ROAD
8. 9612937	01/31/1997	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
9. 9612950	02/01/1997	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
10. 9613066	02/04/1997	UNITED AUTO PARTS	Erie	LACKAWANNA	LEHIGH STREET

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Spill #	Date	Spill Name	County	City	Address
11. 9613731	02/23/1997	BETHLEHEM STEEL CORP	Erie	LACKAWANNA	2558 HAMBURG TURNPIKE
12. 9614375	03/11/1997	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
13. 9614863	03/26/1997	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT
14. 9700670	04/15/1997	BARRETT MOTORS	Erie	LACKAWANNA	3228 SOUTH PARK AVE
15. 9700892	04/21/1997	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
16. 9701407	05/01/1997	HENRY STAHURA	Erie	LACKAWANNA	39 BROWN
17. 9701695	05/08/1997	BETHLEHEM STEEL PUMP HOUS	Erie	LACKAWANNA	1951 HAMBURG TPK RT 5
18. 9701951	05/14/1997	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TRUNPIKE RT5
19. 9703026	06/10/1997	PETRO USA	Erie	LACKAWANNA	2540 SOUTH PARK AV
20. 9703420	06/18/1997	WASTE MANAGEMENT	Erie	LACKAWANNA	70 NORTH GATES AVENUE

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Spill #	Date	Spill Name	County	City	Address
21. 9704893	07/17/1997	SAFETY-KLEEN CORP	Erie	LACKAWANNA	41 NORTH GATES AVE
22. 9704847	07/23/1997	RED MATERIAL IN CREEK	Erie	LACKAWANNA	ROUTE 5
23. 9705195	07/30/1997	HOMEOWNER DUMPING	Erie	LACKAWANNA	18 COOK STREET
24. 9705307	08/01/1997	MILLER'S COLLISION	Erie	LACKAWANNA	1923 ABBOTT ROAD
25. 9706328	08/25/1997	CAR LEAKING OIL	Erie	LACKAWANNA	156 ELKHART STREET
26. 9708265	10/14/1997	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
27. 9708447	10/17/1997	BUFFALO BRAKE BEAM	Erie	LACKAWANNA	400 INGHAM AVENUE
28. 9709160	11/06/1997	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
29. 9709531	11/17/1997	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
30. 9709784	11/21/1997	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill #	Date	Spill Name	County	City	Address
31. 9710457	12/12/1997	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill Information

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Region:9

Spill Number:9612455

Spill Date:01/18/1997

Spill Time:06:30 AM

Call Received Date:01/18/1997

**Time of Call
Received:**07:44 AM

Material Spilled

Spilled Units

KENSOL # 61

200 Gal.

Spill Name:BETHLEHEM BENZOL RECOVERY

Address:ROUTE 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:07/13/1998

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Spill Information

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Region:9

Spill Number:9612937

Spill Date:01/31/1997

Spill Time:03:00 PM

Call Received Date:01/31/1997

**Time of Call
Received:**03:40 PM

Material Spilled

Spilled Units

WASTE OIL

2 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:02/03/1997

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Spill Information

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Region:9

Spill Number:9612950

Spill Date:02/01/1997

Spill Time:01:30 AM

Call Received Date:02/01/1997

**Time of Call
Received:**02:49 AM

Material Spilled

COAL TAR PITCH VOLATILES

Spilled Units

12000 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:LACAWANNA SHIP CANAL

Region Close Date:09/29/1997

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Spill Information

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Region:9

Spill Number:9613731

Spill Date:02/23/1997

Spill Time:04:30 AM

Call Received Date:02/23/1997

**Time of Call
Received:**06:14 AM

Material Spilled

Spilled Units

WASTEWATER

300 Gal.

Spill Name:BETHLEHEM STEEL CORP

Address:2558 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:BLASDELL CREEK

Region Close Date:03/06/1997

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Spill Information

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Region:9

Spill Number:9614863

Spill Date:03/26/1997

Spill Time:07:00 AM

Call Received Date:03/26/1997

**Time of Call
Received:**08:51 AM

Material Spilled

AMMONIA

Spilled Units

25 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/27/1997

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1997

Spill Information

[New Search](#)

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Region:9

Spill Number:9700892

Spill Date:04/21/1997

Spill Time:11:00 AM

Call Received Date:04/21/1997

**Time of Call
Received:**11:33 AM

Material Spilled

UNKNOWN MATERIAL

Spilled Units

7 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:04/21/1997

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Spill Information

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Region:9

Spill Number:9701951

Spill Date:05/14/1997

Spill Time:01:00 PM

Call Received Date:05/14/1997

**Time of Call
Received:**02:30 PM

Material Spilled

#6 FUEL OIL

Spilled Units

Unknown Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TRUNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:Groundwater

Waterbody:

Region Close Date:

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Spill Information

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Region:9

Spill Number:9708265

Spill Date:10/14/1997

Spill Time:03:40 PM

Call Received Date:10/14/1997

**Time of Call
Received:**03:56 PM

Material Spilled

COAL TAR PITCH VOLATILES

Spilled Units

10 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/15/1997

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Region:9

Spill Number:9709531

Spill Date:11/17/1997

Spill Time:12:10 PM

Call Received Date:11/17/1997

**Time of Call
Received:**12:24 PM

Material Spilled

WASTEWATER

Spilled Units

10 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:11/18/1997

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Spill Information

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Region:9

Spill Number:9709784

Spill Date:11/21/1997

Spill Time:05:00 PM

Call Received Date:11/21/1997

**Time of Call
Received:**06:28 PM

Material Spilled

Spilled Units

AMMONIA

50 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:11/25/1997

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Spill #	Date	Spill Name	County	City	Address
1. 9711305	01/08/1998	ERIE COUNTY SEWER DIST #6	Erie	LACKAWANNA	260 LEHIGH STREET
2. 9711342	01/09/1998	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
3. 9711859	01/22/1998	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE
4. 9711892	01/23/1998	TRUCK AT BETHLEHEM STEEL	Erie	LACKAWANNA	HAMBURG TURNPIKE/LINCOLN
5. 9711894	01/23/1998	TRUCK AT BETHLEHEM STEEL	Erie	LACKAWANNA	2558 HAMBURG TPK
6. 9714347	03/26/1998	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES
7. 9800181	04/05/1998	TRANSFORMER AT BETHLEHEM	Erie	LACKAWANNA	FUHRMAN BLVD
8. 9800399	04/09/1998	TRU GREEN CHEM LAWN TRUCK	Erie	LACKAWANNA	401 MARTIN ROAD
9. 9800581	04/14/1998	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES
10. 9801248	04/29/1998	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill #	Date	Spill Name	County	City	Address
11. 9801772	05/11/1998	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
12. 9802033	05/16/1998	HERBICIDE SPRAYING	Erie	LACKAWANNA	RT 5 & MADISON
13. 9802479	05/27/1998	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
14. 9805106	07/23/1998	PETRO USA	Erie	LACKAWANNA	2540 S. PARK AVE
15. 9805717	08/01/1998	NYSDOT PROJECT/SMOKES CRK	Erie	LACKAWANNA	HAMBURG TURNPIKE
16. 9805716	08/07/1998	NYSDOT PROJECT/SPERDUTI	Erie	LACKAWANNA	2654 HAMBURG TURNPIKE
17. 9805713	08/07/1998	NYSDOT PROJECT/BETHLEHEM	Erie	LACKAWANNA	HAMBURG TURNPIKE
18. 9805835	08/11/1998	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
19. 9805973	08/12/1998	WASTE MANAGEMENT INC	Erie	LACKAWANNA	70 NORTH GATES AVENUE
20. 9806699	08/31/1998	FICEL TRANSPORT	Erie	LACKAWANNA	310 LAKE AVENUE

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Spill #	Date	Spill Name	County	City	Address
24. 9875014	09/08/1998	BETHLEHEM STEEL EXCAVATIO	Erie	LACKAWANNA	LINCOLN & ELM
22. 9807539	09/21/1998	MODERN DISPOSAL TRUCK	Erie	LACKAWANNA	SOUTH PARK AV & MCKINLEY
23. 9807620	09/22/1998	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE
24. 9808777	10/14/1998	BETHELHEM STEEL	Erie	LACKAWANNA	2558 HAMBURG TURNPIKE
25. 9875153	10/29/1998	DUMPING FROM TRUCKS	Erie	LACKAWANNA	END OF FISHER STREET
26. 9809786	11/04/1998	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
27. 9875182	11/05/1998	HOLY CROSS CEMETARY	Erie	LACKAWANNA	2900 SOUTH PARK
28. 9810764	11/25/1998	BETHLEHEM STEEL	Erie	LACKAWANNA	2558 HAMBURG TURNPIKE RT5
29. 9811024	12/02/1998	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
30. 9811092	12/03/1998	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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31. 9875292	12/15/1998	LAIDLAW TRANSIT	Erie	LACKAWANNA	2514 SOUTH PARK AVENUE
32. 9812046	12/26/1998	BETHLEHEM STEEL	Erie	LACKAWANNA	2558 HAMBURG TURNPIKE RT5
33. 9875317	12/28/1998	UNI-MART	Erie	LACKAWANNA	2861 SOUTH PARK
34. 9812131	12/29/1998	BETHLEHEM STEEL	Erie	LACKAWANNA	2558 HAMBURG TURNPIKE RT5

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Spill Information

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Region:9

Spill Number:9711892

Spill Date:01/23/1998

Spill Time:02:28 PM

Call Received Date:01/23/1998

**Time of Call
Received:**02:50 PM

Material Spilled

Spilled Units

DIESEL

50 Gal.

Spill Name:TRUCK AT BETHLEHEM STEEL

Address:HAMBURG TURNPIKE/LINCOLN

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Traffic Accident

Source:Commercial
Vehicle

Resource:On Land

Waterbody:

Region Close Date:01/23/1998

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1998

Spill Information

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Region:9

Spill Number:9711894

Spill Date:01/23/1998

Spill Time:01:05 PM

Call Received Date:01/23/1998

**Time of Call
Received:**03:00 PM

Material Spilled

Spilled Units

DIESEL

50 Gal.

Spill Name:TRCUK AT BETHLEHEM STEEL

Address:2558 HAMBURG TPK

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Traffic Accident

Source:Commercial
Vehicle

Resource:In Sewer

Waterbody:

Region Close Date:03/11/1998

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1998

Spill Information

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Region:9

Spill Number:9800181

Spill Date:04/05/1998

Spill Time:06:02 AM

Call Received Date:04/05/1998

**Time of Call
Received:**01:09 PM

Material Spilled

TRANSFORMER OIL

Spilled Units

32 Gal.

Spill Name:TRANSFORMER AT BETHLEHEM

Address:FUHRMAN BLVD

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:07/21/1998

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1998

Spill Information

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Region:9

Spill Number:9811024

Spill Date:12/02/1998

Spill Time:03:00 PM

Call Received Date:12/02/1998

**Time of Call
Received:**03:33 PM

Material Spilled

Spilled Units

TAR

5 Gal.

AMMONIA

5 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:12/03/1998

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1998

Spill Information

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Region:9

Spill Number:9811092

Spill Date:12/03/1998

Spill Time:03:00 PM

Call Received Date:12/03/1998

**Time of Call
Received:**03:25 PM

Material Spilled

Spilled Units

TAR

2 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:12/04/1998

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1998

Spill Information

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Region:9

Spill Number:9812046

Spill Date:12/26/1998

Spill Time:10:30 PM

Call Received Date:12/26/1998

**Time of Call
Received:**11:16 PM

Material Spilled

Spilled Units

AMMONIA

20 Gal.

Spill Name:BETHLEHEM STEEL

Address:2558 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:01/05/1999

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Spill #	Date	Spill Name	County	City	Address
1. 9812184	01/01/1999	BETH STEEL - COKE OVENS	Erie	LACKAWANNA	2558 HAMBURG TURNPIKE
2. 9812185	01/01/1999	BETH STEEL - COKE OVENS	Erie	LACKAWANNA	2558 HAMBURG TKPE
3. 9812241	01/04/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
4. 9812512	01/10/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
5. 9812698	01/14/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
6. 9812777	01/18/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
7. 9813687	02/09/1999	WAREHOUSE	Erie	LACKAWANNA	41 NORTH GATES AVE
8. 9814631	03/09/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
9. 9814810	03/12/1999	BETHLEHEM STEEL/COKE PLAN	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
10. 9875456	03/13/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill #	Date	Spill Name	County	City	Address
11. 9875476	03/24/1999	BILL VOGEL CARS	Erie	LACKAWANNA	180 RIDGE ROAD
12. 9975010	04/06/1999	CITY OF LACKAWANNA	Erie	LACKAWANNA	5 REDDON STREET
13. 9901167	04/30/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
No 14. 9975105	05/07/1999	OIL IN SMOKES CREEK	Erie	LACKAWANNA	2551 HAMBURG TURNPIKE
15. 9975103	05/07/1999	DRUM AT RIDGE ROAD BRIDGE	Erie	LACKAWANNA	RIDGE ROAD
16. 9901972	05/20/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
17. 9902632	06/07/1999	TRUCK AT VALVOLINE	Erie	LACKAWANNA	1318 RIDGE ROAD
18. 9903266	06/22/1999	BFI TRUCK HIT NM POLES	Erie	LACKAWANNA	1234 ABBOTT ROAD
19. 9903260	06/22/1999	BFI TRUCK	Erie	LACKAWANNA	1234 ABBOTT ROAD
20. 9975313	07/27/1999	AVIS LUBE	Erie	LACKAWANNA	24 MAGNOLIA STREET

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Spill #	Date	Spill Name	County	City	Address
21. 9975349	08/10/1999	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES
22. 9906163	08/24/1999	OIL DUMPED INTO POOL	Erie	LACKAWANNA	2 KIRBY STREET
23. 9975379	08/26/1999	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE
24. 9906382	08/28/1999	SHINGLES AT HOUSE	Erie	LACKAWANNA	15 WEBER ROAD
25. 9906534	09/01/1999	SAFETY CLEAN	Erie	LACKAWANNA	41 NORTH GATES
26. 9906525	09/01/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	2558 HAMBURG TURNPIKE RT5
27. 9906567	09/02/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
28. 9907037	09/13/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
29. 9975409	09/13/1999	BETHLEHEM STEEL - UST	Erie	LACKAWANNA	2558 HAMBURG TURNPIKE RT5
30. 9907209	09/16/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill #	Date	Spill Name	County	City	Address
31. 9907540	09/22/1999	BETHLEHEM COKE OVENS	Erie	LACKAWANNA	1951 HAMBURG TRPK
32. 9908133	10/05/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
33. 9908382	10/10/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1941 HAMBURG TURNPIKE RT5
34. 9908642	10/15/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1941 HAMBURG TURNPIKE RT5
35. 9908858	10/21/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
36. 9975518	11/15/1999	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE
37. 9910121	11/20/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
38. 9910259	11/24/1999	COKE OVENS/ARRIC CORP	Erie	LACKAWANNA	HAMBURG TURNPIKE ROUTE 5
39. 9975546	11/29/1999	DONALD KANE LEAKING AUTO	Erie	LACKAWANNA	37 CLEVELAND
40. 9910973	12/15/1999	FORMER PIZZA HUT	Erie	LACKAWANNA	954 RIDGE ROAD

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Spill #	Date	Spill Name	County	City	Address
41. 9911363	12/28/1999	SABIA RESIDENCE	Erie	LACKAWANNA	183 WEST ELMVIEW AVENUE
42. 9911445	12/31/1999	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill Information

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Region:9

Spill Number:9875456

Spill Date:03/13/1999

Spill Time:11:00 AM

Call Received Date:03/13/1999

**Time of Call
Received:**11:05 AM

Material Spilled

Spilled Units

WASH OIL

25 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:03/26/1999

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1999

Spill Information

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Region:9

Spill Number:9975409

Spill Date:09/01/1999

Spill Time:12:00 PM

Call Received Date:09/13/1999

**Time of Call
Received:**08:34 AM

Material Spilled

Spilled Units

#2 FUEL OIL

Unknown Gal.

Spill Name:BETHLEHEM STEEL - UST

Address:2558 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Tank Failure

Source:Other
Comm/Industrial

Resource:Groundwater

Waterbody:

Region Close Date:12/09/1999

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Spill Information

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Region:9

Spill Number:9907209

Spill Date:09/16/1999

Spill Time:12:33 PM

Call Received Date:09/16/1999

**Time of Call
Received:**01:46 PM

Material Spilled

UNKNOWN PETROLEUM

Spilled Units

Unknown Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Other

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:CRREK

Region Close Date:09/17/1999

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Region:9

Spill Number:9907540

Spill Date:09/22/1999

Spill Time:05:00 PM

Call Received Date:09/22/1999

**Time of Call
Received:**05:40 PM

Material Spilled

AMMONIA

Spilled Units

50 Gal.

Spill Name:BETHLEHEM COKE OVENS

Address:1951 HAMBURG TRPK

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:09/23/1999

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Spill Information

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Region:9

Spill Number:9908133

Spill Date:10/04/1999

Spill Time:11:00 PM

Call Received Date:10/05/1999

**Time of Call
Received:**07:21 AM

Material Spilled

DIESEL

Spilled Units

7500 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Vandalism

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/28/1999

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1999

Spill Information

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Region:9

Spill Number:9908382

Spill Date:10/10/1999

Spill Time:07:00 PM

Call Received Date:10/10/1999

**Time of Call
Received:**07:52 PM

Material Spilled

Spilled Units

LUBE OIL

5 Gal.

LUBRICATING OIL

5 Gal.

Spill Name:BETHLEHEM STEEL

Address:1941 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/12/1999

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	Spill #	Date	Spill Name	County	City	Address
1.	9912115	01/20/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
2.	9912155	01/21/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
3.	9912231	01/24/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
4.	9975662	01/27/2000	SUN STATION 0364-1743	Erie	LACKAWANNA	1329 ABBOTT ROAD
5.	9975663	01/28/2000	SAFETY KLEEN TRUCK	Erie	LACKAWANNA	41 NORTH GATES AVENUE
6.	9912381	01/28/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
7.	9912729	02/08/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
8.	9913014	02/15/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
9.	9913081	02/17/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
10.	9975685	02/18/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Search Results

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Spill #	Date	Spill Name	County	City	Address
11. 9913384	02/25/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
12. 9913378	02/25/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
13. 9913817	03/08/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
14. 9913913	03/09/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
15. 9975716	03/15/2000	LAKE ERIE DISTRIBUTORS	Erie	LACKAWANNA	22 SIMON AVENUE
16. 9975738	03/15/2000	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE
17. 0075023	03/17/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
18. 0000866	04/21/2000	TAXI AT SUNOCO STATION	Erie	LACKAWANNA	1329 ABBOTT AND RIDGE
19. 0001054	04/26/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
20. 0075098	05/18/2000	ODORS IN HOME	Erie	LACKAWANNA	18 MADISON STREET

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Spill #	Date	Spill Name	County	City	Address
21. 0002243	05/23/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
22. 0002303	05/24/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
23. 0003110	06/13/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
24. 0003569	06/22/2000	SEWAGE IN SMOKE CREEK	Erie	LACKAWANNA	3260 SOUTH PARK
25. 0075250	07/09/2000	NYSDOT PROJECT - SEWER	Erie	LACKAWANNA	ROUTE 5
26. 0004518	07/14/2000	WAREHOUSE SITE ASSESSMENT	Erie	LACKAWANNA	21 GATES AVENUE
27. 0075247	07/19/2000	NYSDOT PROJECT/CATCH BASI	Erie	LACKAWANNA	ROUTE 5 AT SECOND STREET
28. 0075256	07/24/2000	QUALITY PLAZA	Erie	LACKAWANNA	ABBOTT AND RIDGE ROADS
29. 0075269	07/27/2000	CITY ROW ON GATES AVENUE	Erie	LACKAWANNA	21 GATES AVENUE
30. 0075268	07/27/2000	CONTAMINATION IN ROW	Erie	LACKAWANNA	21 GATES AVENUE

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Spill #	Date	Spill Name	County	City	Address
31. 0006655	09/05/2000	TRUCK AT BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
32. 0075416	10/05/2000	CAN FIBRE	Erie	LACKAWANNA	15 NORTH STEELAWANNA AVE.
33. 0008498	10/20/2000	BETHLEHEM/C AND D BUILDIN	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
34. 0008887	10/31/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
35. 0008969	11/02/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
36. 0009396	11/15/2000	BUFFALO BRAKE BEAM	Erie	LACKAWANNA	400 INGHAM AVE
37. 0009416	11/16/2000	NATIONAL VACUUM/BETHLEHEM	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
38. 0009730	11/27/2000	COKE OVENS - TAR	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
39. 0009822	11/29/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
40. 0009974	12/04/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5

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Spill #	Date	Spill Name	County	City	Address
41. 0010051	12/06/2000	FIRST FLEET TRUCKING	Erie	LACKAWANNA	190 LACKAWANNA TOLL BARRI
42. 0010593	12/21/2000	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
43. 0010697	12/26/2000	BETHLEHELM STEEL	Erie	LACKAWANNA	1951 HAMBURG

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Spill Information

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Region:9

Spill Number:9912155

Spill Date:01/21/2000

Spill Time:07:25 AM

Call Received Date:01/21/2000

**Time of Call
Received:**08:07 AM

Material Spilled

AMMONIUM SULFATE

Spilled Units

Unknown Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other Non
Comm/Institutional

Resource:On Land

Waterbody:

Region Close Date:01/21/2000

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Spill Information

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Region:9

Spill Number:9975685

Spill Date:02/15/2000

Spill Time:12:00 PM

Call Received Date:02/18/2000

**Time of Call
Received:**09:15 AM

Material Spilled

Spilled Units

WASH OIL

200 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:LAKE ERIE

Region Close Date:07/10/2000

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Spill Information

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Region:9

Spill Number:9913384

Spill Date:02/25/2000

Spill Time:08:50 PM

Call Received Date:02/25/2000

**Time of Call
Received:**09:02 PM

Material Spilled

AMMONIUM SULFATE

Spilled Units

500 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:02/28/2000

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Region:9

Spill Number:0075023

Spill Date:03/01/2000

Spill Time:12:00 PM

Call Received Date:03/17/2000

**Time of Call
Received:**12:00 PM

Material Spilled

Spilled Units

HYDRAULIC OIL

0 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Railroad Car

Resource:On Land

Waterbody:

Region Close Date:04/17/2000

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Spill Information

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Region:9

Spill Number:0001054

Spill Date:04/26/2000

Spill Time:10:45 AM

Call Received Date:04/26/2000

**Time of Call
Received:**11:00 AM

Material Spilled

Spilled Units

TAR

10 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:05/01/2000

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2000

Spill Information

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Region:9

Spill Number:0002243

Spill Date:05/23/2000

Spill Time:10:00 AM

Call Received Date:05/23/2000

**Time of Call
Received:**10:25 AM

Material Spilled

Spilled Units

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Other

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:05/26/2000

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2000

Spill Information

[New Search](#)

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Region:9

Spill Number:0002303

Spill Date:05/24/2000

Spill Time:11:00 AM

Call Received Date:05/24/2000

**Time of Call
Received:**11:46 AM

Material Spilled

Spilled Units

COAL TAR PITCH VOLATILES

3 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:07/27/2000

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2000

Spill Information

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Region:9

Spill Number:0003110

Spill Date:06/13/2000

Spill Time:08:15 AM

Call Received Date:06/13/2000

**Time of Call
Received:**08:39 AM

Material Spilled

HYDRAULIC OIL

Spilled Units

200 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Commercial
Vehicle

Resource:On Land

Waterbody:

Region Close Date:07/26/2000

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2000

Spill Information

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Region:9

Spill Number:0006655

Spill Date:09/05/2000

Spill Time:12:50 PM

Call Received Date:09/05/2000

**Time of Call
Received:**02:01 PM

Material Spilled

Spilled Units

WASTE OIL

1 Gal.

Spill Name:TRUCK AT BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Commercial
Vehicle

Resource:Surface Water

Waterbody:LACKAWANNA SHIP CANA

Region Close Date:09/05/2000

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2000

Spill Information

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Region:9

Spill Number:0008498

Spill Date:10/20/2000

Spill Time:11:15 AM

Call Received Date:10/20/2000

**Time of Call
Received:**12:03 PM

Material Spilled

Spilled Units

WASTEWATER

5 Gal.

Spill Name:BETHLEHEM/C AND D BUILDIN

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:10/20/2000

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2000

Spill Information

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Region:9

Spill Number:0008969

Spill Date:11/02/2000

Spill Time:11:10 AM

Call Received Date:11/02/2000

**Time of Call
Received:**11:50 AM

Material Spilled

Spilled Units

WASTEWATER

10 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE RT5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Other

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:11/03/2000

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2000

Spill Information

[New Search](#)

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Region:9

Spill Number:0010697

Spill Date:12/23/2000

Spill Time:03:22 PM

Call Received Date:12/26/2000

**Time of Call
Received:**09:28 AM

Material Spilled

Spilled Units

TAR

75 Gal.

Spill Name:BETHLEHELM STEEL

Address:1951 HAMBURG

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Human Error

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:12/27/2000

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2001

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	Spill #	Date	Spill Name	County	City	Address
1.	0010865	01/03/2001	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
2.	0011379	01/19/2001	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
3.	0011481	01/24/2001	CANFIBRE	Erie	LACKAWANNA	15 NORTH STEELAWANNA AVE.
4.	0011700	01/30/2001	BETHLEHEM STEEL	Erie	LACKAWANNA	ROUTE 5
5.	0012657	02/27/2001	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
6.	0075648	03/07/2001	FRMR AUTO REPAIR SHOP	Erie	LACKAWANNA	2955 SOUTH PARK AVENUE
7.	0175001	04/02/2001	BETHLEHEM/SHIP CANAL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
8.	0100015	04/02/2001	LACKAWANNA SHIP CANAL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
9.	0175038	04/17/2001	ABBOTT ROAD PLAZA DUMPSTE	Erie	LACKAWANNA	ABBOTT ROAD
10.	0100799	04/20/2001	OIL IN RUSH CREEK	Erie	LACKAWANNA	ROUTE 5

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Spill #	Date	Spill Name	County	City	Address
11. 0101010	04/26/2001	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE RT5
12. 0101114	04/29/2001	ROCHESTER AND SOUTHERN DR	Erie	LACKAWANNA	ROUTE 5
13. 0101278	05/03/2001	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
14. 0175087	05/10/2001	SAFETY KLEEN	Erie	LACKAWANNA	41 NORTH GATES AVENUE
15. 0101991	05/21/2001	BETHLEHEM STEEL/COKE DIV	Erie	LACKAWANNA	2558 HAMBURG TRPK
16. 0102886	06/15/2001	BETH STEEL - SCRUB YARD	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
17. 0175183	07/02/2001	BETHLEHEM STEEL	Erie	LACKAWANNA	ROUTE 5
18. 0103630	07/04/2001	CAN FIBRE	Erie	LACKAWANNA	300 COMERACE DR
19. 0104243	07/20/2001	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
20. 0104728	08/02/2001	BETH STEEL	Erie	LACKAWANNA	1956 HAMBURG TN PK

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2001

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<div> First 10 Sites Prev 10 Sites </div>					
Spill #	Date	Spill Name	County	City	Address
21. 0105927	09/04/2001	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
22. 0175303	09/07/2001	TRACTOR TRAILER ACCIDENT	Erie	LACKAWANNA	END OF CALDWELL
23. 0106339	09/16/2001	SMOKES CREEK	Erie	LACKAWANNA	WOOD ST OFF SOUTH PARK AV
24. 0106759	09/28/2001	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TPK
25. 0175341	10/02/2001	PRIVATE RESIDENCE	Erie	LACKAWANNA	644 RIDGE ROAD
26. 0175344	10/04/2001	JACK ADKINS FORD	Erie	LACKAWANNA	1212 ABBOTT RD.
27. 0107019	10/06/2001	BETHLEHAM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
28. 0175381	10/18/2001	GAS STATION	Erie	LACKAWANNA	3473 SOUTH PARK
29. 0108201	11/13/2001	EXXON/MOBIL	Erie	LACKAWANNA	1361 ABBOTT RD
30. 0109240	12/18/2001	POLE #5-5-1	Erie	LACKAWANNA	RT 5 & RIDGE RD

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2001

Spill Information

[New Search](#)

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Region:9

Spill Number:0011700

Spill Date:01/30/2001

Spill Time:10:00 AM

Call Received Date:01/30/2001

**Time of Call
Received:**11:03 AM

Material Spilled

Spilled Units

BENZENE

Unknown Gal.

BENZOL

Unknown Gal.

Spill Name:BETHLEHEM STEEL

Address:ROUTE 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:Air

Waterbody:

Region Close Date:01/30/2001

[New Search](#)

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2001

Spill Information

[New Search](#)

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Region:9

Spill Number:0175001

Spill Date:04/02/2001

Spill Time:08:00 AM

Call Received Date:04/02/2001

**Time of Call
Received:**10:36 AM

Material Spilled

UNKNOWN PETROLEUM

Spilled Units

5 Gal.

Spill Name:BETHLEHEM/SHIP CANAL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:LACKAWANNA SHIP CANA

Region Close Date:04/02/2001

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2001

Spill Information

[New Search](#)

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Region:9

Spill Number:0175183

Spill Date:07/01/2001

Spill Time:12:00 PM

Call Received Date:07/02/2001

**Time of Call
Received:**01:35 PM

Material Spilled
UNKNOWN PETROLEUM

Spilled Units
Unknown Gal.

Spill Name:BETHLEHEM STEEL

Address:ROUTE 5

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Unknown

Resource:Surface Water

Waterbody:CREEK

Region Close Date:07/03/2001

[New Search](#)

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2001

Spill Information

[New Search](#)

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Region:9

Spill Number:0105927

Spill Date:09/04/2001

Spill Time:08:00 AM

Call Received Date:09/04/2001

**Time of Call
Received:**08:21 AM

Material Spilled

Spilled Units

WASH OIL

100 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:09/10/2001

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2002

Search Results

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	Spill #	Date	Spill Name	County	City	Address
1.	0175537	03/08/2002	SUNOCO	Erie	LACKAWANNA	1329 ABBOTT ROAD
2.	0111748	03/13/2002	LACKAWANNA SHIP CANAL	Erie	LACKAWANNA	HAMBURG TURNPIKE
3.	0112283	03/29/2002	OIL TO DRIVEWAY	Erie	LACKAWANNA	78 MEADOWBROOK LANE
4.	0200411	04/12/2002	LAKE FRONT RECYCLING	Erie	LACKAWANNA	COMMERCE DR
5.	0275048	04/30/2002	GRECH RESIDENCE	Erie	LACKAWANNA	24 DELLA
6.	0201338	05/06/2002	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TRPK
7.	0202301	06/03/2002	BETHLEHEM STEEL	Erie	LACKAWANNA	1951 HAMBURG TURNPIKE
8.	0275119	06/04/2002	BETHLEHEM STEEL	Erie	LACKAWANNA	400 HAMBURG TURNPIKE
9.	0202415	06/06/2002	CAN FIBER	Erie	LACKAWANNA	300 COMMERES DR
10.	0275129	06/10/2002	SOUTH BUFFALO RAILWAY	Erie	LACKAWANNA	BETHLEHEM STEEL TRACK 832

[New Search](#)

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2002

Search Results

15 results found

[Refine This Search](#)

First 10 Sites

Prev 10 Sites

Spill #	Date	Spill Name	County	City	Address
11. 0275158	06/21/2002	SENECA YARD - NYSDOT	Erie	LACKAWANNA	RIDGE ROAD
12. 0275186	07/03/2002	KWIK FILL - M-0330	Erie	LACKAWANNA	1131 RIDGE ROAD
13. 0275204	07/16/2002	WASTE OIL ON ROAD	Erie	LACKAWANNA	IF0 59 SHANNON DRIVE
14. 0275236	08/06/2002	BETHLEHEM STEEL COMPLEX	Erie	LACKAWANNA	HIGHWAY 9
15. 0205083	08/14/2002	CANFIBER	Erie	LACKAWANNA	300 COMMERCE AVE

[New Search](#)

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2002

Spill Information

[New Search](#)

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Region:9

Spill Number:0201338

Spill Date:05/06/2002

Spill Time:02:40 PM

Call Received Date:05/06/2002

**Time of Call
Received:**03:13 PM

Material Spilled

Spilled Units

UNKNOWN PETROLEUM

100 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TRPK

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:

[New Search](#)

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2002

Spill Information

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Region:9

Spill Number:0202301

Spill Date:06/03/2002

Spill Time:01:30 PM

Call Received Date:06/03/2002

**Time of Call
Received:**02:42 PM

Material Spilled

UNKNOWN PETROLEUM

Spilled Units

Unknown Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other
Comm/Industrial

Resource:Surface Water

Waterbody:NONE

Region Close Date:

[New Search](#)

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2002

Spill Information

[New Search](#)

[Return to Spills Database Home Page](#)

Region:9

Spill Number:0275119

Spill Date:06/04/2002

Spill Time:12:00 PM

Call Received Date:06/04/2002

**Time of Call
Received:**12:25 PM

Material Spilled
HYDRAULIC OIL

Spilled Units
5 Gal.

Spill Name:BETHLEHEM STEEL

Address:400 HAMBURG TURNPIKE

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:06/04/2002

[New Search](#)

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2002

Spill Information

[New Search](#)

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Region:9

Spill Number:0275129

Spill Date:06/10/2002

Spill Time:11:00 AM

Call Received Date:06/10/2002

**Time of Call
Received:**12:41 PM

Material Spilled
HYDRAULIC OIL

Spilled Units
30 Gal.

Spill Name:SOUTH BUFFALO RAILWAY

Address:BETHLEHEM STEEL TRACK 832

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Railroad Car

Resource:On Land

Waterbody:

Region Close Date:

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2002

Spill Information

[New Search](#)

[Return to Spills Database Home Page](#)

Region:9

Spill Number:0275236

Spill Date:08/06/2002

Spill Time:08:30 AM

Call Received Date:08/06/2002

**Time of Call
Received:**09:39 AM

Material Spilled

HYDRAULIC OIL

Spilled Units

20 Gal.

Spill Name:BETHLEHEM STEEL COMPLEX

Address:HIGHWAY 9

City:LACKAWANNA

County:Erie

[View Map](#)

Cause:Equipment Failure

Source:Other
Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:08/08/2002

[New Search](#)

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2002

Spill Information

[New Search](#)

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Region:9

Spill Number:0110849

Spill Date:02/13/2002

Spill Time:09:00 AM

Call Received Date:02/13/2002

Time of Call

Received:02:11 PM

Material Spilled

OTHER PETROLEUM

Spilled Units

50 Gal.

Spill Name:BETHLEHEM STEEL

Address:1951 HAMBURG TRNPK

City:LACKWANA

County:Erie

[View Map](#)

Cause:Unknown

Source:Other

Comm/Industrial

Resource:On Land

Waterbody:

Region Close Date:11/15/2002

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APPENDIX A.3

CLIMATOLOGICAL DATA

FIGURE 2-1a
TEMPERATURE
Daily Data
Based on BSC Weather Station Data

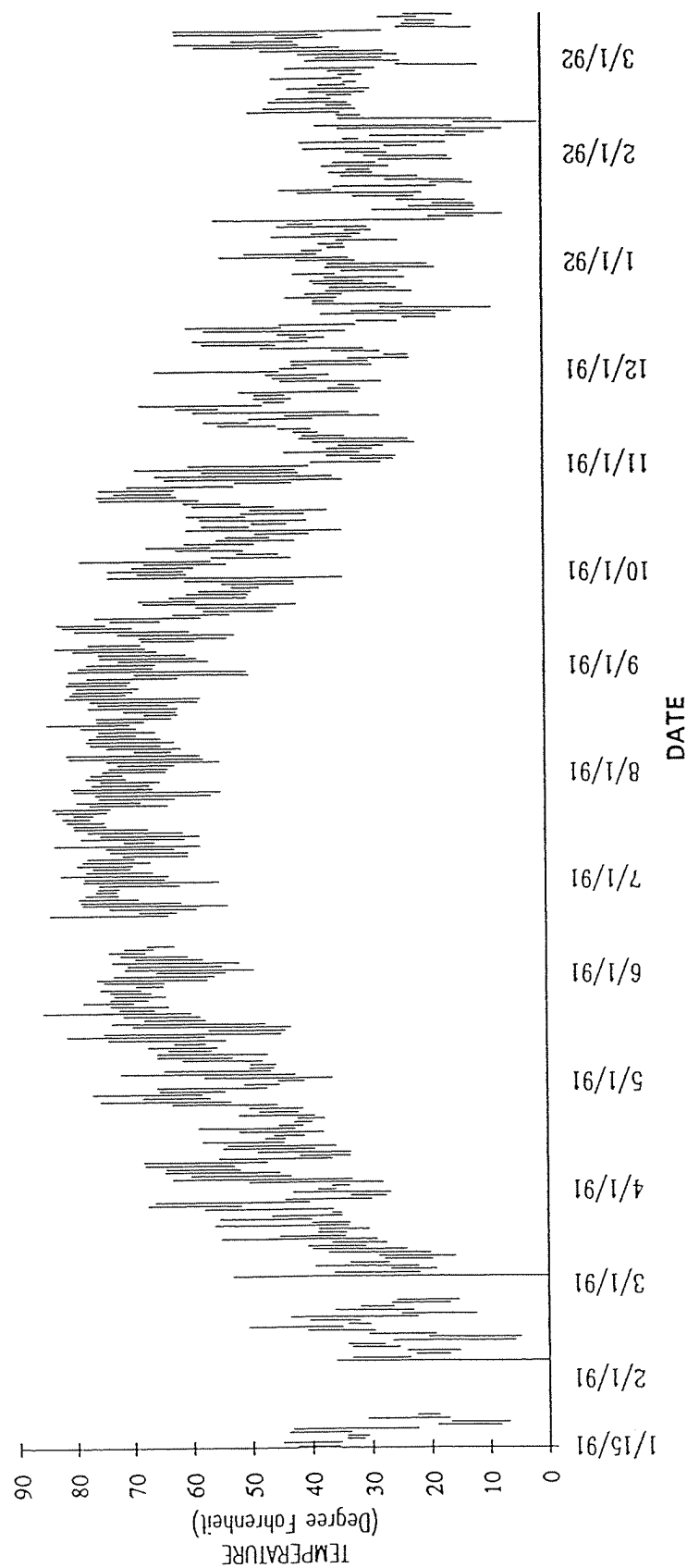


FIGURE 2-1b
TEMPERATURE
 Daily Data
 Based on Buffalo Airport Data (NOAA)

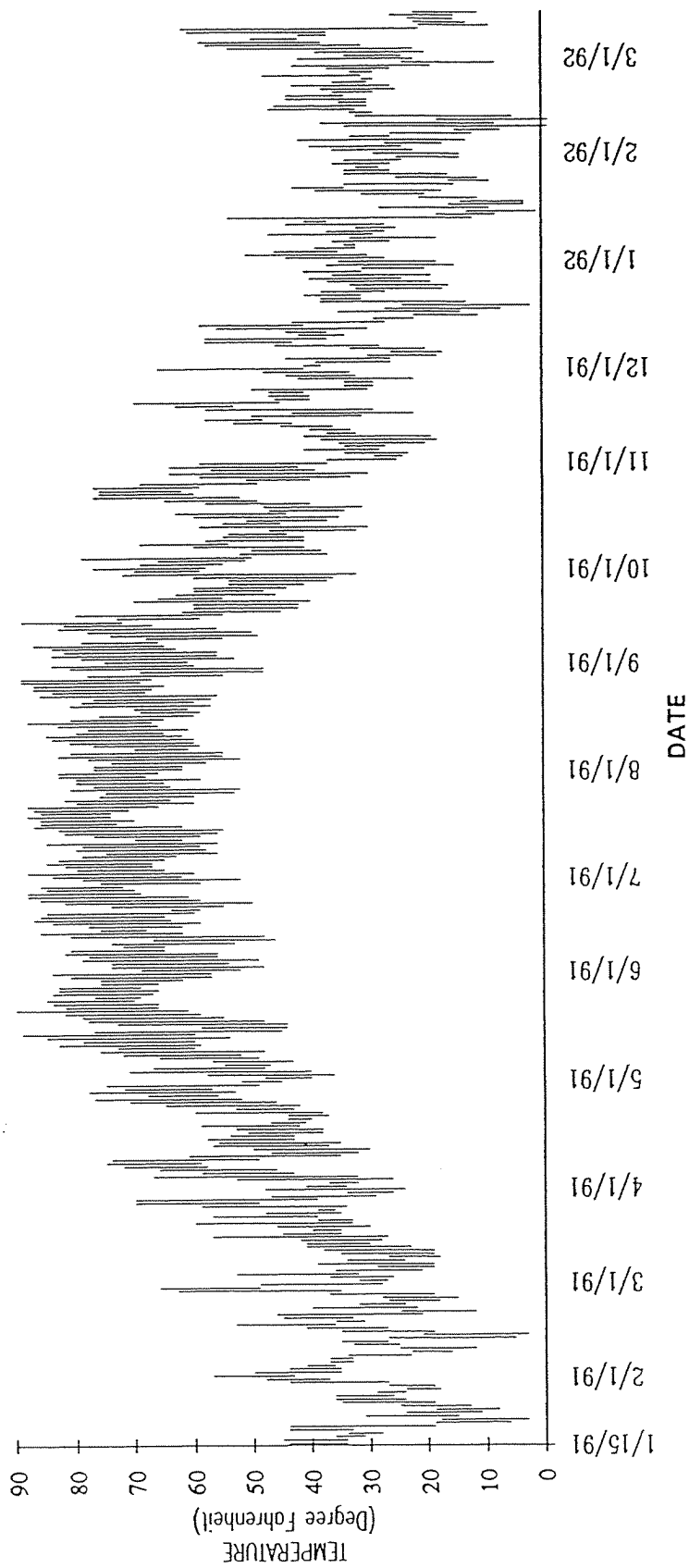


FIGURE 2-1c
PRECIPITATION RECORDED AT THE BSC SITE
(Jan. '91 - Mar. '92)

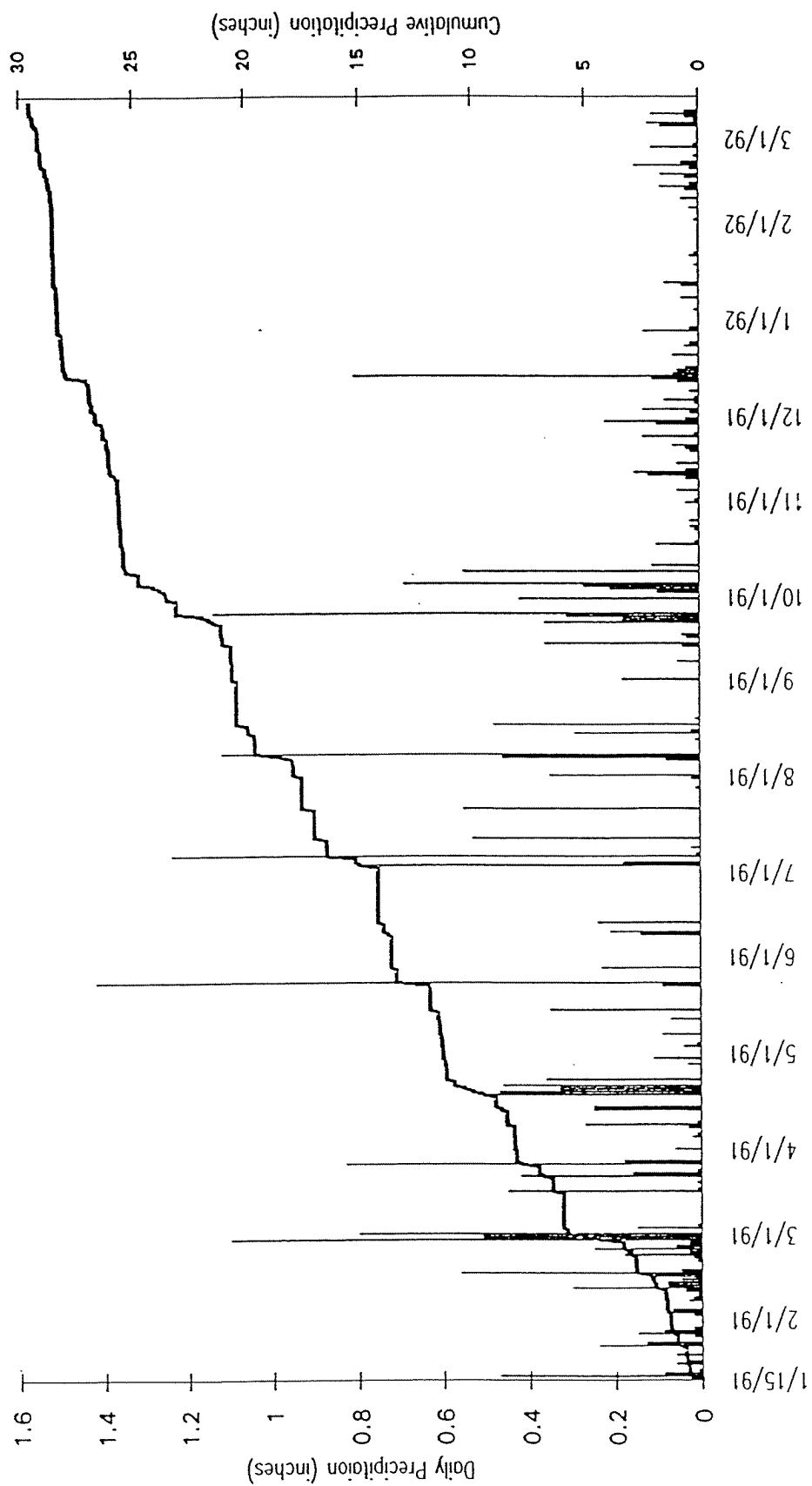


FIGURE 2-2a
COMPARISON OF MAJOR PRECIPITATION EVENT:
BUFFALO AIRPORT VS BSC WEATHER STATION

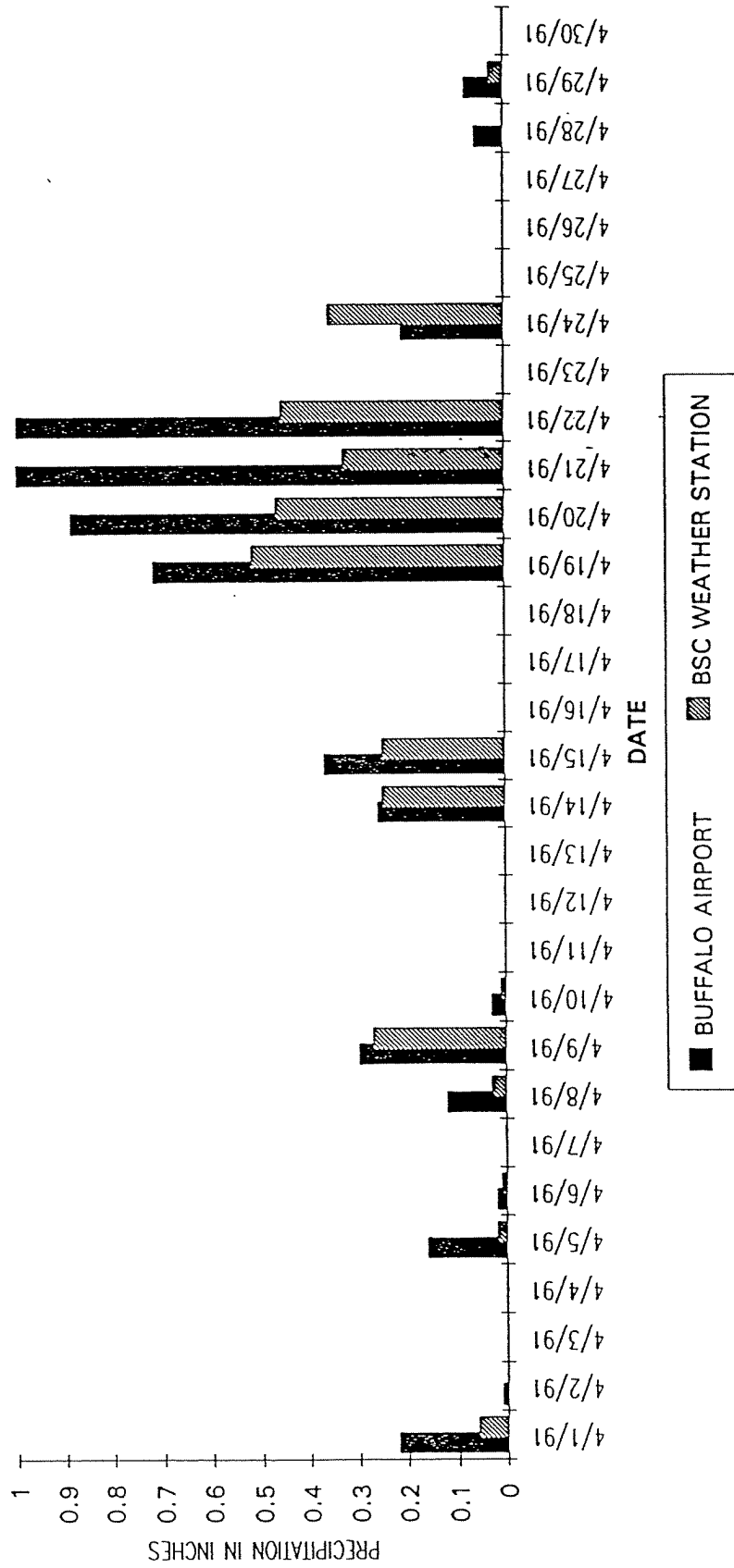


FIGURE 2-2b
COMPARISON OF MAJOR PRECIPITATION EVENT:
BUFFALO AIRPORT VS BSC WEATHER STATION

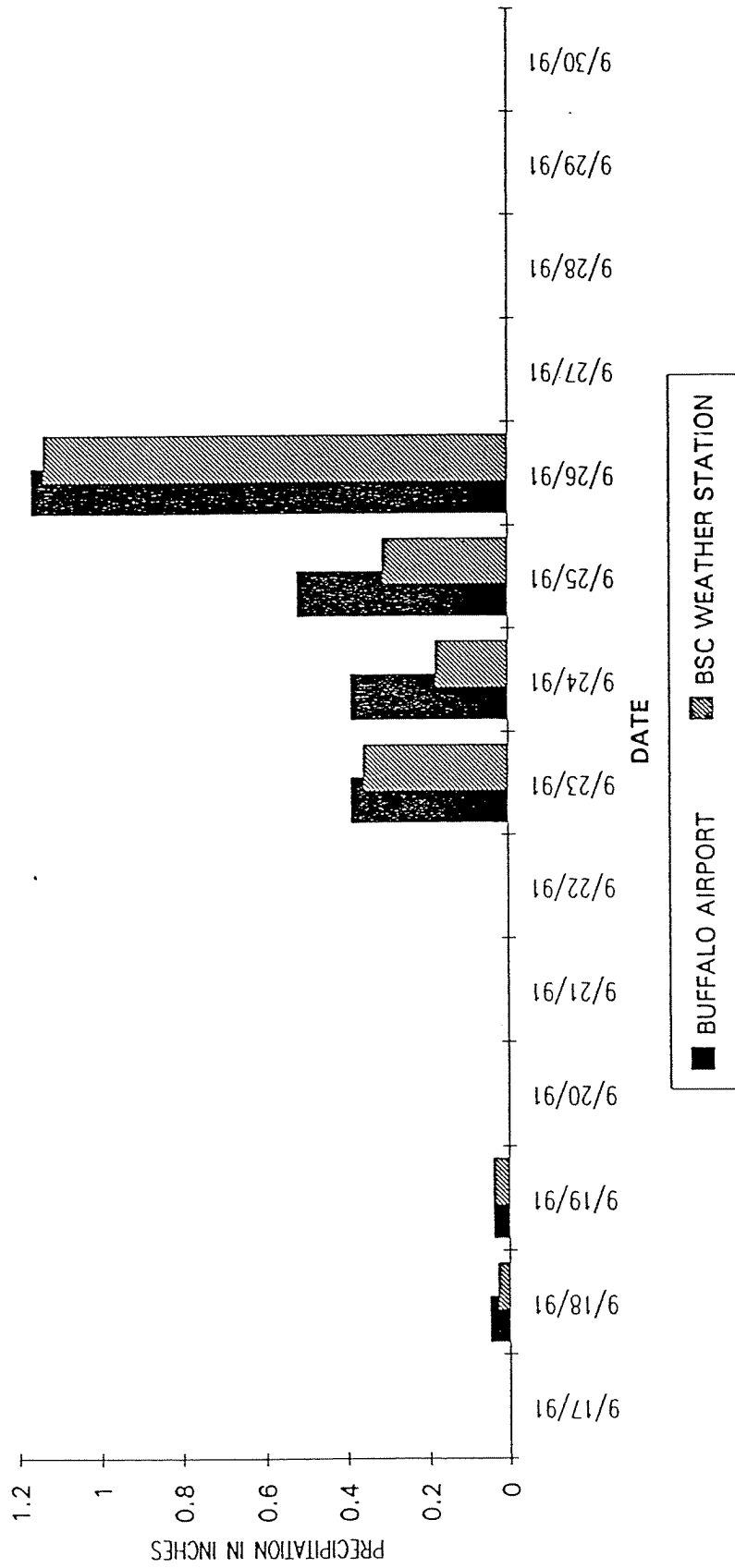


FIGURE 2-2c
COMPARISON OF MAJOR PRECIPITATION EVENT:
BUFFALO AIRPORT VS BSC WEATHER STATION

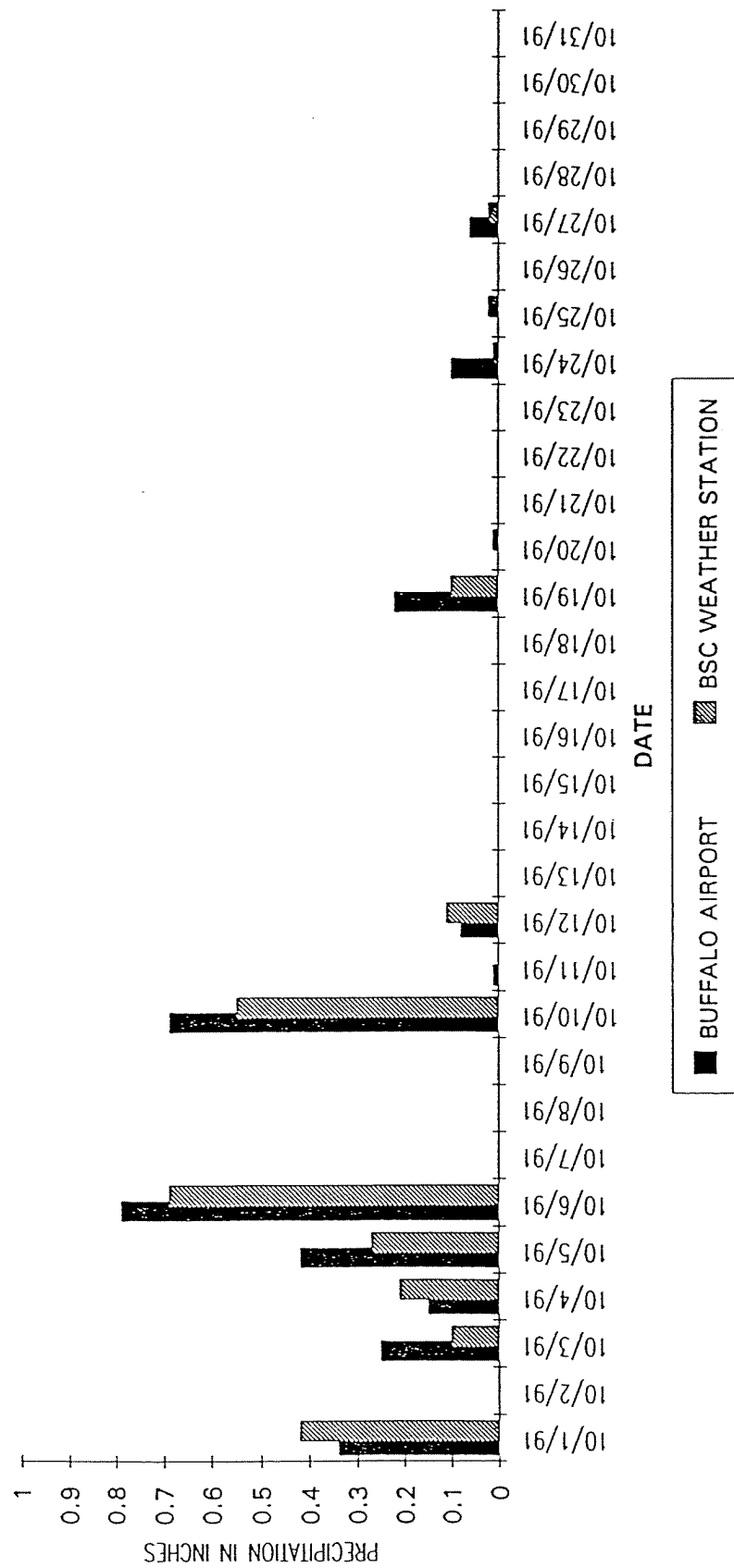
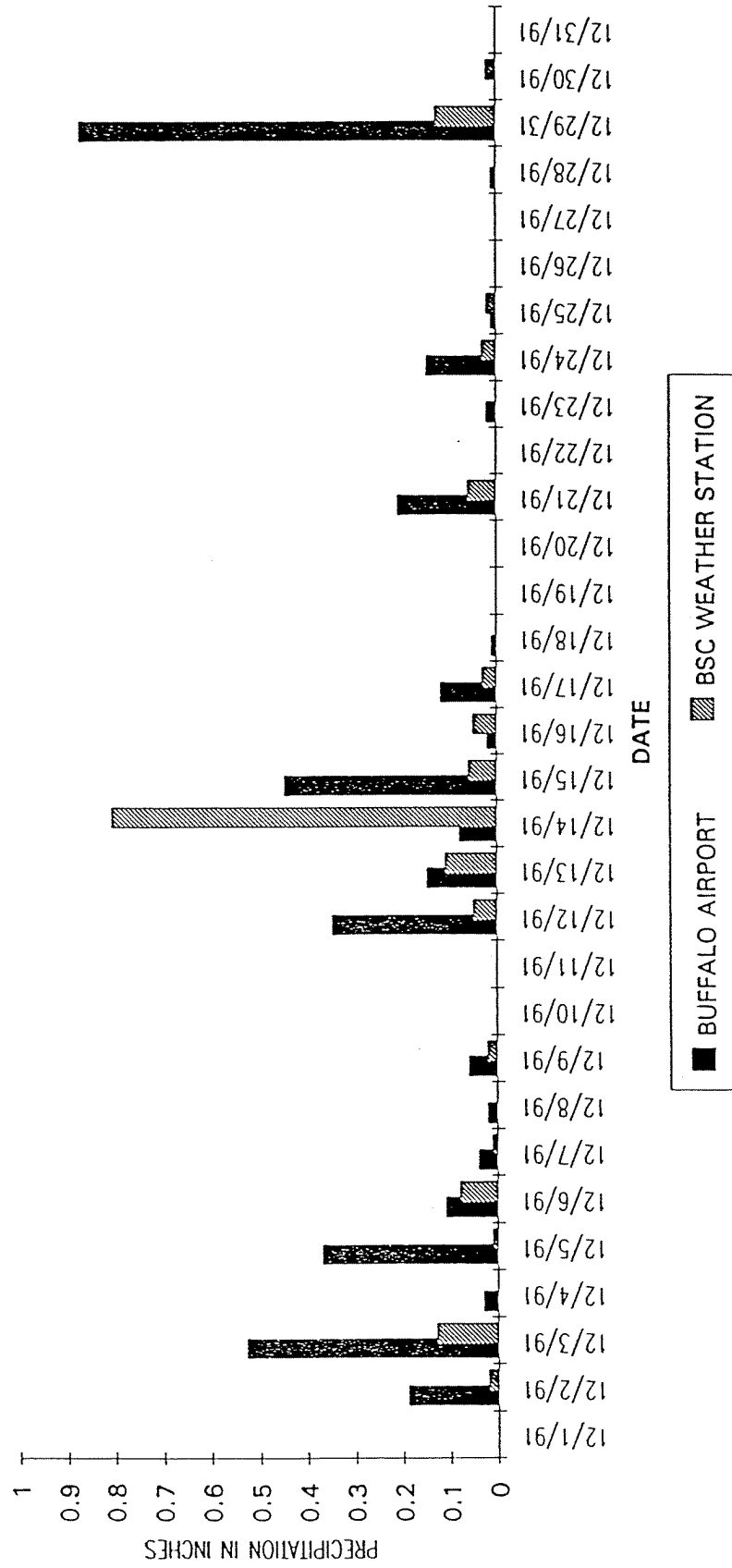
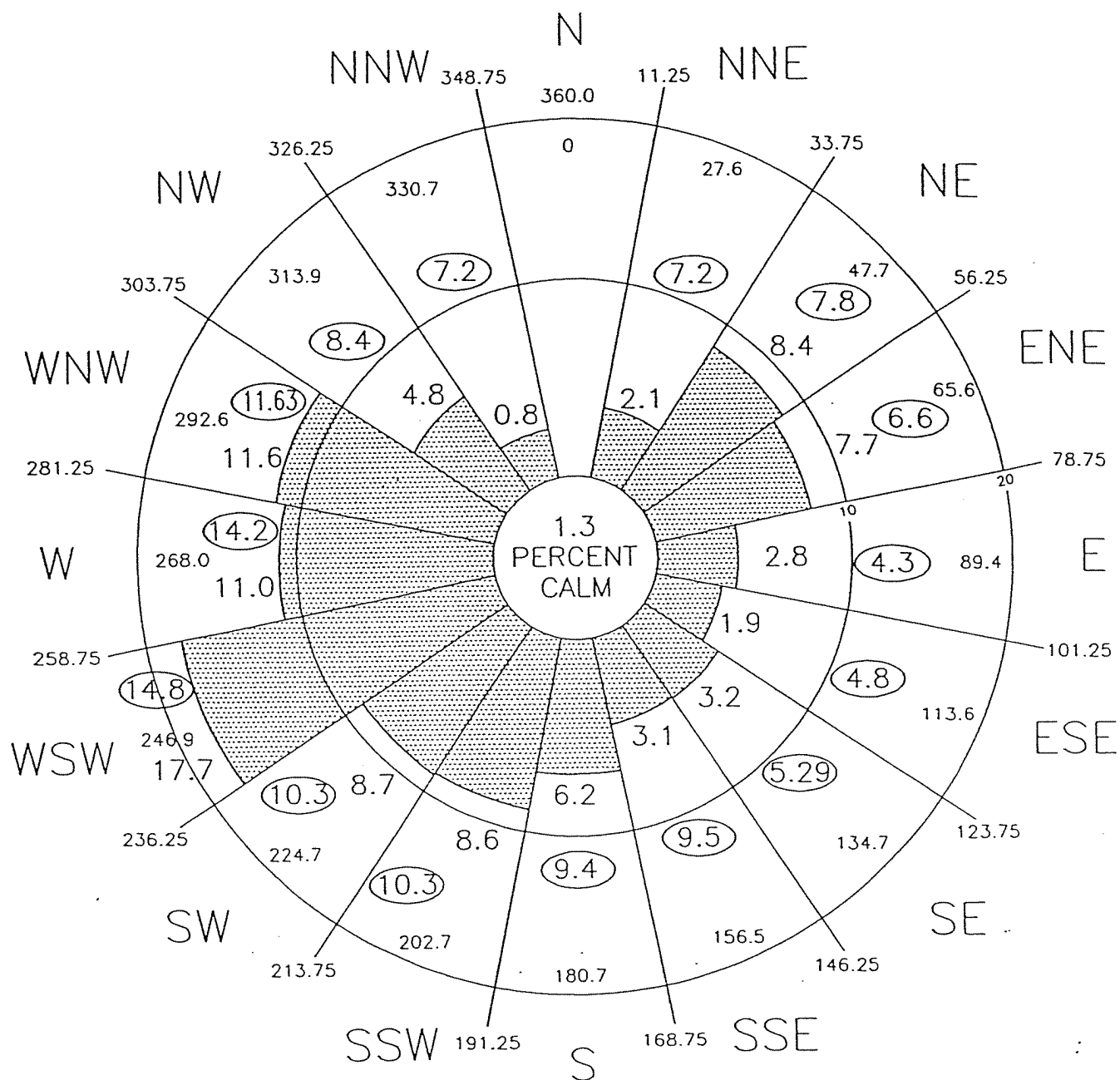


FIGURE 2-2d
COMPARISON OF MAJOR PRECIPITATION EVENT:
BUFFALO AIRPORT VS BSC WEATHER STATION





KEY:

12.9 = PERCENT OCCURRENCE

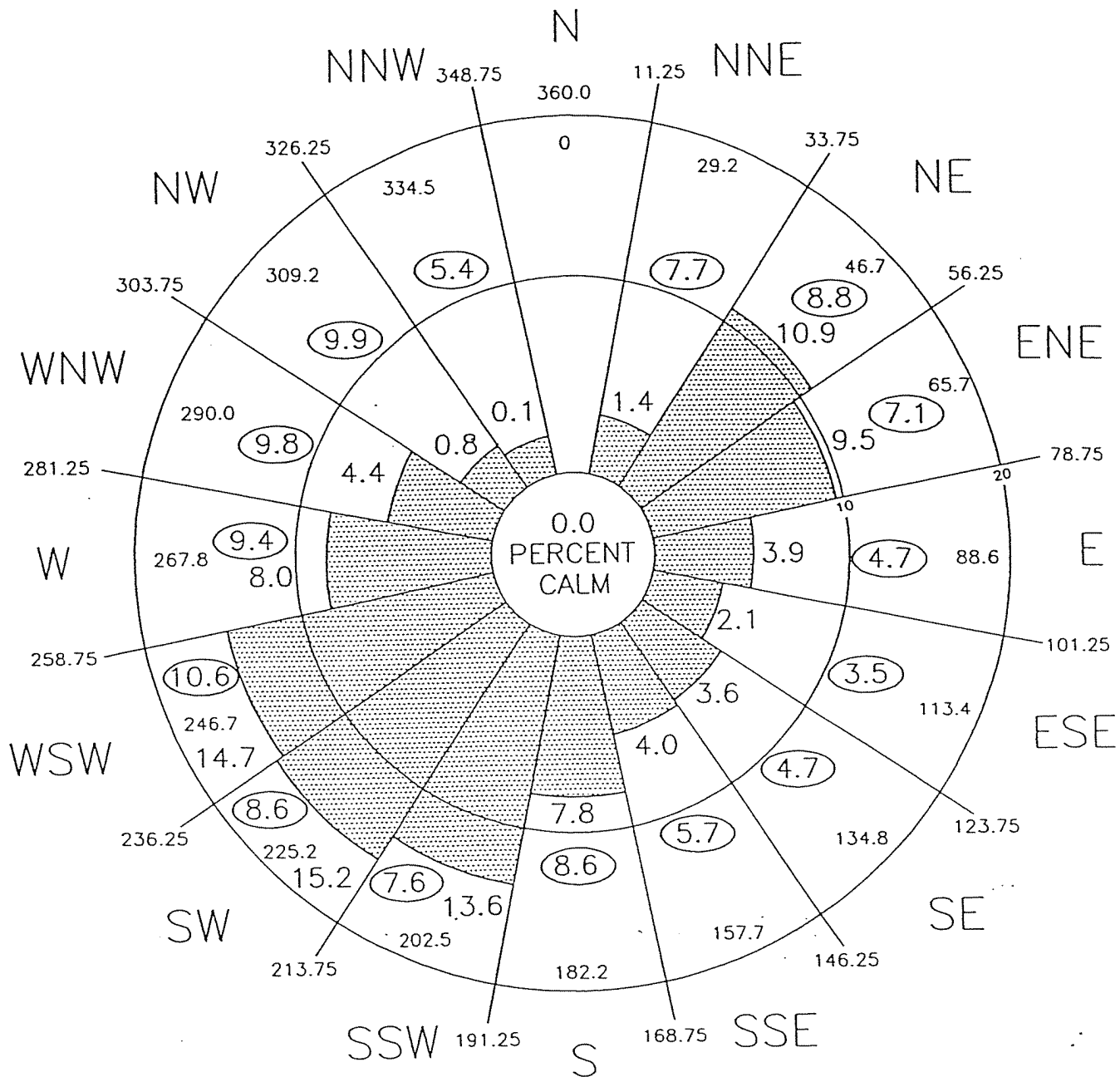
247.0 = AVERAGE DIRECTION

(12.9) = AVERAGE INTENSITY (MPH)

FIGURE 2-3a

WIND FREQUENCY ROSE

Based on BSC Weather Station Data
January 15, 1991 - March 31, 1991



KEY:

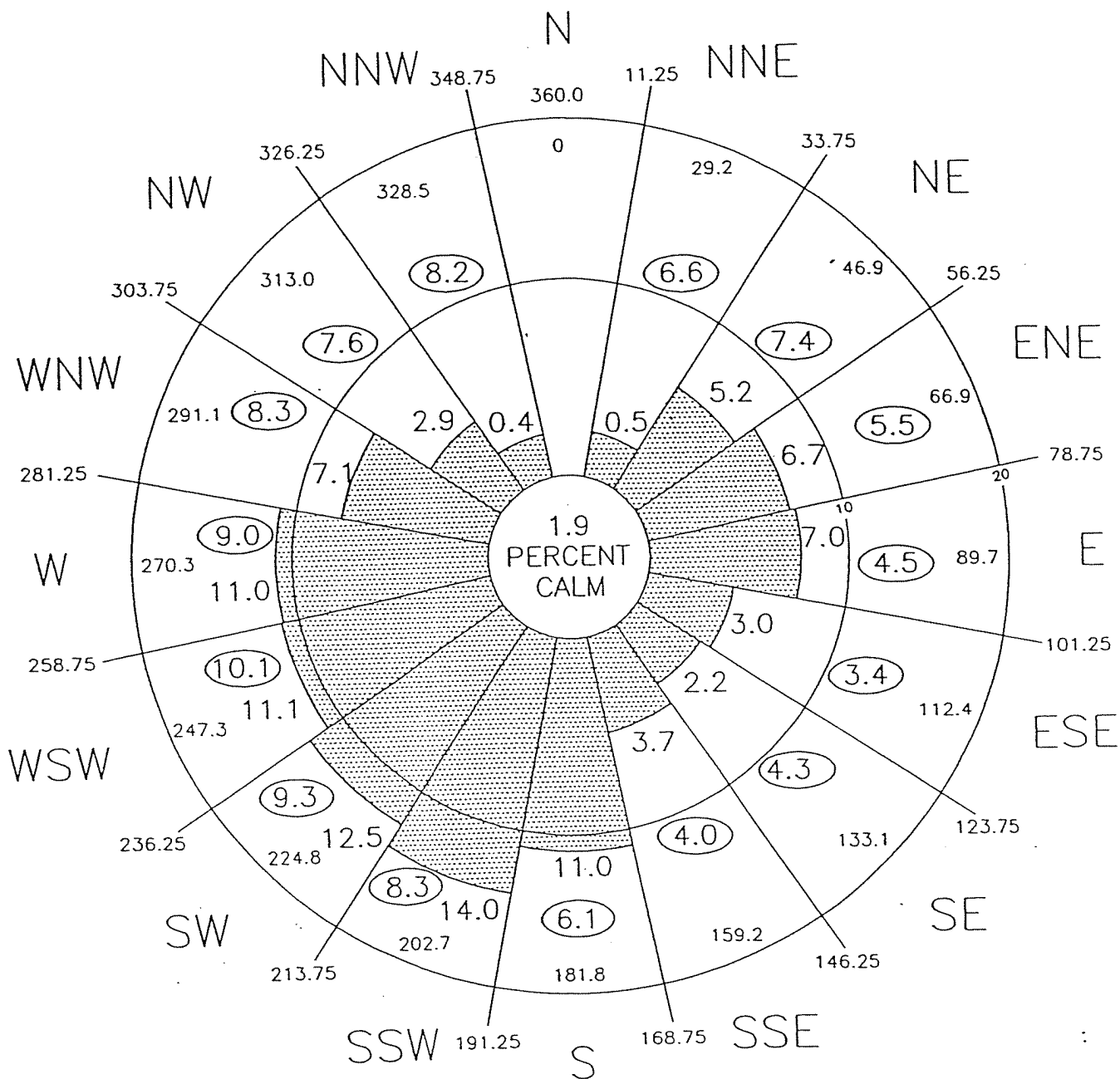
12.9 = PERCENT OCCURRENCE

247.0 = AVERAGE DIRECTION

(12.9) = AVERAGE INTENSITY (MPH)

FIGURE 2-3b

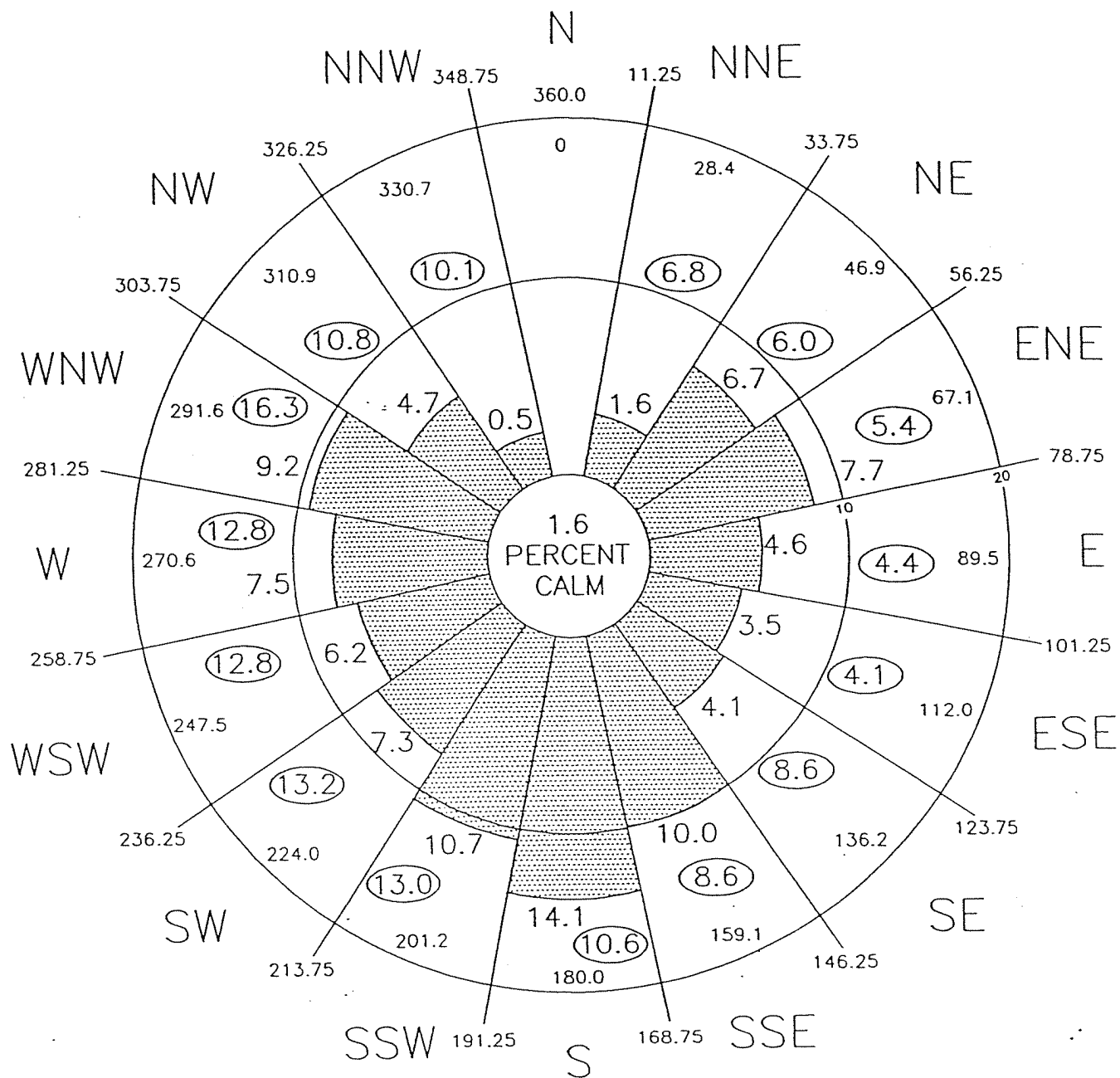
WIND FREQUENCY ROSE
Based on BSC Weather Station Data
April 1, 1991 - June 30, 1991



KEY:

- 12.9 = PERCENT OCCURRENCE
- 247.0 = AVERAGE DIRECTION
- (12.9) = AVERAGE INTENSITY (MPH)

FIGURE 2-3c
WIND FREQUENCY ROSE
 Based on BSC Weather Station Data
 July 1, 1991 - September 30, 1991



KEY:

12.9 = PERCENT OCCURRENCE

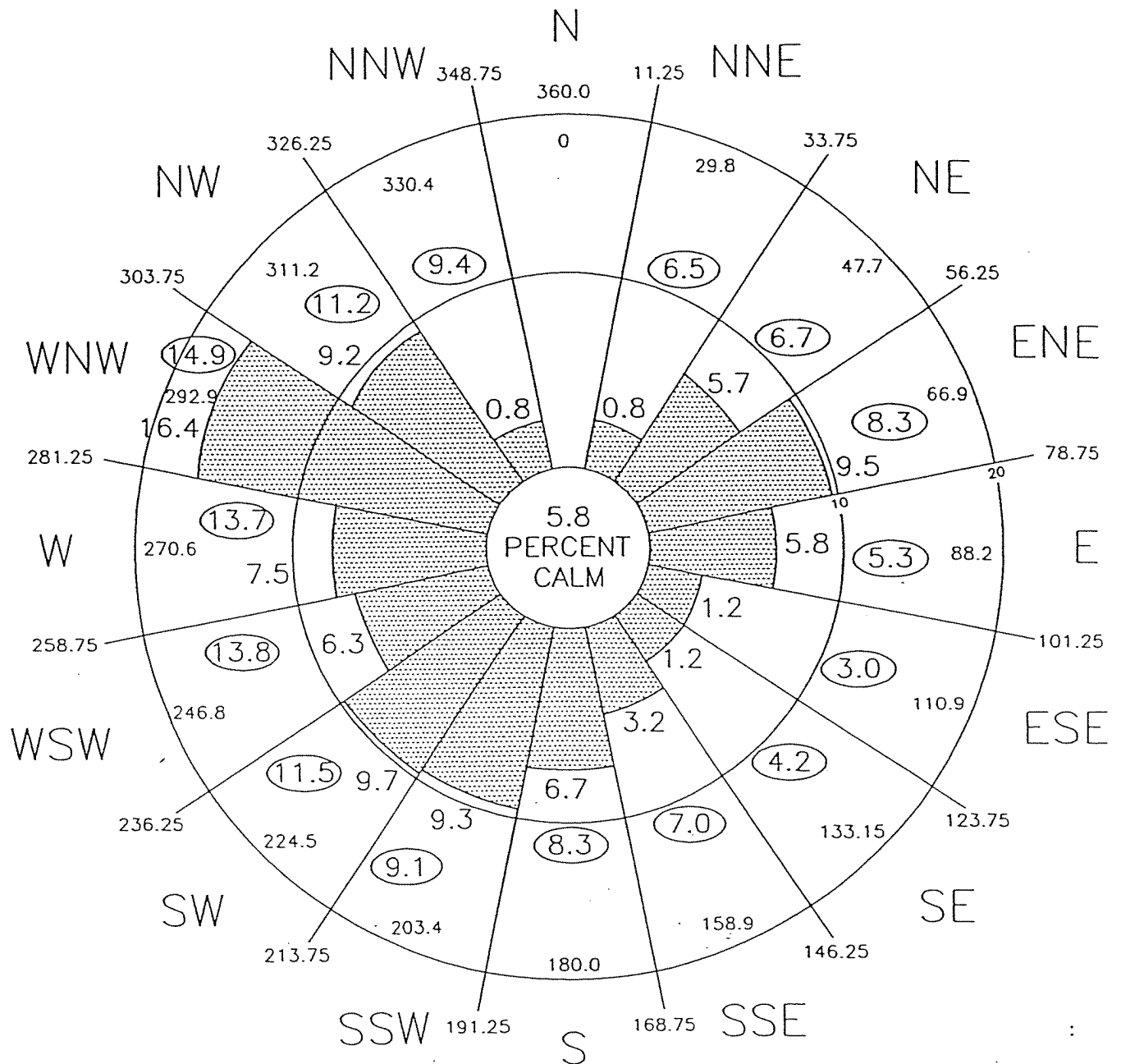
247.0 = AVERAGE DIRECTION

(12.9) = AVERAGE INTENSITY (MPH)

FIGURE 2-3d

WIND FREQUENCY ROSE

Based on BSC Weather Station Data
October 1, 1991 - December 31, 1991



KEY:

12.9 = PERCENT OCCURRENCE

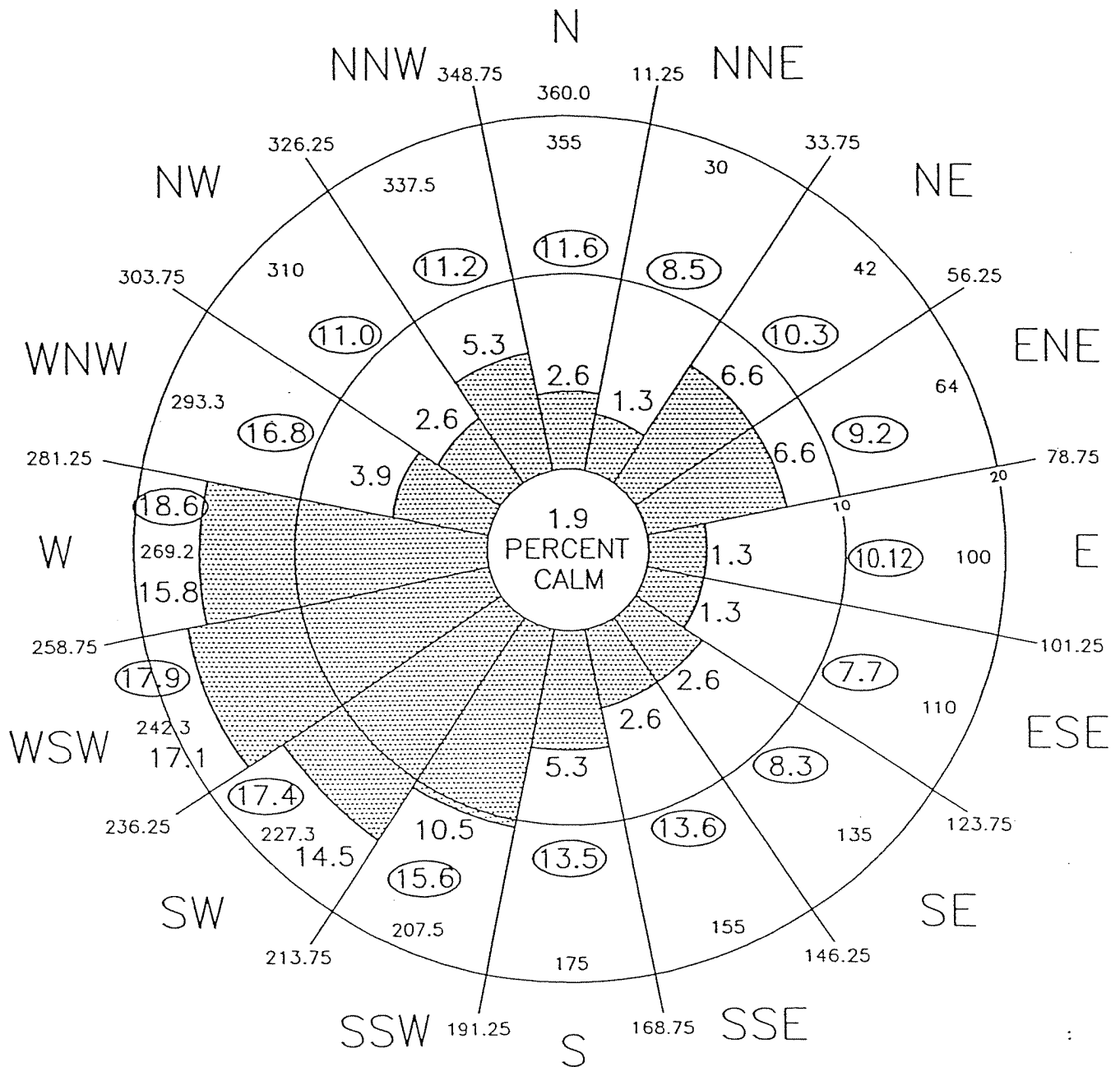
247.0 = AVERAGE DIRECTION

(12.9) = AVERAGE INTENSITY (MPH)

FIGURE 2-3e

WIND FREQUENCY ROSE

Based on BSC Weather Station Data
January 1, 1992 - March 15, 1992



KEY:

12.9 = PERCENT OCCURRENCE

247.0 = AVERAGE DIRECTION

(12.9) = AVERAGE INTENSITY (MPH)

FIGURE 2-3f

WIND FREQUENCY ROSE
Based on Buffalo Airport Data (NOAA)
January 15, 1991 - March 31, 1991

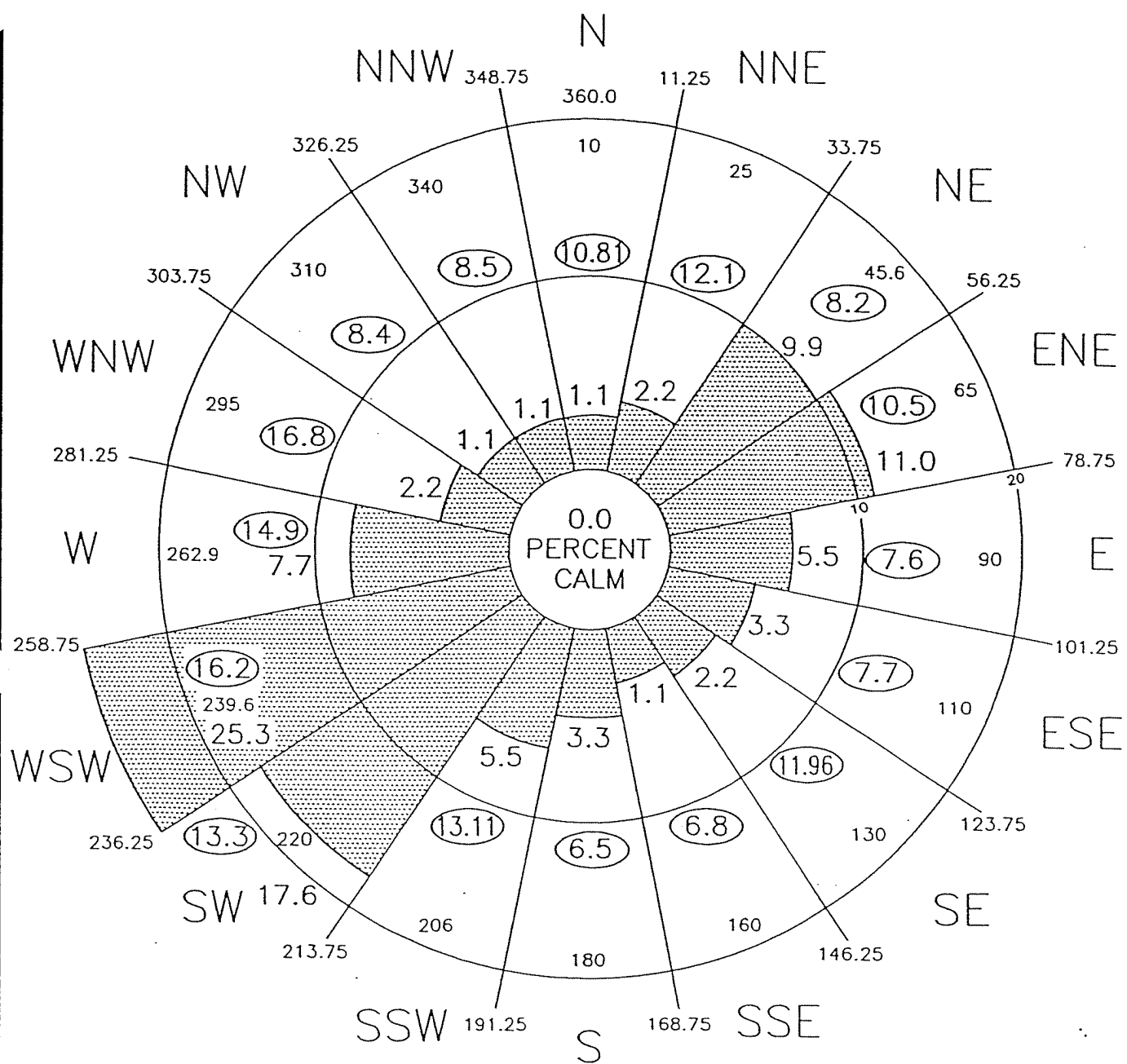


FIGURE 2-3g
WIND FREQUENCY ROSE
 Based on Buffalo Airport Data (NOAA)
 April 1, 1991 - June 30, 1991

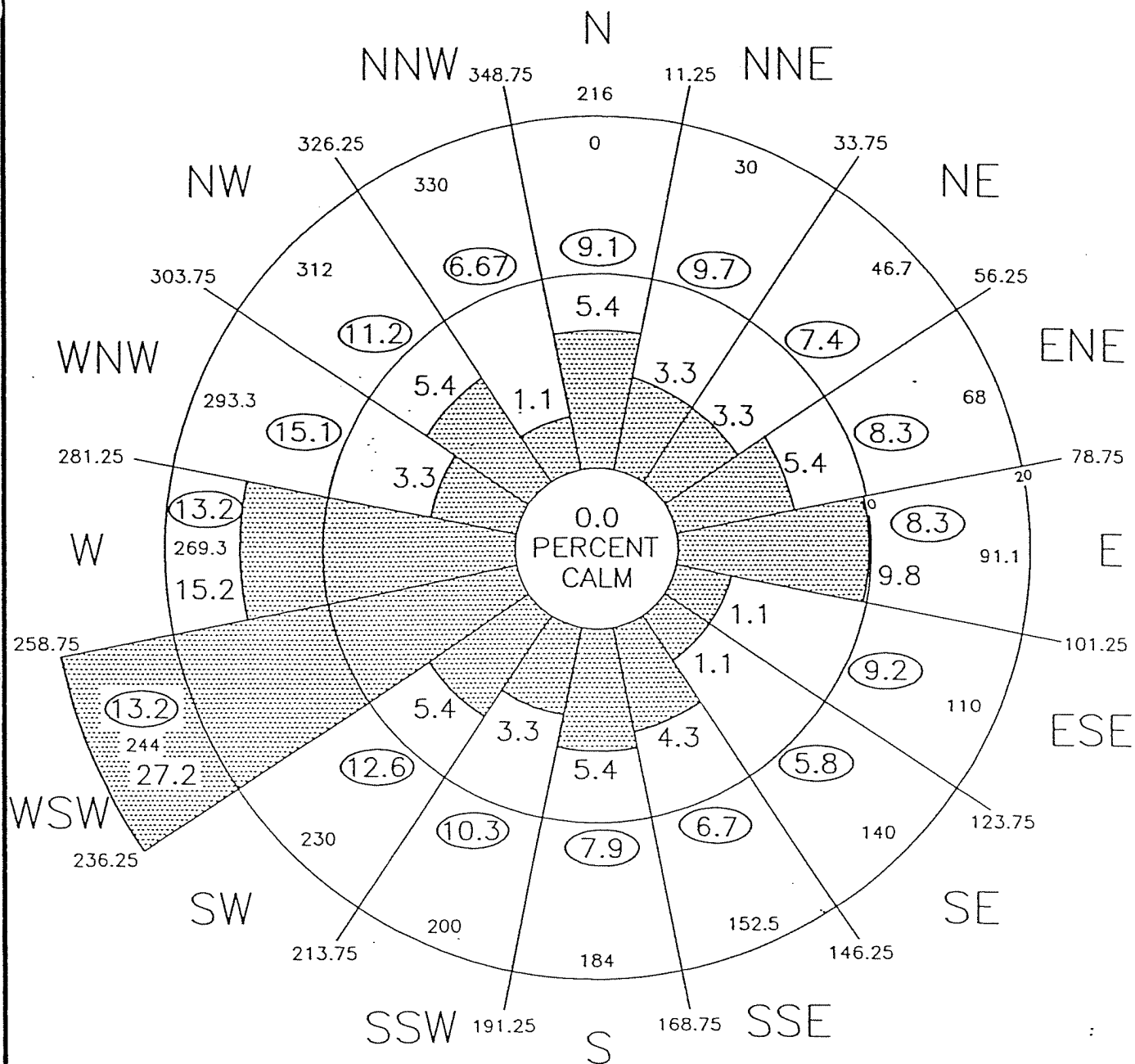
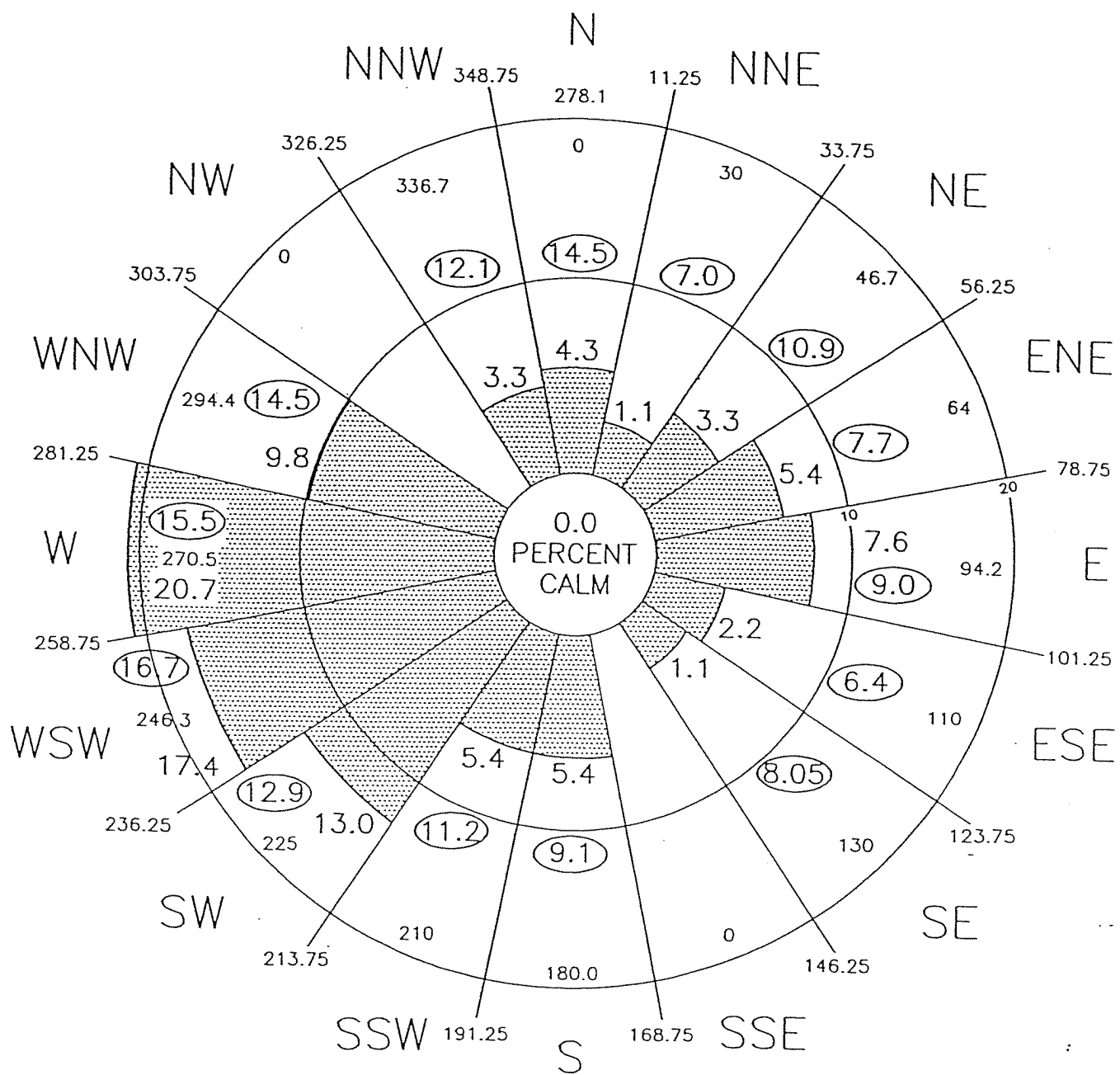


FIGURE 2-3h
 WIND FREQUENCY ROSE
 Based on Buffalo Airport Data (NOAA)
 July 1, 1991 - September 30, 1991



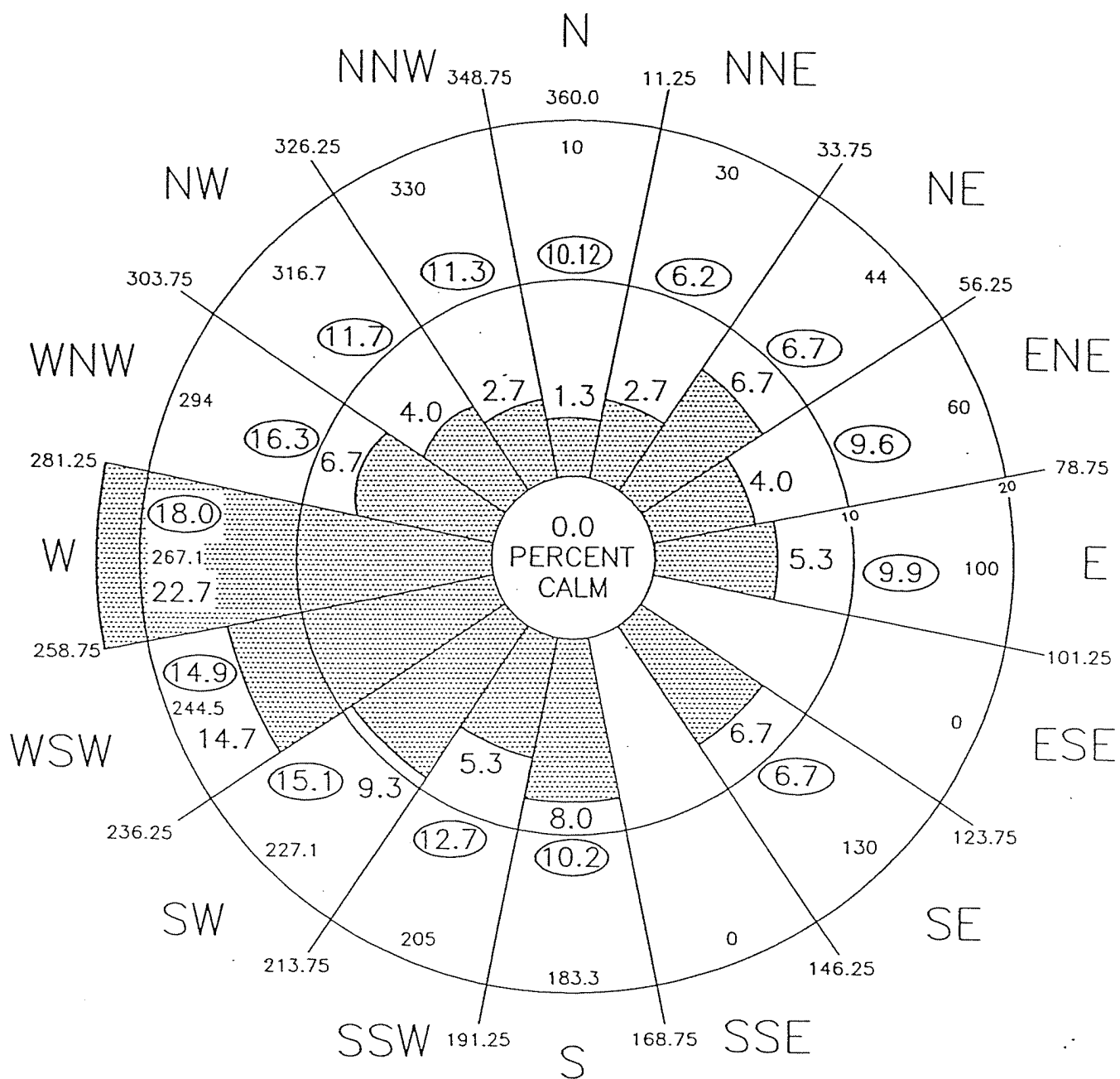
KEY:

12.9 = PERCENT OCCURRENCE

247.0 = AVERAGE DIRECTION

(12.9) = AVERAGE INTENSITY (MPH)

FIGURE 2-3i
WIND FREQUENCY ROSE
Based on Buffalo Airport Data (NOAA)
October 1, 1991 - December 31, 1991



KEY:

12.9 = PERCENT OCCURRENCE

247.0 = AVERAGE DIRECTION

(12.9) = AVERAGE INTENSITY (MPH)

FIGURE 2-3J
WIND FREQUENCY ROSE
Based on Buffalo Airport Data (NOAA)
January 1, 1992 - March 15, 1992

APPENDIX A.4

POTABLE WATER WELL SURVEY

RECORD OF TELEPHONE CONVERSATION

DATE 1/13/99 JOB NO.: 00120 - P5-2060
RECORDED BY: John Boyd ^{DAMES + MOORE} OWNER/CLIENT: BSC Lachar & Associates
TALKED WITH: various - see below OF _____
NATURE OF CALL: INCOMING ☐ OUTGOING ☒ PHONE # _____

ROUTE TO: INFORMATION ACTION

MAIN SUBJECT OF CALL: Potable water wells

ITEMS DISCUSSED:

City of Buffalo - water Division - Engineering 851-4766
DAVE Segal 851-4715. Restrictions for wells in
City? I believe so but check w/ Paul
Garcia. Don't know of any wells in City.
Pauls no. 851-4766
Paul Garcia water Engineer. Don't know of any
private wells. I know of one was a well, can't
connect to public system. NOT aware of any
other restrictions. Check w/ John Finster of
 Erie City Health dept. 858 7671 -

RECORD OF TELEPHONE CONVERSATION

DATE: 1/27/99 TIME: 1000 JOB NO.: 00120-195-2060
 RECORDED BY: J. W. Moore ^{DAMES + MOORE} OWNER/CLIENT: BSC
 TALKED WITH: Paul SHANK OF SHANK well drilling

NATURE OF CALL: INCOMING ☐ OUTGOING ☐ PHONE # _____

ROUTE TO: INFORMATION ACTIONS

MAIN SUBJECT OF CALL: INFO on Buffalo-Pittsburg RR water well

ITEMS DISCUSSED: I drilled a rock well for Buffalo Pittsburg RR last year
no other water supply wells I am aware of

except S Park Ave a Diney - ~~off~~ about 20 years ^{now} ago
AND S Park Ave Sorento Cheese -

3 Rock wells used for the boilers. 15-20 years ago wells were
used the condensate from the boilers for washing cheese.
6-7 miles from BSC

Sorento Cheese - Co. 2375 S Park Ave. 823626
Between Ridge & Tiff.

PAST ^{RESTORATION} ~~Grounds~~ - Now

1/2 mile away
Engineering -

EXT 499 Dennis Stopin

Dennis Stopin EXT. 499 - we had water wells and one gas well
in PAST. Taken out of service at least 10 yrs ago - all copped

RECORD OF TELEPHONE CONVERSATION Pg 1/2

DATE 2/5/89 JOB NO: 00120-195-2060
 RECORDED BY: John Berg DAMES + MOORE OWNER/CLIENT: BSC Lach. #11111111
 TALKED WITH: Various - see below OF _____
 NATURE OF CALL: INCOMING ☐ OUTGOING ☐ PHONE # _____

ROUTE TO: INFORMATION ACTION

MAIN SUBJECT OF CALL: Potable water wells

ITEMS DISCUSSED:

Hambours (Village of) Rich Lardo Engineering SRT. 350
Dick Cans - Bldg Dept. X 210
Dick Cans - 27 yrs in Bldg dept. Do NOT know of any
commercial wells. I live in village of Hambourg. Most
of town has had public water for years. There could be
some wells for non potable uses but I can't tell you for
sure. No records available.

Rich Lardo - 20 years with Engineering dept. No records
of wells available. I suspect everyone is on potable -
municipal water. There may be some wells but don't
really know. North part of town has had public water
for years - 5 years back, put in water lines south
of Soudes Road.

Walt Seneca Engineering dept. 674 5600
Bldg + Plumbing 674 5600

Dave Folly 7 yrs an engineer no knowledge of private
commercial wells

Bob PINNAVAIA (Bldg dept) If within 100', we require
hook ups to public water. There may be some wells used

RECORD OF TELEPHONE CONVERSATION

DATE 2/5/99 JOB NO.: 00120-195-2060

RECORDED BY: Tom Boyd DATES - None OWNER/CLIENT: BSC Cashawanna

TALKED WITH: VARIOUS - See below OF _____

NATURE OF CALL: INCOMING ☐ OUTGOING ☐ PHONE # _____

ROUTE TO:	INFORMATION	ACTION
_____	_____	_____
_____	_____	_____
_____	_____	_____

MAIN SUBJECT OF CALL: _____

ITEMS DISCUSSED: _____
for inspection, but don't know if any...
Dil call back if I think of any.

RECORD OF TELEPHONE CONVERSATION

DATE: 1/13/99 TIME: _____ JOB NO.: 00120195 2060

RECORDED BY: John Boyel ^{DAMES + MOORE} OWNER/CLIENT: BSC

TALKED WITH: Various - see below OF _____

NATURE OF CALL: INCOMING ☒ OUTGOING ☒ PHONE # _____

ROUTE TO: INFORMATION ACTIONS

MAIN SUBJECT OF CALL: Possible use of well water

ITEMS DISCUSSED: _____

Greene County Dept. of Health
- Ron Caccia 858 7677

" NOT AWARE of DOT restrictions to private possible wells. There may be restrictions imposed by the towns or WATER AUTHORITY.

Dick CROAD Engineer. Greene County WATER Authority 685 8251

" WATER Authority does NOT prohibit wells but will NOT allow any well to be connected to the MUNICIPAL WATER SYSTEM. We do NOT WANT well water getting into the County or Town system. NOT AWARE of any private wells in the LACHAWANNA, Hamburg, S. Buffalo area but there could be. We supply all the water to Hamburg, Blossburg and LACHAWANNA but NOT to Buffalo. They have their own system.

I do know of well owners but they are to the south and east in areas of Lancaster, Manilla, Chgo etc.

RECORD OF TELEPHONE CONVERSATION

DATE: 1/13/99 + 1/14/99 TIME: _____ JOB NO.: 00120-195-2060

RECORDED BY: John Boyd DAMES + MOORE OWNER/CLIENT: BSC

TALKED WITH: See below OF _____

NATURE OF CALL: INCOMING ☐ OUTGOING ☒ PHONE # _____

ROUTE TO: INFORMATION ACTIONS

MAIN SUBJECT OF CALL: Potable use of well WATER

ITEMS DISCUSSED:

John Bal CARCZYK - Code enforcement officer. City of Lachawanna. NOT aware of any wells w/in the City. Been in this area for 50+ years. No regulations prohibiting wells, however. NOT aware of any commercial wells in this area.

1/14/99 John Finster Erie Cty DOH 858 7671

Environmental Senior Public Health official.

"Restrictions on wells? That would be up to the town or city. I am NOT aware of any but I believe that some towns in New York can and do have regs that require connection to the public water line if you are within ~~xxxxxx~~ a certain distance.

I know of ~~the~~ only one well locally and that is owned and operated by Buffalo, Pittsburg & Erie Southern Rail Road - near Tift. Street. I believe the well is used only for non potable needs like toilets and that drinking water is supplied by bottled water.

DAMES & MOORE

RECORD OF TELEPHONE CONVERSATION

DATE: 1/14/99 TIME: _____ JOB NO.: 00120 -195-2060
 RECORDED BY: John Boyd ^{DAMES + MOORE} OWNER/CLIENT: BSC
 TALKED WITH: John Fwster OF Eric City DOH
 NATURE OF CALL: INCOMING ☐ OUTGOING ☒ PHONE # 858-7671
 ROUTE TO: INFORMATION ACTIONS

MAIN SUBJECT OF CALL: Potable use of well WATER

ITEMS DISCUSSED:

"They put in a well because the ~~foot~~ location is 1000^{FT} + from the nearest municipal main. They are NOT a community ^{water} system because they serve less than 25 people on a regular basis. I asked them to mark the Taps "non potable" as no one would drink the water."

I asked John about well records. He indicated that there may be records of older wells newer wells but it would be on a case by case (Henceby house) basis. Time consuming to get the data. He did indicate that if a house is on a well and septic system, they have to be TESTED during property transfers - another possible source of data.

John believed that within 3 miles of BSC. There are no wells only public water. The municipal systems came in about 50-60 years ago. Try George Genter at Humber DOH district office 649 4225

RECORD OF TELEPHONE CONVERSATION

DATE: 1/15/98 TIME: _____ JOB NO.: 00120-195-2060
 RECORDED BY: John Boyd ^{DAMES & MOORE} OWNER/CLIENT: BSC Lachawanna
 TALKED WITH: Virioner (see below) OF _____
 NATURE OF CALL: INCOMING ☐ OUTGOING ☒ PHONE # _____

ROUTE TO: INFORMATION ACTIONS

MAIN SUBJECT OF CALL: _____

ITEMS DISCUSSED: Sanitarian / ~~Sanitarian~~ DPH Hamburg Dist Office
George Genter ^{in Hamburg + Bladell} As far as I know all are on public water - IN EVAS; a few homes on wells.
Highland Acres - Septic but public water

I am sure there are wells in Hamburg. But now abandoned
 after ^{wells} gorge of 18 mile creek. - They got public ^{water} in last few years - About 5 years ago.

No permits needed for wells. If you are selling your property, we will require that you hook up to public water and public sewer if available. This ~~policy~~ policy in effect since 1972 - ~~when you sell property~~ only possible exception would be if it's a long way to the line - 600 ft. + - Then a hardship!

Our district does 12 Sanitariums. Hamburg ^{and} South
 Lancaster District Center part of Erie City 683 6487
 Gene known about Lachawanna. Call him Gene DEGMAN Suph
 Northern District (TOWA Wanda. District) 874 1070
 Dec 90, John sign

RECORD OF TELEPHONE CONVERSATION

DATE: 1/20/99 TIME: 1130-1200 JOB NO.: 00120-195-2060

RECORDED BY: J. Boyle ^{L. A. HES +} _{Moore} OWNER/CLIENT: BSC

TALKED WITH: Various see below OF _____

NATURE OF CALL: INCOMING ☐ OUTGOING ☐ PHONE # _____

ROUTE TO: INFORMATION ACTIONS

MAIN SUBJECT OF CALL: Potable use of well water

ITEMS DISCUSSED: Gene Degman 8791070 683 6487 Erie CT DOT LANCASTER DIST.

Called Gene to see if he knew of any wells in The Lachawanna area and any restrictions to well ownership in areas of public water.

driving range - kind a private supply - near Lachawanna / W. Seneca border. - out of business - off Abbott Road.

- another on Lachawanna / W. Seneca border.

off Ridge Rd near Thruway - a little south.

How about policy of hooking up wells + Septic to City Sewer when house sold? Rule NOT Absolute! -

If septic failed, you have to hook up to sewer. If a well + it fails, you have to hook up.

- we don't have records - you would find out only by accident - we hear about them only by accident.

RECORD OF TELEPHONE CONVERSATION

DATE: 1/20/99 TIME: _____ JOB NO.: CD120-195-2060
RECORDED BY: John Boyd ^{DAMES & MOORE} OWNER/CLIENT: BSE. LACHMANA

TALKED WITH: Various - See below OF _____

NATURE OF CALL: INCOMING ☐ OUTGOING ☒ PHONE # _____

ROUTE TO: INFORMATION ACTIONS

MAIN SUBJECT OF CALL: Potable use of well water

ITEMS DISCUSSED: _____

We have records but you need an address. Any known well would be in our sewer info files + there are by radio address! not aware of any commercial wells? Try DEC - Richard Rink. 851 7070.

1/21/99 NYSDOC other than the driving range mentioned before
Richard Rink - I do NOT know of any records or of any wells in the area.

RECORD OF TELEPHONE CONVERSATION

DATE: 1/18/98 TIME: 1130 JOB NO.: 00120-195-2060

RECORDED BY: T. Boyd ^{DAMES +} Moore OWNER/CLIENT: BSC

TALKED WITH: various sechelow OF _____

NATURE OF CALL: INCOMING ☐ OUTGOING ☒ PHONE # _____

ROUTE TO: INFORMATION ACTIONS

MAIN SUBJECT OF CALL: Possible water wells

ITEMS DISCUSSED:

Tim Donahue SBRK - called to ask for contact
at Pittsburg Buffalo RR. Buffalo Pittsburg Railroad -
He will check + call back

Called Tim on January 19/1999

826-6088. Buffalo - Pittsburg - Dave Collins

Dick Scerama

Call to Dick Scer. Confirmed well. Go under Tiff St. bridge - North
PAST 2 RR crossings - look for Block Bldg - ask someone for well location

Ray Haley - Bradford PA 814-368-8370.

Driller: ~~SHAKE~~ SHAKE Well Drillers

Well has been in about one year.

Ray Haley, Bradford

contact Bill Gentleman Warren, PA. 814-726-3552

1 mile to nearest water main so we put in a well and
also put in hydrant - used for drinking water and nonpotable use
- TESTED for 90 gallons per Well used for STATION - bathroom -
drinking water. and used for engine - coolant. Water
has been TESTED and is OK.

RECORD OF TELEPHONE CONVERSATION

DATE: 1/18/99 TIME: _____ JOB NO.: 00120-195-2060

RECORDED BY: John Boyd ^{DAMES + MOORE} OWNER/CLIENT: BSC

TALKED WITH: Bill Gentleman OF Buffalo-Pittsburg RR

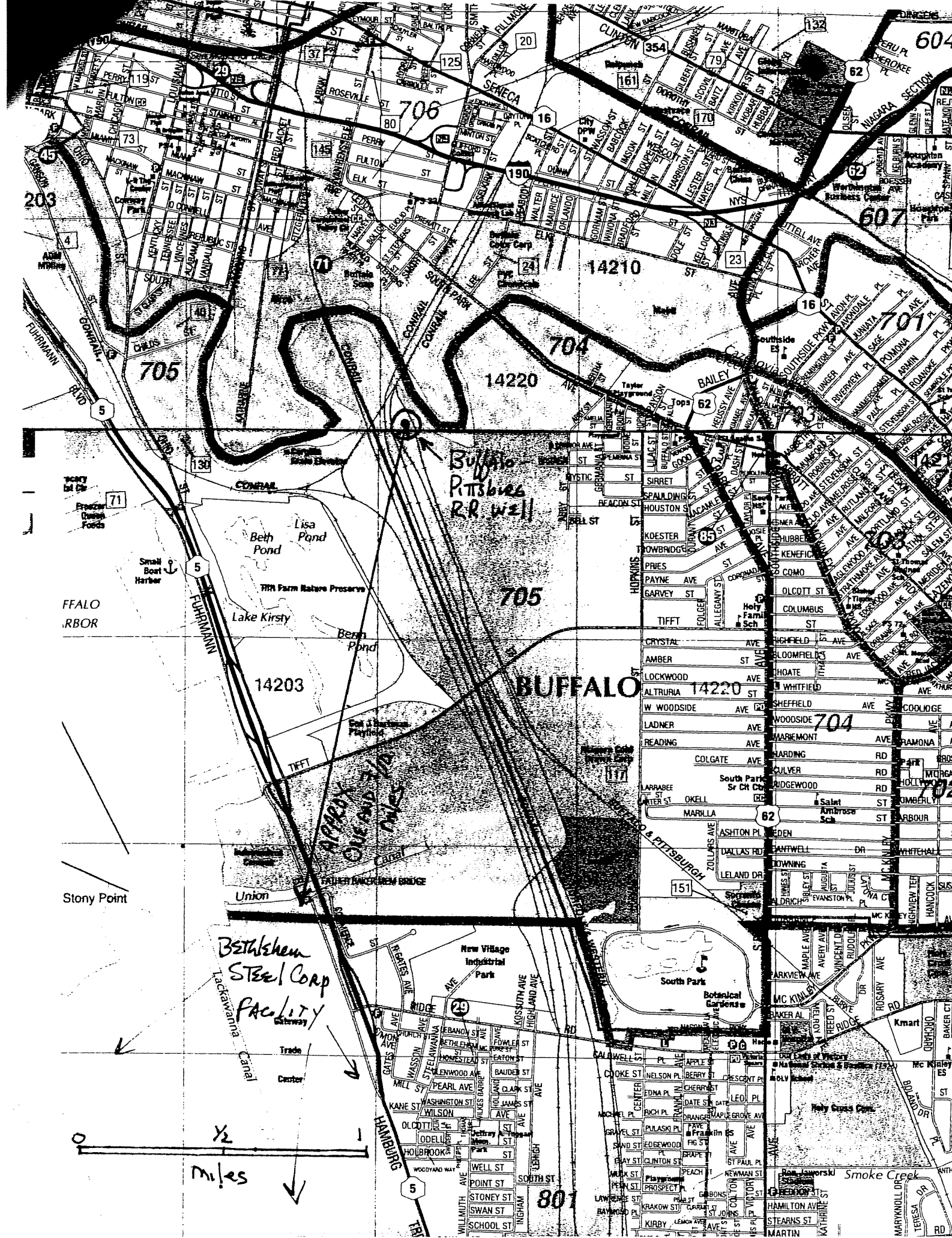
NATURE OF CALL: INCOMING ☐ OUTGOING ☐ PHONE # _____

ROUTE TO: INFORMATION ACTIONS

MAIN SUBJECT OF CALL: LOCATION of B P RR WATER well

ITEMS DISCUSSED: _____

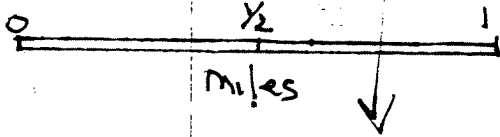
call to Bill Gentleman. He will call EITHE
if Company Appears from having the well log



Buffalo-Pittsburgh
R.R. well

Bethlehem
Steel Corp
Facility

Approx.
One and 1/2
miles





ESTIMATES CHEERFULLY GIVEN
FULL INSURANCE COVERAGE

EHMKE WELL DRILLERS INC.

WATER • GAS • TEST BORINGS

INDUSTRIAL — RESIDENTIAL

WELL SUPPLIES — WATER SYSTEMS

WATER CONDITIONERS

104 MAIN STREET — SILVER CREEK, N. Y. 14136

P.O. BOX 4

TELEPHONE (716) 934-2658

RECEIVED
Dames & Moore

FEB 9 1999

February 5, 1999

File #

ATTN: JOHN BOYD
DAMES & MOORE
3065 Southwestern Blvd,
Orchard Park, NY 14127

10/27 - 11/3/1997 Drilled
pump installed 11/19/97.

Per Pammy in a Tel.
call on 2/23/99.

THE FOLLOWING IS THE WELL LOG YOU REQUESTED FOR:

BUFFALO - PITTSBURGH RAILROAD
off Tifft Street, Buffalo, NY

Depth - 64 ft.

0 - 3' Cinders & Gravel
3' - 8' Yellow clay
8' - 59' Blue Clay
59' - 60' Water bearing gravel
60' - 64' Flint Bedrock

Flow - 50 gallons per minute

Robert L. Ehmke
C.E.O.