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YN-4080 D2833

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES IN THE STATE OF NEW YORK

PHASE II INVESTIGATIONS

Golden Road Disposal Site
Site No. 828021
Town of Chili, Monroe County

March 1992

Prepared for:

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233

Thomas C. Jorling, Commissioner

Division of Hazardous Waste Remediation

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Prepared by:

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1. EXECUTIVE SUMMARY

1.1 SITE DESCRIPTION AND BACKGROUND

The Golden Road Disposal Site (Golden Road site) is located in the Town of Chili, Monroe County, New York (see Figures 1-1 and 1-2). The 8-acre inactive site is located adjacent to Route 490 in a once-rural area of the Town of Chili. Access to the site is obtained from Golden Road. Conrail railroad tracks divide the site into two separate areas, both of which lie immediately adjacent to designated wetlands and are characterized by poor drainage and a high water table. The access road to the area south of the railroad tracks is blocked off by a locking gate. Access to the area north of the railroad tracks is through the Fitzsimons residence driveway.

The site owner, Mr. Howard Fitzsimons, Jr., has been associated with the Golden Road site throughout its use as a disposal site. Most of the fill and drums were brought onto the site with the owner's permission; however, Mr. Fitzsimons himself trucked foundry sand from Abex Corporation to the site (Fitzsimons 1991). The drums originated from the U.S. Army Reserve Unit, Chevron Oil, and unknown illegal dumping. The poorly covered site was active from 1955 through 1976, receiving a wide variety of waste types including U.S. Army artillery shell casings from the 98th Division Reserve Unit (Fitzsimons 1991), 55-gallon drums of unknown wastes, household refuse, metal slag, fly ash, and junked vehicles. The filling of the site was largely accomplished using foundry sand. A great deal of structural steel, fuel tanks, and partially buried drums presently lie about the site. A portion of the wetland area to the west and south was filled during the operation of the site. There are no records concerning the volume of wastes that entered the site.

In early 1982, prior to the Phase I investigation, the Monroe County Health Department and the New York State Department of Environmental Conservation (NYSDEC) began taking samples of the surface waters, sediments, drum contents, and well water from wells in close proximity to the site. Results of groundwater testing indicated levels of cadmium and lead exceeding New York State drinking water standards. Surface water contained elevated levels of cadmium, benzene, and toluene. These results were reported in the Phase I investigation report submitted by Recra Research, Inc. in November 1983.

During 1985, an emergency drum removal project was carried out by a United States Environmental Protection Agency (EPA) contractor. Approximately 560 drums were removed from the land surface. Environmental testing revealed the presence of chlorinated and nonchlorinated solvents, high total organic carbon, organic solids with low flash points, polychlorinated biphenyls (PCBs), and waste oils. Partially buried drums are still visible on site.

1.2 PHASE II INVESTIGATION

As part of the Phase II Investigation, Ecology and Environment Engineering, P.C. (E & E) performed an initial site reconnaissance on April 26, 1989, and a geophysical survey on May 17, 1989. Along with a visual inspection, the site reconnaissance included a continuous air monitoring survey using an HNu photoionization detector to determine the presence of organic vapors. The geophysical investigation consisted of a ground conductivity survey and a total earth's magnetic field survey to locate any buried metallic materials and determine the presence of contaminant plumes.

On June 15, 1989, Om P. Popli, P.E. Engineers (Om Popli), under subcontract to E & E, collected 11 surface soil samples, two waste samples, and one leachate sample to characterize the chemical composition of the soils throughout the site. A third waste sample was collected on August 2, 1989, as requested by NYSDEC. Five monitoring wells were drilled and installed between August 22 and 28, 1989, by Empire Soils under the supervision of Om Popli. Subsurface soil samples from three borings were collected for geotechnical analysis and one sample from well GW-7 was collected for chemical analyses. Groundwater samples were

collected on February 6 and 7, 1990, and surface water samples were collected on February 6, 8, 9, and 12, 1990. All sampling was performed by Om Popli, as was the site survey, which was performed on February 12, 1990. All analyses were performed by E & E's Analytical Services Center (ASC).

1.3 SITE ASSESSMENT

The continuous air monitoring survey during the site reconnaissance using the HNu photoionization detector indicated no organic vapors above background levels from any areas on site. The geophysical surveys provided information to characterize the subsurface and locate potential areas of buried metallic materials. Surface interference from metallic objects (i.e., junked vehicles, steel structures, electric fences, etc.) was encountered in several areas, however, six of the seven survey grids contained enough area free from subsurface metallic debris to drill the monitoring wells without any obstructions. The survey grid for monitoring well GW-7 was not designated free from subsurface metallic debris due to the presence of junked vehicles within the survey grid. This well location was moved to a more suitable area. The subsurface stratigraphy, as confirmed by the installation of the groundwater monitoring wells, indicated an average of 3 feet of fill material (foundry sand, wood fragments, etc.) and possibly 18 feet in some locations (i.e., GW-5). The fill was underlain by silt and clay with rock fragments. In areas where fill material was absent, the soils consisted of various layers of silt, clay, sand, and gravel. Bedrock varied in depth between 11.2 feet to 25.4 feet below ground surface and the top of bedrock generally dipped to the southwest.

Water levels varied between 2.1 feet above ground surface to 5.2 feet below ground surface. Water levels rising above ground surface may indicate artesian conditions, enhanced by a mounding effect within the fill areas, causing a high piezometric surface in the southern and northwestern portions of the site. The groundwater in Monroe County generally flows to the Genesee River or to Irondequoit Bay, which both flow northerly to northeasterly into Lake Ontario (Sweet et al. 1938). Regional groundwater in the vicinity of the site likely flows east toward the Genesee River or north to northwesterly toward the lake.

However, groundwater beneath the site is likely to be mounded in the fill areas. Mounding occurs as water flows through the fill areas, which are composed of coarser materials and have a high hydraulic conductivity, to the underlying finer, undisturbed overburden, which has a lower hydraulic conductivity. Those differences in hydraulic conductivity cause groundwater within the fill to flow radially outward to the surrounding wetlands and ditches. Groundwater flow in the underlying overburden appears to be to the east as indicated by the water levels measured in the monitoring wells.

One subsurface soil sample was collected and analyzed for Target Compound List (TCL) organics including volatile organics, base/neutral and acid extractables (BNAs), and PCBs/pesticides. In addition, this sample was analyzed for the inorganic portion of the TCL list including 23 metals and cyanide. The sample was collected from the GW-7 well bore at a depth of 17 to 19 feet. No organic compounds or cyanide were detected, however, magnesium was detected slightly above the common range for soils in the Eastern United States.

Seven groundwater samples and one drill water sample were collected and analyzed for TCL organics and inorganics. Several organic compounds were detected in both up- and downgradient newly installed groundwater monitoring wells and in the drill rig water. The drill rig water was taken from a local fire hydrant on Golden Road and placed in the drill rig water tank. Contamination detected in the drill rig water sample was the result of laboratory artifacts and is not of concern. Most of the compounds detected in the groundwater were in very low concentrations (i.e., below sample quantitation limits). Some also may have been laboratory artifacts. Benzene in GW-1 and GW-6, ethylbenzene in GW-1, and vinyl chloride, chloroethane, 1,1-dichloroethane, and total 1,2-dichloroethene in GW-7 exceeded New York State Class GA drinking water standards. Several metals also exceeded New York State Class GA drinking water standards in both unfiltered and filtered samples from all the newly installed wells. Some of the samples contained metals (i.e., arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, and zinc) in unfiltered portions that were not detected in the filtered portions. No PCBs, pesticides, or cyanide were detected in any of the groundwater samples tested.

Twenty-three surface water/sediment samples were collected on and adjacent to the Golden Road site. Fourteen on-site samples were analyzed for TCL organics and inorganics and eight off-site samples from the railroad drainage ditch were analyzed only for PCBs/pesticides. Proposed sample SW-13/SED-13 was not collected due to dry conditions. Several organic compounds were detected in five of the 14 surface water samples tested (SW-1, SW-7, SW-9, SW-11, and SW-12). All of the compounds detected were in very low concentrations (i.e., below sample quantitation limits) and did not exceed Class C surface water standards. Several metals were detected in almost all the surface water samples tested at concentrations exceeding Class C surface water standards for the protection of aquatic life. The metals detected included aluminum, cadmium, copper, cobalt, iron, lead, nickel, selenium, vanadium, and zinc. No PCBs, pesticides, or cyanide were detected in any of the surface water samples tested.

Several organic compounds were detected in 11 of the 14 sediment samples tested (SED-1, SED-3, SED-4 through SED-11, and SED-14). Most of these compounds were detected in very low concentrations (below sample quantitation limits) and some may have been laboratory artifacts (i.e., carbon disulfide). In SED-8, one PCB compound (Aroclor-1254) was detected at a very low concentration (i.e., below sample quantitation limits), and two metals (chromium and nickel) exceeded the common range for metals in soils of the Eastern United States. No pesticides or cyanide were detected in any of the samples tested.

Eleven surface soil samples were collected and analyzed for TCL organics and inorganics. Several organic compounds were detected in all of the surface soils tested. Most of the compounds were in very low concentrations (i.e., below sample quantitation limits) and some may have been laboratory artifacts (i.e., chloroform, phthalates). One PCB compound (Aroclor-1260) was also detected in very low concentrations in samples S-1, S-2, and S-8. Neither metals nor cyanide were detected in excess of common ranges of metals in soils of the Eastern United States, and no pesticides were detected in any of samples tested.

Three waste samples and two leachate samples from apparent outbreaks were collected and also analyzed for TCL organics and inorganics. Two of the waste samples (W-1 and W-2) consisted of foundry sand and one

sample (W-3) was a resin-like substance from a partially buried drum. One of the leachate samples (L-1) was aqueous and the other was stained soil/sediment. Several organic compounds were detected in all of the waste and leachate samples tested. Most of the compounds were in very low concentrations (i.e., below sample quantitation limits) and some may have been laboratory artifacts (i.e., chloroform). The concentrations of several metals such as cobalt, iron, manganese, and lead in the resin-like waste sample (W-3) and aluminum, cadmium, cobalt, iron, lead, nickel, vanadium, and zinc in the aqueous leachate sample (L-1) were noticeably high, and exceeded New York State standards for the protection of aquatic life in Class C surface water. The lead concentration in W-3 was noticeably high at 3,430 micrograms per liter (µg/L). No metals were detected in excess of common ranges of metals in soils in the Eastern United States for the foundry sand (W-1 and W-2) and leachate-stained soil/sediment (L-2). No PCBs/pesticides or cyanide were detected in any of the waste or leachate samples.

1.4 HAZARD RANKING SYSTEM SCORE

The Hazard Ranking System (HRS) score was compiled to evaluate risks associated with the site. The HRS is applied to inactive hazardous waste sites in New York State to prioritize those needing additional investigation and remediation. The system evaluates site characteristics, containment measures, waste types, and potential contaminant receptors.

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

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

Based on the results of this and previous studies, the HRS scores for the Golden Road site have been calculated as follows:

S_M = 28.06 (S_{gw} = 44.89; S_{sw} = 18.46; S_a = 0)

S_{FE} = Not scored

S_{DC} = 50

47-15-25 (11/90)-9d

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION

ADDITIONS/CHANGES TO REGISTRY OF INACTIVE HAZARDOUS WASTE DISPOSAL SITES

Original-BHSC
Copy-REGION
Copy-DEE
Copy-DOH
Copy-PREPARER

1. Site Name	2. Site Number	3. Town	4. County
Golden Road Disposal Site	828021	Chili	Monroe

5. Region	6. Classification	7. Activity
9	Current 2 /Proposed _____	[ ] Add [ ] Reclassify [ ] Delist [ ] Modify _____

8a. Describe location of site (attach USGS topographic map showing site location).
The Golden Road Disposal Site is located in the Town of Chili, Monroe County, New York, adjacent to Interstate 490. Site access is from Golden Road. Figure 1-1 of the Phase II Investigation Report shows the site location on the USGS topographic quadrangle.

132.16,132.20,133.13

b. Quadrangle Clifton, NY c. Site latitude 40°07'15" Longitude 77°45'30" d. Tax Map Number 133.17

9a. Briefly describe the site (attach site plan showing disposal/sampling locations)
The site, which is approximately 8 acres in size, is divided into two sections (north and south) by Conrail tracks. The northern section is primarily used for residences and cow pasture, with a large area of junked vehicles. The southern section is inactive, partially wooded, and contains various areas of foundry sand and other surface debris. Wetlands are present to the north, west, and south of the site. Figure 1-2 of the Phase II Investigation report shows the site plan.

b. Area 8 acres c. EPA ID number _____ d. PA/SI [ ] Yes [ ] No

e. Completed: [X] Phase I [X] Phase II [ ] PSA [X] Sampling

10. Briefly list the type and quantity of the hazardous waste and the dates that it was disposed of at this site.
The site was active from 1955 to 1976, receiving a wide variety of waste types, including: U.S. Army artillery shells, 55-gallon drums of unknown wastes, household refuse, metal slag, fly ash, and junked vehicles.

11a. Summarized sampling data attached

[ ] Air [X] Groundwater [X] Surface Water [X] Soil [X] Waste [ ] EP Tox

b. List contravened parameters and values

Groundwater:

Arsenic to 29.4 µg/l
Barium to 1,230 µg/l
Cadmium to 38 µg/l
Chromium to 217 µg/l
Copper to 260 µg/l
Iron to 265,000 µg/l
Lead to 364 µg/l
Magnesium to 840,000 µg/l
Manganese to 1,030 µg/l
Sodium to 71,600 µg/l
Zinc to 1,320 µg/l
Chloroethane to 17 µg/l
1,1,-Dichloroethane to 36 µg/l
Total-1,2,-dichloroethene to 8 µg/l
Benzene to 36 µg/l
Ethylbenzene to 6 µg/l

Surface Water:

Aluminum to 18,700 µg/l
Cadmium to 38.4 µg/l
Copper to 182 µg/l
Iron to 326,000 µg/l
Lead to 193 µg/l
Nickel to 666 µg/l
Vanadium to 107 µg/l
Zinc to 803 µg/l

02[UZ]YN4080:D2833/6638

12. Site impact data

a. Nearest surface water: Distance 0 ft. Direction west, south Classification C

b. Nearest groundwater: Depth 2.1 feet above ground surface to 5.2 feet below the surface. Flow Direction: northeast [ ] Source [X]Primary [ ] Principal

c. Nearest water supply: Distance 0 ft. Direction east Active [X] Yes [ ] No

d. Nearest building: Distance 0 ft. Direction east Use residence

e. Crops/livestock on site? [X] Yes [ ] No

f. Exposed hazardous waste? [X] Yes [ ] No

g. Controlled site access? [ ] Yes [X] No

h. Documented fish or wildlife mortality? [ ] Yes [X] No

i. Impact on special status fish or wildlife resource? [ ] Yes [X] No

j. Within a State Economic Development Zone? [ ] Yes [ ] No

k. For Class 2A: Code _____ Health model score _____

l. For Class 2: Priority category _____

m. HRS Score 28.06

n. Significant threat [X] Yes _____ [ ] No [ ] Unknown

13. Site owner's name	14. Address	15. Telephone Number
Howard Fitzsimons, Jr.	227 Golden Road, Chili, NY	(716) 594-2335

16. Preparer

James D. Griffis, CHMM — Ecology and Environment Engineering, P.C.
Name, title, and organization

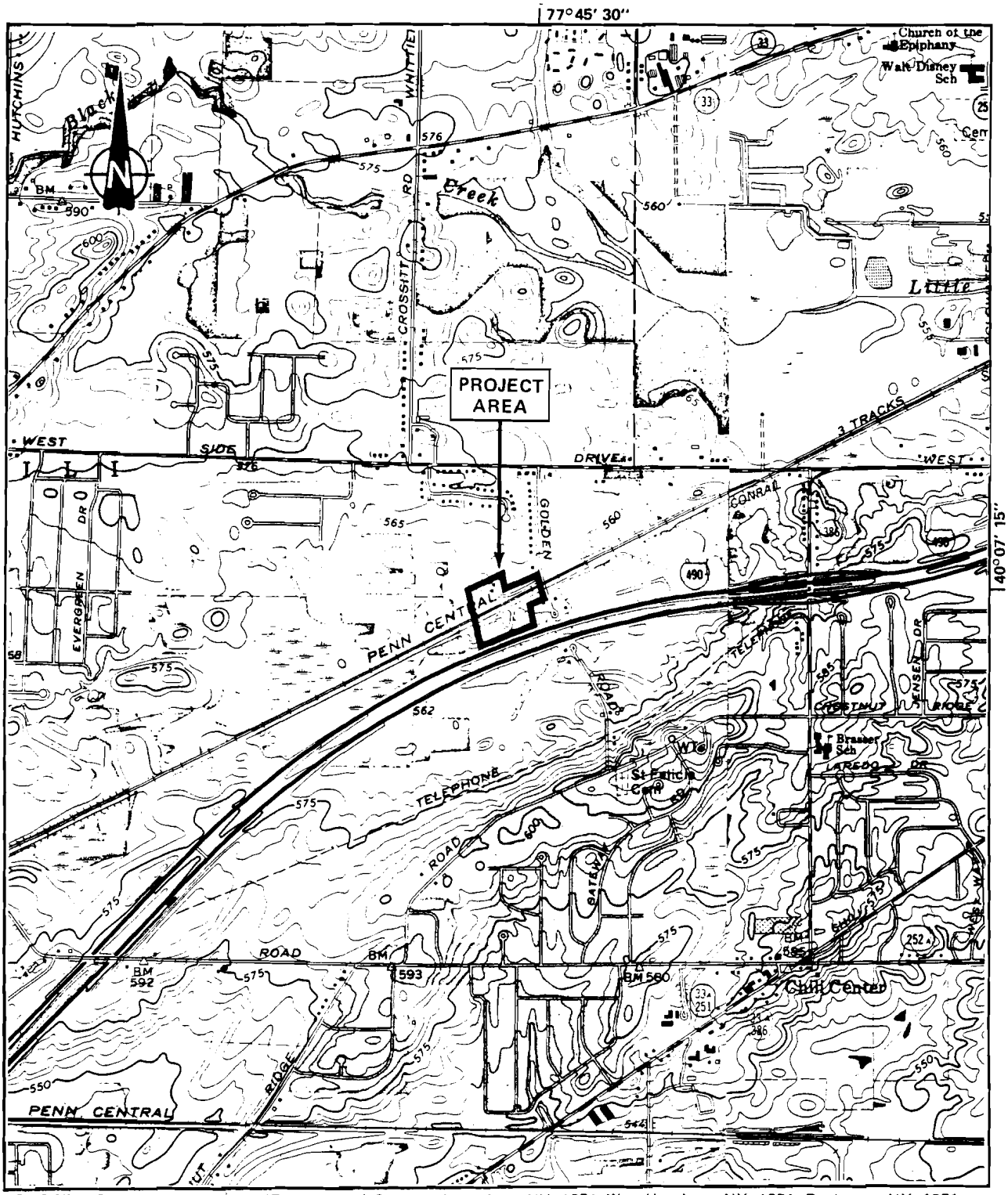
2/5/92 — James D Griffis
Date — Signature

17. Approved

_____
Name, title, and organization

_____ — _____
Date — Signature

02[UZ]YN4080:D2833/6638



SOURCE: USGS 7.5 Minute Series (Topographic) Quadrangle; Clifton, NY, 1971; West Henrietta, NY, 1971; Rochester, NY, 1971; Spencerport, NY, 1971; All (Photorevised 1978).

SCALE 1:24,000

0 .5 1 Mile

0 .5 1 Kilometer

Figure 1–1
LOCATION MAP: GOLDEN ROAD DISPOSAL SITE

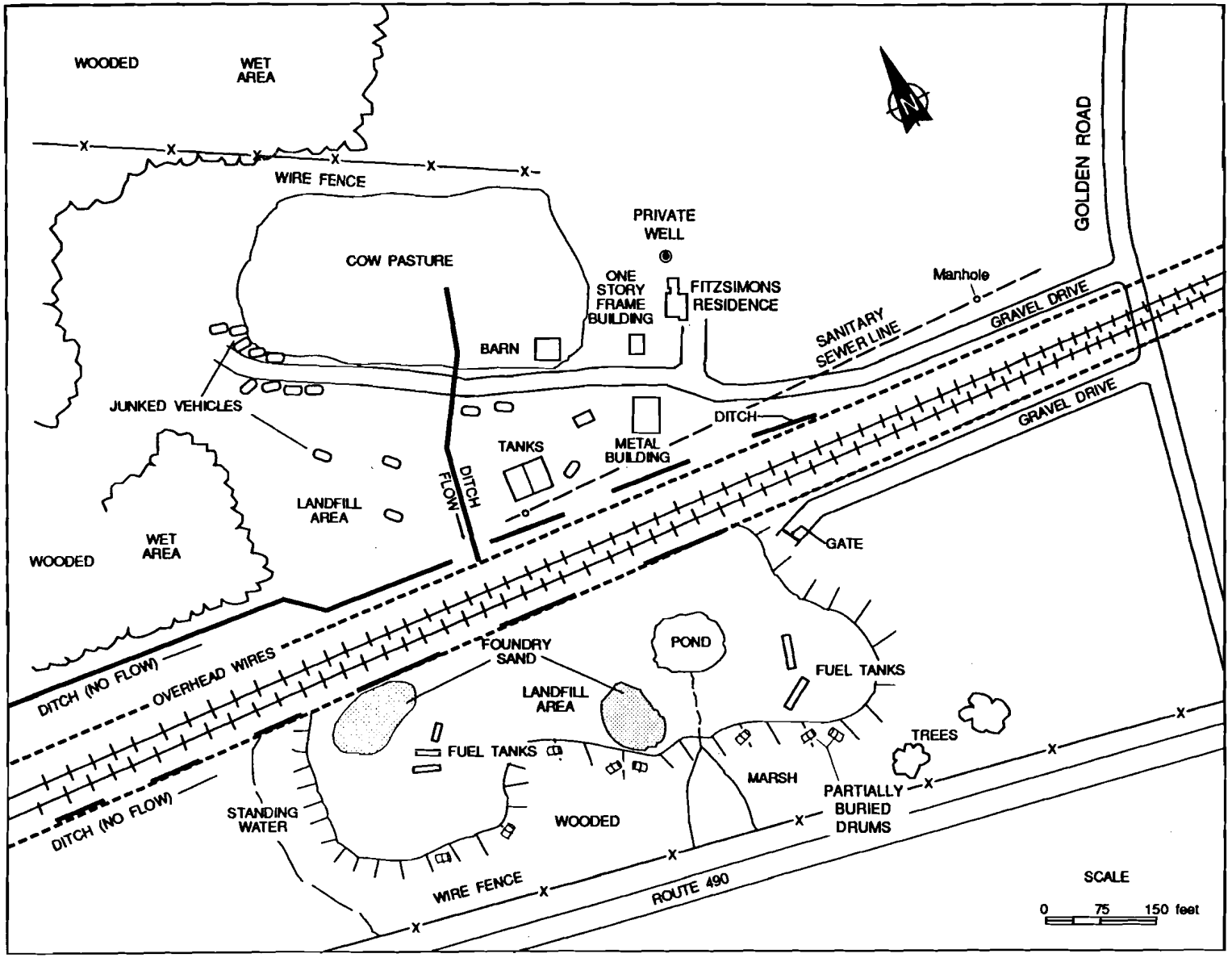


Figure 1-2
SITE SKETCH OF GOLDEN ROAD DISPOSAL SITE

2. OBJECTIVE

This Phase II investigation was conducted under contract to the NYSDEC Division of Hazardous Waste Remediation, Bureau of Hazardous Site Control. The objective of the Phase II investigation was to determine if hazardous wastes have been disposed of at the site, if contaminants exist in the various media (air, groundwater, and soils), and whether threats to human health and the environment exist. Information gathered relative to the above will allow NYSDEC to reclassify the site or, if warranted, delist it.

The Phase II investigation was designed to supplement existing data for the Golden Road Disposal site and update the HRS score. Previous investigations conducted by Recra Research, Inc. in November 1983 have shown levels of cadmium and lead in private groundwater wells that exceed New York State drinking water standards. Also, cadmium, benzene, and toluene were found in the surface water on site. No surface or subsurface soil data for the site were available prior to the Phase II study.

3. SCOPE OF WORK

3.1 INTRODUCTION

Field work for the Phase II investigation at the Golden Road site was based on a work plan prepared by NYSDEC; the work began in June 1989 and was completed in February 1990. A site-specific health and safety plan (HSP) was submitted for review, and a quality assurance project plan (QAPP) was submitted to NYSDEC for approval prior to the start of field work. The work plan called for the installation of seven groundwater monitoring wells and the collection of groundwater samples from each monitoring well, as well as the collection of 15 surface water/sediment samples, 11 surface soil samples, two waste samples, and two leachate samples. Based on the findings of the geophysical survey, two proposed well locations (GW-5 and GW-7) were moved due to significant electrical or magnetic anomalies and on-site access problems. Proposed monitoring well GW-5 was moved onto the fill area because of a steep grade and standing water at the originally proposed location, and GW-7 was moved 125 feet southwest of the original location due to the presence of surface interference to geophysical instruments caused by junked vehicles surrounding the proposed well location.

At the request of the on-site NYSDEC representative, one additional waste sample was collected from a partially buried drum containing a resin-like substance and eight additional surface water/sediment samples were collected along the railroad drainage ditch. The sample from the drum was submitted for full TCL analysis while the samples from the drainage ditch were analyzed for PCBs/pesticides only.

3.2 PHASE II SITE INVESTIGATION

3.2.1 Records Search/Data Compilation

Available information from state, county, municipal, and private files were collected and reviewed prior to the initiation of field work. Records from local and state agency files were reviewed to supplement the Phase I report prepared by Recra Research, Inc. in November 1983. The data review facilitated completion of the field investigation and site assessment and calculation of the final HRS score. Specific contacts are listed in Table 3-1.

3.2.2 Site Reconnaissance and Site Safety

At the beginning of each day of field activities, a site safety meeting was conducted by the site safety officer or the team leader. Discussions included the contaminants found on site, routes of exposure, the route to the hospital, location of the nearest phone, and the use of the air monitoring instruments. Also, a general plan of the site activities for the day was discussed. Each person on site was requested to sign the attendance sheet from these meetings. A site specific HSP was available to all personnel at all times (see Appendix A).

On May 9, 1989, E & E personnel conducted a site reconnaissance. The purposes of the site visit were to:

- Identify access problems;
- Identify tentative locations for borings and wells, surface soil, surface water/sediment, waste, and leachate samples;
- Visually inspect well locations and contact utility companies to determine if underground or aboveground utilities may impact drilling.
- Identify a water supply source for drilling purposes;
- Conduct a limited air monitoring study using an HNu photoionization detector; and
- Photodocument present site conditions.

The air monitoring survey indicated no organic vapor readings above background from any area tested. The site contained large amounts of metal debris on the surface, which caused interference with geophysical

instrumentation. Access appeared to be limited to GW-1 by power lines and a drainage ditch, to GW-2 by trees and a sharp change in grade, and to GW-5 by ponded water and steep grade. Actual site conditions during the site reconnaissance have been photodocumented and are presented in Appendix B, and field logbooks are included in Appendix I.

3.2.3 Geophysical Survey

Geophysical surveys utilizing an EM31 ground conductivity meter and a proton precession magnetometer were performed at the Golden Road site on May 17, 1989. These surveys were conducted at the seven proposed monitoring well locations within and around the perimeter of the site (see Figure 3-1). The results were used to determine site geological conditions, locate buried materials, verify proposed monitoring well locations, and identify any conductive subsurface plumes. The geophysical survey methods and results are presented in Appendix C, and field logbooks are included in Appendix I.

3.2.4 Monitoring Well Installation

Five shallow overburden wells were installed at the Golden Road site between August 22 and August 29, 1989 and two on January 9, 1990 by Empire Soil Investigations, Inc. under the supervision of Om Popli. Two of the wells were installed in January due to delays incurred in obtaining a permit to drill on New York State Department of Transportation (NYSDOT) property. The permit was issued by NYSDOT with co-approval of the United States DOT. The wells monitor shallow groundwater in the overburden, both up- and downgradient of the site (see Figure 3-2 and Table 3-2).

The wells were drilled using an Acker AD-2 hollow-stem auger rig and constructed in accordance with NYSDEC guidelines. Two-foot soil samples were collected in 5-foot intervals above the water table and continuously below the water table using a 2-inch outside diameter (OD) split-spoon sampler driven by a 140-pound safety hammer with a 30-inch free fall. Additional split-spoon samples were taken where major changes in lithology occurred. Seven soil samples were collected for geotechnical analyses along with one sample for chemical analysis (GW-7, 17 to 19 feet). The last sample was collected because of elevated

organic emissions above background levels detected from the split-spoon sample. No visible contamination was observed.

The boreholes were advanced using 4.25-inch inside diameter (ID) hollow-stem augers until refusal at top of bedrock. All wells were set in the overburden, just above bedrock. Well screen consisting of 2-inch ID 0.010 machine-slot polyvinyl chloride (PVC) was set at the bottom of each borehole, above the top of bedrock. Screen length varied from 5 feet (GW-1 and GW-2) to 7 feet (GW-6 and GW-7) to 10 feet (GW-3, GW-4, and GW-5). The screens were followed by threaded, flush-joint PVC riser of the same diameter as the well screen to approximately 2 feet above ground surface. The wells were completed with a sand pack extending 1 foot above the top of the well screen in GW-1 and GW-2, and 2 feet in the other wells, followed by 1 foot of bentonite pellets in GW-1 and GW-2 and 2 feet in the other wells, followed by bentonite grout. These differences were the result of differing depths to groundwater and the need to screen across the water table. A locking protective steel casing was placed over the PVC and a concrete pad was constructed on the ground surface around the protective casing.

After completion of the well, but not sooner than 24 hours after grouting was completed, the well was developed using air surging. Well development was performed until pH, conductivity, and temperature remained constant.

A decontamination pad was constructed on site to steam clean the drill rig, augers, bits, rods, split-spoons, casings, etc. before and after the installation of each well. Split-spoons were decontaminated at each drill site between each sample to prevent cross-contamination of samples. A trisodium phosphate solution, tap water rinse, pesticide-grade methanol rinse, and triple deionized water rinse were used successively.

Boring logs are found in Appendix D, geotechnical analyses are included in Appendix E, and field logbooks are included in Appendix I.

3.2.5 Subsurface Soil Sampling and Analysis

During the installation of the seven monitoring wells (GW-1 through GW-7), one subsurface soil sample was collected on August 23, 1989 for chemical analysis. The sample was collected from GW-7 at a depth of 17

to 19 feet as requested by the NYSDEC site representative due to an organic odor present from the split-spoon sample. The sample was analyzed for TCL organics and inorganics by E & E's Analytical Services Center (ASC). In addition, quality assurance/quality control (QA/QC) samples consisting of one matrix spike/matrix spike duplicate (MS/MSD) sample (GW-7MS/GW-7MSD) were analyzed for volatile organic compounds. Analyses and reporting were performed following the NYSDEC Contract Laboratory Protocol (CLP) of November 1987.

Seven subsurface soil samples were collected for geotechnical analyses. Three were analyzed for grain size and four for Atterberg limits. Each of these samples was chosen because it lay within the screened depth of the well.

Field procedures for subsurface soil sampling are discussed in Section 3.2.4. Geotechnical analyses are included in Appendix E. Analytical results are discussed in Section 4.5 and raw data summary sheets are included in Appendix F.

3.2.6 Groundwater Sampling and Analysis

As part of the Phase II investigation of the Golden Road site, water level measurements and groundwater samples were collected from the seven newly installed monitoring wells on February 6 and 7, 1990 (see Figure 3-2 and Table 3-2). The wells were purged of three to five well volumes of water after recording the water level, then sampled using dedicated PVC bailers. Although the wells were properly developed and purged prior to sampling, the groundwater samples were very silty during sample collection. These samples were analyzed for TCL organics and inorganics by E & E's ASC. In addition, QA/QC samples consisting of a drill rig water sample were analyzed for the above-mentioned compounds. MS/MSD samples were analyzed for volatile organics (GW-6MS/GW-6MSD), BNAs (drill rig MS/drill rig MSD), and PCBs/pesticides (GW-4MS/GW-4MSD and drill rig MS/drill rig MSD).

Analytical results are discussed in Section 4.5 and raw data summary sheets are included in Appendix F. Field procedures for groundwater sampling are presented in Appendix G.

3.2.7 Surface Water/Sediment Sampling and Analysis

Twenty-three surface water/sediment samples were collected on February 6, 8, 9, and 12, 1990 from intermittent streams, wetlands, ponds, storm sewers, and railroad ditches surrounding the site (see Figure 3-2 and Table 3-3). Fifteen of the samples were analyzed for TCL organics and inorganics and eight for PCBs/pesticides only. Surface water/sediment location SW-13/SED-13 was not sampled due to dry conditions. All analyses were performed by E & E's ASC. In addition, QA/QC samples consisting of surface water MS/MSD samples were analyzed for volatile organics (SW-14MS/SW-14MSD), BNAs (SW-11MS/SW-11MSD and SW-12MS/SW-12MSD), and PCBs/pesticides (SW-19MS/SW-19MSD). Sediment MS/MSD samples were analyzed for volatile organics (SED-8MS/SED-8MSD, SED-10MS/SED-10MSD, SED-14MS/SED-14MSD, and SED-15MS/SED-15MSD), BNAs (SED-11MS/SED-11MSD), and PCBs/pesticides (SED-16MS/SED-16MSD).

Analytical results are discussed in Section 4.5, raw data is presented in Appendix F, and field procedures used are described in Appendix G.

3.2.8 Surface Soil Sampling and Analysis

Eleven surface soil samples were collected from various areas throughout the site on June 15, 1989 (see Figure 3-2 and Table 3-4). These samples were analyzed for TCL organics and inorganics by E & E's ASC. In addition, a QA/QC sample consisting of one MS/MSD sample (S-9MS/S-9MSD) was analyzed for all of the above-mentioned parameters except BNAs.

Analytical results are discussed in Section 4.5, raw data are presented in Appendix F, and field procedures are described in Appendix G.

3.2.9 Waste Sampling and Analysis

Two waste samples consisting of foundry sand were collected on June 15 and one of a resin-like substance from a partially buried drum was collected on August 24, 1989 (see Figure 3-2 and Table 3-5). These samples were analyzed for TCL organics and inorganics by E & E's ASC. In addition, a QA/QC sample consisting of one MS/MSD sample (W-3MS/W-3MSD) was also analyzed for volatile organics. Analytical

results are discussed in Section 4.5, raw data are presented in Appendix F, and field procedures are described in Appendix G.

3.2.10 Leachate Sampling and Analysis

Two leachate samples were collected along the northern edge of the southern portion of the site at apparent outbreaks (see Figure 3-2 and Table 3-5). One sample, L-1, collected June 15, 1989, was mostly aqueous in nature. The second leachate sample, L-2, collected February 8, 1990, contained frozen stained soil/sediment. The samples were analyzed for TCL organics and inorganics by E & E's ASC. For QA/QC purposes, the aqueous leachate sample was grouped with the other water samples and the soil/sediment sample was grouped with the other sediment samples.

Analytical results are discussed in Section 4.5, raw data are presented in Appendix F, and field procedures are described in Appendix G.

Table 3-1

SOURCES CONTACTED FOR THE NYSDEC PHASE II INVESTIGATION AT THE GOLDEN ROAD DISPOSAL SITE

New York State Department of Health
Bureau of Environmental Exposure
2 University Place
Room 205
Albany, New York 12203
Contact: Mary Ketter
Telephone Number: 716/847-4551
Date: April 6, 1989
Information Gathered: File search for NYSDEC Phase II report preparation.

New York State Department of Environmental Conservation
584 Delaware Avenue
Buffalo, New York 14202
Contact: Jaspal Singh Walia
Telephone Number: 716/847-4585
Date: March 27-28, 1989
Information Gathered: File search for NYSDEC Phase II report preparation.

Monroe County Environmental Management Council
65 Broad Street
Terminal Building, Room 203
Rochester, New York
Contact: Louise Hartshorn
Telephone Number:
Date: April 13, 1989
Information Gathered: Monroe aerial photos and water service maps of NYSDEC Phase II sites. Monroe County Department of Health was present at this meeting.

County of Monroe
Department of Planning
47 South Fitzhugh Street, Suite 200
Rochester, New York
Contact: Andy Wheatcraft
Telephone Number: 716/428-5335
Date: March 29, 1989
Information Gathered: Land use and census data for Monroe County NYSDEC Phase II sites.

New York State Department of Environmental Conservation
Bureau of Hazardous Site Control
50 Wolf Road
Albany, New York 12233
Contact: Mike Ryan and Jane Thapa
Telephone Number: 518/457-9538
Date: April 3-4, 1989
Information Gathered: File search for additional data and NYSDEC Phase I reports.

New York State Department of Health
Bureau of Environmental Exposure
2 University Place
Room 205
Albany, New York 12203
Contact: Lani D. Rafferty
Telephone Number: 518/458-6308
Date: April 3-4, 1989
Information Gathered: Viewed site inspection reports for NYSDEC Phase I sites.

02[UD]YN4080:D2833/6647/17

Table 3-1 (Cont.)

New York State Department of Environmental Conservation
Division of Regulatory Affairs
600 Delaware Avenue
Buffalo, New York 14202
Contact: Mary Ketter
Telephone Number: 716/847-4551
Date: April 6, 1989
Information Gathered: File search.

Monroe County Water Authority
475 Noris Drive
Rochester, New York
Contact: Tom Stein
Telephone Number: 716/422-2000
Date: June 16, 1989
Information Gathered: Water use information for NYSDEC Golden Road site.

New York State Department of Environmental Conservation
Information Services/Significant Habitat Unit
Wildlife Resources Center
700 Troy-Schenectady Road
Latham, New York 12110-2400
Contact: John Ozard
Telephone Number 518/783-5733
Date: May 2, 1989
Information Gathered: Information on designated critical habitats with respect to NYSDEC Phase II sites.

Monroe County Department of Maps and Surveys
39 West Main Street, Room 304
Rochester, New York
Contact: Andies Hrycaj
Telephone Number: 716/428-5461
Date: April 3, 1989
Information Gathered: Orthophoto maps of Monroe County NYSDEC Phase II site, tax maps for Golden Road site.

New York State Department of Environmental Conservation, Region 8
Division of Hazardous Waste
6274 East Avon-Lima Road
Avon, New York
Contact: Todd Caffoe
Telephone Number: 716/226-2466
Date: March 28, 1989
Information Gathered: File search for NYSDEC Phase II reports.

New York State Department of Environmental Conservation
Water Division
600 Delaware Avenue
Buffalo, New York 14202
Contact: Rebecca Anderson
Telephone Number: 716/847-4590
Date: January 24, 1990
Information Gathered: Flood Insurance Rate Maps

Monroe County Economic Development Office
1 West Main Street, Suite 600
Rochester, New York
Contact: Melissa Brookmire
Telephone Number: 716/428-4504
Date: March 28, 1989
Information Gathered: Population figures for Town of Chili.

Table 3-2

WATER LEVEL DATA

Well	Date Measured	Water Level Below Ground Surface (feet)	Relative Elevations[a] (feet)		
			Relative Elevation at T.O.C.[b]	Relative Grade Elevation[c]	Relative Water Level Elevation
GW-1	2/7/90	3.2	351.18	349.0	345.8
	3/8/91	2.9			346.2
GW-2	2/7/90	+0.5	348.12	346.1	346.6
	3/8/91	0.2			345.9
GW-3	2/7/90	+1.5	347.65	345.5	347.0
	3/8/91	+1.9 (flowing)			347.5
GW-4	2/7/90	+2.1 (flowing)	347.93	345.8	347.9
	3/8/91	+2.1 (flowing)			347.9
GW-5	2/7/90	5.2	353.50	351.1	345.9
	3/8/91	4.5			346.6
GW-6	2/6/90	+0.7	348.65	346.5	347.2
	3/8/91	+1.8			348.4
GW-7	2/6/90	4.3	351.60	349.5	345.3
	3/8/91	1.7			347.8

02[UZ]YN4080:D2833/6648/20

[a]Elevations are not true elevations, but an on-site reference point (i.e., a railroad spike in Rochester Gas and Electric Power Pole No. 13 with an assumed elevation of 350.00 feet above mean sea level).
[b]T.O.C. = Top of steel casing.
[c]Grade elevations reported to the tenth of an inch only.
+Water level measured within the well casing at an elevation above ground surface.

Note: Water levels were measured to the nearest 0.01 foot using an electronic audible water level meter.

Table 3-3

SURFACE WATER AND SEDIMENT SAMPLING LOCATIONS

Sample Number	Location
SW-1/SED-1	Wetlands southeast
SW-2/SED-2	I-490 intermittent stream
SW-3/SED-3	South intermittent stream
SW-4/SED-4	Wetlands south
SW-5/SED-5	Wetlands southwest
SW-6/SED-6	Railroad ditch
SW-7/SED-7	Railroad ditch
SW-8/SED-8	On-site pond/south
SW-9/SED-9	Railroad ditch
SW-10/SED-10	Railroad ditch
SW-11/SED-11	Invert of storm sewer
SW-12/SED-12	Wetlands north
SW-13/SED-13 (not sampled)	Wetlands north center
SW-14/SED-14	Wetlands west
SW-15/SED-15	Wetlands northwest
SW-16/SED-16	Off-site railroad ditch
SW-17/SED-17	Off-site railroad ditch
SW-18/SED-18	Off-site railroad ditch
SW-19/SED-19	Off-site railroad ditch
SW-20/SED-20	Off-site railroad ditch
SW-21/SED-21	Off-site railroad ditch
SW-22/SED-22	Off-site railroad ditch
SW-23/SED-23	Off-site railroad ditch

02[UZ]YN4080:D2833/6649/35

Table 3-4

SURFACE SOIL SAMPLING LOCATIONS

Sample	Location
S-1	Along the east side of the southern fill area
S-2	Along the east side of the southern fill area
S-3	Along the east side of the southern fill area
S-4	Along the south side of the southern fill area
S-5	Along the south side of the southern fill area
S-6	Along the south side of the southern fill area
S-7	Along the north side of the southern fill area
S-8	Along the south side of the southern fill area
S-9	Adjacent to GW-7
S-10	Along the west side of the northern fill area
S-11	Along the west side of the northern fill area

[UZ]YN4080:D2833, #2885, PM = 33

Table 3-5

WASTE AND LEACHATE SAMPLING LOCATIONS

Sample	Location
W-1	Foundry sand from the northwest end of the southern fill area
W-2	Foundry sand from the central portion of the southern fill area
W-3	Resin-like substance from a partially buried drum adjacent to GW-5 near the western edge of the southern fill area
L-1 (aqueous)	Along the north edge of the southern fill area
L-2 (soil/sediment)	Along the north edge of the southern fill area

02[UZ]YN4080:D2833/2888/25

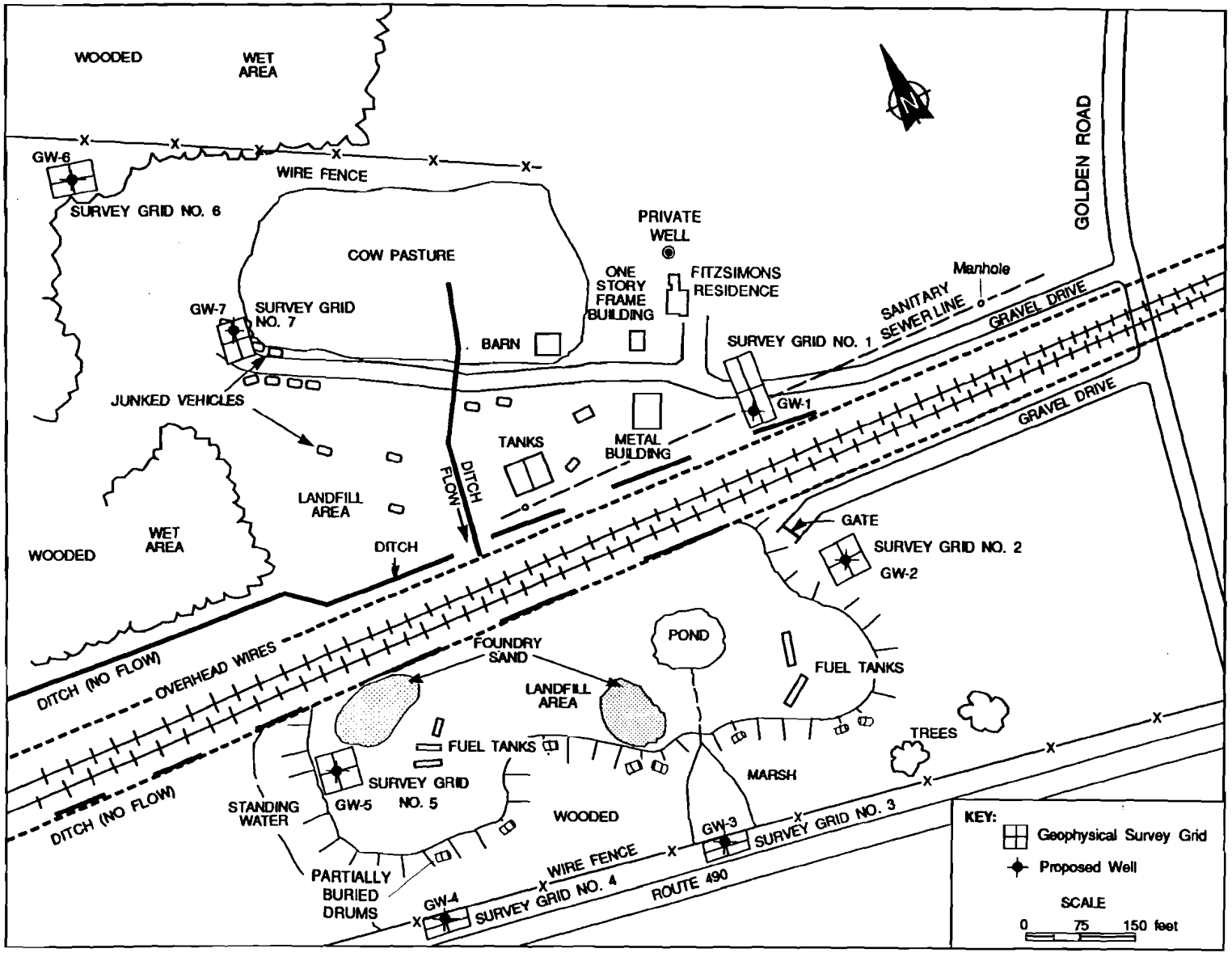


Figure 3-1
GEOPHYSICAL SURVEY AND PROPOSED GROUNDWATER MONITORING WELL LOCATIONS

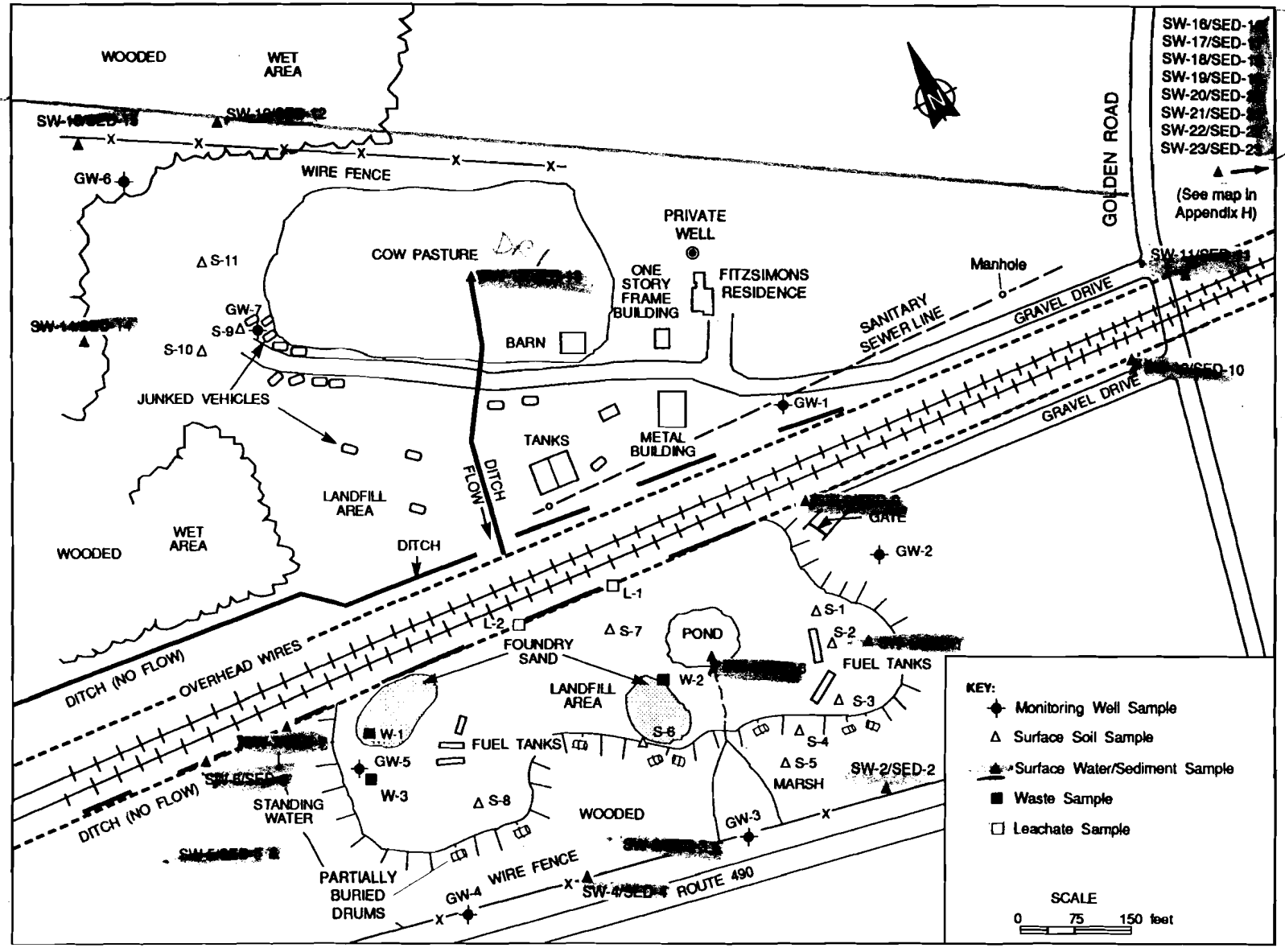


Figure 3-2
MONITORING WELL, GROUNDWATER, SURFACE WATER, SURFACE WATER/SEDIMENT, SURFACE SOIL, WASTE, AND LEACHATE SAMPLING LOCATIONS

4. SITE ASSESSMENT

4.1 SITE HISTORY

The Golden Road site is an 8-acre, private parcel of land that was used as a fill area, located in a once-rural area of the Town of Chili, Monroe County, New York. The site is divided into two separate areas (north and south) by Conrail railroad tracks. The northern area is presently occupied by the site owner, Mr. Howard Fitzsimons, Jr.

The Fitzsimons residence is a two-story dwelling set back approximately 600 feet to the west of Golden Road. The property is bounded by active Conrail tracks to the south and wooded wetlands to the north and west. The area is open and currently used as a cow pasture. There are numerous junked vehicles, several aboveground storage tanks that once contained fuel oil from Chili Fuels, and a metal storage building along the southern border of this northern section. The storage building belongs to Mr. Fitzsimons and was used for general storage, maintenance, and repair of equipment. An 18-inch transit sanitary sewer line (cement/asbestos) is present north of and parallel to the railroad lines. The sewer line is approximately 12 feet below the ground surface. The dates of installation and purpose of this sewer line could not be confirmed.

The southern area of the site is currently inactive. This area is characterized by areas of fill (foundry sand from Abex Corporation), surrounded by wooded wetlands to the south and west, Conrail tracks to the north, and a wooded area to the east. The fill area contains very large, empty steel storage tanks and scrap metal on the surface, and partially buried drums on the southern border. Both areas lie immediately adjacent to Class II designated wetlands and are characterized by poor drainage and a high water table. Extensive landfilling has

elevated the site surface approximately 10 feet above the surrounding terrain.

The Golden Road site was filled from 1955 through 1976 by Mr. Howard Fitzsimons, Jr., the sole owner. The site received a wide variety of wastes including U.S. Army artillery shell casings from the 98th Division Reserve Unit (Fitzsimons 1991), household refuse, metal slag, fly ash, and junked vehicles. No live ammunition was disposed of on site. Much of the actual filling of the site was accomplished using foundry sand hauled from Abex Corporation.

Prior to 1985, several hundred rusted, leaking 55-gallon drums were piled in several places, some of which were lying in the impounded water of the wetlands to the south of the Conrail tracks. The drums originated from the U.S. Army Reserve unit, Chevron Oil, and unknown illegal dumping. In 1985, an emergency drum removal project was completed by an EPA contractor, and approximately 560 drums were removed from the site. However, partially buried drums are still visible on site, and additional buried drums may be present. Environmental testing revealed the presence of chlorinated and nonchlorinated solvents, high total organic carbon, organic solids with low flashpoints, PCBs, and waste oils.

A large number of junk vehicles exist on the northern section of the property behind the Fitzsimons residence and the large metal storage building. The Fitzsimons residence is served by a private well located approximately 40 feet to the north of the residence; however, most of the surrounding area is serviced by public water. Also located on the site are a great deal of structural steel debris and fuel tanks. There are no records of the volumes of the various types of waste that entered the Golden Road site.

4.2 REGIONAL SETTING

4.2.1 Regional Geology and Hydrology of Monroe County

Monroe County lies within the Central Lowland Physiographic Province (Eastern Lake Section). The county is primarily mantled by glacial till and laminated lacustrine clay and silt deposits. The till consists of unconsolidated, poorly-sorted clay, silt, and/or sand deposits of relatively low permeability (loamy matrix). Till thickness ranges from 1 to 165 feet. Lacustrine deposits span southward for

nearly 10 miles from the southern shore of Lake Ontario and exhibit moderate bedding-plane permeability. Lacustrine deposits vary up to 165 feet. Eskers, trending southwest, exist in the western part of the county. The area between Rochester and Syracuse, just east of the site, has been estimated to include approximately 10,000 drumlins (Broughton et al. 1973).

Outcropping of bedrock is sporadic but occurs along the Genesee River, Sibleyville Gravel Pit, Honeyoe Falls, and State Route 386 (approximately 1 mile south of South Greece). The bedrock in the region is exclusively sedimentary and nearly flat-lying, dipping south-southwest approximately 40 feet per mile. Although the bedrock dips southward, the land surface increases in elevation to the south. Therefore, the bedrock units are progressively younger from north to south.

This discussion focuses on five distinct bedrock groups that occur between the southern shore of Lake Ontario and the New York State Thruway (see Figure 4-1). These sedimentary units are all located beneath the Golden Road site and act as the primary controls on regional groundwater flow. The oldest unit, upper Ordovician in age, is the predominantly red shale of the Queenston Formation. Commonly, thin green shale beds and green mottling are present. When weathered, these shales form the sticky red clay of the Lake Ontario Plain. The Queenston is approximately 700 to 1,100 feet thick.

Groundwater occurs principally within a fractured and weathered zone at the top of the Queenston Shale. Most wells penetrating the Queenston draw water from both the Queenston and the overlying deposits (Johnston 1964).

Overlying the Queenston Formation is the Lower Silurian Grimsby Formation of the Medina Group. The basal portion of the Grimsby consists of red shales with interbedded red sandstones. The upper Grimsby is very distinct in that it is green and white mottled with numerous depositional features such as cross-bedding, ripple marks, and sole marks. Its thickness is reported to be 70 feet at Medina in neighboring Orleans County.

The rock units of the Clinton Group, which overlie the Medina Group, are highly fossiliferous, with lithologies that are more diverse than any other bedrock group in this report. Rock units of the Clinton

Group include shale, sandstone, hematite, limestone, and dolostone. The total thickness of the Clinton Group is more than 170 feet.

Generally, the limestones and sandstones are the water-bearing units within the Clinton Group. These rock units contain both vertical and bedding-plane joints. However, the Rochester Shale of the upper Clinton is relatively impermeable and impedes recharge to the underlying, more permeable limestones and sandstones, thus making the Clinton a less productive aquifer than the Lockport Group which lies above. The Lockport Group, which underlies the site, is considered a primary source of groundwater throughout the area. Three types of bedrock openings in the Lockport Group contain the groundwater: bedding planes, vertical fractures, and solution cavities.

The bedding planes, which transmit most of the water in the Lockport Group, and vertical fractures have been widened by up to 1/8 inch by dissolution of the surrounding rock. These fractures extend several miles, thus constituting effective water conduits.

The vertical joints of the Lockport Group are generally too short and sparse to account for significant groundwater storage and transmission, except in the top 10 to 25 feet of bedrock (Oak Orchard Formation). Furthermore, solution cavities, formed when gypsum is dissolved, are present, but are not important components of groundwater flow in the aquifer. Although they increase the porosity of the rock, they are isolated and do not contribute to groundwater transmission.

Overlying the Lockport Group is the upper Silurian Vernon Formation of the Salina Group. This 300-foot-thick red shale serves as a confining layer for the overlying, more permeable, unconsolidated deposits found at the site. Interbedded shale and salt formations, the Syracuse and Camillus, of the Salina Group contain numerous cavities formed by dissolution of salt and gypsum and are very productive aquifers. These formations, as well as the Bertie and Akron formations of the Salina Group, are not present at the site. They can be located, however, in close proximity to the south. The Akron and Bertie carbonate units contain water in bedding joints widened by dissolution. Very little groundwater is found in the Devonian formations above the Salina Group. These formations, principally shale, are relatively impermeable. Some water transmission occurs in small fractures in the bedrock, but no

wells of significant yield are found in these units. In central New York, south of the site, groundwater is obtained mainly from glacial overburden deposits.

The depth of the Precambrian basement, which underlies all of the above-mentioned sedimentary units, increases from approximately 2,000 feet at the northern border of Monroe County to nearly 4,000 feet at its southern border (Broughton et al. 1966). There is only one well documented within the county that reaches the Precambrian.

The only noteworthy structure is a system of vertical to subvertical joints that are pervasive throughout the sedimentary units described above. In this region, the joints strike in numerous directions, thereby generally permitting bedrock to transmit groundwater flow in the direction of the hydraulic gradient.

4.3 SITE GEOGRAPHY

4.3.1 Topography

The Golden Road site is located in the Central Lowlands (Eastern Lake section) Physiographic Province of the United States. This section consists of the plains region, which is covered by a young blanket of glacial till (Pirkle and Yoho 1977). The glacial deposits in the vicinity of the site are uneven and undulating, resulting in well-developed hilly areas with elevations up to 900 feet above mean sea level (AMSL) (Sweet et al. 1938).

The ground surface over the site is uneven, but generally flat-lying. There are several mounds of foundry sand and other fill, and several depressions containing ponds and wetlands. The fill areas are generally 5 to 10 feet above natural grade. The site is located at an elevation of approximately 560 feet AMSL (United States Geological Survey [USGS] 1971).

The site is located in Zone C of the Flood Insurance Rate Map (FIRM). The actual panel (Community Panel No. 3604120010A) prepared by the Federal Emergency Management Agency (FEMA) for this area is not printed because Zone C represents areas of minimal flooding.

4.3.2 Soils

Four soil types have been identified surrounding the landfill area within the boundaries of the property. These soils are represented by

the Schoharie silty clay loam to the north of the railroad tracks, Poygan silt loam to the north and south of the railroad tracks, Colwood loam to the west of the fill areas, and Ontario loam to the north of the Schoharie silty clay loam (Heffner and Goodman 1973; Sweet et al. 1938).

The Schoharie silty clay loam consists of a silty clay loam surface layer with a dull Indian-red clay subsoil. The substratum consists of alternating layers of red clay and sandy material. This soil is usually found in nearly level areas, and exhibits a pH of 6.3 to 7.5 with depth.

The Poygan silt loam is slightly lighter brown in the surface soil than Poygan silty clay loam, lighter in texture, and better drained. The Poygan silty clay loam has a very coarse, granular surface soil. This is underlain by a reddish-brown compact clay, followed by a compact sandy till. This soil occupies low, less drained areas when associated with Schoharie soil and exhibits a pH of 6.0 at the surface.

The Colwood loam consists of a granular loam of fine, light texture at the surface, followed by a light-textured sandy soil. The subsoil consists of sandy clay to fine sandy loam. The lower subsoil layer ranges from a sandy clay to a fine sandy loam. These soils usually occur in poorly-drained areas.

The Ontario loam consists of a friable, fine-textured loam with some small irregular sandstone gravel at the surface, and is underlain by a loam of light texture and loose friable consistency, also containing gravel. The subsoil is composed of a compact, very gravelly material consisting of small rock fragments.

Soil borings at the Golden Road site (see Appendix D) generally indicated the presence of fill material averaging 3 feet in thickness and possibly as thick as 18 feet in the vicinity of GW-5. However, recovery during split spooning at GW-5 was insufficient to verify the depth of fill at that location (see Appendix I). This upper layer was usually a silty, gravelly sand. The soils underlying the fill consisted of various layers of silty sand, silty clay, and clay; followed by rock fragments and silt overlying the bedrock. Geotechnical analyses were performed on one sample from each well. The results of these analyses are presented in Table 4-1 and Appendix E.

4.4 SITE HYDROGEOLOGY

The information used to develop the discussion in this subsection includes the Phase II geophysical survey, seven monitoring well borings and installations, USGS topographic maps (see Figure 1-1), geological survey maps (see Figure 4-1), and regional groundwater reports.

The boring logs are included in Appendix D, and geotechnical analysis results are presented in Appendix E.

4.4.1 Geology

Bedrock underlying the soils at the Golden Road site varied in depth from 11.2 to 25.4 feet below ground surface. Drill log information is summarized in Table 4-2. The top of bedrock was shallowest along the eastern border of the fill areas, and deepest in the western portion of the southern section of the site. Top of bedrock dips to the southwest. The seven boreholes did not penetrate the bedrock.

The bedrock underlying the soils at the Golden Road site is the Lockport Dolomite of the Lockport Group. The formation is generally brownish-gray in color, medium to thick bedded, stylolitic dolomite, exhibiting parting (i.e., separations along planes), mineralized vugs, and poorly preserved fossils (Tesmer 1981). Throughout its outcrop and in the subsurface beneath the Devonian rocks, the Lockport maintains a nearly uniform thickness of 200 feet. It is also known for its diversity of mineral content (i.e., quartz, calcite, selenite and gypsum, dolomite, sphalerite, galena, pyrite, and flourite). Although none of the minerals has been used on a commercial scale, the rock itself is quarried extensively for use as a crushed stone (Broughton et al. 1966).

4.4.2 Hydrology

Groundwater

In general, regional groundwater flow in Monroe County is to the north toward Lake Ontario. The groundwater in Monroe County generally flows to the Genesee River or to Irondequoit Bay, which both flow northerly to northeasterly into Lake Ontario (Sweet et al. 1938). Regional groundwater in the vicinity of the site likely flows east toward the Genesee River or north to northwesterly toward the lake.

The terrain is variable across the site. From northeast to southwest, the features include a highland area with a maximum elevation above the landfill of approximately 25 feet, a low swampy area, the raised northern landfill area containing a pipeline parallel to the railroad tracks, a low railroad ditch, an elevated railroad track bed, a low railroad ditch, the southern landfill area, a low swampy area, the elevated Route 490 highway, a low swampy area, and a highland area with a maximum elevation above the landfill of approximately 55 feet. Many of the low areas were described as "wet with standing water" during field observations. Topographic maps of the area (USGS 1971, 1978) indicate possible drainage of these swampy areas is to the east and/or west.

The two landfill areas on site are large surface areas with a maximum elevated relief of 8 feet above the low areas. They are composed of a mixture of fill materials that include foundry sand underlain by finer undisturbed overburden material consisting of silt, clay, and some sand.

Seven groundwater monitoring wells were installed in the overburden at the Golden Road site. Three wells were installed in the northern section and four in the southern section. These wells were installed to establish whether contamination is present and migrating off site. The well locations are shown in Figure 3-2 and well construction data are presented in Table 4-3. Appendix D contains the boring logs, and water level data are shown in Table 4-4.

Groundwater encountered during drilling varied in depth from 7 to 15 feet below ground surface, or a relative site elevation of 340 to 333 feet. The groundwater levels in the completed wells varied in depth from approximately 2.1 feet above ground surface to 5.2 feet below ground surface or a relative site elevation of 347.9 to 345.25 feet.

This change in water levels between when the water-bearing zone was first encountered and after well completion indicates an upward vertical gradient. This upward gradient is caused by recharge to the aquifer from an area of higher potential. When a monitoring well intercepts a groundwater potential with a higher elevation than the elevation at which water was encountered, groundwater will rise to the elevation of

the intercepted potential in the well. In addition, a confining layer may be present. According to the boring logs (see Appendix D), the overburden materials are composed of predominantly silts and clays. These fine-grained materials may confine or partially confine the underlying coarser sandy silt and gravelly weathered bedrock zones in some locations.

Groundwater may mound in the landfill areas due to the differences in hydraulic conductivity between the fill, which is coarse and more permeable, and the underlying undisturbed overburden, which is finer and less permeable. Water flow, though the fill flows radially outwards, acting as a recharge area, is to the surrounding lower topographic areas. At this site, the lower areas consist of the swampy low lands and the railroad bed and ditches. If it can be assumed that the swampy conditions existed before the railroad bed was constructed, then the placement of coarser fill on the tighter overburden may have caused the coarser material to sink into the overburden over time and use. This would then provide a more permeable east-west channel for the preferential flow of the groundwater from the fill and the swampy low areas. This is only a hypothesis since all seven wells were screened below the tighter overburden layer.

An 18-inch transit sanitary sewer line (cement/asbestos) trending east-west is present north of and parallel to the railroad tracks (see Figure 1-2). The sewer line is approximately 12 feet below ground surface at the overburden-bedrock interface (Murphy 1991). The presence of this line appears to impact groundwater flow in the undisturbed overburden aquifer since a depression in the groundwater table was detected in the wells in the vicinity of the pipeline. It is possible that hydraulic communication can take place more readily between the fill and lower overburden due to the disturbance of the overburden from the pipeline's construction.

Route 490 may act as a small point of recharge to the groundwater but this is difficult to determine without knowing the drainage systems utilized or the details of construction. If the road has an impact on the site, it would be in contributing to the surface water and sediment samples taken between the south edge of the landfill and Route 490.

In summary, the Golden Road site may have a complex groundwater flow pattern. The mounding of the upper groundwater flow system within

the fill may flow radially outward to the outer lowland areas, the railroad bed, and possibly the sewer pipeline. The lower groundwater system may be partially confined. The monitoring wells that were screened in the lower groundwater flow system indicate groundwater flow to the east or northeast, possibly converging in on and possibly following a preferential flow along the sewer pipeline.

Surface Water

There are several surface water bodies located on the Golden Road site. Drainage ditches exist on both sides of the Conrail tracks. However, no flow was observed in these ditches during the field work. Standing water is located in the central portion and along the western and southern edges of the southern section of the site. These areas appeared to be stagnant and swampy and flow direction could not be determined. Little Black Creek is located approximately 1 mile north of the site and Black Creek is located 2 miles south of the site.

Little Black Creek is a Class C stream from its mouth to 1,000 feet above the Chili Avenue bridge, Class B to the Pixley Road bridge, and Class C to its headwaters. Tributaries to Little Black Creek are both Class B and C. Black Creek is Class C within a 3-mile radius of the project area. All tributaries to Black Creek within a 3-mile radius of the project area are Class C (Department of State 1983).

Best use for Class B waters is for primary contact recreation and any other use except as a source of water supply for drinking, culinary, or food processing purposes. The best use for Class C waters is for fishing and all other uses except as a source of water supply for drinking, culinary or food processing purposes, and primary-contact recreation (NYSDEC 1986).

4.5 SITE CONTAMINATION ASSESSMENT

Analytical data for the site contamination assessment are presented in Appendix F. For TCL organic compounds, all positive reported values and qualifiers for samples, field QC samples, and laboratory MS/MSD samples are presented on data summary forms. For TCL inorganics, CLP Form 1's are included for all samples and field QC samples.

All CLP data packages were reviewed to determine whether qualified data were acceptable for the intended use. In general, methylene

chloride, acetone, 2-butanone, and phthalate compounds are considered to be due to laboratory contamination and not evaluated if levels are less than five times the detection limit, when the values are qualified with a "B." In addition, hexane, which is also considered a laboratory contaminant, was often found in samples from the unknown compound search.

4.5.1 Subsurface Soil from Well Borings

Only one subsurface soil sample was collected from one of the monitoring well borings (GW-7) and tested for TCL organics and inorganics. No other samples were collected due to the lack of organic vapor readings above background. Although this sample did not exhibit measurable organic vapors with the instrumentation, it was collected at a depth interval of 17 to 19 feet because of a discoloration and organic odor.

No organic compounds, PCBs/pesticides, or cyanide were detected; however, magnesium was detected slightly above the common range of metals in soils of the Eastern United States (see Tables 4-5 and 4-6).

4.5.2 Groundwater

Groundwater samples were collected from each of the seven new monitoring wells and analyzed for TCL organics and inorganics. Monitoring wells GW-3 and GW-4 were considered upgradient and GW-1, GW-2, GW-5, GW-6, and GW-7 were considered downgradient. Although GW-3 and GW-4 are upgradient wells, they may be receiving water from the southern landfill due to a mounding effect. Table 4-7 contains field measurements of groundwater chemical parameters taken during well sampling.

Portions of the groundwater TCL organic data were qualified as unusable due to analytical problems caused by the lack of a re-extraction during the initial sample analysis or re-extraction performed over 50 days beyond holding times, thus resulting in very low surrogate recoveries. The unusable data included the BNA results for GW-4, GW-5, GW-6, and GW-7, and PCB/pesticide results for GW-2 and GW-6. In addition, PCB/pesticide results for GW-1, GW-3, GW-5, and GW-7 should be considered biased low. These analytical results were not used to determine the extent of contamination, however, the elimination of these results has no effect on the HRS scoring because the metals results yielded the maximum possible score. All metals and volatiles data are valid and usable.

The groundwater and drill rig water results for TCL organic compounds are summarized in Table 4-8. The groundwater contaminants were generally limited to trace levels of volatile organic compounds detected in GW-1, GW-6, and GW-7. Benzene detected in GW-1 and GW-6, ethylbenzene in GW-1, and vinyl chloride, chloroethane, 1,1-dichloroethane, and total-1,2-dichloroethene in GW-7 exceeded New York State drinking water standards.

Other petroleum-related volatiles such as toluene in GW-6 and total xylenes in GW-1 and GW-6 were also detected, indicating a potential petroleum contamination. The potential source of these contaminants in GW-1 may be activities associated with the storage of Chili Fuels trucks in the steel building to the west or the aboveground storage tanks behind that building. Monitoring well GW-6 may be intercepting the same petroleum plume as GW-1. Significant levels of chlorinated organic solvents such as chloroethane and 1,1-dichloroethane were found in GW-7, along with very low levels of tetrachloroethene and chlorobenzene in GW-6.

Drill rig water was taken from a local fire hydrant on Golden Road and placed in the drill rig water tank. The trihalomethanes detected in the volatile fraction of the sample analysis are typical of potable water sources using chlorination processes. The phthalate in the sample may be a laboratory artifact.

The following metals exceed New York State Class GA groundwater drinking water standards (see Table 4-9):

- Arsenic in the unfiltered portion of GW-1;
- Barium in the unfiltered portion of GW-2;
- Cadmium and chromium in the unfiltered portion of GW-1, GW-2, and GW-5;
- Copper in the unfiltered portion of GW-1 and GW-2;
- Iron in the unfiltered portion of GW-4 and GW-5, and both the unfiltered and filtered portions of GW-1, GW-2, GW-3, GW-6, GW-7, and drill-rig water;
- Lead in the unfiltered portion of GW-1, GW-2, GW-5, and GW-6;
- Magnesium in both the unfiltered and filtered portions of GW-1 through GW-7;

- o Manganese in the unfiltered portions of GW-2, GW-3, GW-5, and GW-6, and both the unfiltered and filtered portions of GW-1 and GW-7;

- o Sodium in both the unfiltered and filtered portions of GW-1 through GW-7; and

- o Zinc in the unfiltered portions of GW-1, GW-2, and GW-5.

No PCBs/pesticides or cyanide were detected in any of the groundwater or drill water samples tested.

Groundwater was also sampled from two private drinking water wells located on Golden Road. The samples were collected by the Monroe County Department of Health (DOH) on October 30, 1990 and analyzed by the New York State DOH. The samples were collected from the site owner's (Fitzsimons) well located at 227 Golden Road and from the Hendrickson well located at 240 Golden Road (across the street and to the north of the site). Analytical results of these samples indicated no contaminants attributable to the site in the Hendrickson water sample and only low levels (below the NYSDEC Class GA drinking water standard) of trichloroethene (TCE) in the Fitzsimons water sample. These sample results are on file at the State and County DOH offices.

4.5.3 Surface Water/Sediment

Twenty-two surface water/sediment samples were collected on and adjacent to the Golden Road site. Fourteen on-site samples were analyzed for TCL organics and inorganics and eight off-site samples (along the railroad drainage ditch) were analyzed for PCB/pesticides only. Sample SW-13/SED-13 in the north central portion of the site was not collected due to dry conditions.

Portions of the surface water TCL organic data were also qualified as unusable due to the same analytical problems stated in Section 4.5.2. The data include the BNA results for SW-1, SW-12, and SW-14, and PCB/-pesticide results for SW-12. These analytical results cannot be used to determine the extent of contamination. The elimination of the results will have no effect on the HRS score because the metals and volatile results yielded the maximum possible score. All metals and volatiles data are valid and usable.

The surface water results for TCL organic compounds are summarized in Table 4-10. All surface water samples were free of contamination with the exception of very low levels (below sample quantitation limits) of benzene, toluene, and chlorobenzene in SW-7, toluene in SW-11, carbon disulfide in SW-12, and total polynuclear aromatic hydrocarbons (PAHs) in SW-1 and SW-9.

The following metals exceeded New York State Class C surface water regulatory standards for the protection of aquatic life (see Table 4-11):

- Aluminum in SW-1 through SW-12, SW-14, and SW-15;
- Cadmium in SW-1, SW-7, and SW-9;
- Cobalt in SW-3;
- Copper in SW-1, SW-7, SW-9, and SW-10;
- Iron in SW-1 through SW-10, SW-12, SW-14, and SW-15;
- Lead in SW-1, SW-2, and SW-4 through SW-10;
- Nickel in SW-8;
- Selenium in SW-1, SW-2, SW-7, and SW-10;
- Vanadium in SW-1, SW-7, SW-9, and SW-10; and
- Zinc in SW-1, SW-2, SW-4 through SW-10, SW-14, and SW-15.

There are no standards for the protection of human life for Class C surface waters. No PCBs or pesticides were detected in any of the surface waters tested.

The sediment results for TCL organic compounds are summarized in Table 4-5. In general, the sediments contained low levels of toluene and varying levels of PAHs. The highest total PAH concentrations were found in sediment samples SED-7, SED-8, SED-9, SED-10, and SED-11. Other volatile organic compounds (i.e., carbon disulfide, chloromethane, and 2-butanone) detected are possible laboratory artifacts.

Only two metals (chromium and nickel) exceeded the common range for metals in soils in the Eastern United States in sample SED-8. Cyanide was detected only in sample SED-2 (see Table 4-6).

No pesticides were detected in any of the sediment samples tested, but a low level of PCB Aroclor-1254 was found in SED-8.

The eight off-site surface water and sediment samples (SW-16 to SW-23) were collected at the request of NYSDEC after the site owner reported that his neighbor may have dumped materials containing PCBs in the ditches along the railroad tracks. These samples were collected and analyzed at ASC for pesticides/PCBs. No pesticides/PCBs were detected in any sample. Laboratory analytical results are presented in Appendix F.

4.5.4 Surface Soil

Eleven surface soils were collected and analyzed for TCL organics and inorganics. The surface soil results for TCL organic compounds are summarized in Table 4-5. Samples S-1, S-7, S-9, and S-11 contained low levels of chlorinated solvents such as total-1,2-dichloroethene and tetrachloroethene with the highest concentrations present in S-1 and S-11. Because of the low concentrations present and various minor analytical problems, the soil volatile results should be considered estimates. Several soil samples also contained varying concentrations of semivolatile organic compounds including phenol (S-3, S-5, S-8, S-10, and S-11), n-nitrosodiphenylamine (S-1 and S-2), and PAHs (S-1 through S-11). The highest concentrations of total PAHs were found in samples S-2, S-3, and S-5. One PCB compound (Aroclor-1260) was detected at low concentrations in samples S-1, S-2, and S-8. Most of the compounds detected were low in concentration, and chloroform, hexane, and phthalates are probably laboratory artifacts.

No metals exceeded common ranges for metals in soil in the Eastern United States. Cyanide was detected only in sample S-2 (see Table 4-6).

No pesticides were detected in any of the surface soil samples tested.

4.5.5 Waste

Three waste samples were collected and analyzed for TCL organics and inorganics. Two of the waste samples consisted of foundry sand (W-1 and W-2) and one was a resin-like substance from a partially buried drum (W-3). The foundry sand contained the following organic compounds: low-level PAH in W-1 and W-2; total-1,2,-dichloroethene in W-1; toluene in

W-1; and hexane in W-2. The resin-like substance (W-3) contained the following organic compounds: total xylenes and total trimethyl-benzene isomers (see Table 4-5). Most of the above-mentioned compounds are very low in concentration (i.e., below sample quantitation limits), and some (methylene chloride and hexane) are probably laboratory artifacts.

Several metals such as cobalt, iron, lead, and manganese in sample W-3 were noticeably high.

No metals in the foundry sand samples (W-1 and W-2) exceeded the common range of metals in soils in the Eastern United States (see Table 4-6). Metals detected from waste sample W-3 are reported in Table 4-12. Cyanide was not detected in any of the waste samples.

No PCBs or pesticides were detected in any of the waste samples collected.

4.5.6 Leachate

Two samples were collected from areas of apparent leachate outbreaks and analyzed for TCL organics and inorganics. One sample was aqueous (L-1) and the other was stained soil/sediment (L-2). The aqueous sample contained measurable concentrations of the chlorinated organic compounds chloroethane and 1,1-dichloroethane. N,n-diethyl-3-methylbenzamide was also identified to be present at low concentrations (see Table 4-10). Only two organic compounds, chloroform and dibenzofuran, were detected at very low concentrations in the stained soil/sediment sample (see Table 4-5). Chloroform may be a laboratory artifact.

Several inorganic elements in the aqueous sample exceeded New York State human regulatory limits for surface water: arsenic, barium, cadmium, iron, lead, magnesium, manganese, and zinc; and those that exceeded aquatic regulatory limits include aluminum, cobalt, iron, vanadium, and zinc (see Table 4-11). No inorganic elements exceeded common ranges for metals in soils in the Eastern United States from the leachate-stained soil/sediment sample.

No PCBs/pesticides or cyanide were detected in either leachate sample.

4.5.7 Contamination Assessment Summary

Only one subsurface soil sample (GW-7 at 17 to 19 feet) was collected at the Golden Road site. Analysis of this sample did not indicate the presence of any organic contaminants. Only one metal (manganese) exceeded the common range of metals in soils of the Eastern United States from this sample.

The groundwater from the upgradient wells contained the following chemical constituents at significant concentrations:

GW-3 (Background)

- Iron, magnesium, manganese, and sodium above drinking water standards in the unfiltered sample; and
- Iron, magnesium, and sodium in excess of drinking water standards in the filtered sample.

GW-4

- Iron and sodium above drinking water standards in the unfiltered sample; and
- Sodium above drinking water standards in the filtered sample.

The groundwater from the downgradient wells contained the following chemical constituents at significant concentrations:

GW-1

- Benzene and ethylbenzene in excess of drinking water standards;
- Arsenic, cadmium, chromium, copper, iron, lead, magnesium, manganese, sodium, and zinc in excess of drinking water standards in the unfiltered sample; and
- Iron, magnesium, manganese, and sodium in excess of drinking water standards in the filtered sample.

GW-2

- Barium, cadmium, chromium, copper, iron, lead, magnesium, manganese, sodium, and zinc above drinking water standards in the unfiltered sample; and
- Iron, magnesium, and sodium in excess of drinking water standards in the filtered sample.

GW-5

- o Cadmium, chromium, iron, lead, manganese, sodium, and zinc above drinking water standards in the unfiltered sample; and
- o Sodium above drinking water standards in the filtered sample.

GW-6

- o Benzenes in excess of drinking water standards;
- o Iron, lead, manganese, and sodium above drinking water standards in the unfiltered sample; and
- o Iron and sodium above drinking water standards in the filtered sample.

GW-7

- o Vinyl chloride, chloroethane, 1,1-dichloroethane, and total-1,2-dichloroethane in excess of drinking water standards;
- o Manganese and sodium above drinking water standards in the unfiltered sample; and
- o Manganese and sodium above drinking water standards in the filtered sample.

Since both upgradient and downgradient wells and the drill water contained iron in excess of drinking water standards, the source of the iron is probably off site. High concentrations of manganese were also detected upgradient (GW-3), thereby indicating an off-site source. Very low concentrations of 4-methyl-1,2-pentanone were detected in several of the downgradient wells, along with one of the upgradient wells (GW-4), thereby indicating a possible upgradient source also. All of the other organic compounds and metals mentioned above, detected in the downgradient wells, appear to have originated on site.

The surface waters tested were generally free from organic contaminants except for very low concentrations of benzene, toluene, and chlorobenzene in GW-7; PAHs in SW-1 and SW-9; and toluene in SW-11. Samples SW-7, SW-9, and SW-11 were from the drainage ditch along the south side of the railroad tracks. All of the surface water samples contained metals in excess of Class C surface water standards for the protection

of aquatic life. There are no standards for the protection of human life in Class C surface waters. Aluminum, iron, and zinc are present both upgradient and downgradient, indicating an off-site source, while cadmium, cobalt, lead, magnesium, manganese, selenium, and vanadium seem to be concentrated in the southeast portion of the site.

Organic constituents detected in the sediments associated with the surface water samples consisted of mainly very low concentrations of toluene in SED-1, SED-3, SED-4, SED-5, SED-7, SED-9, and SED-10, all in the area to the south of the railroad tracks. Other organics detected in this area include dibenzofuran in SED-8, SED-9, and SED-10, and Aroclor-1254 in SED-8. Chloromethane and 2-butanone were detected near the west border in the northern portion of the site; however, they are often associated with background laboratory contamination. Only two metals (chromium and nickel) exceeded common ranges of metals in soils for the Eastern United States in sample SED-8. Cyanide was detected in SED-2; however, there are no guidelines for this constituent.

Surface soil sample S-1, located to the east of the pond in the southern portion of the site, and S-11, located in the open area in the northwest portion of the site contained the most organic contaminants: 1,1-dichloroethane; total-1,2-dichloroethene; 1,1,1-trichloroethane, tetrachloroethene, toluene, n-nitro-sodiphenylamine, PAHs, and Aroclor-1260; and total-1,2-dichloroethene, trichloroethene, tetrachloroethene, toluene, and phenol, respectively. Phenols were also detected in samples S-3, S-5, S-8, and S-10; n-nitrosodiphenylamine in S-2; 1,1-dichloroethane in S-3, total-1,2-dichloroethene in S-7 and S-9; 1,1,1-trichloroethene in S-3; and Aroclor-1260 in S-8. No metals exceeded the common range of metals in soils of the Eastern United States. Cyanide was detected in sample S-2; however, no guidelines exist for this constituent.

The foundry sand waste samples (W-1 and W-2) contained very low concentrations of total-1,2-dichloroethene and toluene, and the resin-like waste (W-3) contained total xylenes and total-trimethyl-benzene isomers. No metals in the foundry sand samples exceeded common ranges of metals in soils of the Eastern United States; however, high levels of iron, lead, and manganese were detected in the resin-like sample.

The aqueous leachate sample, L-1, contained chloroethane, 1,1-dichloroethane, and very low concentrations of a few BNAs. The leachate-stained soil/sediment sample, L-2, contained dibenzofuran. Elevated levels of aluminum, arsenic, barium, cadmium, cobalt, iron, lead, magnesium, manganese, vanadium, and zinc were detected in the aqueous sample (L-1); but no metals exceeded common ranges for the Eastern United States in the leachate-stained soil/sediment sample (L-2).

In general, the groundwater, surface water, and surface soils appear to have been contaminated by landfilling activities on both sides of the railroad tracks. No pesticides were detected in any of the samples tested; PCBs were detected only in surface soil samples S-1, S-2, and S-8, and sediment sample SW-8; cyanide was detected only in surface soil sample S-2 and sediment sample SW-2. No PCBs/pesticides were detected from the additional surface water/sediment from the railroad drainage ditch requested by the on-site NYSDEC representative.

4.6 RECOMMENDATIONS

Based upon the analytical results of subsurface soil, groundwater, surface water/sediment, surface soil, waste, and leachate samples collected at the Golden Road site, contamination of all the above mentioned media was confirmed. Most of the organic contaminant levels were low; however, metal concentrations in both the groundwater and surface water exceeded drinking water standards. It is apparent that the contamination is originating on site. The question that remains is whether there are contaminants on site that pose a significant threat to human health and the environment. Since the drums removed from the site contained chlorinated and nonchlorinated solvents, high total organic carbon, organic solids with low flashpoints, PCBs, and waste oils, it is possible that a major source of the on-site contaminants have been removed. The partially buried drums that are still visible may contain additional contamination and warrant further investigation. The data collected to date are insufficient to make a definitive determination; thus, additional investigatory work is recommended for the immediate vicinity of the buried drums. There is also the potential for buried live artillery shells on site; therefore, an explosive ordnance specialist should be

consulted in order to determine the presence or absence of the shells. The groundwater monitoring wells should also be tested for explosive constituents. In addition, sampling of all downgradient private wells in the vicinity of the site (i.e., along Golden Road) is recommended in order to further determine the extent of groundwater contamination migration.

Table 4-1

SUMMARY OF GEOTECHNICAL ANALYSES

Sample Number	Sample Depth (feet)	Partical Size Distribution (percent)						Atterburg Limits (percent)		
		Gravel	Coarse Sand	Medium Sand	Fine Sand	Silt	Clay	Liquid Limit	Plastic Limit	Plasticity Index
GW-1	1 - 3	21	16	22	15	17	9	NR	NR	NR
GW-2	1 - 3							Non-plastic		
GW-3	17 - 19							15	12	3
GW-4	5 - 8							Non-plastic		
GW-5	5 - 7	17	4	7	53	11	8	NR	NR	NR
GW-6	1 - 3	0	0	0	64	21	15	NR	NR	NR
GW-7	15 - 17							Non-plastic		

02[UZ]YN4080:D2833/2881/24

Key:

NR = Not run

Table 4-2

DRILLING LOG INFORMATION FOR NEW WELLS

Well Type	Approximate Thickness of Overburden (feet)	Approximate Elevation[a] of Top of Bedrock or Refusal (feet above MSL)	Total Depth of Borehole Measured from Top of PVC Casing (feet)	Comments
GW-1, Overburden	12.0	337.0	13.68	Drilled 8/23/89
GW-2, Overburden	11.2	334.9	13.0	Drilled 8/24/89
GW-3, Overburden	18.5	327.0	20.35	Drilled 1/9/90
GW-4, Overburden	21.1	324.7	23.23	Drilled 1/9/90
GW-5, Overburden	25.4	325.7	26.5	Drilled 8/24/89
GW-6, Overburden	16.6	329.9	18.65	Drilled 8/22/89
GW-7, Overburden	17.4	332.1	19.3	Drilled 8/23/89

02[UZ]YN4080:D2833/2880/19

[a]Elevations are not true elevations, but relative to an on-site reference point.

Table 4-3

MONITORING WELL CONSTRUCTION DATA

Well	Opening	Feet of Screen or Open Hole	Feet of Riser	Thickness of Bentonite (feet)	Total Depth of Well (feet)	Stick-up Height (feet)
GW-1	Screen	5	8.5	1	11.5	2
GW-2	Screen	5	8.0	1	11.0	2
GW-3	Screen	10	10.2	2	18.2	2
GW-4	Screen	10	13.1	2	21.1	2
GW-5	Screen	10	16.5	2	24.5	2
GW-6	Screen	7	11.6	2	16.6	2
GW-7	Screen	7	12.2	2	17.2	2

02[UZ]YN4080:D2833/2892/15

Table 4-4

WATER LEVEL DATA

Well	Date Measured	Water Level Below Ground Surface (feet)	Relative Elevations[a] (feet)		
			Relative Elevation at T.O.C.[b]	Relative Grade Elevation[c]	Relative Water Level Elevation
GW-1	2/7/90	3.2	351.18	349.0	345.8
	3/8/91	2.9			346.2
GW-2	2/7/90	+0.5	348.12	346.1	346.6
	3/8/91	0.2			345.9
GW-3	2/7/90	+1.5	347.65	345.5	347.0
	3/8/91	+1.9 (flowing)			347.5
GW-4	2/7/90	+2.1 (flowing)	347.93	345.8	347.9
	3/8/91	+2.1 (flowing)			347.9
GW-5	2/7/90	5.2	353.50	351.1	345.9
	3/8/91	4.5			346.6
GW-6	2/6/90	+0.7	348.65	346.5	347.2
	3/8/91	+1.8			348.4
GW-7	2/6/90	4.3	351.60	349.5	345.3
	3/8/91	1.7			347.8

02[UZ]YN4080:D2833/2893/20

[a]Elevations are not true elevations, but an on-site reference point (i.e., a railroad spike in Rochester Gas and Electric Power Pole No. 13 with an assumed elevation of 350.00 feet above mean sea level).
[b]T.O.C. = Top of steel casing.
[c]Grade elevations reported to the tenth of an inch only.
+Water level measured wihin the well casing at an elevation above ground surface.

Note: Water levels were measured to the nearest 0.01 foot using an electronic audible water level meter.

Table 4-5

SUBSURFACE AND SURFACE SOILS, SEDIMENT, LEACHATE-STAINED SOIL/SEDIMENT, AND WASTE
ORGANIC ANALYSES SUMMARY

Compound Detected	Concentration (µg/kg)	Sample
Volatile Organics		
Chloromethane	4 J	SED-14
Carbon disulfide	4 J	SED-14
1,1-Dichloroethane	84	S-1
	5 J	S-3
Total-1,2-dichloroethene	2 J	S-1
	2 J	S-7
	2 J	S-9
	3 J	S-9 MS
	2 J	S-9 MSD
	9	S-11
	6 J	S-11 RE
	3 J	W-1
Chloroform	2 J	S-3
	7 J	L-2
2-Butanone	92	SED-14
1,1,1-Trichloroethane	19	S-1
	20	S-3
Trichloroethene	5 J	S-11
	4 J	S-11 RE
Tetrachloroethene	12	S-1
	3 J	S-11
	1 J	S-11 RE
Toluene	2 J	S-1
	9	S-11
	4 J	S-11 RE
	3 J	SED-1
	6 J	SED-3
	6 J	SED-4
	5 J	SED-5
	2 J	SED-6
	13	SED-7
	9 J	SED-9
	4 J	SED-9 RE
	5 J	SED-10
	3 J	W-1
Hexane	5.5 J	S-10
	11 J	S-11
	9 J	S-11 RE
	8.8 J	W-2 RE
Total xylenes	820 J	W-3
	1,000 J	W-3 MS
	1,300 J	W-3 MSD
Total trimethyl-benzene isomers	13,000	W-3

02[UZ]YN4080:D2833/3338/31

Key at end of table.

Table 4-5 (Cont.)

Compound Detected	Concentration (µg/kg)	Sample
BNAs		
Phenol	70 J	S-3
	84 J	S-5
	58 J	S-8
	46 J	S-10
	65 J	S-11
Dibenzofuran	74 J	SED-8
	110 J	SED-9
	110 J	SED-10
	59 J	L-2
Diethylphthalate	1,700	S-2
N-Nitrosodiphenylamine	1,000 J	S-1
	110 J	S-2
Di-n-butylphthalate	9,000	S-1
	150 J	S-2
	760	S-3
	240 J	S-4
	530 J	S-5
	83 J	S-6
	51 J	S-8
	84 J	S-9
	150 J	S-10
Butylbenzylphthalate	500 J	S-1
	85 J	S-2
Total PAHs	5,300 J	S-1
	24,000 J	S-2
	21,000	S-3
	5,000 J	S-4
	12,000 J	S-5
	170 J	S-6
	500 J	S-7
	1,200 J	S-8
	220 J	S-9
	290 J	S-10
	120 J	S-11
	440 J	SED-1
	280 J	SED-2
	460 J	SED-3
	7,700 J	SED-6
	64,000 J	SED-7
	29,000 J	SED-8
	19,000 J	SED-9
	16,000 J	SED-10
	13,000 J	SED-11
	4,800 J	SED-11 MS
	4,300 J	SED-11 MSD
	4,900 J	L-2
	53 J	W-1
	136 J	W-2

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Key at end of table.

Table 4-5 (Cont.)

Compound Detected	Concentration (µg/kg)	Sample
PCBs/pesticides		
Aroclor-1254	610 J	SED-8
Aroclor-1260	810 J	S-1
	770 J	S-2
	45 J	S-8

02[UZ]YN4080:D2833/3338/31

Key:

J = Estimated value for tentatively identified compounds or when mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.
MS = Matrix spike
MSD = Matrix spike duplicate
RE = Reanalysis due to unacceptable surrogate recoveries and/or internal area responses.

Table 4-6

SUBSURFACE AND SURFACE SOILS, SEDIMENT, LEACHATE-STAINED SOIL/SEDIMENT, AND WASTE (FOUNDRY SAND) INORGANIC ANALYSES SUMMARY

Inorganics Detected	Range in Samples (mg/kg)	Guidelines for Soils/ Surface Materials of Eastern United States[a] Range (mg/kg)	Guidelines for Soils/ Surface Materials of Eastern United States[a] Estimated Arithmetic Mean (mg/kg)	Comments	Samples Exceeding Guidelines Location	Samples Exceeding Guidelines Level (mg/kg)
Aluminum	575 - 10,100	7,000 - >100,000	57,000	Levels are all below the arithmetic mean of the reference soils		
Antimony	ND	<1 - 8.8	0.76			
Arsenic	1.2 - 32.1	<1.1 - 73	7.4	Levels are all below the arithmetic mean except in samples S-7, S-9, S-11, SED-6, SED-9, W-1, and W-2, which were above the arithmetic mean of the reference soils		
Barium	28.3 - 145	10 - 1,500	420	Levels are all below the arithmetic mean of the reference soils		
Beryllium	ND - 0.53	<1 - 7	0.85	Level is below arithmetic mean of the reference soils, and only detected in sample S-5		
Cadmium	ND - 2.3	No guideline		Only detected in sample SED-10		
Calcium	374 - 118,000	10 - 280,000	630	Levels are often above the arithmetic mean of the reference soils		
Chromium	ND - 1,640	1 - 1,000	52	Levels are often close to the arithmetic mean of the reference soils except for sample SED-8, which exceeded the common range	SED-8	1,640
Cobalt	ND - 5.1	<0.1 - 70	9.2	Levels are all below the arithmetic mean of the reference soils		

02[UZ]YN4080:D2833/3340/5

Key at end of table.

Table 4-6 (Cont.)

Inorganics Detected	Range in Samples (mg/kg)	Guidelines for Soils/ Surface Materials of Eastern United States[a]		Comments	Samples Exceeding Guidelines	
		Range (mg/kg)	Estimated Arithmetic Mean (mg/kg)		Location	Level (mg/kg)
Copper	4.9 - 85.1	<1 - 700	22	Levels are often close to the arithmetic mean of the reference soils		
Cyanide	ND - 5.3	No guideline		Detected only in samples S-2 and SED-2		
Iron	4,970 - 21,200	10 - >100,000	2,500	Levels are all greater than the arithmetic mean of the reference soils		
Lead	6.7 - 135	<10 - 300	17	Levels are often above the arithmetic mean of the reference soils		
Magnesium	197 - 54,500	50 - 50,000	460	Levels are often above the arithmetic mean, and sample GW-7 (17-19 ft) exceeded the common range of the reference soils	GW-7 (17-19 ft)	54,500
Manganese	28.6 - 449	<2 - 7,000	640	Levels are all below the arithmetic mean of the reference soils		
Mercury	ND - 0.23	0.01 - 3.4	0.12	Level is above the arithmetic mean of the reference soils, and only detected in sample SED-8		
Nickel	3.4 - 1,170	<5 - 700	18	Levels are often above the arithmetic mean, and sample SED-8 exceeded the common range of the reference soils	SED-8	1,170
Potassium	ND - 489	50 - 3,700	--	Levels are often in the medium range of the reference soils		
Selenium	ND - 2.6	<0.1 - 3.9	.45	Level is below arithmetic mean of the reference soils, and only detected in sample SED-15		

02[UZ]YN4080:D2833/3340/5

Key at end of table.

Table 4-6 (Cont.)

Inorganics Detected	Range in Samples (mg/kg)	Guidelines for Soils/ Surface Materials of Eastern United States[a] Range (mg/kg)	Estimated Arithmetic Mean (mg/kg)	Comments	Samples Exceeding Guidelines Location	Level (mg/kg)
Silver	ND	No guidelines				
Sodium	ND - 1,160	<500 - 50,000	780	Levels are close to the arithmetic mean of the reference soils		
Thallium	ND	2.2 - 23	8.6			
Vanadium	2.8 - 41.9	<7 - 300	66	Levels are all below the arithmetic mean of the reference soils		
Zinc	14.3 - 41.9	<5 - 2,900	52	Levels are often above the arithmetic mean of the reference soils		

02[UZ]YN4080:D2833/3340/5

[a]Source: Shacklette and Boerngen 1984.

Key:

ND = Not detected

Table 4-7

FIELD MEASUREMENTS OF GROUNDWATER
CHEMICAL PARAMETERS TAKEN DURING
WELL SAMPLING

Well	Date	Time	pH	Temperature °C	Conductivity (micromhos/cm)	Nephelometric Turbidity Units (NTU)[a]
GW-1	2/7/90	0900	8.2	8.7	2,300	>1,000
GW-2	2/7/90	1115	7.9	6.5	3,005	>1,000
GW-3	2/7/90	1140	8.0	8.8	3,048	>1,000
GW-4	2/7/90	1155	7.9	9.0	2,950	>1,000
GW-5	2/7/90	1045	8.2	8.7	2,300	>1,000
GW-6	2/6/90	1200	8.9	6.1	1,860	>1,000
GW-7	2/6/90	1125	7.1	8.6	2,268	>1,000

[UZ]YN4080:D2833/2894/17

[a]The well water was clouded by silt during purging and sampling.

Table 4-8

GROUNDWATER AND DRILL WATER ORGANIC ANALYSES SUMMARY

Compound Detected	Concentration (µg/L)	Sample	NYSDEC Class GA Groundwater Standards[a] (µg/L)
Volatile Organics			
Vinyl chloride	9 J	GW-7	2
Chloroethane	17	GW-7	5
Carbon disulfide	2 J	GW-6	50[b]
1,1-Dichloroethane	36	GW-7	5
Total-1,2-dichloroethene	1 J	GW-6	5
	8	GW-7	
Chloroform	24	Drill rig	100
Bromodichloromethane	11	Drill rig	50
Trichloroethene	2 J	GW-6	5.0
Dibromochloromethane	4 J	Drill rig	50
Benzene	36	GW-1	Not detectable
	1 J	GW-6	
4-methyl-1,2-pentanone	3 J	GW-1	50[b]
	3 J	GW-4	
	4 J	GW-5	
	7 J	GW-6	
	2 J	GW-6 MS	
	5 J	GW-6 MSD	
2-Hexanone	7 J	GW-6	50
	5 J	GW-6 MSD	
Tetrachloroethene	2 J	GW-6	5
Toluene	2 J	GW-6	5
Chlorobenzene	1 J	GW-6	5
Ethylbenzene	6	GW-1	5
	1 J	GW-6	
Total xylenes	4 J	GW-1	15
	1 J	GW-6	
BNAs			
Di-n-butylphthalate	23	Drill rig	50[b]
	38	Drill rig MS	
	35	Drill rig MSD	

02[UZ]YN4080:D2833/3341/17

[a]Source: NYSDEC, New York State Ambient Water Quality Standards and Guidance Values 1990.

[b]NYSDEC Guidance value

Key:

J = Estimated value for tentatively identified compounds or when mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.
MS = matrix spike
MSD = matrix spike duplicate

Table 4-9

GROUNDWATER INORGANIC ANALYSES SUMMARY

Inorganics Detected	Range in Samples (µg/L)	NYSDEC Class GA Groundwater Standards[a] (µg/L)	Sample Exceeding Standards or Guidance Values (µg/L)		
			Location	Unfiltered	Filtered
Aluminum	ND - 128,000	No regulatory standard			
Arsenic	ND - 29.4	25	GW-1	29.4	--
Barium	ND - 1,230	1,000	GW-2	1,230	--
Cadmium	ND - 38	10	GW-1	31.4	ND
			GW-2	38.0	ND
			GW-5	16.5	ND
Calcium	15,900 - 2,760,000	No regulatory standard			
Chromium	ND - 217	50	GW-1	145	ND
			GW-2	217	ND
			GW-5	83.4	ND
Cobalt	ND - 88.3	No regulatory standard			
Copper	ND - 260	200	GW-1	214	ND
			GW-2	260	ND
Iron	111 - 265,000	300	GW-1	243,000	1,140
		500 (iron and manganese)	GW-2	265,000	419
			GW-3	17,000	325
			GW-4	1,130	--
			GW-5	127,000	--
			GW-6	48,400	402
			GW-7	5,730	580.0
			Drill rig	359	NR

02[UZ]YN4080:D2833/3342/20

Key at end of table.

Table 4-9 (Cont.)

Inorganics Detected	Range in Samples (µg/L)	NYSDEC Class GA Groundwater Standards[a] (µg/L)	Sample Exceeding Standards or Guidance Values (µg/L)		
			Location	Unfiltered	Filtered
Lead	ND - 364	25	GW-1	364	ND
			GW-2	180	ND
			GW-5	39	ND
			GW-6	44	ND
Magnesium	8,220 - 840,000	No regulatory standard	GW-1	840,000	48,500
		35,000 guidance value	GW-2	836,000	49,100
			GW-3	78,200	42,300
			GW-4	45,200	42,600
			GW-5	197,000	57,300
			GW-6	132,000	35,500
			GW-7	74,500	61,400
Manganese	ND - 1,030	300	GW-1	8,020	153
		500 (iron and manganese)	GW-2	12,100	--
			GW-3	596	--
			GW-5	5,120	--
			GW-6	1,600	--
			GW-7	686	393
Mercury	ND - 0.28	2			
Nickel	ND - 205	No regulatory standard			
Potassium	1,280 - 19,700	No regulatory standard			
Sodium	11,800 - 71,600	20,000	GW-1	61,900	55,500
			GW-2	56,500	54,700
			GW-3	69,800	70,700
			GW-4	71,600	69,100
			GW-5	23,300	22,200
			GW-6	61,100	58,200
			GW-7	66,000	63,100

02[UZ]YN4080:D2833/3342/20

Key at end of table.

Table 4-9 (Cont.)

Inorganics Detected	Range in Samples (µg/L)	NYSDEC Class GA Groundwater Standards[a] (µg/L)	Sample Exceeding Standards or Guidance Values (µg/L)		
			Location	Unfiltered	Filtered
Vanadium	ND - 21.3	No regulatory standard			
Zinc	ND - 1,320	300	GW-1	1,320	--
			GW-2	1,120	--
			GW-5	326	ND

02[UZ]YN4080:D2833/3342/20

[a]Source: NYSDEC, New York State Ambient Water Quality Standards and Guidance Values 1990.

Key:

ND = Not detected
NR = Not run

Table 4-10

SURFACE WATER AND LEACHATE ORGANIC ANALYSES SUMMARY

Compound Detected	Concentration (µg/L)	Sample	NYSDEC Class C Surface Water Standards[a] (µg/L)	Samples Exceeding Standards
Volatiles				
Chloroethane	23	L-1	50	
Carbon disulfide	1 J	SW-12	50	
1,1-dichloroethane	7	L-1	50	
Benzene	1 J	SW-7	6[b]	
Toluene	1 J	SW-7	50	
	2 J	SW-11		
Chlorobenzene	1 J	SW-7	5	
BNAs				
N,n-diethyl-3-methylbenzamide	16 J	L-1	50	
	14 J	L-1 RE		
Total PAHs	14 J	SW-1	50	
	28 J	SW-9		

02[UZ]YN4080:D2833/3343/16

[a]Source: NYSDEC, New York State Ambient Water Quality Standards and Guidance Values 1990.

[b]NYSDEC guidance value

Key:

J = Estimated value for tentatively identified compounds or when mass spectral data indicate the presence of a compound that meets the identification criteria, but the result is less than the sample quantitation limit but greater than zero.
RE = Reanalysis due to unacceptable surrogate recoveries and/or internal area responses.

Table 4-11

SURFACE WATER AND LEACHATE INORGANIC ANALYSES SUMMARY

Inorganic Detected	Range in Samples (µg/L)	NYSDEC Class C Surface Water Standards[a] (µg/L)	Samples Exceeding Standards		
			Location	Level (µg/L)	
Aluminum	113 - 18,700	100 A	SW-1	18,700	
			SW-2	2,490	
			SW-3	147	B
			SW-4	2,200	
			SW-5	864	
			SW-6	463	
			SW-7	2,120	
			SW-8	687	
			SW-9	3,900	
			SW-10	7,420	
			SW-11	113	B
			SW-12	449	
			SW-14	139	B
			SW-15	1,050	
			L-1	1,360	
Arsenic	ND - 164	190 (dissolved form) A			
Barium	32.1 - 1,260	No regulatory standard			
Beryllium	ND - 3.0 B	11[b] or 1,100[c] A			
Cadmium	ND - 38.4	EXP (0.7852 [ln (ppm hardness)] - 3.490) Range of standard 1.85 - 6.92 A	SW-1	9.5	
			SW-7	9.7	
			SW-9	14.5	
			L-1	38.4	
Calcium	46,900 - 312,000	No regulatory standard			
Chromium	ND - 43.0	EXP (0.819 [ln (ppm hardness)] + 1.561) Range of standard 345 - 1,360 A			
Cobalt	ND - 13.1 B	5 A	SW-3	10	
			L-1	13.1	

02[UZ]YN4080:D2833/3344/18

Key at end of table.

Table 4-11 (Cont.)

Inorganic Detected	Range in Samples (µg/L)	NYSDEC Class C Surface Water Standards[a] (µg/L)	Samples Exceeding Standards	
			Location	Level (µg/L)
Copper	ND - 182	EXP (0.8545 [ln (ppm hardness)] - 1.465) Range of standard 20.1 - 84.6 A	SW-1	105
			SW-7	138
			SW-9	182
			SW-10	151
Iron	248 - 326,000	300 A	SW-1	28,700
			SW-2	4,810
			SW-3	544
			SW-4	5,000
			SW-5	6,010
			SW-6	9,830
			SW-7	76,300
			SW-8	24,800
			SW-9	89,800
			SW-10	22,600
			SW-12	1,530
			SW-14	1,790
			SW-15	2,710
			L-1	326,000
Lead	ND - 193	EXP (1.266 [ln (ppm hardness)] - 4.661) Range of standard 7.09 - 59.4 A	SW-1	193
			SW-2	56
			SW-4	66
			SW-5	19.6
			SW-6	13.1
			SW-7	134
			SW-8	14.7
			SW-9	178
			SW-10	107
			L-1	61.9
Magnesium	16,900 - 53,700	No regulatory standard		

[UZ]YN4080:D2833/3344/18

Key at end of table.

Table 4-11 (Cont.)

Inorganic Detected	Range in Samples (µg/L)	NYSDEC Class C Surface Water Standards[a] (µg/L)	Samples Exceeding Standards		
			Location	Level (µg/L)	
Manganese	25.7 - 4,650	No regulatory standard			
Nickel	ND - 667	EXP (0.76 [ln (ppm hardness)] + 1.06) Range of standard 154 - 550 A	SW-8	252	
			L-1	667	
Potassium	1,540 - 17,900	No regulatory standard			
Selenium	ND - 3.7 B	1 A (acid-soluble form)	SW-1	3.7	
			SW-2	1.4	
			SW-7	1.1	
			SW-10	1.1	
Sodium	9,020 - 272,000	No regulatory standard			
Vanadium	ND - 107	14 A (acid-soluble form)	SW-1	57.2	
			SW-7	24.7	B
			SW-9	30.8	B
			SW-10	20.8	B
			L-1	107	
Zinc	11.9 B - 803	30 A	SW-1	803	
			SW-2	152	
			SW-4	211	
			SW-5	64.9	
			SW-6	69.9	
			SW-7	302	
			SW-8	151	
			SW-9	587	
			SW-10	311	
			SW-14	49.8	
			SW-15	90.0	
			L-1	312	

02[UZ]YN4080:D2833/3344/18

Key at end of table.

Table 4-11 (Cont.)

02[UZ]YN4080:D2833/3344/18

[a]Source: NYSDEC New York State Ambient Water Quality Standards and Guidance Values 1990.

[a]When hardness is less than or equal to 75 ppm
[b]When hardness is greater than or equal to 75 ppm

Key:

A = Aquatic
B = Reported value is less than contract-required detection limit but greater than instrument detection limit.
ND = Not detected

Table 4-12

WASTE (RESIN-LIKE SUBSTANCE)
SAMPLE W3
INORGANIC ANALYSES SUMMARY

Inorganic Detected	Waste (µg/L)
Aluminum	25.7 B
Antimony	ND
Arsenic	ND
Barium	7.5 B
Beryllium	ND
Cadmium	ND
Calcium	3,710
Chromium	3.0
Cobalt	162
Copper	2.4 B
Iron	778
Lead	3,430
Magnesium	1,670
Manganese	9,090
Mercury	ND
Nickel	ND
Potassium	336 B
Selenium	ND
Silver	ND
Sodium	1,240
Thallium	ND
Vanadium	ND
Zinc	231
Cyanide	ND

[UZ]YN4080:D2833/3346/46

Key:

B = Reported value is less than contract required detection limit but greater than the instrument detection limit.

ND = Not detected.

System	Series	Group	Formation	Rock Type	Thickness in Feet	Description
Silurian		Salina	Akron and Bertie Dolostones		75	Interbedded dolostone and shale
			Camillus and Syracuse		300	Green and grey shales with dolomite, gypsum, anhydrite, and halite
			Vernon		600	Red shale with green and grey interbeds, dolomite becoming common near the top
		Lockport	Oak Orchard		160	Siliceous dolostone with shaly partings
			Penfield			
		Clinton	Decew DS		197	Red, green and grey shales and mudstones with interbedded dolostones, sandstones, limestones, hematite, and hematitic and oolitic limestone
			Rochester SH			
			Irondequoit LS			
			Williamson SH			
			Wolcott Furnace Hamatite			
			Wolcott LS			
			Sodus SH			
			Bearcreek SH			
			Wallington LS			
			Furnaceville Hematite			
			Maplewood SH			
			Thorold/ Kodak SS			
		Medina	Grimsby		55	Red and green mottled sandstone and shale exhibiting depositional features
Ordovician	Upper		Queenston		1,100	Thinly bedded micaceous shales and siltstones

SOURCE: Revised from Rickard & Fisher, 1970, Geologic Map of New York, Finger Lakes Sheet.

Figure 4-1 BEDROCK UNITS OF NORTHERN MONROE COUNTY

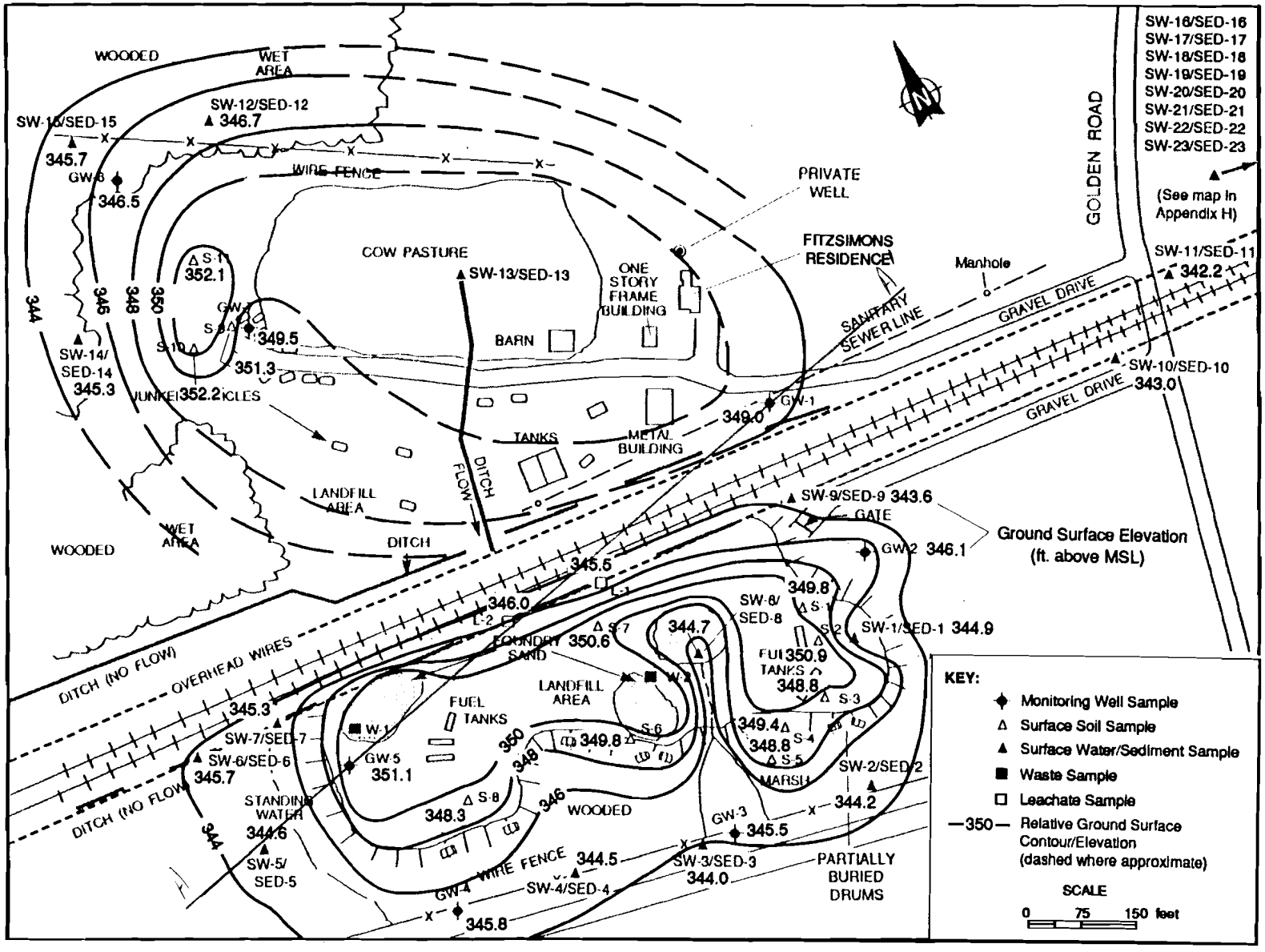


Figure 4-2
GROUND SURFACE CONTOUR MAP

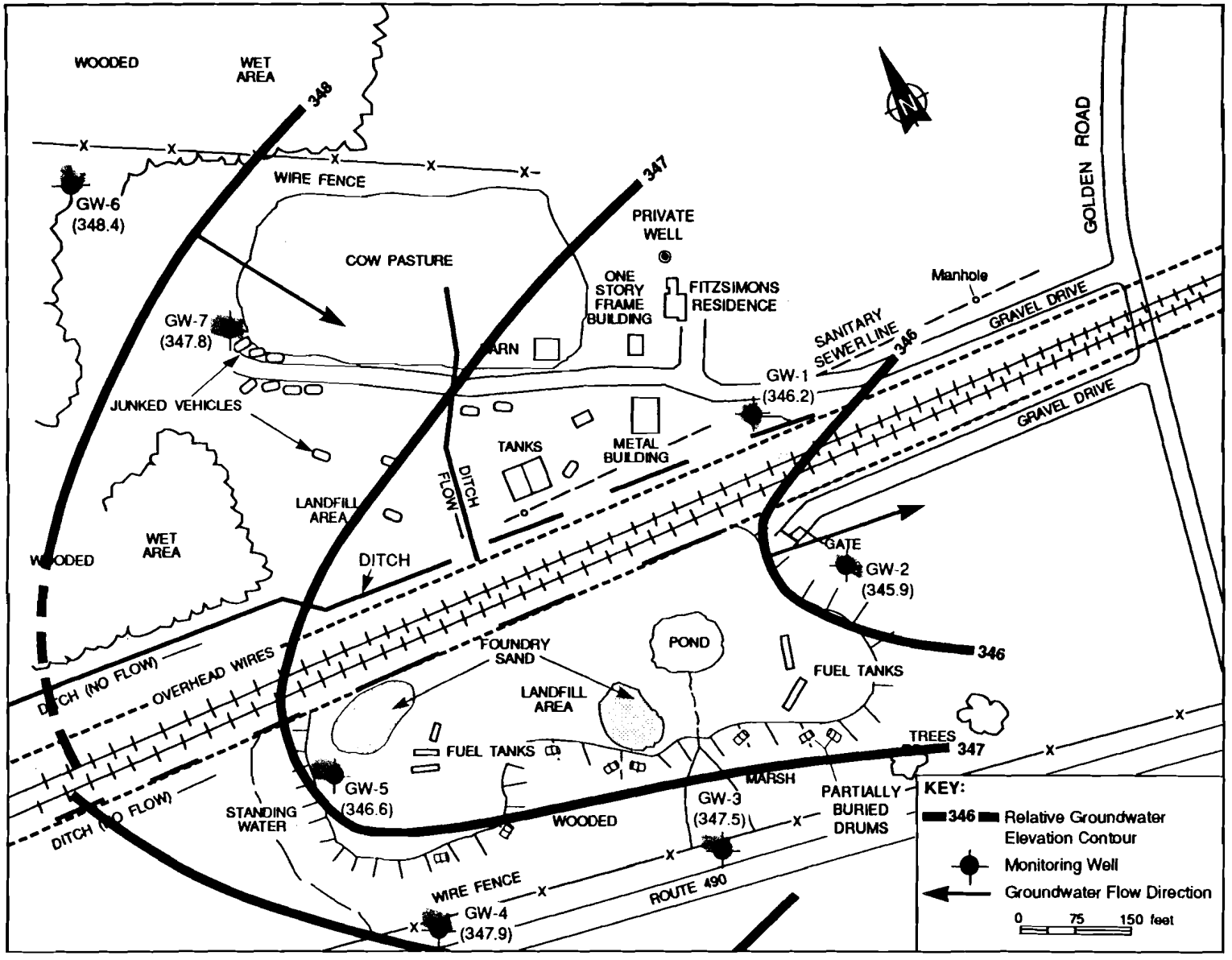


Figure 4-3
OVERBURDEN GROUNDWATER CONTOUR MAP, MARCH 1990

5. FINAL APPLICATION OF HAZARD RANKING SYSTEM

5.1 NARRATIVE SUMMARY

The Golden Road disposal site is situated within an 8-acre parcel of land on Golden Road in the Town of Chili, Monroe County, New York (see Figure 5-1). The site is located at 227 Golden Road and is bisected by active Conrail tracks. The site is currently owned by Howard Fitzsimons, Jr., and was previously owned by Howard Fitzsimons, Sr.

The site was active from 1955 through 1976, receiving a wide variety of wastes including U.S. Army artillery shell casings, 55-gallon drums of unknown wastes, household refuse, metal slag, fly ash, and junked vehicles. The majority of the material used for fill was foundry sand. Approximately 560 drums were removed in 1985. The drums contained chlorinated and nonchlorinated solvents, high total organic carbon, organic solids with low flashpoints, PCBs, and waste oils. Large pieces of structural steel, fuel tanks, and partially buried drums currently lie on site.

According to tests conducted by E & E, groundwater, surface water/sediment, and surface soils are contaminated with low levels of organic compounds and high levels of metals. No pesticides were detected in any of the samples tested; however, PCBs were detected in one sediment sample and three surface soil samples. Cyanide was detected in one sediment sample and one surface soil sample.

Approximately 5,352 people live within a 1-mile radius of the site and are potentially affected by direct contact due to lack of security (i.e., fences), especially to the south of the railroad tracks, and surface water and soil contamination. All residences within a 1-mile radius of the site are within the local municipal water service area;

however, residents (i.e., the site owners) are still known to be using private groundwater wells as their only source of drinking water. An exact number of people drinking groundwater within 1 mile of the site could not be obtained but is suspected to be low.

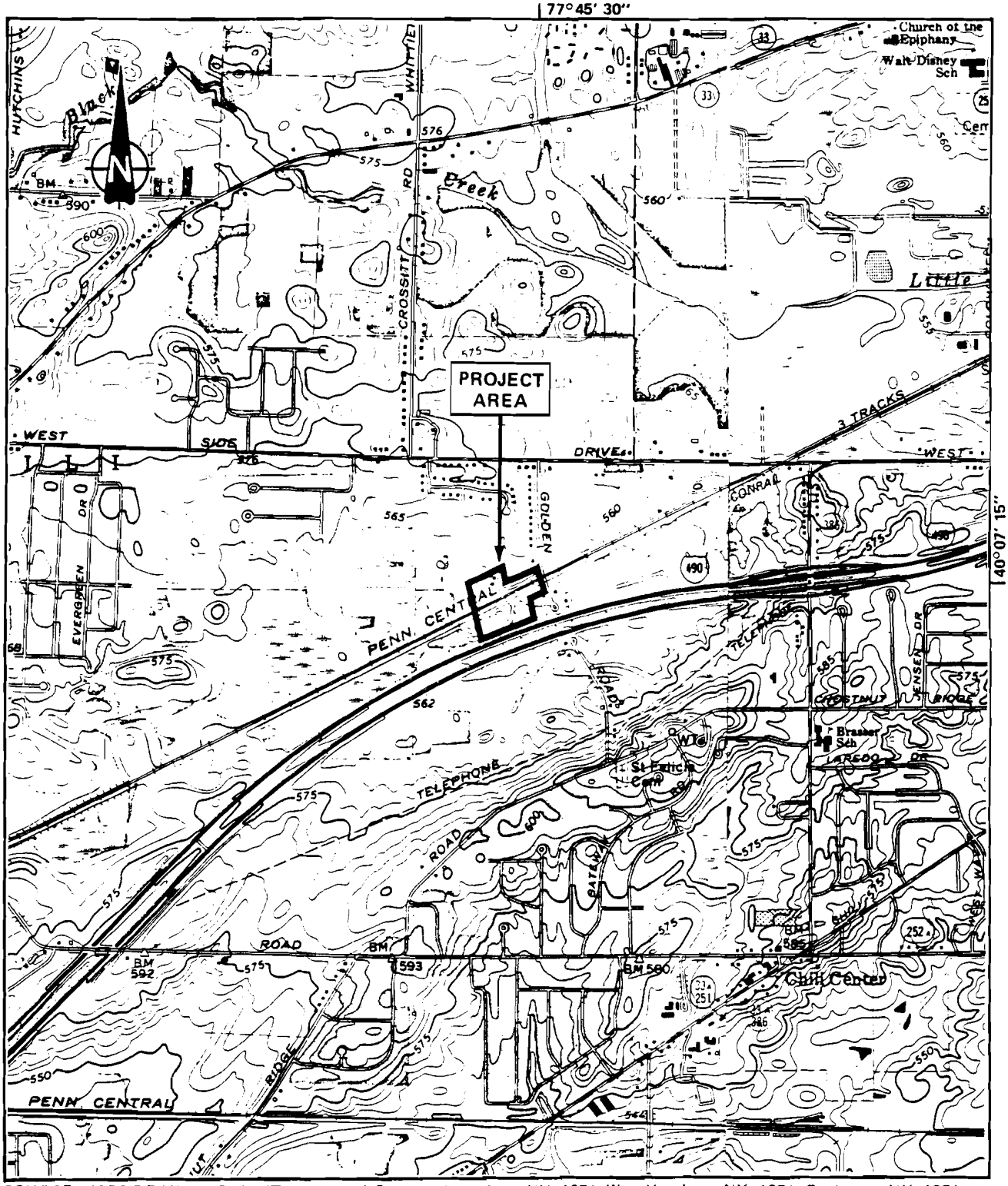


Figure 5–1
LOCATION MAP: GOLDEN ROAD DISPOSAL SITE

FIGURE 1

H R S C O V E R S H E E T

Facility Name: Golden Road Disposal Site

Location: 227 Golden Road, Chili, NY 14625

EPA Region: _____

Person(s) in Charge of Facility: Howard Fitzsimons, Jr.

_____

_____

Name of Reviewer: G. Florentino Date: 6/26/90

General Description of the Facility:

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

The Golden Road disposal site is an 8-acre, inactive landfill which contains U.S. Army artillery shells, household refuse, metal slag, fly ash, foundry sand, junked vehicles, and partially buried 55-gallon drums which may contain solvents and/or ink wastes. The site is located in a residential area. The soil surface water and groundwater contamination is of major concern.

Scores: S_M = 28.06 (S_{gw} = 44.89 S_{sw} = 18.46 S_a = 0)

S_{FE} = not scored

S_{DC} = 50

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	0 (45)	1	45	45	3.1
If observed release is given a score of 45, proceed to line [4]. If observed release is given a score of 0, proceed to line [2].					
[2] Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	0 (1) 2 3	1	1	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			11	15	
[3] Containment	0 1 2 (3)	1	3	3	3.3
[4] Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 2 3 (4) 5 6 7 8	1	4	8	
Total Waste Characteristics Score			22	26	
[5] Targets					3.5
Ground Water Use	0 1 (2) 3	3	6	9	
Distance to Nearest Well/Population Served	0 4 6 8 10 / 12 16 18 (20) / 24 30 32 35 40	1	20	40	
Total Targets Score			26	49	
[6] If line [1] is 45, multiply [1] x [4] x [5]. If line [1] is 0, multiply [2] x [3] x [4] x [5]			25,740	57,330	
[7] Divide line [6] by 57,330 and multiply by 100		S_{gw} = 44.89			

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 (45)	1	45	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	0 1 2 (3)	1	3	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 2 (3)	2	6	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			14	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 2 3 (4) 5 6 7 8	1	4	8	
Total Waste Characteristics Score			22	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	0 1 2 (3)	2	6	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 / 12 16 18 20 / 24 30 32 35 40	1	0	40	
Total Targets Score			12	55	
6 If line 1 is 45, multiply 1 x 4 x 5 / If line 1 is 0, multiply 2 x 3 x 4 x 5			11,880	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} =	18.46		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

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

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	44.89	2015.11
Surface Water Route Score (S_{sw})	18.46	340.77
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		2355.88
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		48.54
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		28.06

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} = Not scored			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 (3)	1	3	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 3 (4) 5	4	16	20	
Distance to a Critical Habitat	(0) 1 2 3.	4	0	12	
Total Targets Score			16	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			10,800	21,600	
7 Divide line 6 by 21,600 and multiply by 100		S_{OC} =	50		

FIGURE 12
DIRECT CONTACT WORK SHEET

DOCUMENTATION RECORDS

FOR

HAZARD RANKING SYSTEM

Instructions: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,320 drums plus 80 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

Facility Name: Golden Road Disposal Site

Location: 227 Golden Road, Town of Chili, NY

Date Scored: 7/3/90

Person Scoring: G. Florentino

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

Ref. 1, 5, 6, 7

Factors Not Scored Due to Insufficient Information:

Comments or Qualifications:

GROUNDWATER ROUTE

1. OBSERVED RELEASE

Contaminants detected (3 maximum):

Total lead, benzene
1,1-dichloroethane Score = 45
Ref. 1

Rationale for attributing the contaminants to the facility:

Groundwater samples collected from on-site wells
Ref. 1

* * *

2. ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

Lockport Group
Ref. 2 and 3

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

The shallowest water level encountered during drilling was 3.0 feet in GW-2. Water levels rose in the completed wells to 2.1 feet above ground surface in GW-4.
Ref. 1

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

<20 feet
Assigned value = 3

Net Precipitation

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

32 inches
Ref. 4

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

27 inches
Ref. 4

Net precipitation (subtract the above figures):

5 inches
Assigned value = 1

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Silty sand, sometimes silty clay
Ref. 2 and 3

Permeability associated with soil type:

0.63 - 2.0 inches per hour
Ref. 2 and 3

Physical State

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

Solids: Artillery shells, foundry sand/fly ash, household refuse
Liquids: >560 55-gallon drums
Ref. 5 and 6

* * *

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Landfill - no liner, no cap

Method with highest score:

See above
Assigned value = 3
Ref. 5 and 6

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Total lead	Assigned value = 18
1,1-dichloroethane	Assigned value = 12
Benzene	Assigned value = 12

Ref. 1 and 7

Compound with highest score:

Total lead
Assigned value = 18
Ref. 7

Note: Dissolved lead was not detected, therefore an alternative score would be 12 for benzene.

Hazardous Waste Quantity

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

560 drums were removed from the site and several still remained partially, and possibly, buried.
(Note: Other waste present on site in unknown quantities)
Ref. 5 and 6

Basis of estimating and/or computing waste quantity:

560 drums removed from site (Note: This is a minimal waste value)
Ref. 5 and 6

* * *

5. TARGETS

Groundwater Use

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

Drinking water with municipal water from alternate unthreatened sources presently available.
Assigned value = 2
Ref. 5

Distance to Nearest Well

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

Mr. Howard Fitzsimons 227 Golden Road
Ref. 1, 5, and 19

Distance to above well or building:

Adjacent to fill
Assigned value = 4
Ref. 1, 5, and 19

Population Served by Groundwater Wells Within a 3-Mile Radius

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

Average of 14.1 wells per square mile in Town of Chili.
9.4 sq. miles x 14.1 wells/sq. mile x 3.8 people/well = 504 people
Ref. 5 and 8

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

300 acres x 1.5 = 450 people
Ref. 5

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

504 + 450 = 954
Assigned value = 2

SURFACE WATER ROUTE

1. OBSERVED RELEASE

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

Cadmium
Lead
Benzene
Toluene
Manganese
Score = 45
Ref. 1

Rationale for attributing the contaminants to the facility:

Samples collected from on-site or adjacent surface water
Ref. 1

* * *

2. ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

0 - 3%
Ref. 1, 5, 10, 11, 12, and 13

Name/description of nearest downslope surface water:

Unnamed pond and wetlands on and adjacent to site
Ref. 1 and 5

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

0 - 3%
Ref. 1, 5, 10, 11, 12, and 13

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

Yes
Ref. 1, 5, 10, 11, 12, and 13

Is the facility completely surrounded by areas of higher elevation?

No
Assigned value = 3
Ref. 1, 5, 10, 11, 12, and 13

1-Year 24-Hour Rainfall in Inches

2.2
Assigned value = 2
Ref. 14

Distance to Nearest Downslope Surface Water

Adjacent
Assigned value = 3
Ref. 1 and 5

Physical State of Waste

Solids: Artillery shells, foundry sand/fly ash, household refuse
Liquids: >560 55-gallon drums
Assigned value = 3
Ref. 5 and 19

* * *

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Landfill - no liner, no cap

Method with highest score:

Same as above
Assigned value = 3
Ref. 5

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Cadmium	Assigned value = 18
Lead	Assigned value = 18
Manganese	Assigned value = 18
Benzene	Assigned value = 12
Toluene	Assigned value = 9

Ref. 1 and 7

Compound with highest score:

Cadmium
Assigned value = 18
Ref. 7

Hazardous Waste Quantity

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

560 drums removed from site. Other drums exist partially or completely buried. Other wastes exist on site in unknown quantities
Ref. 6

Basis of estimating and/or computing waste quantity:

560 drums were removed (Note: This is a minimal waste value)
Assigned value = 4
Ref. 7

* * *

5. TARGETS

Surface Water Use

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

Unknown, possibly recreation. No intakes in area.
Assigned value = 2
Ref. 5, 10, 11, 12, and 13

Is there tidal influence?

No
Ref. 15

Distance to a Sensitive Environment

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

None
Ref. 15

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

Site adjacent to designated Class II wetland
Assigned value = 3
Ref. 5

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

None
Assigned value = 0
Ref. 5

Population Served by Surface Water

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

None
Assigned value = 0
Ref. 5

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

None
Ref. 5

Total population served:

None
Ref. 5

Name/description of nearest of above water bodies:

None
Ref. 5

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

None
Ref. 5

AIR ROUTE

1. OBSERVED RELEASE

Contaminants detected:

Air samples were not collected and tested. The site was screened with an HNu photoionization detector. No contaminants were detected.
Assigned value = 0
Ref. 1

Date and location of detection of contaminants:

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2. WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Not sampled, unknown
Assigned value = 1
Ref. 1 and 5

Most incompatible pair of compounds:

Unknown
Assigned value = 1
Ref. 7

Toxicity

Most toxic compound:

Unknown
Assigned value = 1

Hazardous Waste Quantity

Total quantity of hazardous waste:

560 drums
Ref. 6

Basis of estimating and/or computing waste quantity:

560 drums removed (waste quantity is a minimal value because other wastes were disposed on site)
Ref. 1, 5, and 6

* * *

3. TARGETS

Population Within 4-Mile Radius

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

0 to 4 mi (0 to 1 mi) 0 to 1/2 mi 0 to 1/4 mi

0-1 miles 5,352
Assigned value = 21
Ref. 16

Distance to a Sensitive Environment

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

None
Ref. 15

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

Site adjacent to designated Class II wetland
Assigned value = 3
Ref. 5

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

None
Assigned value = 0
Ref. 5

Land Use

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

1 mile
Assigned value = 3
Ref. 10, 11, 12, 13, and 17

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

None
Assigned value = 0
Ref. 10, 11, 12, and 13

Distance to residential area, if 2 miles or less:

Adjacent
Assigned value = 3
Ref. 10, 11, 12, 13, and 17

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

<0.25 mile
Assigned value = 3
Ref. 17

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

<0.25 mile
Assigned value = 3
Ref. 17

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

None
Assigned value = 0
Ref. 9

1. CONTAINMENT

Hazardous substances present:

No fire hazard at site.
Ref. 18

Type of containment, if applicable:

* * *

2. WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

No readings with O_2/explosimeter
Assigned value = 0
Ref. 1

Ignitability

Compound used:

Unknown
Assigned value = 1
Ref. 7

Reactivity

Most reactive compound:

Unknown
Assigned value = 1
Ref. 7

Incompatibility

Most incompatible pair of compounds:

Unknown
Assigned value = 1
Ref. 7

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

560 drums
Ref. 6

Basis of estimating and/or computing waste quantity:

560 drums removed (Note: Waste quantity is a minimum value due to the disposal of other unknown quantities of waste)
Ref. 5 and 6

* * *

3. TARGETS

Distance to Nearest Population

Adjacent
Assigned value = 5
Ref. 1, 5, 10, 11, 12, and 13

Distance to Nearest Building

Adjacent
Assigned value = 3
Ref. 1, 5, 10, 11, 12, and 13

Distance to a Sensitive Environment

Distance to wetlands:

Adjacent
Assigned value = 3
Ref. 5, 10, 11, 12, and 13

Distance to critical habitat:

None
Assigned value = 0
Ref. 5

Land Use

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

1.0 mile
Assigned value = 3
Ref. 17

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

None
Assigned value = 0
Ref. 10, 11, 12, and 13

Distance to residential area, if 2 miles or less:

Adjacent
Assigned value = 3
Ref. 10, 11, 12, 13, and 17

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

<0.25 miles
Assigned value = 3
Ref. 17

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

<0.25 miles
Assigned value = 3
Ref. 17

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

None
Assigned value = 0
Ref. 9

Population Within 2-Mile Radius

19,439
Assigned value = 5
Ref. 16

Buildings Within 2-Mile Radius

>700
Assigned value = 3
Ref. 10, 11, 12, and 13

OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No incidents on record.
Ref. 5

* * *

2. ACCESSIBILITY

Describe type of barrier(s):

Barriers do not completely surround the facility.
Assigned value = 3

* * *

3. CONTAINMENT

Type of containment, if applicable:

No containment. Foundry sand/fly ash at surface.
Assigned value = 15
Ref. 1, 5, and 19

* * *

4. WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Benzene	Assigned value = 3
Toluene	Assigned value = 2

Ref. 1 and 7

Compound with highest score:

Benzene
Assigned value = 3
Ref. 7

* * *

5. TARGETS

Population Within One-Mile Radius

5,352
Assigned value = 4
Ref. 16

Distance to Critical Habitat (of endangered species)

None
Assigned value = 0
Ref. 5

REFERENCES

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

Reference Number	Description of the Reference
1	Ecology and Environment Engineering, P.C., April 26, 1989, Site Inspection of the Golden Road Disposal Site, Town of Chili, New York, performed for the New York State Department of Environmental Conservation, Albany, New York.
2	Sweet, A.T., W.J. Latimer, C.S. Pearson, C.H. Diebold, W.W. Rietz, C.P. Mead, W. Secor, and M. Howard, Jr., 1938, Soil Survey of Monroe County, New York, United States Department of Agriculture, Soil Conservation Service, Cornell, New York. Document location: Ecology and Environment Engineering, P.C., Buffalo, New York.
3	Heffner, R.L., S.D. Goodman, 1973, Soil Survey of Monroe County, New York, United States Department of Agriculture, Soil Conservation Service, Cornell, New York. Document location: Ecology and Environment Engineering, P.C., Buffalo, New York.
4	National Oceanic and Atmospheric Administration, 1983, Climatic Atlas of the United States, Reprinted from United States Department of Commerce, Environmental Science Services Administration, Environmental Data Service, 1968, National Climatic Data Center, Asheville, North Carolina. Document location: Ecology and Environment Engineering, P.C., Buffalo, New York.
5	New York State Department of Environmental Conservation, November 28, 1983, Golden Road Disposal Site, New York State Superfund Phase I Summary Report, Town of Chili, Monroe County, New York, prepared by Recra Research, Inc. Document location: NYSDEC, Albany, New York.
6	Jackson, D., July 25, 1983, Sampling Report, Golden Road Disposal Site, Site No. 8-28-021, New York State Department of Environmental Conservation, Division of Solid and Hazardous Waste, Region 8, Albany, New York. Document location: Ecology and Environment Engineering, P.C., Lancaster, New York.
7	Uncontrolled Hazardous Waste Site Ranking Systems, A Users Manual, National Oil and Hazardous Substances, Contingency Plan, Appendix A (40 CFR) (47 FR 31219), July 16, 1982. Document location: Ecology and Environment Engineering, P.C., Buffalo, New York.
8	Chudyk, S., July 3, 1990, personal communication, Highway Superintendent, Town of Chili, New York. Document location: Ecology and Environment Engineering, P.C., Buffalo, New York.
9	National Conference of State Historic Preservation Officers, National Park Service, and American Assoication for State and Local History, 1989, National Register of Historic Places 1966-1988, American Association for State and Local History, Nashville, Tennessee. Document location: Ecology and Environment Engineering, P.C., Buffalo, New York.
10	United States Geological Survey, 1971, Clifton, New York Quadrangle, Monroe County, New York, 7.5-Minute Series (Topographic), Washington, D.C. Document location: Ecology and Environment Engineering, P.C., Buffalo, New York.

02[UZ]YN480:D2833/6639

Reference Number	Description of the Reference
11	_____, 1978, Rochester West, New York Quadrangle, Photorevised from 1971, Monroe County, New York, 7.5-Minute Series (Topographic), Washington, D.C.
12	_____, 1978, Spencerport, New York Quadrangle, Photorevised from 1971, Monroe County, New York, 7.5-Minute Series (Topographic), Washington, D.C.
13	_____, 1978, West Henrietta, New York Quadrangle, Photorevised from 1971, Monroe County, New York, 7.5-Minute Series (Topographic), Washington, D.C.
14	Hershfield, D., 1963, Rainfall Frequency from 30 minutes to 24 hours and Return Periods from 1 to 10 years, Technical Paper No. 40, prepared for United States Department of Agriculture, Soil Conservation Service, Washington, D.C. Document location: Ecology and Environment Engineering, P.C., Buffalo, New York.
15	Kirsch, K., April 11, 1990, personal communication, New York State Department of Environmental Conservaiton, Wetlands Section, Avon, New York. Document location: Ecology and Environment Engineering, P.C., Buffalo, New York.
16	General Sciences Corporation, 1987, Graphical Exposure Modeling System Users Guide, Volume I: Core Manual, United States Environmental Protection Agency, Washington, D.C.
17	Monroe County Department of Planning, 1988, Existing Land Use Map 1 Environmental Planning Atlas, Rochester, New York.
18	Christian, J., July 5, 1990, personal communication, Fire Marshall, Town of Chili, Chili, New York. Document location: Ecology and Environment Engineering, P.C., Buffalo, New York.
19	Fitzsimons, L., January 21, 1991, personal communication, Golden Road Disposal Site owner, Chili, New York. Document location: Ecology and Environment Engineering, P.C., Buffalo, New York.

02[UZ]YN480:D2833/6639

REFERENCE 1

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES IN THE STATE OF NEW YORK

PHASE II INVESTIGATIONS

Golden Road Disposal Site
Site No. 828021
Town of Chili, Monroe County

August 1990
Volume I

Prepared for:

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233

Thomas C. Jorling, Commissioner

Division of Hazardous Waste Remediation

Michael J. O'Toole, Jr., P.E., Director

Prepared by:

Ecology and Environment Engineering, P.C.

5-26

REFERENCE 2

Series 1933, No. 17 Issued May 1938

UNITED STATES DEPARTMENT OF AGRICULTURE

Soil Survey
of
Monroe County, New York

By

A. T. SWEET, in Charge, and W. J. LATIMER
United States Department of Agriculture

and

C. S. PEARSON, C. H. DIEBOLD, W. W. RIETZ
C. P. MEAD, WILBER SECOR, and MONTAGUE HOWARD, Jr.
Cornell University Agricultural Experiment Station

Bureau of Chemistry and Soils

In cooperation with the
Cornell University Agricultural Experiment Station

For sale by the Superintendent of Documents, Washington, D. C. - - - - - - - - - - Price $2.00

REFERENCE 3

FERRIS

SOIL SURVEY

Monroe County New York

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
In cooperation with
CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION
Issued March 1973

5-30

SOIL SURVEY OF MONROE COUNTY, NEW YORK

By ROBERT L. HEFFNER AND SEYMOUR D. GOODMAN, SOIL CONSERVATION SERVICE

SOILS SURVEYED BY ROBERT L. HEFFNER, SEYMOUR D. GOODMAN, BRADFORD A. HIGGINS, AND TROY D. YOAKUM, SOIL CONSERVATION SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, IN COOPERATION WITH THE CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION

MONROE COUNTY is in the Erie-Ontario Lake Plain region of western New York (fig. 1). It is approximately 25 miles from north to south and 27 miles from east to west. It has a total area of 430,720 acres, or about 673 square miles. Rochester, the county seat, is in the northern part of the county.

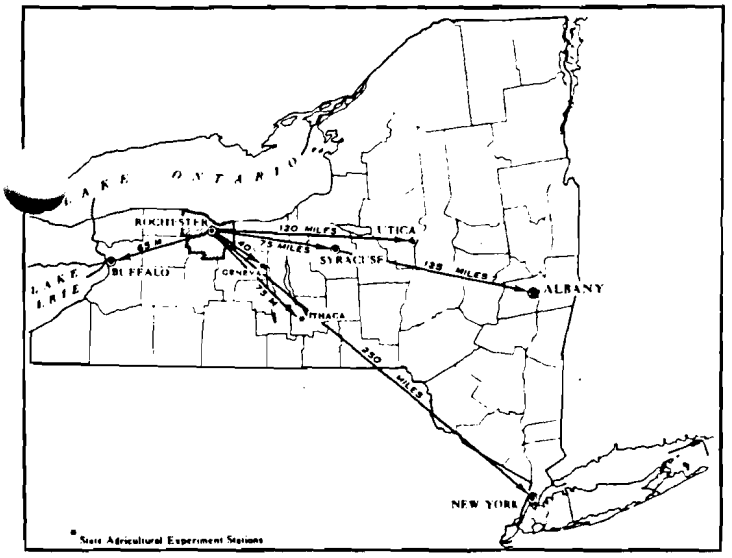


Figure 1.—Location of Monroe County in New York.

Slightly less than half the county is used for farming. Dairying is the predominant farm enterprise. A substantial amount of fluid milk is sold. Also important are cash-grain crops and fruits and vegetables. Grain crops are grown for dairy feed, as well as for cash income. Also, a considerable acreage of dry beans is grown in the county. North of U.S. Route 104 and also in small areas south of this highway, an extensive acreage is used for fruits and vegetables. Apples, cherries, pears, prunes, tomatoes, potatoes, cabbage, and green beans are commonly grown. Approximately 30 percent of the total dollar value of farm products sold comes from the sale of fruits and vegetables.

Only a small percentage of the county is used for woodland. Much of the acreage is scattered throughout the county in small farm woodlots. Much of the woodland is owned by the Government. The State owns land along the Ontario Parkway, the Erie Barge Canal, and Hamlin State Park. The county owns approximately 10,000 acres of parkland, which is distributed throughout the county.

Rochester, the county seat, has many manufacturing facilities that include food processing, clothing, graphic arts, cameras, chemicals, automotive parts, and heavy machine tools. Brockport, Honeoye Falls, Hilton, and other towns also have small manufacturing facilities.

How This Survey Was Made

Soil scientists made this survey to learn what kinds of soil are in Monroe County, where they are located, and how they can be used. The soil scientists went into the county knowing they were likely to find many soils they had already seen and perhaps some they had not. As they traveled over the county, they observed the steepness, length, and shape of slopes, the size and speed of streams, the kinds of native plants or crops, the kinds of rock, and many facts about the soils. They dug many holes to expose soil profiles. A profile is the sequence of natural layers, or horizons, in a soil; it extends from the surface down into the parent material that has not been changed much by leaching or by the action of plant roots.

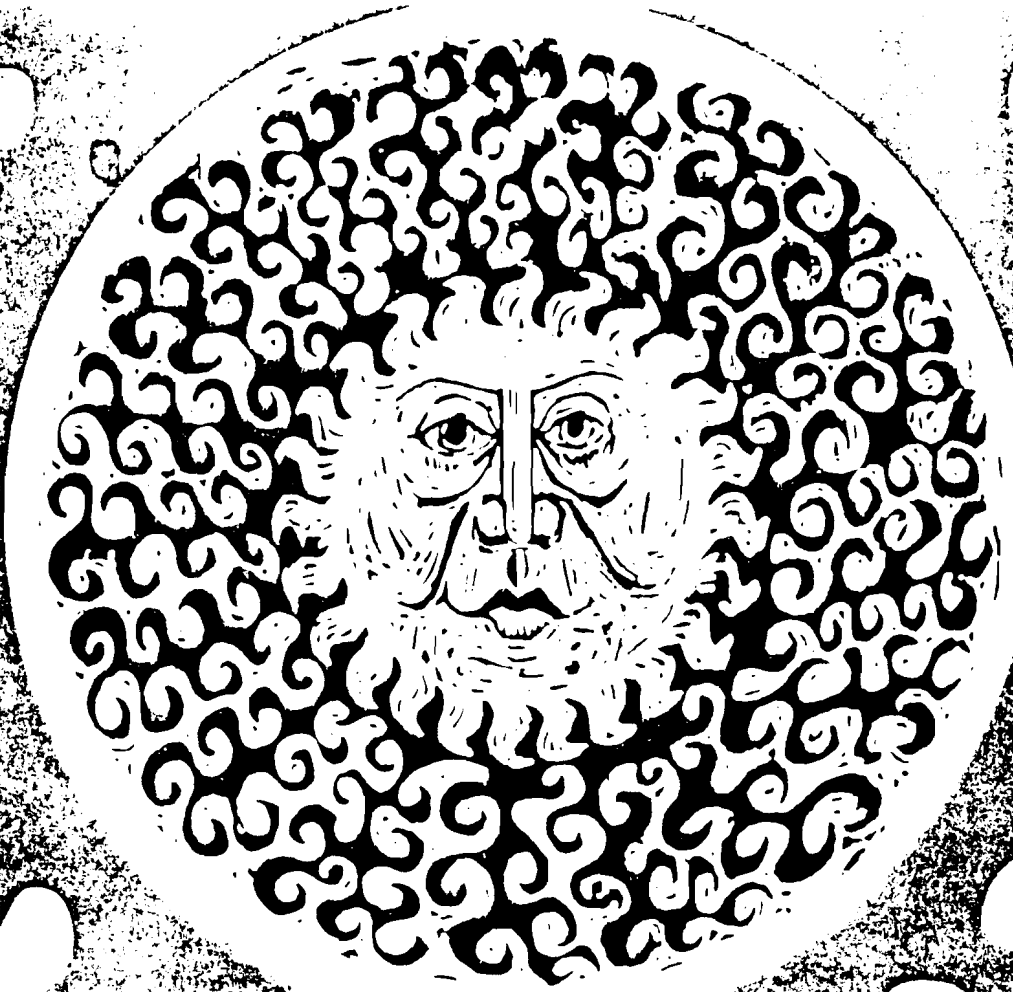
The soil scientists made comparisons among the profiles they studied, and they compared these profiles with those in counties nearby and in places more distant. They classified and named the soils according to nationwide, uniform procedures. The soil series (*7*)[1] and the soil phase are the categories of soil classification most used in a local survey.

Soils that have profiles almost alike make up a soil series. Except for different texture in the surface layer, all the soils of one series have major horizons that are similar in thickness, arrangement, and other important characteristics. Each soil series is named for a town or other geographic feature near the place where a soil of that series was first observed and mapped. Collamer and Hilton, for example, are the names of two soil series. All the soils in the United States having the same series name are essentially alike in those characteristics that affect their behavior in the undisturbed landscape.

Soils of one series can differ in texture of the surface layer and in slope, stoniness, or some other characteristic that affects use of the soils by man. On the basis of such differences, a soil series is divided into phases. The name of a soil phase indicates a feature that affects management.

[1] Italic numbers in parentheses refer to Literature Cited, p. 170.

REFERENCE 4



CLIMATIC ATLAS OF THE UNITED STATES

:ntal Science Services Administration . Environmental Data S

recycled paper

5-33

ecology and environment

U.S. DEPARTMENT OF COMMERCE
C. R. Smith, Secretary

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
Robert M. White, Administrator

ENVIRONMENTAL DATA SERVICE
Woodrow C. Jacobs, Director

JUNE 1968

REPRINTED BY THE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
1983

REFERENCE 5

GOLDEN ROAD DISPOSAL SITE

NEW YORK STATE SUPERFUND
PHASE I SUMMARY REPORT

FINAL

November 28, 1983

Prepared By:

Recra Research, Inc.
4248 Ridge Lea Road
Amherst, New York 14226

For:

New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-0001

REFERENCE 6

SAMPLING REPORT

Golden Road Disposal Site

Chili (T), Monroe (C)

Site Code: 8-28-021

Priority Code: N

Date Sampled: July 20, 1983

By: Deborah Jackson
Senior Engineering Technician
Division of Solid and Hazardous Waste
Region 8

July 25, 1983

REFERENCE 7

Uncontrolled Hazardous Waste Site Ranking System

A Users Manual
(HW-10)

Originally Published in
the July 16, 1982, *Federal Register*

United States
Environmental Protection
Agency

1984

REFERENCE 8

CONTACT REPORT

Telephone (X) Meeting ( ) Other ( )

AGENCY: Town of Chili

ADDRESS: 3235 Chili Ave.
Rochester, N.Y. 14624

PHONE NO.: (716) 889-3550

PERSON CONTACTED: Steven Chudyk
Highway Superintendent

TO: YN-4000

FROM: G. Florentino

DATE: 7/3/90

SUBJECT: Water Supply for Town of Chili

Mr. Chudyk stated that there are residences south of Black Creek in the Town of Chili that are not on Monroe County water and there may also be some residences north of Black Creek on private wells.

Acknowledgment:
(See Attached)

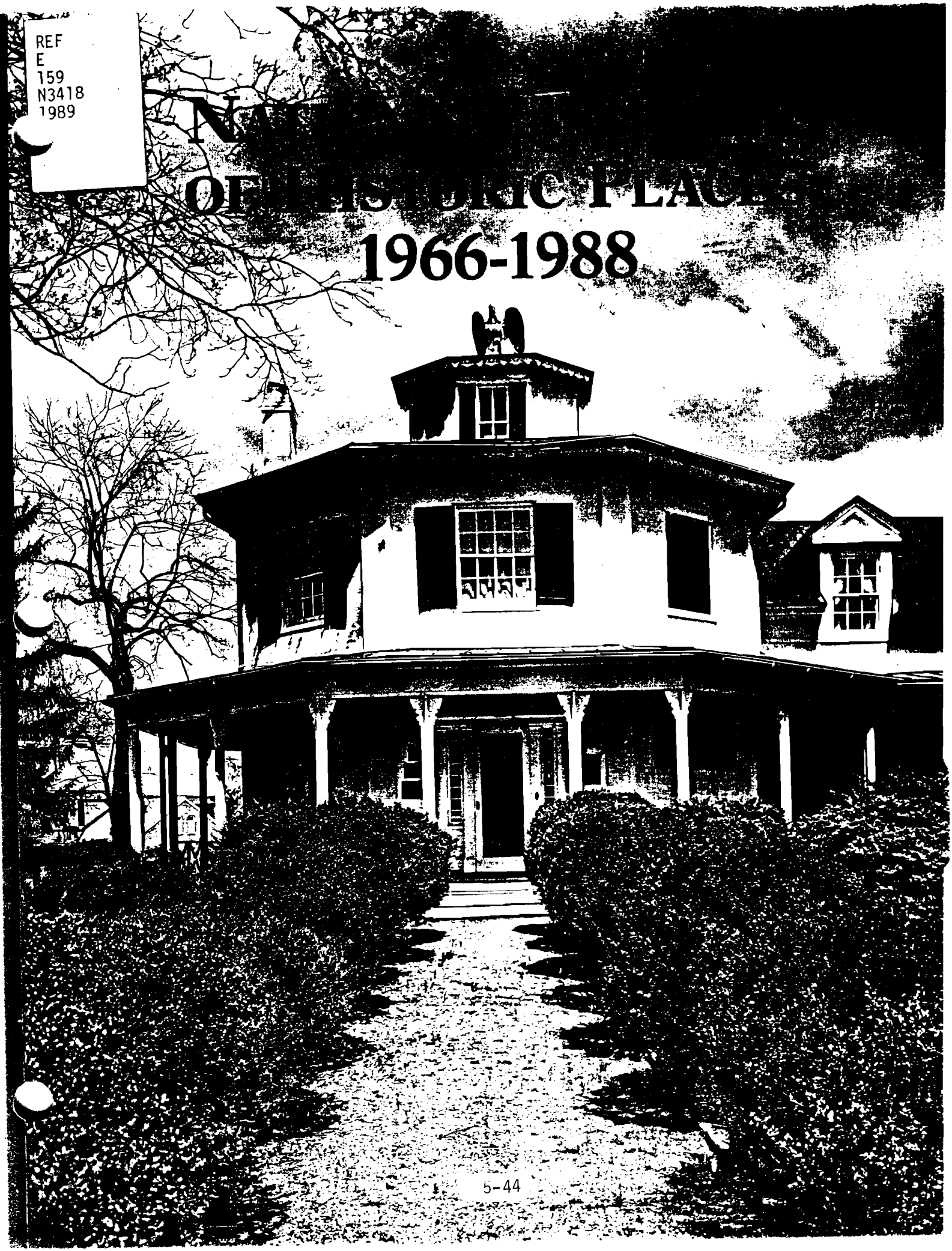
Signature: Stephen A. Chudyk Date: July 9, 1990

Title: Supt. of Highways

GF/kk
CR/YN4080
[ENVSHARE]

REFERENCE 9

NA
OF HISTORIC PLACES
1966-1988



NATIONAL REGISTER OF HISTORIC PLACES 1966-1988

NATIONAL CONFERENCE OF
STATE HISTORIC PRESERVATION OFFICERS
Washington, D.C.

NATIONAL PARK SERVICE
Washington, D.C.

AMERICAN ASSOCIATION FOR
STATE AND LOCAL HISTORY
Nashville, Tennessee

Library of Congress Cataloging-in-Publication Data

National Register of Historic Places, 1966-1988.

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ISBN 0-942063-03-3

The cumulative list included in this edition of the *National Register of Historic Places 1966-1988* has been compiled, edited, and provided to the American Association for State and Local History in magnetic tape form by the National Park Service.

Photo Credits

Front Cover - The Glebe in Arlington, Virginia, has evolved to its present condition with additions made to it over the years. Walter Jones built the original portion in the early 1820s with the artist, Clark Mills, adding the octagonal wing to the house in the 1850s. That wing is one of the best examples of this mid-19th century building form. (*HABS, Jack E. Boucher.*)

Back Cover - Top: *W.P. Snyder, Jr.*, shown here underway at Pittsburgh, Pennsylvania, circa 1945, is a sternwheel river towboat designed to pass under low bridges. Called a "poolboat" and built in 1918 for Carnegie Steel, she towed barges of coal on the Ohio, Mississippi, and Monongahela rivers. She is now a museum vessel at the Ohio River Museum in Marietta, Ohio. (*Courtesy of Ohio Historical Society.*) Middle: This archeological site is the remains of Fort Filmore. The fort, near Las Cruces, New Mexico, was a typical southwestern army post of the 1850s. Sand soon covered the fort after it was abandoned in 1862, which helped preserve the lower portions of the adobe walls. (*John P. Wilson.*) Bottom: Southern Terminal and Warehouse Historic District was the wholesaling center for the city of Knoxville, Tennessee, and much of the surrounding region in the late 19th and early 20th centuries. A variety of commercial architectural styles highlights the district. (*Gail L. Guymon.*)

Madison County—Continued

Comstock, Zephnia, Farmhouse [Cazenovia Town MRA], 2363 Nelson St., Cazenovia, 11/02/87, A,C, 87001866
Cottage Lawn, 435 Main St., Oneida, 11/06/80, A,C, 80002650
Crandall Farm Complex [Cazenovia Town MRA], 2430 Ballina Rd., Cazenovia vicinity, 11/02/87, A,C, 87001867
Evergreen Acres [Cazenovia Town MRA], Syracuse Rd., Cazenovia vicinity, 11/02/87, A,C, 87001868
First National Bank of Morrisville, Main St., Morrisville, 9/12/85, A,C, 85002365
Hamilton Village Historic District, Roughly Kendrick Ave., Broad, Payne, Hamilton, Madison, Pleasant and Lebanon Sts., Hamilton, 9/13/84, C, 84002494
House at 107 Stroud Street [Canastota Village MRA], 107 Stroud St., Canastota, 5/23/86, C, 86001302
House at 115 South Main Street [Canastota Village MRA], 115 S. Main St., Canastota, 5/23/86, C, 86001289
House at 205 North Main Street [Canastota Village MRA], 205 N. Main St., Canastota, 5/23/86, C, 86001296
House at 233 James Street [Canastota Village MRA], 233 James St., Canastota, 5/23/86, C, 86001295
House at 313 North Main Street [Canastota Village MRA], 313 N. Main St., Canastota, 5/23/86, C, 86001298
House at 326 North Peterboro Street [Canastota Village MRA], 326 N. Peterboro St., Canastota, 5/23/86, C, 86001299
House at 328 North Peterboro Street [Canastota Village MRA], 328 N. Peterboro St., Canastota, 5/23/86, C, 86001301
Lorenzo, Ledyard St. (U.S. 20), Cazenovia, 2/18/71, C, 71000541
Main-Broad-Grove Streets Historic District, Roughly bounded by Main, Broad, E. Grove, W. Grove, Wilbur, Elizabeth, E. Walnut, W. Walnut, and Stone Sts., Oneida, 9/15/83, C, 83001705
Maples, The [Cazenovia Town MRA], 2420 Nelson Rd., Cazenovia vicinity, 11/02/87, A,C, 87001876
Meadows Farm Complex [Cazenovia Town MRA], Rippleton Rd., Cazenovia vicinity, 11/02/87, A,C, 87001869
Middle Farmhouse [Cazenovia Town MRA], 4875 W. Lake Rd., Cazenovia vicinity, 11/02/87, C, 87001870
Niles Farmhouse [Cazenovia Town MRA], Rippleton Rd., Cazenovia vicinity, 11/02/87, A,C, 87001871
Old Biology Hall, Colgate University, Hamilton, 9/20/73, C, 73001199
Old Madison County Courthouse, E. Main St., Morrisville, 6/15/78, A,C, 78001860
Oneida Community Mansion House, Sherrill Rd., Oneida, 10/15/66, A,B,a, NHL, 66000527
Parker Farmhouse [Cazenovia Town MRA], 3981 East Rd., Cazenovia vicinity, 11/02/87, A,C, 87001872
Peterboro Land Office, Peterboro Rd., Peterboro, 9/07/84, A,C, 84002498
Peterboro Street Elementary School [Canastota Village MRA], 220 N. Peterboro St., Canastota, 5/23/86, C, 86001304
Roberts, Judge Nathan S., House [Canastota Village MRA], W. Seneca Ave., Canastota, 5/23/86, C, 86001305
Rolling Ridge Farm [Cazenovia Town MRA], 3937 Number Nine Rd., Cazenovia vicinity, 11/02/87, A,C, 87001873
Smith, Adon, House, 3 Broad St., Hamilton, 5/02/74, C, 74001256
South Peterboro Street Commercial Historic District [Canastota Village MRA], Roughly bounded by NY 76, Diamond St., Penn Central RR tracks, and Commerce Ave., Canastota, 5/23/86, C, 86001287
South Peterboro Street Residential Historic District [Canastota Village MRA], S. Peterboro St. between Terrace and Rasbach Sts., Canastota, 5/23/86, C, 86001288
Sweetland Farmhouse [Cazenovia Town MRA], Number Nine Rd., Cazenovia vicinity, 11/02/87, C, 87001874
Tall Pines [Cazenovia Town MRA], Ridge Rd., Cazenovia vicinity, 11/02/87, C, 87001875
US Post Office—Canastota [US Post Offices in New York State, 1858-1943, TR], 118 S. Peterboro St., Canton, 11/17/88, A,C, 88002467
United Church of Canastota [Canastota Village MRA], 144 W. Center St., Canastota, 5/23/86, C,a, 86001306
Wheeler House Complex, NY 8, Leonardsville, 9/22/83, C, 83001706

Monroe County

Adams-Ryan House, 425 Washington St., Adams Basin, 9/05/85, A,C, 85001957
Andrews Street Bridge [Inner Loop MRA;Stone Arch Bridge TR], Andrews St. at Genesee River, Rochester, 10/11/84, A,C, 84000182
Anthony, Susan B., House, 17 Madison St., Rochester, 10/15/66, B, NHL, 66000528
Bevier Memorial Building, Washington St., Rochester, 10/25/73, A,C, 73001201
Bridge Square Historic District [Inner Loop MRA], Roughly bounded by Inner Loop, Centre Park, Washington and W. Main Sts., Rochester, 10/11/84, A,C, 84000273
Brown, Adam, Block [Inner Loop MRA], 480 E. Main St., Rochester, 10/04/85, C, 85002857
Building at 551—555 North Goodman Street, 551—555 N. Goodman St., Rochester, 3/20/86, C, 86000448
Campbell-Whittlesey House, 123 S. Fitzhugh St., Rochester, 2/18/71, C, 71000542
Chamber of Commerce [Inner Loop MRA], 55 Saint Paul St., Rochester, 10/04/85, C, 85002859
Child, Jonathan, House & Brewster-Burke House Historic District, 37 S. Washington St. and 130 Spring St., Rochester, 2/18/71, B,C, 71000543
Chili Mills Conservation Area, 1 mi. SW of West Chili off Stuart Rd. along Black Creek, West Chili vicinity, 3/12/75, C,D, 75001198
City Hall Historic District, S. Fitzhugh St. between Broad and W. Main Sts., Rochester, 9/17/74, A,C,a, 74001258
Cohen, H. C., Company Building—Andrews Building [Inner Loop MRA], 216 Andrews St., Rochester, 10/04/85, A,C, 85002853
Court Exchange Building—National Casket Company [Inner Loop MRA], 142 Exchange St., Rochester, 10/04/85, C, 85002850
Court Street Bridge [Inner Loop MRA;Stone Arch Bridge TR], Court St. at Genesee River, Rochester, 10/11/84, A,C, 84000276
Cox Building [Inner Loop MRA;Department Store TR], 36-48 St. Paul St., Rochester, 10/11/84, A,C, 84000279
Daisy Flour Mill, Inc., 1880 Blossom Rd., Rochester, 6/26/72, A,C, 72000855
DeLand, Henry, House, 99 S. Main St., Fairport, 4/17/80, C, 80004610
Dewey, Chester, School No. 14 [Inner Loop MRA], 200 University Ave., Rochester, 10/04/85, C, 85002847
East Avenue Historic District, Irregular pattern along East Ave. from Probert St. to Alexander St., Rochester, 4/17/79, A,C, 79001589
East High School, 410 Alexander St., Rochester, 6/30/83, C, 83001707
Eastman Dental Dispensary, 800 E. Main St., Rochester, 4/28/83, B,C, 83001708
Eastman, George, House, 900 East Ave., Rochester, 11/13/66, B, NHL, 66000529
Edwards Building [Inner Loop MRA;Department Store TR], 26-34 St. Paul St., Rochester, 10/11/84, A,C, 84000287
Ely, Hervey, House, 138 Troup St., Rochester, 8/12/71, C, 71000544
Erie Canal: Second Genesee Aqueduct, Broad St., Rochester, 9/29/76, A,C, 76001228
Federal Building, N. Fitzhugh and Church Sts., Rochester, 4/13/72, C, 72000856
First National Bank of Rochester—Old Monroe County Savings Bank Building [Inner Loop MRA], 35 State St., Rochester, 10/04/85, C, 85002861
First Presbyterian Church, 101 S. Plymouth Ave., Rochester, 10/25/73, C,a, 73001202
First Universalist Church, SE corner of S. Clinton Ave. and Court St., Rochester, 5/27/71, C,a, 71000545
Gannett Building [Inner Loop MRA], 55 Exchange St., Rochester, 10/04/85, A,C, 85002862
Genesee Lighthouse, 70 Lighthouse St., Rochester, 8/13/74, A, 74001259

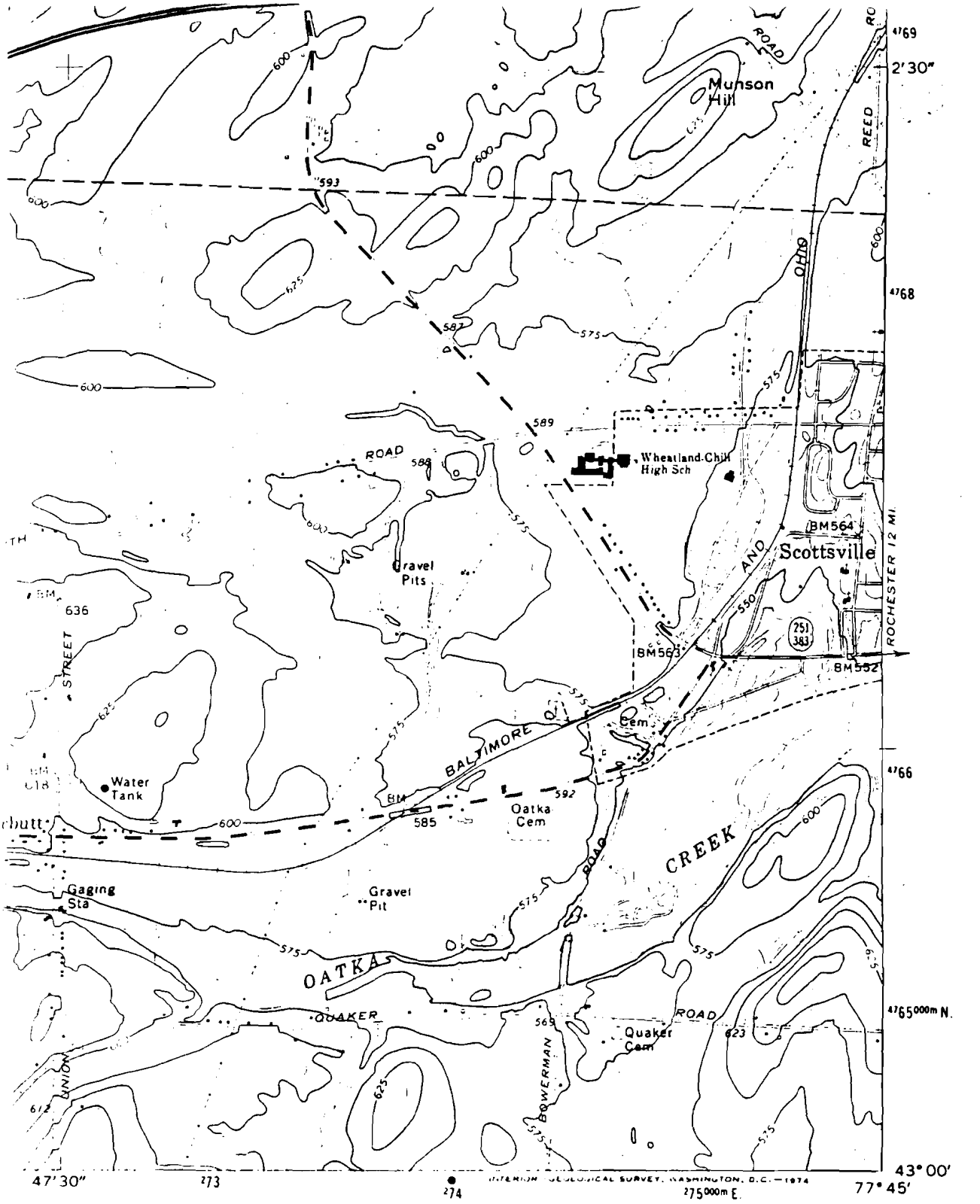
Monroe County—Continued

Granite Building [Inner Loop MRA;Department Store TR], 124 E. Main St., Rochester, 10/11/84, A,C, 84000290
Grove Place Historic District [Inner Loop MRA], Gibbs, Selden, Grove and Windsor Sts., Rochester, 10/11/84, A,C, 84000299
Hinchey, Franklin, House, 634 Hinchey Rd., Gates, 11/10/83, C, 83004045
House at 235—237 Reynolds Street, 235—237 Reynolds St., Rochester, 9/12/85, C, 85002272
Jewish Young Men's and Women's Association [Inner Loop MRA], 400 Andrews St., Rochester, 10/04/85, C, 85002848
Kirstein Building [Inner Loop MRA], 242 Andrews St., Rochester, 10/04/85, A,C, 85002844
Lehigh Valley Railroad Station [Inner Loop MRA], 99 Court St., Rochester, 10/04/85, A,C, 85002858
Leopold Street Shule, 30 Leopold St., Rochester, 6/07/74, A,C,a, 74001260
Little Theatre [Inner Loop MRA], 240 East Ave., Rochester, 10/04/85, A,C, 85002860
Lower Mill, N. Main St., Honeoye Falls, 5/17/73, A,C, 73001200
Madison Square—West Main Street Historic District, Roughly bounded by Silver, Canal, W. Main and Madison Sts., Rochester, 11/03/88, A,C, 88002382
Main Street Bridge [Inner Loop MRA;Stone Arch Bridge TR], Main St. at Genesee River, Rochester, 10/11/84, A,C, 84000303
Michaels—Stern Building [Inner Loop MRA], 87 N. Clinton Ave., Rochester, 10/04/85, A,C, 85002854
Mt. Hope-Highland Historic District, Bounded roughly by the Clarissa St. Bridge, Genesee River, Grove and Mt. Hope Aves., plus, Rochester, 1/21/74, B,C, 74001261
Mud House, 1000 Whalen Rd., Penfield, 10/11/78, C, 78001862
National Company Building [Inner Loop MRA;Department Store TR], 159 E. Main St., Rochester, 10/11/84, A,C, 84000291
Naval Armory—Convention Hall [Inner Loop MRA], 75 Woodbury Blvd., Rochester, 10/04/85, A, 85002852
Nazareth House, 94 Averill Ave., Rochester, 4/12/84, A,C,a, 84002734
O'Kane Market and O'Kane Building, 104—106 Bartlett St. & 239—255 Reynolds St., Rochester, 9/12/85, C, 85002288
Old Stone Warehouse, 1 Mt. Hope Ave., Rochester, 10/15/73, A,C, 73001203
Phoenix Building, S. Main and State Sts., Pittsford, 8/07/74, A,C, 74001257
Pittsford Village Historic District, Roughly bounded by the Canal, Jefferson Ave., Sutherland, and South Sts., Pittsford, 9/07/84, C, 84002736
Powers Building, W. Main and State Sts., Rochester, 4/03/73, A,C, 73001204
Reynolds Arcade [Inner Loop MRA], 16 E. Main St., Rochester, 10/04/85, C, 85002855
Rich, Samuel, House, 2204 Five Mile Line Rd., Penfield vicinity, 12/30/87, A,B,C, 87002199
Richardson's Tavern, 1474 Marsh Rd., Perinton, 5/06/80, A,C, 80002652
Riga Academy, 3 Riga-Mumford Rd., Riga, 11/21/80, A,C, 80002653
Rochester City School #24, Meigs St., Rochester, 9/15/83, C, 83001709
Rochester Fire Department Headquarters and Shops [Inner Loop MRA], 185 North St., Rochester, 10/21/85, C,g, 85003361
Rochester Savings Bank, 40 Franklin St., Rochester, 3/16/72, A,C, 72000857
Rochester Street Historic District, Both sides of Rochester St., Scottsville, 10/25/73, C, 73001205
Rundel Memorial Library [Inner Loop MRA], 115 South Ave., Rochester, 10/04/85, C, 85002845
Shingleside, 476 Beach Ave., Rochester, 9/13/84, C, 84002737
Sibley Triangle Building [Inner Loop MRA], 20—30 East Ave., Rochester, 10/04/85, C, 85002849
Sibley, Hiram, Homestead, 29 Sibley Rd., Sibleyville, 9/12/85, B,C,b, 85002291
Spring House, 3001 Monroe Ave., Pittsford vicinity, 11/20/75, A,C, 75001199
St. John's Episcopal Church, 11 Episcopal Ave., Honeoye Falls, 7/07/88, C,a, 88001014
St. Joseph Roman Catholic Church and Rectory, 108 Franklin St., Rochester, 5/29/75, A,C,a, 75001197
St. Paul-North Water Streets Historic District [Inner Loop MRA], St. Paul, N. Water, and Andrews Sts., Rochester, 10/11/84, A,C, 84000398
State Street Historic District [Inner Loop MRA], 109-173 State St., Rochester, 10/11/84, A,C, 84000402
Stone-Tolan House, 2370 E. Ave., Brighton, 7/21/83, A,C,e, 83001710
Third Ward Historic District, Roughly bounded by Adams and Peach Sts., I-490, and both sides of Troup and Fitzhugh Sts., Rochester, 7/12/74, A,B,C, 74001262
Totiakton Site, Address Restricted, Honeoye Falls vicinity, 9/21/78, D, 78001861
US Post Office—East Rochester [US Post Offices in New York State, 1858-1943, TR], 206 W. Commercial St., East Rochester, 11/17/88, A,C, 88002495
University Club [Inner Loop MRA], 26 Broadway, Rochester, 10/04/85, C, 85002851
Vanderbeck House, 1295 Lake Ave., Rochester, 4/09/84, C, 84002739
Warner, H. H., Building [Inner Loop MRA], 72—82 St. Paul St., Rochester, 10/04/85, A,C, 85002846
Washington Street Rowhouses [Inner Loop MRA], 30—32 N. Washington St., Rochester, 10/04/85, C, 85002856
Wilbur House, 187 S. Main St., Fairport, 5/06/80, C, 80002651
Wilder Building [Inner Loop MRA], 1 E. Main St., Rochester, 10/04/85, A,C, 85002863

Montgomery County

Butler, Walter, Homestead, NE of Fonda on Old Trail Rd., Fonda vicinity, 6/23/76, B, 76001229
Caughnawaga Indian Village Site, Address Restricted, Fonda vicinity, 8/28/73, D, 73001207
Ehle House Site, Address Restricted, Nelliston, 6/14/82, A,D, 82004780
Ehle, Peter, House [Nelliston MRA], E. Main St., Nelliston, 9/27/80, B,C, 80002655
Erie Canal, 6 mi. W of Amsterdam on NY 5S, Fort Hunter vicinity, 10/15/66, A,C,D, NHL, 66000530
Fort Johnson, Jct. of NY 5 and 67, Fort Johnson, 11/28/72, B,C, NHL, 72000858
Fort Klock, 2 mi. E of St. Johnsville on NY 5, St. Johnsville, 11/28/72, A, NHL, 72000859
Fort Plain Conservation Area, Address Restricted, Fort Plain vicinity, 11/15/79, A,C,D,d, 79001591
Greene Mansion, 92 Market St., Amsterdam, 12/31/79, B,C, 79001590
Guy Park, W. Main St., Amsterdam, 2/06/73, B,C, 73001206
Lasher-Davis House [Nelliston MRA], U.S. 5, Nelliston, 9/27/80, C, 80002656
Nellis, Jacob, Farmhouse [Nelliston MRA], Nellis St., Nelliston, 9/27/80, B,C, 80002657
Nelliston Historic District [Nelliston MRA], Prospect, River, Railroad and Berthoud Sts., Nelliston, 9/27/80, C, 80002658
Palatine Bridge Freight House, E of Palatine Bridge on NY 5, Palatine Bridge vicinity, 3/07/73, A,C, 73001208
Palatine Church, Mohawk Tpke., Palatine, 1/25/73, A,C,a, 73001209
Reformed Dutch Church of Stone Arabia, E of Nelliston on NY 10, Nelliston vicinity, 9/14/77, A,C,a,d, 77000951
Rice's Woods, Address Restricted, Canajoharie vicinity, 7/18/80, D,d, 80002654
US Post Office—Amsterdam [US Post Offices in New York State, 1858-1943, TR], 12—16 Church St., Amsterdam, 11/17/88, A,C, 88002451
US Post Office—Canajoharie [US Post Offices in New York State, 1858-1943, TR], 50 W. Main St., Canajoharie, 11/17/88, A,C, 88002464
Van Alstyne House, Moyer St., Canajoharie, 9/08/83, A,C, 83001711
Vrooman Avenue School, Vrooman Ave., Amsterdam, 6/30/83, A,C, 83001712
Wagner, Webster, House, E. Grand St., Palatine Bridge, 3/07/73, B,C, 73001210
Walrath-Van Horne House [Nelliston MRA], W. Main St., Nelliston, 9/27/80, A,C, 80002659

REFERENCE 10



INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1974

1 MILE

ROAD CLASSIFICATION

Primary highway, hard surface

Secondary highway, hard surface

Light-duty road, hard or improved surface

Unimproved road

Interstate Route U S Route State Route

(RUSH) 5469 I NW

NEW YORK

QUADRANGLE LOCATION

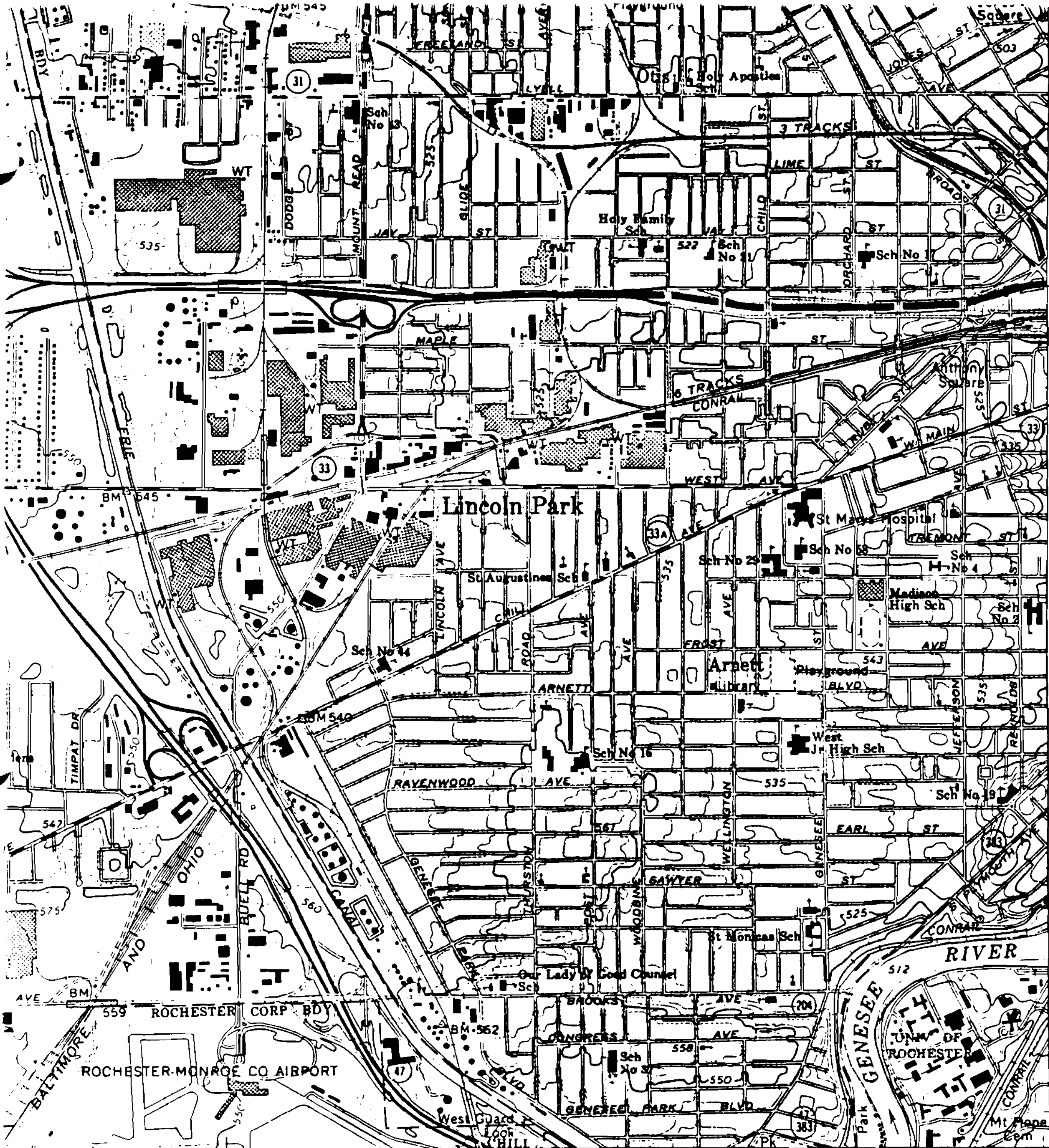
5-50

CLIFTON, N.Y.
N4300—W7745/7.5

1971

AMS 5470 IIF SE-SERIES V821

REFERENCE 11



1 MILE

6000 7000 FEET

1 KILOMETER

ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road

Interstate Route U. S. Route State Route

VATER 242.8

QUADRANGLE LOCATION

IDARDS

22092

ABLE ON REQUEST

Revisions shown in purple compiled from aerial photographs taken 1976. This information not field checked

Map edited 1978

Purple tint indicates extension of urban areas

ROCHESTER WEST, N. Y.

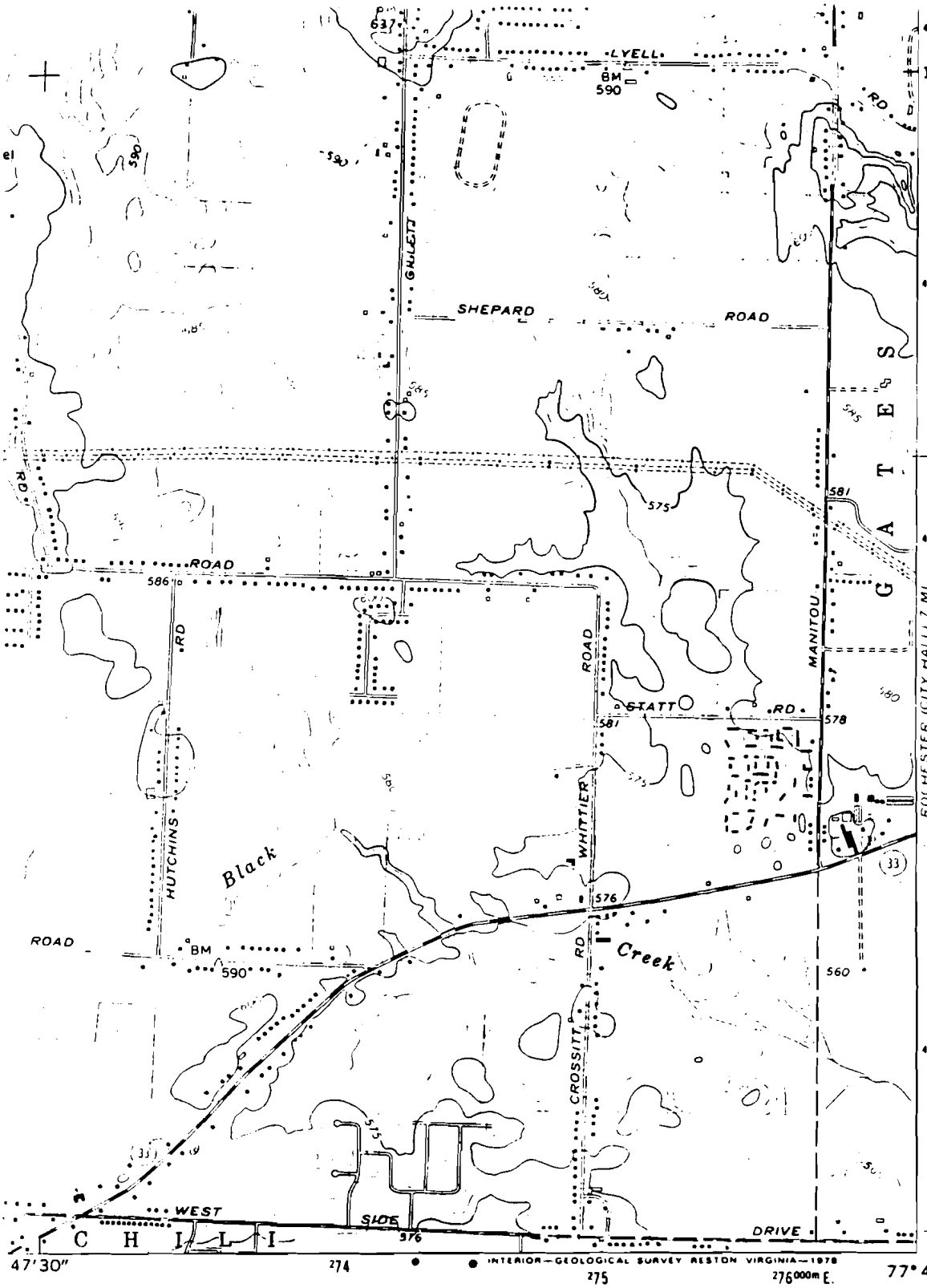
43077-B6-TF-024

1971

PHOTOREVISED 1978

DMA 5470 II NW—SERIES V821

REFERENCE 12



ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road

Interstate Route U S Route State Route

1 MILE

QUADRANGLE LOCATION

SPENCERPORT, N.Y.

N4307.5—W7745/7.5

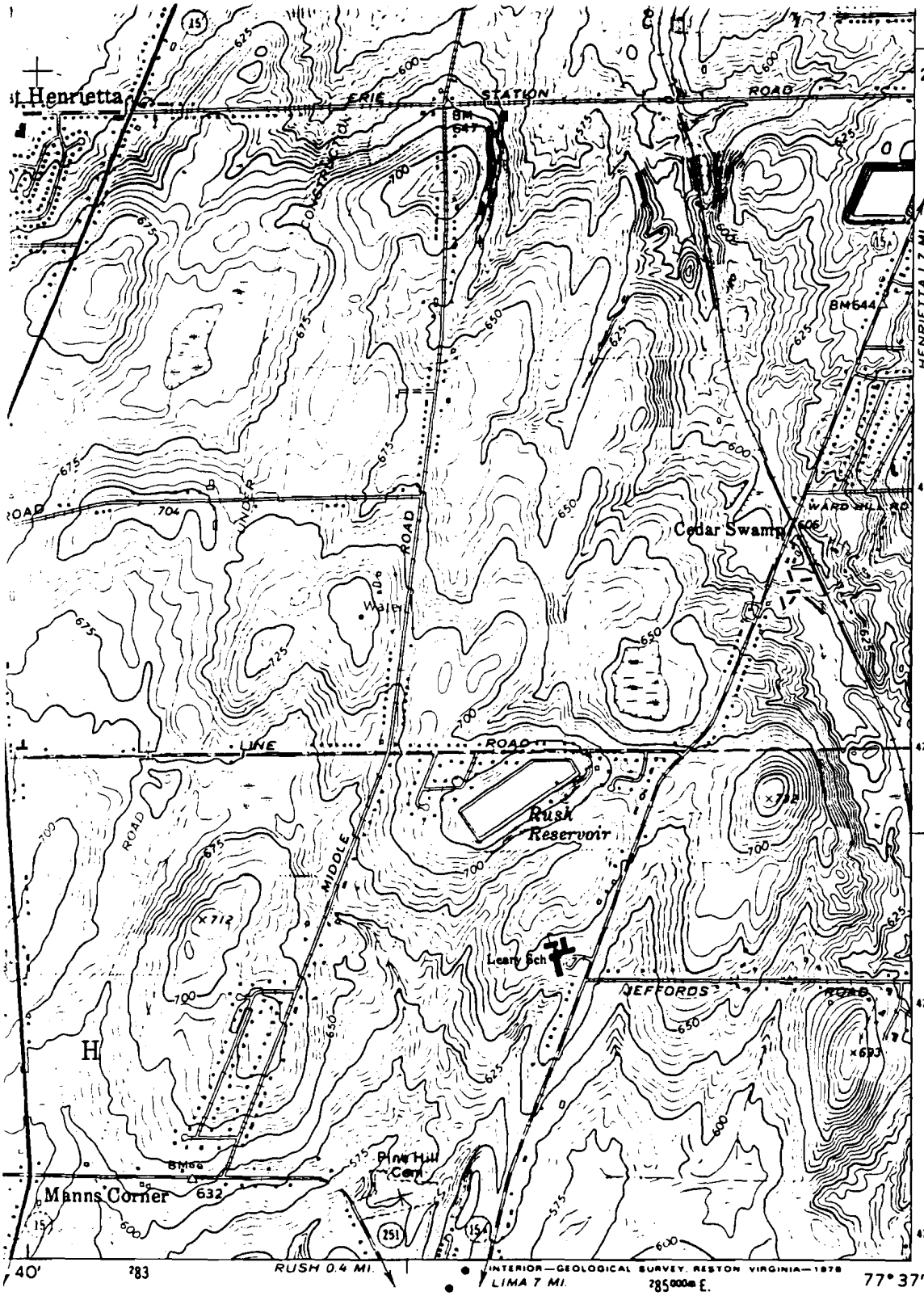
5-54

1971

PHOTOREVISED 1978

AMS 5470 III NE—SERIES V821

REFERENCE 13



ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road

Interstate Route U. S. Route State Route

QUADRANGLE LOCATION

WEST HENRIETTA, N. Y.

N4300—W7737.5/7.5

1971

PHOTOREVISED 1978

AMS 5470 II SW—SERIES V821

REFERENCE 14

MENT OF COMMERCE
ES, Secretary

WEATHER BUREAU
F. W. REICHELDERFER, Chief

TECHNICAL PAPER NO. 40

RAINFALL FREQUENCY ATLAS OF THE UNITED STATES

for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years

Prepared by
DAVID M. HERSHFIELD
Cooperative Studies Section, Hydrologic Services Division
for
Engineering Division, Soil Conservation Service
U.S. Department of Agriculture

REFERENCE 15

INTERVIEW ACKNOWLEDGEMENT FORM

SITE NAME: Golden Road

I.D. NUMBER:

PERSON CONTACTED: Kathy Kirsch

DATE: 4/11/89

PHONE NUMBER: (716) 226-2466 ext. 346

AFFILIATION: NYSDEC, Region 8 Office, Wetlands Sec

CONTACT PERSON(S): Natasha Snyder and Matt Ki

ADDRESS: 6274 East Avon - Lima Rd., Avon, NY 14414

TYPE OF CONTACT: Meeting

INTERVIEW SUMMARY

There are no coastal wetlands within two miles or less of the site.

There is no tidal influence on surface waters near the site.

ACKNOWLEDGEMENT

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

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

Signature: Kathleen M. Kirsch 5-60 Date: 4/11/89

REFERENCE 16

DRAFT

GRAPHICAL EXPOSURE MODELING SYSTEM

(GEMS)

USER'S GUIDE

VOLUME 1. CORE MANUAL

Prepared for:

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES AND TOXIC SUBSTANCES
EXPOSURE EVALUATION DIVISION
Task No. 3-2
Contract No. 68023970
Project Officer: Russell Kinerson
Task Manager: Loren Hall

Prepared by:

GENERAL SCIENCES CORPORATION
6100 Chevy Chase Drive, Suite 200
Laurel, Maryland 20707

Submitted: February, 1987

REFERENCE 17

INTERVIEW ACKNOWLEDGEMENT FORM

SITE NAME: Golden Road

I.D. NUMBER:

PERSON CONTACTED: Arthur Ormsby

DATE: 3/29 and 3/30/89

AFFILIATION: Monroe Co. Department of Planning

PHONE NUMBER: (716) 428-5461

ADDRESS: 47 South Fitzhugh St., Suite 200
Rochester, New York 14614-2299

CONTACT PERSON(S): Natasha Snyder and Matt Ki

TYPE OF CONTACT: Meeting

INTERVIEW SUMMARY

At the Monroe Co. Department of Planning the following information was examined and copied: Census tract maps and population figures; and the Environmental Planning Atlas for Monroe Co.

The Atlas included information on existing land use, contours and elevations, water mains and districts, prime farmland and agricultural districts, historic sites, and NYS freshwater wetlands.

ACKNOWLEDGEMENT

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

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

Signature: Arthur Ormsby Date: March 30 1989

5-64

REFERENCE 18

CONTACT REPORT

Telephone (X) Meeting ( ) Other ( )

AGENCY: Town of Chili Town Hall

ADDRESS: 3235 Chili Ave.
Rochester, N.Y. 14624

PHONE NO.: (716) 889-3550

PERSON CONTACTED: Jim Christian

TO: YN-4000 File

FROM: G. Florentino

DATE: 7/5/90

SUBJECT: Fire Hazard at Golden Road Site

No apparent fire hazard at Golden Road Site (227 Golden Road, Chili, New York).

Acknowledgment:
(See Attached)

Signature: Jim Christian Date: 7/12/90

Title: Fire Marshal

GF/kk
CR/YN4080
[ENVSHARE]

REFERENCE 19

ecology and environment, inc.
BUFFALO CORPORATE CENTER
368 PLEASANTVIEW DRIVE, LANCASTER, NEW YORK 14086, TEL. 716/684-8060
International Specialists in the Environment

March 19, 1991

Mrs. H. Fitzsimons
227 Golden Road
Rochester, NY 14625

Dear Mrs. Fitzsimons:

Ecology and Environment Engineering, P.C., (E & E) has been contracted by the New York State Department of Environmental Conservation (NYSDEC) to conduct a Phase II investigation on your property.

In accordance with NYSDEC requirements on documentation of all reference material pertaining to this investigation, I would ask you to please review the notes of our telephone conversation (see attached) and make any necessary corrections. If the information is accurate, please sign and complete the information requested on each sheet and return to me in the envelope provided. Your assistance in this matter is greatly appreciated. If you have any questions, please call me at 716-684-8060.

Sincerely,

James J. Richart

James J. Richert
Project Manager

JJR/smj
L/YN-4080
[ENV]#885

CONTACT REPORT

Telephone (X) Meeting ( ) Other ( )

SITE: Golden Road Disposal Site

ADDRESS: 227 Golden Road
Rochester, NY 14624

PHONE NO.: 716-594-2335

PERSON CONTACTED: Linda Fitzsimons

TO: Project File: YN-4000

FROM: G. Florentino and J. Richert

DATE: 3-14-91

SUBJECT: Disposal History

The Fitzsimons accepted fill material to fill in low-lying areas to the south of the railroad tracks. The fill included:

- o U.S. Army artillery shell casings (no live ammunition) from the US Army Reserve 98th Division in Rochester
- o Foundry Sand from Abex Corp. in Rochester, NY
  - trucked by H. Fitzsimmons Jr.
- o Drums and assorted debris (south of the railroad tracks)
  - U.S. Army Reserve 98th Division
  - Chevron Oil
  - Unknown dumping

The Fitzsimons private well is located on the north side of the house, and is approximately 40 ft. in depth. The railroad which divides the property is active--both passenger and freight. The steel building to the south of the Fitzsimons residence on the north side of the railroad tracks has been used by the Fitzsimons' for general storage/maintenance/repair purpose in conjunction with their now inactive Chili Fuels and Great Western Construction business and their presently active farming business. The building was never considered an official office building. Fuel oil was stored in tanks on the west side of this building.

Acknowledgment

I have read the above transcript and I agree that it is an accurate summary of the information verbally conveyed to Ecology and Environment Engineering, P.C. Interviewer(s) as revised* if necessary).

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

Signature: _____ Date: _____

smj
CR/YN-4070
[ENV]#854

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

EPA

PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 State	02 Site Number
NY	828021

II. SITE NAME AND LOCATION

01 Site Name (Legal, common, or descriptive name of site)	02 Street, Route No., or Specific Location Identifier
Golden Road Disposal Site	227 Golden Road

03 City	04 State	05 Zip Code	06 County	07 County Code	08 Cong. Dist.
Town of Chili	NY	14625	Monroe	28	30

09 Coordinates Latitude	Longitude	10 Type of Ownership (Check One)
43 07 08.	77 45 45.	[X] A. Private [ ] B. Federal [ ] C. State [ ] D. County [ ] E. Municipal [ ] F. Other _____ [ ] G. Unknown

III. INSPECTION INFORMATION

01 Date of Inspection	02 Site Status	03 Years of Operation
4 / 26 / 89 (Month Day Year)	[ ] Active [X] Inactive	1955 (Beginning Year) 1976 (Ending Year) [ ] Unknown

04 Agency Performing Inspection (Check all that apply)
[ ] A. EPA [ ] B. EPA Contractor _____ (Name of Firm) [ ] C. Municipal
[ ] D. Municipal Contractor _____ (Name of Firm) [ ] E. State [X] F. State Contractor Ecology and Environment Engineering P.C. (Name of Firm)
[ ] G. Other (Specify) _____

05 Chief Inspector	06 Title	07 Organization	08 Telephone No.
G. Florentino	Geologist	Ecology and Environment Engineering P.C.	(716) 684-8060
09 Other Inspectors	10 Title	11 Organization	12 Telephone No.
T. Ferrara	Geologist	Ecology and Environment Engineering P.C.	(716) 684-8060
			( )
			( )
			( )
			( )

13 Site Representatives Interviewed	14 Title	15 Address	16 Telephone No.
Howard Fitzsimons	Owner	227 Golden Road	(716) 594-2335
			( )
			( )
			( )
			( )

17 Access Gained by (Check one)	18 Time of Inspection	19 Weather Conditions
Owner Permission	1445	Sunny, 60°F wind from north 5 mph

IV. INFORMATION AVAILABLE FROM

01 Contact	02 Agency/Organization	03 Telephone No.
Walter Demick	NYSDEC - Albany	(518) 457-9538

04 Person Responsible for Site Inspection Form	05 Agency	06 Organization	07 Telephone No.	08 Date
J. Griffis		Ecology and Environ. Eng. P.C.	(716) 684-8060	4 / 27 / 89 (Month Day Year)

02[UZ]YN4080:D2833/6646

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

EPA

PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 State	02 Site Number
NY	828021

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 Physical States (Check all that apply)

[X] A. Solid
[ ] B. Powder, Fines
[X] C. Sludge
[X] D. Other Artillery shells (Specify)
[ ] E. Slurry
[X] F. Liquid
[ ] G. Gas

02 Waste Quantity at Site (Measure of waste quantities must be independent)

Tons unknown
Cubic Yards unknown
No. of Drums >560

03 Waste Characteristics (Check all that apply)

[X] A. Toxic
[ ] B. Corrosive
[ ] C. Radioactive
[X] D. Persistent
[X] E. Soluble
[ ] F. Infectious
[X] G. Flammable
[ ] H. Ignitable
[ ] I. Highly volatile
[X] J. Explosive
[ ] K. Reactive
[ ] L. Incompatible
[ ] M. Not applicable

III. WASTE TYPE

Category	Substance Name	01 Gross Amount	02 Unit of Measure	03 Comments
SLU	Sludge			
OLW	Oily waste			
SOL	Solvents			
PSD	Pesticides			
OCC	Other organic chemicals			
IOC	Inorganic chemicals			
ACD	Acids			
BAS	Bases			
MES	Heavy Metals	unknown		

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 Category	02 Substance Name	03 CAS Number	04 Storage/Disposal Method	05 Concentration	06 Measure of Concentration

V. FEEDSTOCKS (See Appendix for CAS Numbers)

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

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

NYSDEC 1983 Phase I Investigation
Jackson, D., 1983 Sampling Report

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

EPA

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 State	02 Site Number
NY	828021

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. Groundwater Contamination
03 Population Potentially Affected Unknown
02 [X] Observed (Date 4/13/82) [ ] Potential [X] Alleged
04 Narrative Description

Mr. Fitzsimmon's on-site drinking water well tested positive (high concentrations of cadmium and lead). It is not known how many private wells are in the area. Most of the residents use municipal water.

01 [X] B. Surface Water Contamination
03 Population Potentially Affected 0
02 [X] Observed (Date 5/12/82) [ ] Potential [X] Alleged
04 Narrative Description:

No known use of surface water in the area, other than wetlands.

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

No record.

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

No record.

01 [X] E. Direct Contact
03 Population Potentially Affected 5,352
02 [ ] Observed (Date 4/26/89) [X] Potential [ ] Alleged
04 Narrative Description:

No fences, easily accessible.
Population within 1-mile radius.

01 [X] F. Contamination of Soil
03 Area Potentially Affected 8 acres
02 [X] Observed (Date 5/12/82) [ ] Potential [X] Alleged
04 Narrative Description:

Drums were observed throughout the site; some spilled onto ground, foundry sand, and/or fly ash disposed on site.

01 [X] G. Drinking Water Contamination
03 Population Potentially Affected unknown
02 [X] Observed (Date 4/13/82) [ ] Potential [X] Alleged
04 Narrative Description:

Mr. Fitzsimmon's drinking water well tested positive for high levels of cadmium and lead. Most residents use municipal water; however, private wells may exist in the immediate area.

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

No record.

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

No record.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

EPA

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS (Cont.)

I. IDENTIFICATION

01 State	02 Site Number
NY	828021

II. HAZARDOUS CONDITIONS AND INCIDENTS (Cont.)

01 [ ] J. Damage to Flora — 02 [ ] Observed (Date _____) [ ] Potential [ ] Alleged
04 Narrative Description:

No record.

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

No record.

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

No record.

01 [X] M. Unstable Containment of Wastes (Spills/Runoff/Standing liquids, Leaking drums) — 02 [X] Observed (Date 2/23/79) [ ] Potential [X] Alleged
03 [ ] Population Potentially Affected 5352 04 Narrative Description:

Several hundred drums observed on site. Population within 1-mile radius.

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

No record.

01 [ ] O. Contamination of Sewers, Storm/ Drains, WWTPs — 02 [ ] Observed (Date _____) [ ] Potential [ ] Alleged
04 Narrative Description:

No record.

01 [X] P. Illegal/Unauthorized Dumping — 02 [X] Observed (Date 1979) [ ] Potential [X] Alleged
04 Narrative Description:

Fly ash and foundry sand hauled to site by William Statt.

05 Description of Any Other Known, Potential, or Alleged Hazards

III. TOTAL POPULATION POTENTIALLY AFFECTED 5,352 within 1-mile radius

IV. COMMENTS

Landfill appears to once have been part of wetland.

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

NYSDEC 1983 Phase I Investigation
Jackson, D., 1983 Sampling Report
Ecology and Environment Engineering P.C. site inspection on 4/26/89
General Sciences Corp., 1987, 1980 census information

02[UZ]YN4080:D2833/6646

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

EPA

PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 State	02 Site Number
NY	828021

II. PERMIT INFORMATION

01 Type of Permit Issued (Check all apply)	02 Permit Number	03 Date Issued	04 Expiration Date	05 Comments
[ ] A. NPDES NA				
[ ] B. UIC				
[ ] C. AIR				
[ ] D. RCRA				
[ ] E. RCRA Interim Status				
[ ] F. SPCC Plan				
[ ] G. State (Specify)				
[ ] H. Local (Specify)				
[ ] I. Other (Specify)				
[X] J. None				

III. SITE DESCRIPTION

01 Storage Disposal (Check all that apply)	02 Amount	03 Unit of Measure	04 Treatment (Check all that apply)	05 Other
[ ] A. Surface Impoundment			[ ] A. Incineration	[X] A. Buildings On Site
[ ] B. Piles			[ ] B. Underground Injection	
[X] C. Drums, Above Ground	>560	55-gallon	[ ] C. Chemical/Physical	2
[ ] D. Tank, Above Ground			[ ] D. Biological	
[ ] E. Tank, Below Ground			[ ] E. Waste Oil Processing	
[X] F. Landfill	8	acres	[ ] F. Solvent Recovery	06 Area of Site
[ ] G. Landfarm			[ ] G. Other Recycling Recovery	
[ ] H. Open dump			[X] H. Other None (specify)	8 Acres
[ ] I. Other (Specify)				

07 Comments

IV. CONTAINMENT

01 Containment of Wastes (Check one)

[ ] A. Adequate, Secure [ ] B. Moderate [ ] C. Inadequate, Poor [X] D. Insecure, Unsound, Dangerous

02 Description of Drums, Diking, Liners, Barriers, etc.

Drums were scattered on the surface and buried. There are no liners or any means of containment.

V. ACCESSIBILITY

01 Waste Easily Accessible: [X] Yes [ ] No

02 Comments:

No fences, drums on surface, foundry sand on surface.

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

NYSDEC 1983 Phase I Investigation; Jackson, D., 1983 Sampling Report; Ecology and Environment Engineering, P.C. site inspection 4/26/89

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

EPA

PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 State	02 Site Number
NY	828021

II. DRINKING WATER SUPPLY

01 Type of Drinking Supply (Check as applicable)	Surface	Well
Community	A. [X]	B. [ ]
Non-community	C. [ ]	D. [X]

02 Status		
Endangered	Affected	Monitored
A. [ ]	B. [ ]	C. [ ]
D. [ ]	E. [X]	F. [ ]

03 Distance to Site
A >3 (mi)
B on site (mi)

III. GROUNDWATER

01 Groundwater Use in Vicinity (Check one)

[ ] A. Only Source for Drinking
[X] B. Drinking (Other sources available) Commercial, industrial, irrigation (No other water sources available)
[ ] C. Commercial, industrial, irrigation (Limited other sources available)
[ ] D. Not Used, Unusable

02 Population Served by Groundwater Unknown

03 Distance to Nearest Drinking Water Well On site (mi)

04 Depth to Groundwater	05 Direction of Groundwater Flow	06 Depth to Aquifer of Concern	07 Potential Yield of Aquifer	08 Sole Source Aquifer Unknown
7 - 15 (ft)	North	7 - 15 (ft)	5 - 500 (gpd)	[ ] Yes [ ] No

09 Description of Wells (including usage, depth, and location relative to population and buildings)

Mr. Fitzsimmon's well is on site; 3 other possible wells along Golden Road, depth unknown.

10 Recharge Area		11 Discharge Area	
[ ] Yes	Comments: Unknown	[ ] Yes	Comments: Unknown
[ ] No		[ ] No	

IV. SURFACE WATER

01 Surface Water (Check one)

[ ] A. Reservoir, Recreation, Drinking Water Source
[ ] B. Irrigation, Economically Important Resources
[ ] C. Commercial, Industrial
[X] D. Not Currently Used

02 Affected/Potentially Affected Bodies of Water

Name:	Affected	Distance to Site
Adjacent wetlands	[X]	Adjacent (mi)
	[ ]	(mi)
	[ ]	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 Total Population Within

One (1) Mile of Site	Two (2) Miles of Site	Three (3) Miles of Site
A. 5,352	B. 19,439	C. 29,206
No. of Persons	No. of Persons	No. of Persons

02 Distance to Nearest Population
Adjacent (mi)

03 Number of Buildings Within Two (2) Miles of Site
>700

04 Distance to Nearest Off-Site Home
<0.25 (mi)

05 Population Within Vicinity of Site (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

The area displays village populations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

EPA

PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA (Cont.)

I. IDENTIFICATION

01 State	02 Site Number
NY	828021

VI. ENVIRONMENTAL INFORMATION

01 Permeability of Unsaturated Zone (Check one)

[ ] A. 10^{-6} - 10^{-8} cm/sec [ ] B. 10^{-4} - 10^{-6} cm/sec [X] C. 10^{-4} - 10^{-3} cm/sec [ ] D. Greater than 10^{-3} cm/sec

02 Permeability of Bedrock (Check one)

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

03 Depth to Bedrock	04 Depth of Contaminated Soil Zone	05 Soil pH
11 - 25 (ft)	Unknown	Unknown

06 Net Precipitation	07 One Year 24-Hour Rainfall	08 Site Slope	Direction of Site Slope	Terrain Average Slope
6.7 (in)	2.0 (in)	0 - 1 %	N/A	0 - 3 %

09 Flood Potential

Site is in 500 Year Floodplain

10 [ ] Site is on Barrier Island, Coastal High Hazard Area, Riverine Floodway

11 Distance to Wetlands (5 acre minimum)

ESTUARINE NA OTHER

A. _____ (mi) B. Adj. (mi)

12 Distance to Critical Habitat (of endangered species)

None (mi)

Endangered Species: _____

13 Land Use in Vicinity

Distance to:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREA; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS PRIME AG LAND	AGRICULTURAL LANDS AG LAND
A. 1.0 (mi)	B. Adj. (mi)	C. <.25 (mi)	D. <.25 (mi)

14 Description of Site in Relation to Surrounding Topography

Site is in a relatively flat-lying area that contains several wetlands. Elevation of the site has been raised 3 - 4 feet above wetlands by fill material.

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

USGS topographical maps: Spencerport, NY, photo revised 1978
Clifton, NY 1971
West Henrietta, NY, photo revised 1978
Rochester West, NY, photo revised 1978
Ecology and Environment Engineering, P.C. site inspection 4/26/89
NYSDEC Phase I Investigation 1983
Jackson, D., 1983 Sampling Report
United States Department of Agriculture, Soil Conservation Service, Soils of Monroe County
General Sciences Corp., 1987, 1980 census information

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

EPA

PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 State	02 Site Number
NY	828021

II. SAMPLES TAKEN - No samples taken during S.I.

Sample Type	01 Number of Samples Taken	02 Samples Sent to	03 Estimated Date Results Available
Groundwater			
Surface Water			
Waste			
Air			
Runoff			
Spill			
Soil			
Vegetation			
Other	None		

III. FIELD MEASUREMENTS TAKEN

01 Type	02 Comments
Organic vapors	Site screened with HNu photoionizer

IV. PHOTOGRAPHS AND MAPS

01 Type [X] Ground [ ] Aerial

02 In Custody of Ecology and Environment Engineering, P.C.
(Name of Organization or Individual)

03 Maps
[X] Yes
[ ] No

04 Location of Maps
Ecology and Environment Engineering, P.C. Logbook

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

None

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

Ecology and Environment Engineering, P.C. site inspection 4/26/88

02[UZ]YN4080:D2833/6646

EPA	POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 7 - OWNER INFORMATION	I. IDENTIFICATION 01 State: NY 02 Site Number: 828021

II. CURRENT OWNER(S)

01 Name	02 D+B Number	03 Street Address (P.O. Box, RFD #, etc.)	04 SIC Code	05 City	06 State	07 Zip Code
Howard Fitzsimons		227 Golden Road		Chili	NY	14625

PARENT COMPANY (if applicable)

08 Name	09 D+B Number	10 Street Address (P.O. Box, RFD #, etc.)	11 SIC Code	12 City	13 State	14 Zip Code

III. PREVIOUS OWNER(S) (List most recent first)

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

IV. REALTY OWNER(S) (if applicable, most recent first)

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

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

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

EPA

PART 8 - OPERATOR INFORMATION - NA

I. IDENTIFICATION

01 State	02 Site Number
NY	828021

II. CURRENT OPERATOR (if different from Owner)			OPERATOR'S PARENT COMPANY (if applicable)		
01 Name Howard Fitzsimons	02 D+B Number		10 Name	11 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.) 227 Golden Road	04 SIC Code		12 Street Address (P.O. Box, RFD #, etc.)	13 SIC Code	
05 City Chili	06 State NY	07 Zip Code 14625	14 City	15 State	16 Zip Code
08 Years of Operation	09 Name of Owner				

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)			PREVIOUS OPERATORS' PARENT COMPANIES (if applicable)		
01 Name	02 D+B Number		10 Name	11 D+B Number	
03 Street Address (P.O. Box, RFD #, etc.)	04 SIC Code		12 Street Address (P.O. Box, RFD #, etc.)	13 SIC Code	
05 City	06 State	07 Zip Code	14 City	15 State	16 Zip Code
08 Years of Operation	09 Name of Owner During This Period				

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

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

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

02[UZ]YN4080:D2833/6646

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT EPA PART 9 - GENERATOR/TRANSPORTER INFORMATION	I. IDENTIFICATION	
	01 State NY	02 Site Number 828021

II. ON-SITE GENERATOR - NA

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

III. OFF-SITE GENERATOR(S) - NA

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

IV. TRANSPORTER(S) - NA

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

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

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

EPA

PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 State	02 Site Number
NY	828021

II. PAST RESPONSE ACTIVITIES

01 [ ] A. Water Supply Closed — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] B. Temporary Water Supply Provided — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] C. Permanent Water Supply Provided — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] D. Spilled Material Removed — 02 Date 1985 — 03 Agency EPA
04 Description:
Emergency drum removal (removed 560 drums)

01 [ ] E. Contaminated Soil Removed — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] F. Waste Repackaged — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] G. Waste Disposed Elsewhere — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] H. On-Site Burial — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] I. In Situ Chemical Treatment — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] J. In Situ Biological Treatment — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] K. In Situ Physical Treament — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] L. Encapsulation — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] M. Emergency Waste Treatment — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] N. Cutoff Walls — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] O. Emergency Diking/Surface Water Diversion — 02 Date _____ — 03 Agency _____
04 Description:
None on record

01 [ ] P. Cutoff Trenches/Sump — 02 Date _____ — 03 Agency _____
04 Description:
None on record

02[UZ]YN4080:D2833/6646

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT EPA PART 10 - PAST RESPONSE ACTIVITIES (Cont.)	I. IDENTIFICATION	
	01 State NY	02 Site Number 828021

II. PAST RESPONSE ACTIVITIES (Cont.)

01 [ ] Q. Subsurface Cutoff Wall 02 Date _____ 03 Agency _____
04 Description:
None on record

01 [ ] R. Barrier Walls Constructed 02 Date _____ 03 Agency _____
04 Description:
None on record

01 [ ] S. Capping/Covering 02 Date _____ 03 Agency _____
04 Description:
None on record

01 [ ] T. Bulk Tankage Repaired 02 Date _____ 03 Agency _____
04 Description:
None on record

01 [ ] U. Grout Curtain Constructed 02 Date _____ 03 Agency _____
04 Description:
None on record

01 [ ] V. Bottom Sealed 02 Date _____ 03 Agency _____
04 Description:
None on record

01 [ ] W. Gas Control 02 Date _____ 03 Agency _____
04 Description:
None on record

01 [ ] X. Fire Control 02 Date _____ 03 Agency _____
04 Description:
None on record

01 [ ] Y. Leachate Treatment 02 Date _____ 03 Agency _____
04 Description:
None on record

01 [ ] Z. Area Evacuated 02 Date _____ 03 Agency _____
04 Description:
None on record

01 [ ] 1. Access to Site Restricted 02 Date _____ 03 Agency _____
04 Description:
None on record

01 [ ] 2. Population Relocated 02 Date _____ 03 Agency _____
04 Description:
None on record

01 [ ] 3. Other Remedial Activities 02 Date _____ 03 Agency _____
04 Description:
None on record

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

NYSDEC Phase I Investigation 1983
NYSDEC Files, Bureau of Hazardous Site Control, Albany, New York

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT EPA PART 11 - ENFORCEMENT INFORMATION	I. IDENTIFICATION	
	01 State NY	02 Site Number 828021

II. ENFORCEMENT INFORMATION

01 Past Regulatory/Enforcement Action [ ] Yes [ ] No

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

In 1976, NYSDEC Region 8 directed owner to stop dumping in wetland area.

On August 12, 1980, the site was added to the hazardous waste site registry by Ms. C. Wittenberg and Mr. G.D. Knowles of NYSDEC.

NYSDEC Region 8 informed owner of violations of 6 NYCRR Part 360 in 1981.

W. Statt cited by NYSDEC for lack of Part 364 permit to haul fly ash in 1981.

In 1982, NYSDEC and Monroe County Health Department sampled the site and found petroleum hydrocarbons in the soil, and toluene, xylene, and organic dyes in the drums.

July 20, 1983, the site was sampled by NYSDEC.

NYSDEC Phase I Investigation 11/28/83.

Remedial action performed (drum and soil removal) between Nov. 13, 1984 and June 27, 1985 under contract to NYSDEC.

Nov. 24, 1984, Howard Fitzsimons, Jr. received a court order from the Erie County Supreme Court to provide access and refrain from hindering or interfacing in any way with NYSDEC investigations.

May 1985, the site was sampled by NYSDEC.

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

NYSDEC Phase I Investigation 1983
NYSDEC Files, Bureau of Hazardous Site Control

6. REFERENCES

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APPENDIX A

SITE-SPECIFIC HEALTH AND SAFETY PLAN AND DRILLING SITE SAFETY CHECKLIST

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SITE SAFETY PLAN

Version 988

A. GENERAL INFORMATION

Project Title: Golden Road | Project No.: YN4020

TDD/Pan No.:

Project Manager: Gene Florentino | Project Dir.: J. Griffis

Location(s): Town of Chili, Monroe County, NY

Prepared by: Sharon Walck | Date Prepared: 4-21-89

Approval by: Corp H/S grop ATP | Date Approved: 01MAY89

Site Safety Officer Review: | Date Reviewed:

Scope/Objective of Work: Site reconnaissance, geophysical survey, and environmental sampling.

Proposed Date of Field Activities: May - August 1989

Background Info: Complete: [ ] Preliminary (No analytical data available) [ ]

Documentation/Summary:

Overall Chemical Hazard:	Serious	[ ]	Moderate	[X]
	Low	[ ]	Unknown	[ ]
Overall Physical Hazard	Serious	[ ]	Moderate	[X]
	Low	[ ]	Unknown	[ ]

B. SITE/WASTE CHARACTERISTICS

Waste Type(s):

Liquid	[X]	Solid	[X]	Sludge	[X]	Gas/Vapor	[ ]

Characteristic(s):

Flammable/ Ignitable	[X]	Volatile	[X]	Corrosive	[ ]	Acutely Toxic	[ ]
Explosive	[X]	Reactive	[ ]	Carcinogen	[ ]	Radioactive*	[ ]

Other:

Physical Hazards:

Overhead	[ ]	Confined* Space	[ ]	Below Grade	[ ]	Trip/Fall	[ ]
Puncture	[X]	Burn	[ ]	Cut	[ ]	Splash	[ ]
Noise	[ ]	Other:	U.S. Army Artillery shells are buried at this site. Other hazards to be determined.				

equires completion of additional form and special approval from the Corporate Health/Safety group. Contact SC or HQ.

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Site History/Description and Unusual Features (see Sampling Plan for detailed description): Disposal site divided in two by a railroad track, making northern and southern areas. Both areas are surrounded by wetlands. Southern section is 8 to 10 feet higher due to large quantities of fill wastes: foundry sand, artillery shells, municipal refuse, metal slag, flyash, drummed industrial wastes.

Locations of Chemicals/Wastes: Buried wastes, partially buried drums, junk vehicles on northern section, Cattle may be on-site.

Estimated Volume of Chemicals/Wastes: Unknown.

Site Currently in Operation Yes: [ ] No: [X]

C. HAZARD EVALUATION

List Hazards by Task (i.e., drum sampling, drilling, etc.) and number them. (Task numbers are cross-referenced in Section D)

Physical Hazard Evaluation: 1. Site reconnaissance, 2. Geophysical survey, 3. Environmental sampling - surface soil, surface water, leachate.

Chemical Hazard Evaluation:

Compound	PEL/TWA	Route of Exposure	Acute Symptoms	Odor Threshold	Odor Description
Copper	0.1 mg/m cu	Inhalation, skin and eye contact, ingestion	Skin, eye, and and nose irritation	--	--
Zinc	None established	Eye and skin contact inhalation	Skin irritation coughing, vomiting, fever	--	--
Fluoride	2.5 mg/m cu/ 0.1 ppm	Inhalation, ingestion, eye and dermal contact	Irritation of skin, eyes, mucus membranes, and lungs	0.035 ppm	Strong, intense (choking)
Toluene	100 ppm	Inhalation, skin	Fatigue, nausea, dizziness	2.3 ppm	Aromatic
Xylene	100 ppm	Inhalation	Dizziness, irritation to eyes and respiration	0.5 ppm	Aromatic
Cadmium	0.5 mg/m cu/ 0.2 mg/m cu	Inhalation, ingestion	Irritation of nose and throat	--	--
Benzene	10 ppm	Inhalation	Dizziness, eye, nose, throat irritation	4-12 ppm	Gasoline
Lead	0.05 mg/m cu	Inhalation, oral	Lassitude, pallor, loss of appetite	--	--

Note: Complete and attach a Hazard Evaluation Sheet for major known contaminant.

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D. SITE SAFETY WORK PLAN

Site Control: Attach map, use back of this page, or sketch of site showing hot zone, contamination reduction, zone, etc.

Perimeter identified? [Y] Site secured? [N]

Work Areas Designated? [N] Zone(s) of Contamination Identified? [N]

Personnel Protection (TLD badges required for all field personnel):

Anticipated Level of Protection (Cross-reference task numbers to Section C):

	A	B	C	D
Task 1			X	X
Task 2			X	X
Task 3			X	X
Task 4				

(Expand if necessary)

Modifications: Enter site in Level C with adequate air monitoring to either upgrade to Level B or downgrade to Level D.

Action Levels for Evacuation of Work Zone Pending Reassessment of Conditions:

- Level D: O_2 <19.5% or >25%, explosive atmosphere >10% LEL, organic vapors above background levels, particulates >_____ mg/m^3, other _____.
- Level C: O_2 <19.5% or >25%, explosive atmosphere >25% LEL_3(California-20%), unknown organic vapor (in breathing zone) >5 ppm, particulates >_____ mg/m^3, other _____.
- Level B: O_2 <19.5% or >25%, explosive atmosphere >25% LEL (California-20%), unknown organic vapors (in breathing zone) >500 ppm, particulates >_____ mg/m^3, other _____.
- Level A: O_2 <19.5% or >25%, explosive atmosphere >25% LEL (California-20%), unknown organic vapors >500 ppm, particulates >_____ mg/m^3, other _____.

Air Monitoring (daily calibration unless otherwise noted):

Contaminant of Interest	Type of Sample (area, personal)	Monitoring Equipment	Frequency of Sampling
Volatile organics	Area	Hnu 10.2 eV	Continuous
Flammables	Area	Explosimeter	Continuous

(Expand if necessary)

Decontamination Solutions and Procedures for Equipment, Sampling Gear, etc.:

1. Scrub with brushes in trisodium phosphate solution, 2. Rinse with deionized water, 3. 10% Nitric acid 4. Rinse with hexane, 5. Rinse with acetone, 6. Rinse with deionized water, 7. Air dry.

*Note: Decon activities requiring solvent use necessitate wearing APR w/GMC-H cartridges, as well as impermeable gloves.

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Personnel Decon Protocol: Following disposal of expendables, crew will wash hands/face asap. Water, pump soap, and paper towels to be available at hotline.

Decon Solution Monitoring Procedures, if Applicable: N/A.

Special Site Equipment, Facilities, or Procedures (Sanitary Facilities and Lighting Must Meet 29 CFR 1910.120):

Site Entry Procedures and Special Considerations: No. Invasive sampling without adequate assessment of possible buried drums and/or ordnance. Use caution if rail line is active.

Work Limitations (time of day, weather conditions, etc.) and Heat/Cold Stress Requirements:

Daylight, no work during thunderstorms.

General Spill Control, if applicable: N/A.

Investigation-Derived Material Disposal (i.e., expendables, decon waste, cuttings):

To be determined; solid materials to be double bagged; liquids to be containerized. Written authorization must be obtained to leave IDMs on-site after beginning of fieldwork, or plans should be made for off-site disposal.

Sample Handling Procedures Including Protective Wear:

APR, rubber booties and gloves, Tyvek coveralls, safety shoes. Face shield to be worn when sampling liquids. Surgical gloves for handling samples during documentation, labeling, and packing.

Team Member*	Responsibility
TBD	Team Leader
	Site Safety Officer

*1 entries into exclusion zone require Buddy System use. All E & E field staff participate in medical monitoring program and have completed applicable training per 29 CFR 1910.120. Respiratory protection program meets requirements of 29 CFR 1910.134, and ANSI Z88.2 (1980).

E. EMERGENCY INFORMATION

(Use supplemental sheets, if necessary)

LOCAL RESOURCES

(Obtain a local telephone book from your hotel, if possible)

Ambulance Dial 911

Hospital Emergency Room 89 Genesee Street, 14611 St. Mary's Hospital (716) 464-3000

Poison Control Center Strong Memorial Hospital, 601 Elmwood Avenue, Rochester 14642 (716) 275-5151

Police (include local, county sheriff, state) Dial 911, Monroe County Sheriff

Fire Department Dial 911

Airport Rochester Monroe County Airport

Agency Contact (EPA, State, Local USCG, etc.)

Local Laboratory E & E ASC

UPS/Fed. Express

Client/EPA Contact

Site Contact

SITE RESOURCES

Site Emergency Evacuation Alarm Method TBD at site meeting

Water Supply Source

Telephone Location, Number

Cellular Phone, if available

Radio

Other

EMERGENCY CONTACTS

1. Dr. Raymond Harbison (Univ. of Florida) ..... (501) 221-0465 or (904) 462-3277, 3281
   Alachua, Florida (501) 370-8263 (24 hours)

2. Ecology and Environment, Inc., Safety Director
   Paul Jonmaire ..... (716) 684-8060 (office)
   (716) 655-1260 (home)

3. Regional Office Contact ..... _____ (home)
   _____ (office)

4. FITOM, TATOM, or Office Manager ..... _____ (home)

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MEDTOX HOTLINE

1. Twenty-four hour answering service: (501) 370-8263

   What to report:

   - State: "this is an emergency."
   - Your name, region, and site.
   - Telephone number to reach you.
   - Your location.
   - Name of person injured or exposed.
   - Nature of emergency.
   - Action taken.

2. A toxicologist, (Drs. Raymond Harbison or associate) will contact you. Repeat the information given to the answering service.

3. If a toxicologist does not return your call within 15 minutes, call the following persons in order until contact is made:

   a. 24 hour hotline - (716) 684-8940
   b. Corporate Safety Director - Paul Jonmaire - home # (716) 655-1260
   c. Assistant Corp. Safety Officer - Steven Sherman - home # (716) 688-0084

EMERGENCY ROUTES

(NOTE: Field Team must Know Route(s) Prior to Start of Work)

Directions to hospital (include map) Golden Road to West Side Drive, make a right on West Side. Follow this town to Chili Avenue, make a left on Chili. Follow this all the way to Genesee Street; hospital is on corner.

Emergency Egress Routes to Get Off-Site To be determined and discussed at on-site safety meeting.

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F. EQUIPMENT CHECKLIST

PROTECTIVE GEAR

Level A	No.	Level B	No.
SCBA		SCBA	
SPARE AIR TANKS		SPARE AIR TANKS	
ENCAPSULATING SUIT (Type _____)		PROTECTIVE COVERALL (Type _____)	
SURGICAL GLOVES		RAIN SUIT	
NEOPRENE SAFETY BOOTS		BUTYL APRON	
BOOTIES		SURGICAL GLOVES	
GLOVES (Type _____)		GLOVES (Type _____)	
OUTER WORK GLOVES		OUTER WORK GLOVES	
HARD HAT		NEOPRENE SAFETY BOOTS	
CASCADE SYSTEM		BOOTIES	
5-MINUTE ESCAPE COOLING VEST		HARD HAT WITH FACE SHIELD	
		CASCADE SYSTEM	
		MANIFOLD SYSTEM	
Level C		**Level D**	
ULTRA-TWIN RESPIRATOR	X	ULTRA-TWIN RESPIRATOR (Available)	X
POWER AIR PURIFYING RESPIRATOR		CARTRIDGES (Type GMC-H)	X
CARTRIDGES (Type GMC-H)	X	5-MINUTE ESCAPE MASK (Available)	
5-MINUTE ESCAPE MASK		PROTECTIVE COVERALL (Type Tyvek)	X
PROTECTIVE COVERALL (Type Tyvek)	X	RAIN SUIT	
RAIN SUIT		NEOPRENE SAFETY BOOTS	
BUTYL APRON		BOOTIES	X
SURGICAL GLOVES	X	WORK GLOVES	X
GLOVES (Type Neoprene)	X	HARD HAT WITH FACE SHIELD	X
OUTER WORK GLOVES		SAFETY GLASSES	
NEOPRENE SAFETY BOOTS	X		
HARD HAT WITH FACE SHIELD			
BOOTIES	X		
HARDHAT			

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INSTRUMENTATION	No.	DECON EQUIPMENT	No.
OVA		WASH TUBS	X
THERMAL DESORBER		BUCKETS	
O2/EXPLOSIMETER W/CAL. KIT	1	SCRUB BRUSHES	X
PHOTOVAC TIP		PRESSURIZED SPRAYER	X
HNu (Probe 10.2 lamp)	1	DETERGENT (Type spray bottle)	X
MAGNETOMETER		SOLVENT (Type hexane/acetone)	X
PIPE LOCATOR		PLASTIC SHEETING	X
WEATHER STATION		TARPS AND POLES	
DRAEGER PUMP, TUBES _____		TRASH BAGS	X
BRUNTON COMPASS		TRASH CANS	X
MONITOX CYANIDE		MASKING TAPE	
HEAT STRESS MONITOR		DUCT TAPE	X
NOISE EQUIPMENT _____		PAPER TOWELS	X
PERSONAL SAMPLING PUMPS		FACE MASK	
		FACE MASK SANITIZER	X
		FOLDING CHAIRS	
		STEP LADDERS	
RADIATION EQUIPMENT		DISTILLED WATER	X
DOCUMENTATION FORMS		10% NITRIC ACID	X
PORTABLE RATEMETER			
SCALER/RATEMETER		SAMPLING EQUIPMENT	
NaI Probe		8 OZ. BOTTLES	X
ZnS Probe		HALF-GALLON BOTTLES	
GM Pancake Probe		VOA BOTTLES	X
GM Side Window Probe		STRING	
MICRO R METER		HAND BAILERS	
ION CHAMBER		THIEVING RODS WITH BULBS	
ALERT DOSIMETER		SPOONS	X
POCKET DOSIMETER		KNIVES	X
		FILTER PAPER	
FIRST AID EQUIPMENT		PERSONAL SAMPLING PUMP SUPPLIES	
FIRST AID KIT			
OXYGEN ADMINISTRATOR	1		
STRETCHER			
PORTABLE EYE WASH	1		
BLOOD PRESSURE MONITOR			
FIRE EXTINGUISHER	1		

VAN EQUIPMENT	No.
TOOL KIT	1
HYDRAULIC JACK	
LUG WRENCH	1
TOW CHAIN	1
VAN CHECK OUT	
Gas	
Oil	
Antifreeze	
Battery	
Windshield Wash	
Tire Pressure	
MISCELLANEOUS	
PITCHER PUMP	
SURVEYOR'S TAPE	X
100 FIBERGLASS TAPE	
300 NYLON ROPE	
NYLON STRING	
SURVEYING FLAGS	X
FILM	
WHEEL BARROW	
BUNG WRENCH	
SOIL AUGER	
PICK	
SHOVEL	
CATALYTIC HEATER	
PROPANE GAS	
BANNER TAPE	X
SURVEYING METER STICK	
CHAINING PINS & RING	
TABLES	
WEATHER RADIO	
BINOCULARS	
MAGAPHONE	

MISCELLANEOUS (Cont.)	No.
SHIPPING EQUIPMENT	
COOLERS	X
PAINT CANS WITH LIDS, 7 CLIPS EACH	
VERMICULITE	
SHIPPING LABELS	X
DOT LABELS: "DANGER"	
"UP"	
"INSIDE CONTAINER COMPLIES ..."	
"HAZARD GROUP"	
STRAPPING TAPE	X
BOTTLE LABELS	X
BAGGIES	X
CUSTODY SEALS	X
CHAIN-OF-CUSTODY FORMS	X
FEDERAL EXPRESS FORMS	
CLEAR PACKING TAPE	X

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ON-SITE SAFETY MEETING

Project _____ TDD/Pan _____

Date _____ Time _____ Job No. _____

Address _____

Specific Location _____

Type of Work _____

_____

SAFETY TOPICS PRESENTED

Protective Clothing/Equipment _____

_____

Chemical Hazards _____

_____

Radiation Hazards _____

_____

Physical Hazards _____

_____

Emergency Procedures _____

_____

Hospital/Clinic _____ Telephone _____

Hospital Address _____

Special Equipment _____

Other _____

Checklist

1. Emergency information reviewed? _____ and made familiar to all team members? _____
2. Route to nearest hospital driven? _____ and its location known to all team members? _____
3. Site safety plan readily available and its location known to all team members? _____

Meeting shall be attended by all personnel who will be working within the exclusion area. Daily informal update meetings will be held when site tasks and/or conditions change.

ATTENDEES

(Expand on back of sheet if necessary)

Name Printed	Signature

Meeting Conducted by: _____ _____

(Print) (Signature)

_____ _____

(Site Safety Coordinator) (Team Leader)

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ATTENDEES (Cont.)	
Name Printed	Signature

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HAZARD EVALUATION OF CHEMICALS

Chemical Name Copper Date 4-21-89

DOT Name/U.N. No. ______ Job No. YN4010

CAS Number 7440-50-8

References Consulted (circle):

NIOSH/OSHA Pocket Guide Verschueren **(Merck Index)** Hazardline Chris (Vol. II)

(Toxic and Hazardous Safety Manual) ACGIH Other: Handbook of ... Chemicals + ...

Chemical Properties: (Synonyms: NONE)

Chemical Formula $CuSO_4 \cdot 5H_2O$/CuCl Molecular Weight 291.04

Physical State metal, dust mist or Fume Solubility (H_2O) insoluble Boiling Point 2595°C

Flash Point — Vapor Pressure/Density 8.94 Freezing Point —

Specific Gravity 8.92 Odor/Odor Threshold — Flammable Limits —

Incompatabilities Acetylene gas; Magnesium Metal React... mists.

Biological Properties:

TLV-TWA 0.2 mg/m³ PEL 0.1 mg/m³ Odor Characteristic —

IDLH — Human TDL: LDLo Orl-... 18,200 mg/kg Aquatic 5.6 mg/L Rat/Mouse ______

Route of Exposure Inhalation, Ingestion, Skin or Eye Con...

Carcinogen ______ Teratogen ______ Mutagen ______

Handling Recommendations: (Personal protective measures)

Wear protective clothing, Eye ..., Resp... D... protection.

Monitoring Recommendations:

Disposal/Waste Treatment:

1st method is Copper Recovery. If that is not feasible the Copper can be precipitated through the use of caustics and the sludge deposited in a chemical waste landfill.

Health Hazards and First Aid:

Edathamil Calcium disodium Recommended ... lavage ... followed by saline cathartics, induce vomiting ... Irrigate Eye + wash skin with soap. Inhalat... - move to Fresh Air + perform Artificial ...

Symptoms: Acute: Skin Irritation, Eye irritation ... irritation

Chronic: ... irritation ... metal ... Nausea Fever ... Ulceration of Nasal Septum.

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HAZARD EVALUATION OF CHEMICALS

Chemical Name Zinc Date 4-21-89
DOT Name/U.N. No. UN1436 Job No. YN4000
CAS Number

References Consulted (circle):
NIOSH/OSHA Pocket Guide Verschueren Merck Index Hazardline Chris (Vol. II)
Toxic and Hazardous Safety Manual ACGIH (Other:) OHS Data base

Chemical Properties: (Synonyms: Blue Powder, CI 77945, JASAD)
Chemical Formula ZN Molecular Weight 65.37
Physical State Solid Solubility (H_2O) [illegible] Boiling Point [illegible]
Flash Point Non-Flammable Vapor Pressure/Density [illegible] 909°F Freezing Point 787
Specific Gravity 7.14 Odor/Odor Threshold Flammable Limits
Incompatabilities Acids, sodium Peroxide, chlorine water, [illegible]

Biological Properties:
TLV-TWA — PEL None established
Odor Characteristic
IDLH not specified Human Aquatic Rat/Mouse
Route of Exposure Eye, skin contact, Inhalation
Carcinogen Teratogen Mutagen

Handling Recommendations: (Personal protective measures)
Prevent repeated or prolonged skin contact [illegible]
clothing, gloves + Faceshield

Monitoring Recommendations:

Disposal/Waste Treatment:
Place contaminated cl[illegible]
storage until laundered [illegible]

Health Hazards and First Aid:
If it gets in Eyes wash with large amts of [illegible]
Medical Attention immediately

Symptoms: Acute: Skin irritation thirst [illegible]
Muscular Ache fever nausea [illegible]
Chronic: None Specified

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HAZARD EVALUATION OF CHEMICALS

Chemical Name: Fluoride (Fluorine) Date: 4-21-89
DOT Name/U.N. No.: 1045 Job No.: UN 4000
CAS Number: 7782-41-4

References Consulted (circle):
NIOSH/OSHA Pocket Guide Verschueren **(Merck Index)** Hazardline **(Chris (Vol. II))**
(Toxic and Hazardous Safety Manual) ACGIH Other: Handbook of Toxic and Hazardous Chemicals + Carcinogens.

Chemical Properties: (Synonyms:)
Chemical Formula: F_2 Molecular Weight: 38.00
Physical State: gas or liquid Solubility (H_2O): insoluble Boiling Point: -188°C
Flash Point: — Vapor Pressure/Density: not applicable Freezing Point: -219°C
Specific Gravity: 1.11 Odor/Odor Threshold: 0.035 ppm Flammable Limits: —
Incompatabilities: Reacts with most oxidizable substances / water

Biological Properties:
TLV-TWA: 0.1 ppm PEL: 2.5 mg/m³ Odor Characteristic: [illegible]
IDLH: 500 mg/m³ Human TDL: inhl-hmn TCL: 25 ppm Aquatic: Rat/Mouse: LC50: 185 [illegible]
Route of Exposure: Inhale Ingestion, eye + ~~sk~~ Dermal
Carcinogen: Teratogen: Mutagen:

Handling Recommendations: (Personal protective measures)
Chemical goggles - special clothing not easily [illegible] by Fluorine gas

Monitoring Recommendations:

Disposal/Waste Treatment:
Reaction of Aqueous waste [illegible] followed by [illegible] And either recovery or/And disposal of the resultant calcium fluoride.

Health Hazards and First Aid:
Avoid contact with vapor or liquid. irrigate eyes immediately, wash skin with [illegible]. For inhalation move [illegible] And perform artificial respiration. Ingestion: give large quantities of water + induce vomiting, Medical Attention.

Symptoms: Acute: irritants of Skin, Eyes, Mucous Membranes + Lungs

Chronic: Inhalation CAN produce bronchospasm, laryngospasm and pulmonary edema. Also Gastrointestinal [illegible]

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HAZARD EVALUATION OF CHEMICALS

Chemical Name TOLUENE Date 4-13-89 4-21-89

DOT Name/U.N. No. 1294 Job No. YATTTC (illegible)

CAS Number

References Consulted (circle):

(NIOSH/OSHA Pocket Guide) Verschueren (Merck Index) Hazardline (Chris (Vol. II))

Toxic and Hazardous Safety Manual ACGIH Other:

Chemical Properties: (Synonyms: METHYL BENZENE, TOLUOL)

Chemical Formula C_7H_8 Molecular Weight 92

Physical State COLORLESS LIQUID Solubility (H_2O) 0.05g/100g H_2O Boiling Point 231° F

Flash Point 40° F Vapor Pressure/Density 3.2 Freezing Point -139° F

Specific Gravity 0.8669 Odor/Odor Threshold 2ppm - BENZENE-LIKE Flammable Limits 1.3% - 7%

Incompatabilities STRONG OXIDIZERS, HNO_3, H_2SO_4, Cl_2, PEROXIDES, HEAT

Biological Properties:

TLV-TWA 200 ppm (375 mg/m³) (CEILING) PEL Odor Characteristic BENZENE LIKE

IDLH 2000 ppm Human IHL TCLo - 20 ppm Aquatic Rat/Mouse

Route of Exposure INHALATION, SKIN

Carcinogen EXPERIMENTAL Teratogen Mutagen

Handling Recommendations: (Personal protective measures)

IMPERVIOUS CLOTHING, VITON GLOVES, FACESHIELD, RESPIRATOR w/ ORGANIC VAPOR CARTRIDGE UP TO 1000 ppm, >1000 ppm USE SCBA

Monitoring Recommendations:

Disposal/Waste Treatment:

CONCENTRATED: INCINERATION; DILUTE DISCHARGE TO MUNICIPAL SEWER AFTER PRIMARY TREATMENT, INCINERATION FOR DILUTE ORGANIC MIXTURES

Health Hazards and First Aid:

FLUSH AREA WITH WATER & WASH WITH SOAP; MOVE TO FRESH AIR IF BREATHED; IF SWALLOWED, DO NOT INDUCE VOMITTING

Symptoms: Acute: CNS DEPRESSION, FATIGUE, NAUSEA

Chronic: BONE MARROW DEPRESSION, DEFATTING OF SKIN, DERMATITIS

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HAZARD EVALUATION OF CHEMICALS

Chemical Name XYLENE Date ~~4-13-89~~ 4-21-89

DOT Name/U.N. No. 1307 Job No. ~~YO1000~~ UN400

CAS Number

References Consulted (circle):

NIOSH/OSHA Pocket Guide Verschueren Merck Index Hazardline Chris (Vol. II)

Toxic and Hazardous Safety Manual ACGIH Other:

Chemical Properties: (Synonyms: DIMETHYLBENZENE, XYLOL)

Chemical Formula C_8H_{10} Molecular Weight 106

Physical State COLORLESS LIQUID Solubility (H_2O) 0.00003% Boiling Point 292°F

Flash Point 77°F Vapor Pressure/Density 3.7 Freezing Point -12°F

Specific Gravity 0.86 Odor/Odor Threshold 0.5 ppm Flammable Limits 1.0% - 7.0%

Incompatabilities STRONG OXIDIZERS, STRONG ACID, HEAT, PEROXIDE

Biological Properties:

TLV-TWA 100 ppm PEL Odor Characteristic AROMATIC

IDLH 10,000 ppm Human HL TCLO-200 ppm Aquatic Rat/Mouse IHL LC50 5000 ppm

Route of Exposure INHALE, SKIN

Carcinogen EXPERIMENTAL Teratogen Mutagen

Handling Recommendations: (Personal protective measures)

IMPERVIOUS CLOTHING, PVC ~~Viton~~ GLOVES, FACESHIELD, AVOID PROLONGED CONTACT. RESPIRATOR w/ ORGANIC VAPOR CARTRIDGE TO 5000 ppm, >10,000 ppm USE SCBA

Monitoring Recommendations:

Disposal/Waste Treatment:

OSHA STANDARD 29 CFR 1910.106 APPLIES

Health Hazards and First Aid:

SKIN - WASH w/ SOAP + WATER; EYES - FLUSH w/ WATER; REMOVE TO FRESH AIR IF OVERCOME

Symptoms: Acute: EYE + MUCOUS MEMBRANE IRRITANT, CNS DEPRESSANT. INGESTION CAUSES GASTROINTESTINAL UP

Chronic: MORE SEVERE THAN ABOVE, HYPERPLASIA OF BONE MARROW.

Chemical Name Cadmium Date 4-21-89

DOT Classification _____ Job Number 4/1940.1

CAS Number 7440-43-9

REFERENCES CONSULTED (circle; also include MSDS if appropriate.)
(NIOSH/OSHA Pocket Guide) Merck Index Hazardline Chris(vol.III)
(ACGIH TLV Booklet) Toxic & Hazardous Safety Manual (SAX) (Aldrich)
(RTECS) other: Casarett & Doull's Toxicology, Niosh Occupational Heathguid

CHEMICAL PROPERTIES: (Synonyms: C.I 77180)
Chemical Formula Cd MW 112.4 Ionization Potential N/A
Physical State Crystals Boiling Point 1412° F Freezing Point 609° F
Flash Point N/A Flammable Limits N/A Vapor Pressure _____
Specific Gravity/Density 8.642 Odor/Odor Threshold None

Solubility-water: Insoluble Solubility-other: _____
Incompatabilities & Reactivity: Strong oxidizers, sulfur, selenium, zinc, amm

TOXICOLOGICAL PROPERTIES: _____ (dust) (Fume)
Exposure Limits: TLV-TWA (ACGIH) .05mg/m³ PEL (OSHA) .2mg/m³ .1mg/m³
STEL None est. Ceiling Limits .6mg/m³/.3mg/m³ IDLH 40 mg/m³
Toxicity Data: (Indicate duration of study)
Human; IHL Tclo 39mg/m³/20M Dermal _____ Oral _____
Rat/Mouse; IHL _____ Dermal _____ Oral LD50 225mg/kg
Aquatic: N/A Other: _____
Carcinogen animal-pos Mutagen exp. _ Reproductive Toxin exper. teratoge
Route(s) of exposure - (circle all that apply): (Inhalation) (Ingestion)
Dermal Contact Eye(ocular)** Dermal Absorption Other _____

HANDLING RECOMMENDATIONS: (personal protective measures)
Respirators: > any detectable air concentraton - use SCBA
Protective Clothing: Chemical resistant gloves & boots.
Special Equipment: None

DISPOSAL, FIRE and SPILLS: (Use numbered codes; see attached sheets for explanation.)
Disposal P Fire 13 Leaks&Spills 7.10
Decomposition Products: Toxic Cd fumes

FIRST AID:
INL: Large quantities of water, inducevomiting, medical attent.
IHG: Remove to fresh air, art. resp. if necessary, med. attent. immed.
Eye/Skin: Irrigate/wash with water for at least 15 min.

SYMPTOMS:
acute(immediate) exposure effects: IHL: irritation of nose & throat, 2-hou delay before symptoms of cough, chest pain, nausea, vomiting, dizziness, chills, stomach distress. ING Nausea, vomiting, diarrhea, abominal cramps

chronic(long term) exposure effects: loss of smell, ulceration of nose, shortness of breath, liver damage, kidney damage (most affected), mild anemia, emphysema, linked to cancer & hypertension.

reproductive effects: Possibly cuases prostate cancer. teratogenic in

Hazard Evaluation of Chemicals
Region V - Chicago

emical Name Benzene Date 4-21-89

lassification _____ Job Number 4N4011

S Number 71-43-2

FERENCES CONSULTED (circle; also include MSDS if approprate.)
OSH/OSHA Pocket Guide) Merck Index (Hazardline) (Chris(vol.III))
GIH TLV Booklet) Toxic & Hazardous Safety Manual (SAX) (Aldrich)
ECS) other: _____

EMICAL PROPERTIES: (Synonyms: benzol, benzole, cyclohexatriene)
emical Formula C6H6 MW 78 Ionization Potential 9.24ev
ysical State liquid Boiling Point 176°F Freezing Point 42°F
ash Point 12°F Flammable Limits 1.3-7.1% Vapor Pressure 75mm
ecific Gravity/Density 0.879 Odor/Odor Threshold 4.68 ppm
lubility-water: slightly Solubility-other: _____
compatabilities & Reactivity: strong oxidizers, chlorine, bromine

XICOLOGICAL PROPERTIES:
posure Limits: TLV-TWA (ACGIH) 10 ppm PEL (OSHA) 10 ppm
STEL none Ceiling Limits >25<50ppm/10min IDLH 2000 ppm
xicity Data: (Indicate duration of study)
Human; IHL Tclo 100/CNS Dermal _____ Oral Tdlo 130mg/kg:CNS
Rat/Mouse; IHL Tclo 50/24H Dermal _____ Oral LD50 3800mg/kg
Aquatic: Tlm96:100-10ppm Other: IHL:Man TC 2100mg/m3/4Y; carc.
Carcinogen human-sus Mutagen exper. Reproductive Toxin exper.
oute(s) of exposure - (circle all that apply): (Inhalation) (Ingestion)
rmal Contact) (Eye(ocular)) (Dermal Absorption) Other _____

NDLING RECOMMENDATIONS: (personal protective measures)
espirators: 10 ppm use SCBA
rotective Clothing: excel-viton; good-neoprene, saranax; poor-butyl, natural
ubber for gloves. Avoid skin/eye contact.
pecial Equipment: none

SPOSAL, FIRE and SPILLS: (Use numbered codes; see attached sheets for explanation.)
isposal D Fire 6,7 Leaks&Spills 3,4,5,6,9
ecomposition Products: toxic fumes of carbon dioxide, carbon monoxide

RST AID:
G: Do not induce vomiting, give water or milk, medical attent. immed.
L: Remove to fresh air, give artificial resp. if needed, medical attent.
e/Skin: Flush with water, rinse/wash skin with soap & water thoroughly.

MPTOMS:
ute(immediate) exposure effects: skin irritant, CNS depressant, mostly
L, initial excitation followed by headache, dizziness, vomiting, delirium,
re exposure may see tremors, blurred vision, shallow resp., convulsions.

ronic(long term) exposure effects: anorexia, drowsiness, anemia, bleeding
der skin, reduced blood clotting; liver, kidney, bone marrow damage, leukemia.

productive effects: None reported in humans.

Hazard Evaluation of Chemicals
Region V - Chicago

Chemical Name Lead Date 4-21-89

Classification _____ Job Number CM 4018

CAS Number 7439-92-1

FERENCES CONSULTED (circle; also include MSDS if approprate.)
OSH/OSHA Pocket Guide) Merck Index (Hazardline) (Chris(vol.III))
GIH TLV Booklet) Toxic & Hazardous Safety Manual (SAX) (Aldrich)
ECS) other: Sittig

EMICAL PROPERTIES: (Synonyms: White lead, plumbum)
emical Formula Pb MW 207 Ionization Potential N/A
ysical State Variable Boiling Point 3164°F Freezing Point
ash Point Incombust. Flammable Limits Incombus Vapor Pressure variable
ecific Gravity/Density 11.3 @61°FOdor/ Odor Threshold None
lubility-water: Insoluble Solubility-other:
compatabilities & Reactivity: Strong oxidizers, perioxides, active metals

XICOLOGICAL PROPERTIES:
posure Limits: TLV-TWA (ACGIH) .15 mg/m³ PEL (OSHA) 50ug/m³
STEL None est. Ceiling Limits None est. IDLH Variable
xicity Data: (Indicate duration of study)
Human; IHL _____ Dermal _____ Oral Tdl0 450mg/kg/6Y
Rat/Mouse; IHL _____ Dermal _____ Oral Tdlo 790mg/kg
A atic: Unknown Other: Toxicity varies with lead cpds.
(cinogen Indef. Mutagen Indef Reproductive Toxin exp. teratogen
ute(s) of exposure - (circle all that apply): (Inhalation) (Ingestion)
rmal Contact) (Eye(ocular)) (Dermal Absorption) Other

NDLING RECOMMENDATIONS: (personal protective measures)
spirators: 5mg/m3 high efficiency particulate respirator, other concentrations - SCBA.
otective Clothing: Avoid skin and eye contact
ecial Equipment: None

SPOSAL, FIRE and SPILLS: (Use numbered codes; see attached sheets for explanation.)
sposal P Fire 13 Leaks&Spills 7,8,10
composition Products: Toxic fumes of lead

RST AID:
G: Give water, induce vomiting, medical attention immed.
L: Move to fresh air, artifical resp. if necessary, medical attent.
e/Skin: Irrigate/wash with water. Wash skin thoroughly with soap & water.

MPTOMS:
ute(immediate) exposure effects: Cumulative neurotoxin-commonly occurs om prolonged exposure. Symptoms include stomach distress, vomiting, hea, black stools, anemia, nervous system effects.
nic(long term) exposure effects: 3 clinical types: a-ailmentary-abominal in, discomfort, constipation or diarrhea, metallic taste, lead line on gum adache. b-nueromuscular, muscle weakness, joint/muscle pain, dizziness, somnia, paralysis c-encephalic: brain involvement, stupor, coma, death, rare.
productive effects: Human epid. studies have concluded that lead is a lson to male & female germ cells; increased incidence of miscarriages, illbirths, sterility in females: sperm depression & decreased motility in

DRILLING SITE SAFETY CHECKLIST

- All E&E drilling personnel will have read and understood the terms of E&E drilling SOP.

- Daily inspection of rig and components - obvious or questionable safety conditions will be cause for work interruption.

- Only approved drillers will remain in proximity to borehole during drilling and in any event, an approximate 4' x 8' super exclusion area will be in place around moving auger. No personnel will enter this zone while drilling is ongoing.

- Continuous O_2/explosimeter monitoring at borehole using remote sampling hose.

- All field team members will be briefed on planned drilling operations and possible problems before work commences on day one. All will be shown location and operation of "kill switches". These switches will be operationally checked each morning.

- Fire extinguisher(s) will be staged next to rig before drilling/refueling operations.

- Welding/cutting activities will only be performed at a distance from ignition sources approved as safe by the Site Safety Officer (SSO), Team Leader.

- Appropriate personnel protective equipment (based on hazards associated with assumed well contaminants) will be worn as directed by the SSO and terms of the site safety plan. As a minimum, steel-toed boots, hard-hats, and face shields will be worn during any active drilling.

- Outrigger stabilizers must be in place before drilling commences. The rig must also be leveled.

- Drill rig boom must be horizontal during movement of rig. It will not be erected within 25 feet of overhead lines.

- Electrical storms within earshot of the job site will be cause for work termination until deemed safe by the SSO and Team Leader.

- Where underground utilities are suspected in a vacinity of operations, the local utilities shall be contacted. Where utilities are identified, they shall be marked using flags.

- Where buried drums, etc. are suspected, a full survey of drilling zone is required using appropriate instrumentation prior to ground breaking.

DRILLING SITE SAFETY CHECKLIST continued:

- Only trained, experienced staff will operate the cathead. Personnel must be knowledgeable in safe good practive procedures for cathead use.
- Only properly licensed staff will drive the drill rig. A daily safety check of the vehicle will be carried out by the driver, per E&E protocol.
- Climbing on vertical boom is not permitted by E&E staff.

APPENDIX B

PHOTOGRAPHIC LOGS

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PHOTOGRAPHIC RECORD

Client: NYSDEC E & E Job No.: YN4080

Camera: Make Kodak Fling 35mm Disposable SN: N/A

Photographer: G. Florentino Date/Time: 5/17/89 1220

Lens: Type N/A SN: N/A Frame No.: 6 (Roll 2)

Comments: View to north of proposed GW-7 well location. Note area is surrounded by junked vehicles.

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PHOTOGRAPHIC RECORD

Client: NYSDEC E & E Job No.: YN4080

Camera: Make Kodak Fling 35mm Disposable SN: N/A

Photographer: G. Florentino Date/Time: 5/17/89 1235

Lens: Type N/A SN: N/A Frame No.: 5 (Roll 2)

Comments: View to south of proposed GW-1 well location (stake). Note: Driveway in foreground and Conrail tracks in background.

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PHOTOGRAPHIC RECORD

Client: NYSDEC E & E Job No.: YN4080

Camera: Make Kodak Fling 35mm Disposable SN: N/A

Photographer: G. Florentino Date/Time: 5/17/89 1345

Lens: Type N/A SN: N/A Frame No.: 4 (Roll 2)

Comments: View to north of proposed GW-2 location (stake). Note: Conrail tracks in background.

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PHOTOGRAPHIC RECORD

Client: NYSDEC E & E Job No.: YN4080

Camera: Make Kodak Fling 35mm Disposable SN: N/A

Photographer: G. Florentino Date/Time: 5/17/89 1430

Lens: Type N/A SN: N/A Frame No.: 3 (Roll 2)

Comments: View to west of proposed GW-5 well location (stake) on edge of fill area.

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PHOTOGRAPHIC RECORD

Client: NYSDEC E & E Job No.: YN4080

Camera: Make Kodak Fling 35mm Disposable SN: N/A

Photographer: G. Florentino Date/Time: 5/17/89 1620

Lens: Type N/A SN: N/A Frame No.: 2 (Roll 2)

Comments: View to west of proposed GW-4 well location (stake). Note: Site boundary is to right, I490 is to left.

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PHOTOGRAPHIC RECORD

Client: NYSDEC E & E Job No.: YN4080

Camera: Make Kodak Fling 35mm Disposable SN: N/A

Photographer: G. Florentino Date/Time: 5/17/89 1710

Lens: Type N/A SN: N/A Frame No.: 1 (Roll 2)

Comments: View to west of proposed GW-3 well location (stake). Note: Site boundary is to right, I490 is to left.

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PHOTOGRAPHIC RECORD

Client: NYSDEC E & E Job No.: YN4080

Camera: Make Kodak Fling 35mm Disposable SN: N/A

Photographer: G. Florentino Date/Time: 5/17/89 1145

Lens: Type N/A SN: N/A Frame No.: 0 (Roll 3)

Comments: View to west of proposed GW-6 well location (stake).

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APPENDIX C

GEOPHYSICAL SURVEY

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE II INVESTIGATIONS

GEOPHYSICAL SURVEY

GOLDEN ROAD DISPOSAL SITE
SITE NUMBER 828021
TOWN OF CHILI, MONROE COUNTY

June 1989

Prepared for:

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

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

Prepared by:

Ecology and Environment Engineering, P.C.

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

1. INTRODUCTION

This geophysical investigation report for the Golden Road Disposal site (I.D. No. 828021) on Golden Road in Chili, New York, was prepared by Ecology and Environment Engineering, P.C. (E & E), under contract to the New York State Department of Environmental Conservation (NYSDEC). The geophysical investigation consisted of an EM31 (electromagnetic terrain conductivity) survey and a portable proton magnetometer (total earth field magnetics) survey. This report includes field data (Appendix C-1) and contour maps (Appendix C-2) for the geophysical survey performed at this site on May 17, 1989, as part of the Phase II Investigation. Additionally, interpretations of the data generated, along with conclusions, are provided in this report.

2. OBJECTIVES

The geophysical survey program at the Golden Road Disposal site was designed to achieve several general goals. The main objectives of the geophysical methods used were to optimize the locations of the seven proposed on-site groundwater monitoring wells; reduce the risks associated with drilling into unknown terrain and wastes; reduce overall project time and cost; improve the accuracy and confidence of the investigation; identify the existence and boundaries of buried waste or groundwater contamination plumes; and to determine vertical and horizontal anomalies.

3. METHODS

Grids were set up at each of the prospective monitoring well locations. The X and Y axes of each survey grid were initially oriented approximately east-west and north-south, respectively. Precise compass orientations were then obtained for each of the survey grid axes. Survey grid coordinate 0,0 is located in the southwest corner of each contour map. Semi-permanent wooden stakes mark the proposed well locations for reference during drilling.

The dimension and station spacing of each survey grid varied due to physical restrictions at each proposed site (i.e., dense vegetation, steepness of slope, standing water, metal debris, railroad tracks, power lines, fences, etc.). Both horizontal and vertical dipole readings in north-south/east-west orientations were recorded at each survey grid node when performing the EM31 survey. The effective depths of penetration provided by the EM31 in the vertical and horizontal dipole modes is $\leq$18 feet and $\leq$9 feet, respectively. These depths were considered adequate to delineate any buried materials which may be encountered while drilling. Magnetometer readings were recorded at each node in both north-south/east-west orientations.

All geophysical field data were initially recorded in two log books dedicated to this site investigation. Magnetometer data were reduced by averaging station readings for north-south and east-west orientations and correcting these values for diurnal variation based on background station readings. EM31 conductivity data were averaged for north-south and east-west orientations for both vertical and horizontal dipole positions. The reduced geophysical data (see Appendix C-1) were then plotted and contoured for each survey (see Appendix C-2).

4. DATA INTERPRETATION

The purpose of interpreting the results of the magnetometer and EM31 surveys is to provide a probable explanation for anomalous geophysical contours. The presence of buried utilities, metal objects, wastes, and contaminant plumes is often manifest as relatively elevated or decreased station readings and gradient values. The following interpretations are based on the contour maps generated from magnetometer and EM31 data which are listed in Tables 1 and 2 in Appendix C-1. The survey grids encompass each of the seven groundwater monitoring well locations as proposed by NYSDEC in the Phase II Investigation Work Plan for the Golden Road Disposal site (see Figure 4-1).

The following discussion provides details of each of the seven survey grids:

Survey Grid Area No. 1

A review of magnetometer data contours at the no. 1 grid location indicates that this 1,200-square-foot survey area is without substantial geomagnetic anomalies. The risk of drilling into any shallow ferrous material is expected to be minimal.

In general, low electromagnetic conductivity values measured with the EM31 (3.5 to 12.5 millimhos/meter) were observed in both vertical and horizontal dipole modes. These low values indicate the absence of near-surface metal debris and/or contamination. Higher values and negative values were observed in the northeast corner and along the western border of the survey grid. These values are the result of interference caused by a hay wagon, farm machinery, and other metal debris. Negative conductivity readings indicate very high conductivity beyond the capabilities of the instrument.

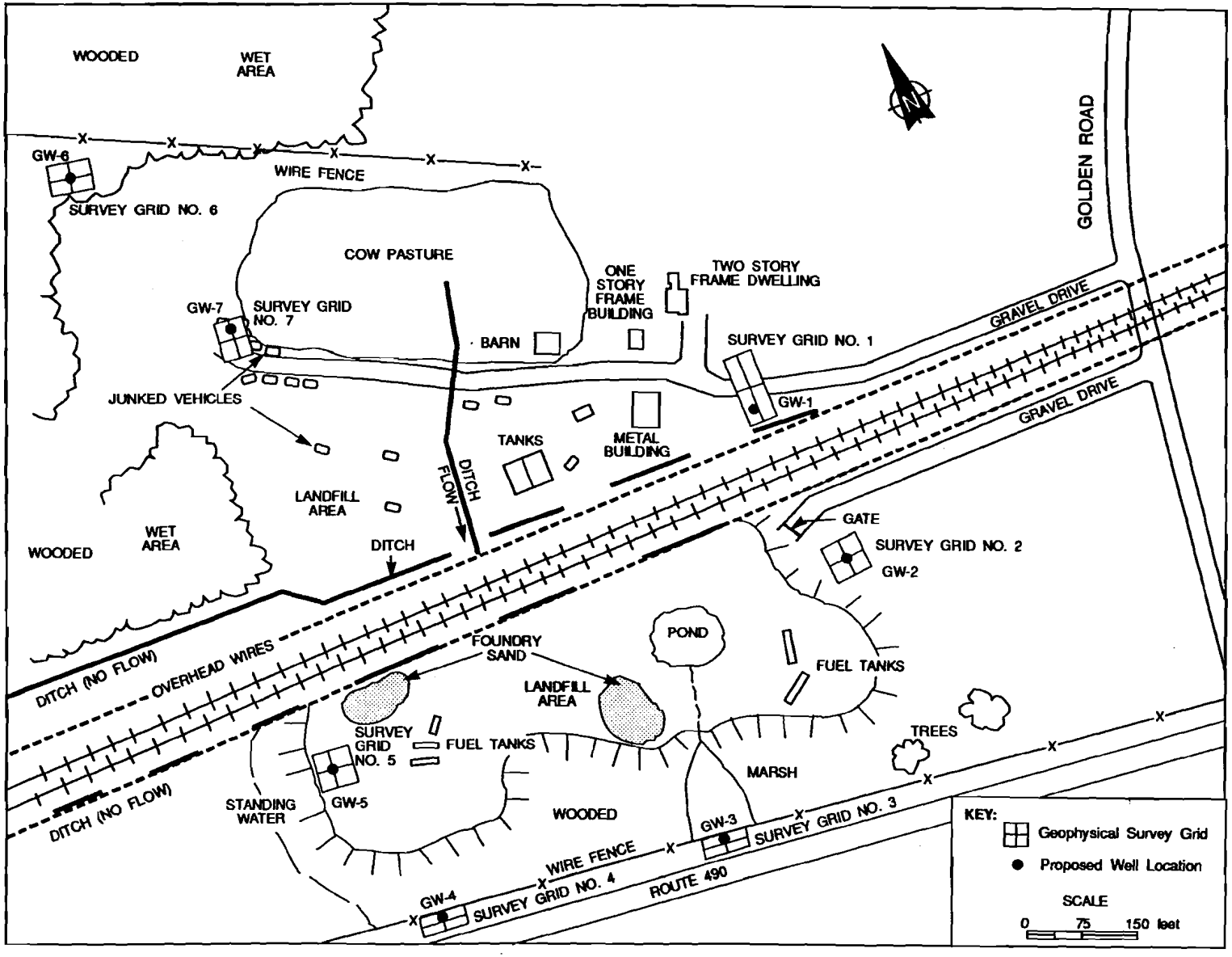


Figure 4-1
GEOPHYSICAL SURVEY AND PROPOSED GROUNDWATER MONITORING WELL LOCATIONS

The installation of the proposed monitoring well GW-1 at the location indicated on the contour map is suitable. The well location may also be moved to any area within the survey grid if required to facilitate rig access.

Survey Grid Area No. 2

A review of magnetometer data contours at the No. 2 grid location indicates that this 1,600-square-foot survey area is without substantial geomagnetic anomalies. There is an isolated area at coordinate 30,10 where the magnetic field decreases. This may be due to the presence of a very small, shallow object because an anomalous response by the EM31 at the same station was lacking. The risk of drilling into any shallow ferrous material within this grid area is expected to be minimal.

Low electromagnetic conductivity values measured with the EM31 (7.5 to 10 millimhos/meter) were observed in both vertical and horizontal dipole modes. These low values indicate the absence of near-surface metal debris and/or contamination.

The installation of the proposed monitoring well GW-2 at the location indicated on the contour map is suitable. The location may also be moved to any area within the survey grid if required to facilitate rig access.

Survey Grid Area No. 3

A review of magnetometer data contours at the No. 3 grid location indicates that this 1,200-square-foot survey area contains several geomagnetic anomalies. The apparent anomalies are located in the southern portion of the survey grid. The source of these anomalies is probably due to interference from construction material of Interstate 490 along with the effects of passing vehicles approximately 10 feet to the south of the survey grid.

Electromagnetic conductivity values measured with the EM31 (13.5 to 41.5 millimhos/meter) were observed in both vertical and horizontal dipole modes. These values were relatively low and consistent in the central portion of the survey grid, thus indicating the absence of near-surface metal debris and/or contamination. Conductivity increased to the south and north of the survey grid. Once again, the increase to the

south was caused by Interstate 490, and the increase to the north was due to the presence of a fence 10 feet to the north of the survey grid.

The installation of the proposed monitoring well GW-3 at the location indicated on the contour map is suitable. The location may also be moved to any area within the survey grid if required to facilitate rig access.

Survey Grid Area No. 4

A review of magnetometer data contours at the No. 4 grid location indicates that this 1,200-square-foot survey area contains one geomagnetic anomaly. This anomalous area in the southeast corner of the survey grid is probably due to the effects of Interstate 490 approximately 10 feet to the south of the survey grid. The risk of drilling into any shallow ferrous material within this grid area is expected to be minimal.

Electromagnetic conductivity values measured with the EM31 (12.0 to 44.5 millimhos/meter) were observed in both vertical and horizontal dipole modes. These values were relatively low and constant in the central portion of the survey grid, thus indicating the absence of near-surface metal debris and/or contamination. Conductivity increased to the north due to the presence of a fence and to the south due to the effects of Interstate 490 ten feet outside the survey area.

The installation of the proposed monitoring well GW-4 at the location indicated on the contour map is suitable. The location may also be moved to any area within the survey grid if required to facilitate rig access.

Survey Grid Area No. 5

A review of magnetometer data contours at the No. 5 grid location indicates that this 1,600-square-foot survey area contains two geomagnetic anomalies. These anomalous areas, located in the northwest corner of the grid and at coordinate 10,20, probably represent small, shallow metallic objects because of the lack of anomalous responses of the EM31 in the same areas. Care should be taken when drilling in this area because it appears the survey grid is located on fill material.

Low electromagnetic conductivity values measured with the EM31 (5.5 to 14.0 millimhos/meter) were observed in both vertical and horizontal dipole modes. These low values indicate the absence of near-surface metal debris and/or contamination.

The installation of the proposed monitoring well GW-5 at the location indicated on the contour map is unsuitable due to the presence of the magnetic anomaly. The location should be moved to any other area within the survey grid outside of coordinates 0,40 to 10,40 and 0,20 to 10,20.

Survey Grid Area No. 6

A review of magnetometer data contours at the No. 6 grid location indicates that this 1,600-square-foot survey area is without substantial geomagnetic anomalies. The risk of drilling into any shallow ferrous material within this grid area is expected to be minimal.

Low electromagnetic conductivity values measured with the EM31 (6.0 to 9.5 millimhos/meter) were observed in both vertical and horizontal dipole modes. These low values indicate the absence of near-surface metal debris and/or contamination.

The installation of the proposed monitoring well GW-6 at the location indicated on the contour map is suitable. The location may also be moved to any area within the survey grid if required to facilitate rig access.

Survey Grid Area No. 7

A review of magnetometer data contours at the No. 7 grid location indicates that this 600-square-foot survey area contains several geomagnetic anomalies. The main cause of these anomalies is interference from adjacent junked vehicles. The risk of drilling into any shallow ferrous material within this grid area is unknown due to the low reliability of the data.

Electromagnetic conductivity values measured with the EM31 ranged from 12.3 to 31 millimhos/meter along with negative values along the borders of the survey grid in both vertical and horizontal dipole modes. Negative meter readings indicate very high conductivities beyond the

capabilities of the instrument. These high values also were caused by the presence of the junked vehicles.

The installation of the proposed monitoring well GW-7 at the location indicated on the contour map is questionable. The well should be moved to a location free from cultural interferences, or the vehicles should be removed and the area should be re-surveyed.

5. CONCLUSIONS AND RECOMMENDATIONS

Based upon the interpretations discussed in Section 4, the proposed locations of 5 of the 7 groundwater monitoring wells appear to be satisfactory with only minor adjustments. On-site field observations indicate that survey grid area no. 5 is probably located over a fill area. Particular care should be exercised in order to avoid drilling through potentially hazardous material. The location of GW-7 should be moved to an area free from cultural interferences, or the vehicles should be removed and the area re-surveyed.

Prior to drilling, the underground-utility locating service should be contacted to indicate possible public utilities buried in the vicinity of the drill sites.

All proposed well locations should be confirmed with a NYSDEC representative prior to the commencement of drilling, especially GW-5. The presence of a magnetic anomaly at the GW-5 well location indicates that this well should be moved to an area outside the 0,40 to 10,40 and 0,20 to 10,20 coordinates as discussed in Section 4.

APPENDIX C-1

MAGNETOMETER AND EM31 SURVEY DATA

Table 1

AVERAGE NORTH-SOUTH/EAST-WEST MAGNETOMETER READINGS

GOLDEN ROAD DISPOSAL SITE

Grid No. 1

Station #	Average N-S/E-W (Gammas)	Corrected Data* (Gammas)
0,0	52,136	52,141
10,0	52,138	52,148
20,0	52,139	52,145
0,10	52,134	52,155
10,10	52,139	52,165
20,10	52,142	52,173
0,20	53,093	53,129
10,20	52,133	52,175
20,20	52,138	52,185
0,30	52,144	52,196
10,30	52,134	52,191
20,30	52,144	52,206
0,40	52,144	52,212
10,40	52,141	52,214
20,40	52,146	52,224
0,50	52,152	52,235
10,50	52,150	52,238
20,50	52,143	52,237
0,60	52,138	52,237
10,60	52,142	52,246
20,60	52,148	52,258

[UZ]YN4030:D2419, #1637, PM=30

*Data has been corrected for natural magnetic fluctuations (i.e., drift) by using data obtained at an on-site base station.

Table 1

AVERAGE NORTH-SOUTH/EAST-WEST MAGNETOMETER READINGS

GOLDEN ROAD DISPOSAL SITE

Grid No. 2

Station #	Average N-S/E-W (Gammas)	Corrected Data* (Gammas)
0,0	57,283	57,225
10,0	56,654	56,538
20,0	56,976	56,802
30,0	56,713	56,481
40,0	57,097	56,807
0,10	57,094	56,746
10,10	56,228	55,822
20,10	55,889	55,425
30,10	54,546	54,024
40,0	56,373	55,787
0,20	56,135	55,491
10,20	56,896	56,194
20,20	56,396	55,636
30,20	56,951	56,133
40,20	57,218	56,342
0,30	57,032	56,098
10,30	57,540	56,548
20,30	57,099	56,049
30,30	57,651	56,543
40,30	57,041	55,875
0,40	57,077	55,853
10,40	57,032	55,750
20,40	57,057	55,717
30,40	57,556	56,158
40,40	56,951	55,502

[UZ]YN4030:D2419, #1637, PM=30

*Data has been corrected for natural magnetic fluctuations (i.e., drift) by using data obtained at an on-site base station.

Table 1

AVERAGE NORTH-SOUTH/EAST-WEST MAGNETOMETER READINGS

GOLDEN ROAD DISPOSAL SITE

Grid No. 3

Station #	Average N-S/E-W (Gammas)	Corrected Data* (Gammas)
40,0	53,390	53,403
30,0	54,951	54,977
20,0	55,588	55,626
10,0	54,109	54,160
0,0	56,733	56,797
0,10	53,690	53,767
10,10	57,661	57,751
20,10	53,493	53,595
30,10	57,199	57,314
40,10	57,386	57,514
0,20	54,633	54,774
10,20	55,659	55,813
20,20	57,232	57,398
30,20	55,176	55,355
40,20	56,194	56,386
40,30	56,599	56,804
30,30	57,189	57,407
20,30	56,766	56,996
10,30	57,305	57,548
0,30	57,228	57,484

[UZ]YN4030:D2419, #1637, PM=30

*Data has been corrected for natural magnetic fluctuations (i.e., drift) by using data obtained at an on-site base station.

Table 1

AVERAGE NORTH-SOUTH/EAST-WEST MAGNETOMETER READINGS

GOLDEN ROAD DISPOSAL SITE

Grid No. 4

Station #	Average N-S/E-W (Gammas)	Corrected Data* (Gammas)
40,0	54,187	54,456
30,0	56,165	56,447
20,0	56,929	57,223
10,0	57,130	57,437
0,0	57,347	57,667
0,10	57,046	57,379
10,10	56,750	57,096
20,10	57,201	57,559
30,10	57,462	57,833
40,10	56,871	57,255
40,20	57,157	57,554
30,20	56,951	57,361
20,20	56,855	57,277
10,20	57,000	57,435
0,20	57,171	57,619
0,30	56,572	57,033
10,30	56,640	57,114
20,30	56,597	57,083
30,30	56,814	57,314
40,30	56,754	57,266

[UZ]YN4030:D2419, #1637, PM=30

*Data has been corrected for natural magnetic fluctuations (i.e., drift) by using data obtained at an on-site base station.

Table 1

AVERAGE NORTH-SOUTH/EAST-WEST
MAGNETOMETER READINGS

GOLDEN ROAD DISPOSAL SITE

Grid No. 5

Station #	Average N-S/E-W (Gammas)	Corrected Data* (Gammas)
40,40	57,299	57,298
30,40	57,221	57,219
20,40	57,512	57,509
10,40	57,562	57,558
0,40	53,960	53,955
0,30	56,906	56,900
10,30	57,735	57,728
20,30	57,406	57,396
30,30	57,366	57,357
40,30	57,507	57,497
40,20	57,148	57,137
30,20	57,237	57,225
20,20	57,591	57,578
10,20	58,042	58,028
0,20	57,556	57,541
0,10	57,686	57,670
10,10	57,760	57,743
20,10	57,530	57,512
30,10	57,551	57,532
40,10	57,412	57,392
40,0	57,155	57,134
30,0	57,669	57,647
20,0	57,223	57,200
10,0	57,507	57,483
0,0	57,649	57,623

[UZ]YN4030:D2419, #1637, PM=30

*Data has been corrected for natural magnetic fluctuations (i.e., drift) by using data obtained at an on-site base station.

Table 1

AVERAGE NORTH-SOUTH/EAST-WEST MAGNETOMETER READINGS

GOLDEN ROAD DISPOSAL SITE

Grid No. 6

Station #	Average N-S/E-W (Gammas)	Corrected Data* (Gammas)
40,40	56,842	56,711
30,40	56,861	56,664
20,40	57,405	57,142
10,40	57,253	56,925
0,40	57,465	57,071
0,30	57,209	56,749
10,30	57,141	56,615
20,30	57,124	56,533
30,30	57,577	56,920
40,30	57,176	56,453
40,20	57,251	56,463
30,20	57,024	56,170
20,20	57,187	56,267
10,20	57,345	56,360
0,20	57,126	56,075
0,10	57,222	56,105
10,10	57,363	56,180
20,10	57,577	56,329
30,10	57,140	55,760
40,10	57,194	55,749
40,0	57,372	55,861
30,0	57,061	55,484
20,0	57,207	55,565
10,0	57,211	55,503
0,0	57,459	55,684

[UZ]YN4030:D2419, #1637, PM=30

*Data has been corrected for natural magnetic fluctuations (i.e., drift) by using data obtained at an on-site base station.

Table 1

AVERAGE NORTH-SOUTH/EAST-WEST MAGNETOMETER READINGS

GOLDEN ROAD DISPOSAL SITE

Grid No. 7

Station #	Average N-S/E-W (Gammas)	Corrected Data* (Gammas)
0,0	55,356	55,486
10,0	53,893	54,152
20,0	54,615	55,004
20,10	53,429	53,947
10,10	54,445	55,093
0,10	53,618	54,395
0,20	54,688	55,595
10,20	55,393	56,429
20,20	53,182	54,348
20,30	54,421	55,716
10,30	54,142	55,567

[UZ]YN4030:D2419, #1637, PM=30

*Data has been corrected for natural magnetic fluctuations (i.e., drift) by using data obtained at an on-site base station.

Table 2

AVERAGE NORTH-SOUTH/EAST-WEST GROUND CONDUCTIVITY READINGS WITH EM31

GOLDEN ROAD DISPOSAL SITE

Survey Grid No. 1

Station #	Vertical Dipole (millimhos/meter)	Horizontal Dipole (millimhos/meter)
0,0	9.5	8.0
0,10	36.5	Neg.
0,20	24.0	Neg.
0,30	13.0	3.5
0,40	12.0	11.5
0,50	Neg.	18.0
0,60	11.0	8.5
10,0	8.0	7.0
10,10	9.0	7.5
10,20	7.0	8.5
10,30	8.0	8.5
10,40	10.0	11.0
10,50	8.5	12.5
10,60	11.0	9.0
20,0	10.0	9.0
20,10	10.5	8.5
20,20	10.5	8.0
20,30	11.5	8.0
20,40	8.5	11.5
20,50	11.0	11.5
20,60	36.0	12.5

[UZ]YN4030:D2419, #1638, PM=30

Neg. = Negative meter reading. This is caused by very high conductivity beyond the capabilities of the instrument.

Table 2

AVERAGE NORTH-SOUTH/EAST-WEST GROUND CONDUCTIVITY READINGS WITH EM31

GOLDEN ROAD DISPOSAL SITE

Survey Grid No. 2

Station #	Vertical Dipole (millimhos/meter)	Horizontal Dipole (millimhos/meter)
0,0	9.0	8.0
0,10	9.0	8.0
0,20	9.0	8.0
0,30	9.0	7.5
0,40	9.0	8.5
10,0	9.0	8.0
10,10	9.0	8.5
10,20	9.0	8.0
10,30	9.0	7.5
10,40	9.0	7.5
20,0	9.0	8.0
20,10	9.0	8.0
20,20	9.0	8.0
20,30	9.0	8.5
20,40	9.0	8.0
30,0	9.0	8.5
30,10	9.0	8.5
30,20	10.0	8.5
30,30	9.0	9.0
30,40	9.5	9.0
40,0	10.0	9.0
40,10	9.0	8.5
40,20	10.0	9.0
40,30	10.0	10.0
40,40	10.0	9.5

[UZ]YN4030:D2419, #1638, PM=30

Table 2

AVERAGE NORTH-SOUTH/EAST-WEST GROUND CONDUCTIVITY READINGS WITH EM31

GOLDEN ROAD DISPOSAL SITE

Survey Grid No. 3

Station #	Vertical Dipole (millimhos/meter)	Horizontal Dipole (millimhos/meter)
0,0	25.5	13.5
0,10	20.0	16.0
0,20	20.5	17.0
0,30	41.5	22.5
10,0	24.0	13.5
10,10	20.5	15.5
10,20	21.0	16.0
10,30	39.0	22.0
20,0	23.0	14.5
20,10	19.5	15.5
20,20	20.5	18.0
20,30	40.0	20.5
30,0	23.5	14.0
30,10	20.1	16.5
30,20	20.5	17.5
30,30	38.5	19.0
40,0	23.5	15.0
40,10	21.5	17.5
40,20	21.5	16.0
40,30	39.5	18.5

[UZ]YN4030:D2419, #1638, PM=30

Table 2

AVERAGE NORTH-SOUTH/EAST-WEST GROUND CONDUCTIVITY READINGS WITH EM31

GOLDEN ROAD DISPOSAL SITE

Survey Grid No. 4

Station #	Vertical Dipole (millimhos/meter)	Horizontal Dipole (millimhos/meter)
0,0	21.5	12.5
0,10	18.0	12.5
0,20	20.0	15.5
0,30	44.5	22.0
10,0	22.5	12.5
10,10	19.0	12.5
10,20	20.0	15.0
10,30	33.5	21.5
20,0	23.5	12.5
20,10	18.0	12.0
20,20	19.0	14.0
20,30	31.0	20.5
30,0	25.0	12.5
30,10	18.5	12.0
30,20	19.0	14.0
30,30	29.0	18.5
40,0	24.0	13.0
40,10	19.0	12.5
40,20	18.5	14.0
40,30	28.5	17.5

[UZ]YN4030:D2419, #1638, PM=30

Table 2

AVERAGE NORTH-SOUTH/EAST-WEST GROUND CONDUCTIVITY READINGS WITH EM31

GOLDEN ROAD DISPOSAL SITE

Survey Grid No. 5

Station #	Vertical Dipole (millimhos/meter)	Horizontal Dipole (millimhos/meter)
0,0	5.0	9.5
0,10	6.5	8.0
0,20	7.5	7.5
0,30	6.5	8.0
0,40	6.5	8.0
10,0	6.0	11.0
10,10	9.5	9.0
10,20	8.0	9.0
10,30	7.5	10.0
10,40	7.0	10.5
20,0	4.0	12.0
20,10	10.0	9.5
20,20	7.5	11.0
20,30	6.0	10.5
20,40	8.5	10.5
30,0	6.0	14.0
30,10	6.5	10.5
30,20	5.5	10.5
30,30	6.5	11.0
30,40	8.5	10.0
40,0	9.0	13.5
40,10	7.5	8.5
40,20	8.5	8.0
40,30	6.5	9.0
40,40	5.0	9.5

[UZ]YN4030:D2419, #1638, PM=30

Table 2

AVERAGE NORTH-SOUTH/EAST-WEST GROUND CONDUCTIVITY READINGS WITH EM31

GOLDEN ROAD DISPOSAL SITE

Survey Grid No. 6

Station #	Vertical Dipole (millimhos/meter)	Horizontal Dipole (millimhos/meter)
0,0	9.0	7.0
0,10	8.5	7.0
0,20	9.0	6.0
0,30	9.0	7.0
0,40	9.0	8.5
10,0	9.0	7.0
10,10	8.5	6.5
10,20	8.0	6.5
10,30	8.0	7.0
10,40	9.0	7.0
20,0	9.0	7.0
20,10	9.0	6.5
20,20	9.0	6.0
20,30	9.0	6.5
20,40	9.0	7.0
30,0	9.0	7.5
30,10	8.5	7.5
30,20	9.0	6.0
30,30	8.5	6.0
30,40	8.0	7.0
40,0	9.5	8.0
40,10	9.0	7.5
40,20	8.5	7.0
40,30	8.0	7.0
40,40	8.0	7.0

[UZ]YN4030:D2419, #1638, PM=30

Table 2

AVERAGE NORTH-SOUTH/EAST-WEST GROUND CONDUCTIVITY READINGS WITH EM31

GOLDEN ROAD DISPOSAL SITE

Survey Grid No. 7

Station #	Vertical Dipole (millimhos/meter)	Horizontal Dipole (millimhos/meter)
0,0	Neg.	Neg.
0,10	Neg.	Neg.
0,20	Neg.	19.5
0,30	NA	NA
10,0	12.5	17.0
10,10	13.0	18.5
10,20	13.0	17.0
10,30	31.0	Neg.
20,0	15.5	24.0
20,10	17.0	13.0
20,20	Neg.	16.0
20,30	NA	Neg.

[UZ]YN4030:D2419, #1638, PM=30

Neg. = Negative meter reading. This is caused by very high conductivity beyond the capabilities of the instrument.

NA = Data not available due to inaccessibility of a given survey station (i.e., the presence of junked vehicles).

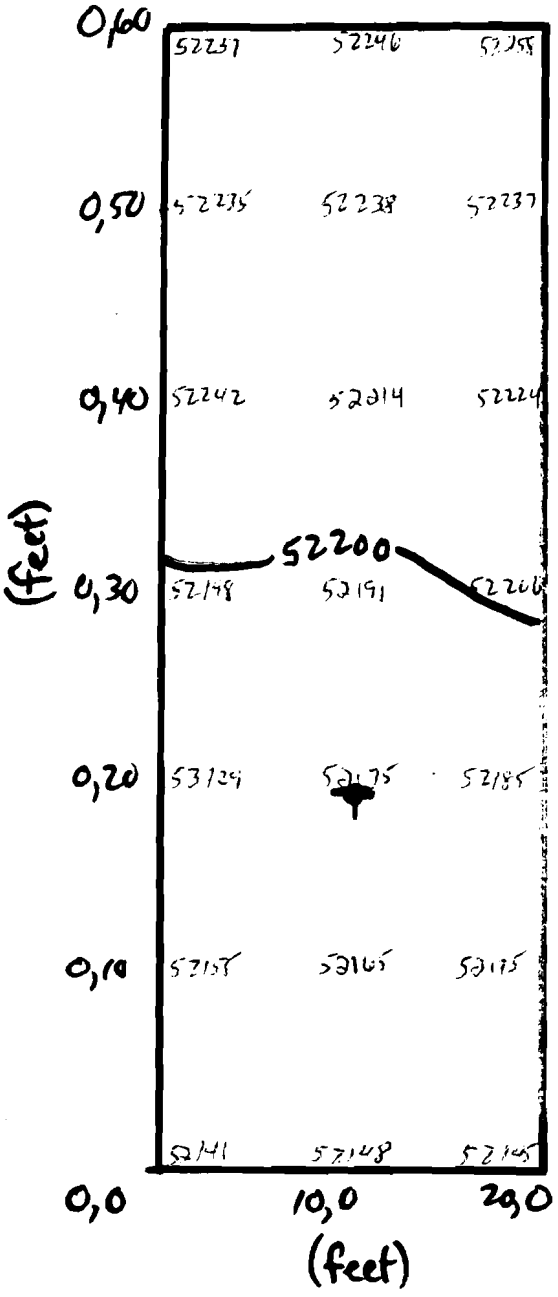
APPENDIX C-2

MAGNETOMETER AND
EM31 SURVEY CONTOUR MAPS

GOLDEN ROAD DISPOSAL SITE
Site No. 828021

MAGNETOMETER SURVEY
GRID No. 1
(gammas)

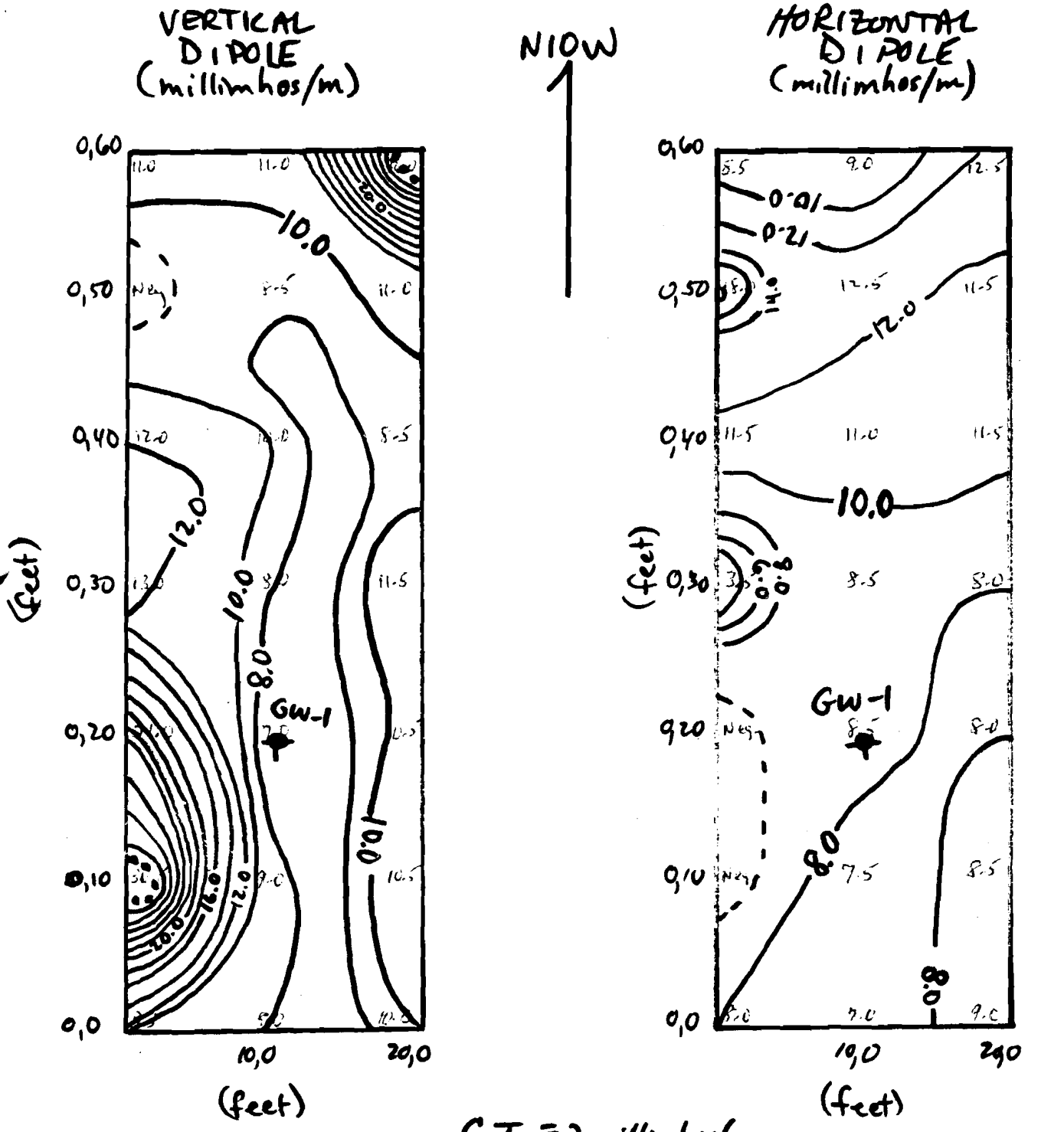
N10W



C.I. = 100 gammas
● = proposed well location

GOLDEN ROAD DISPOSAL SITE
Site No. 828021

EM 31 SURVEY GRID NO. 1



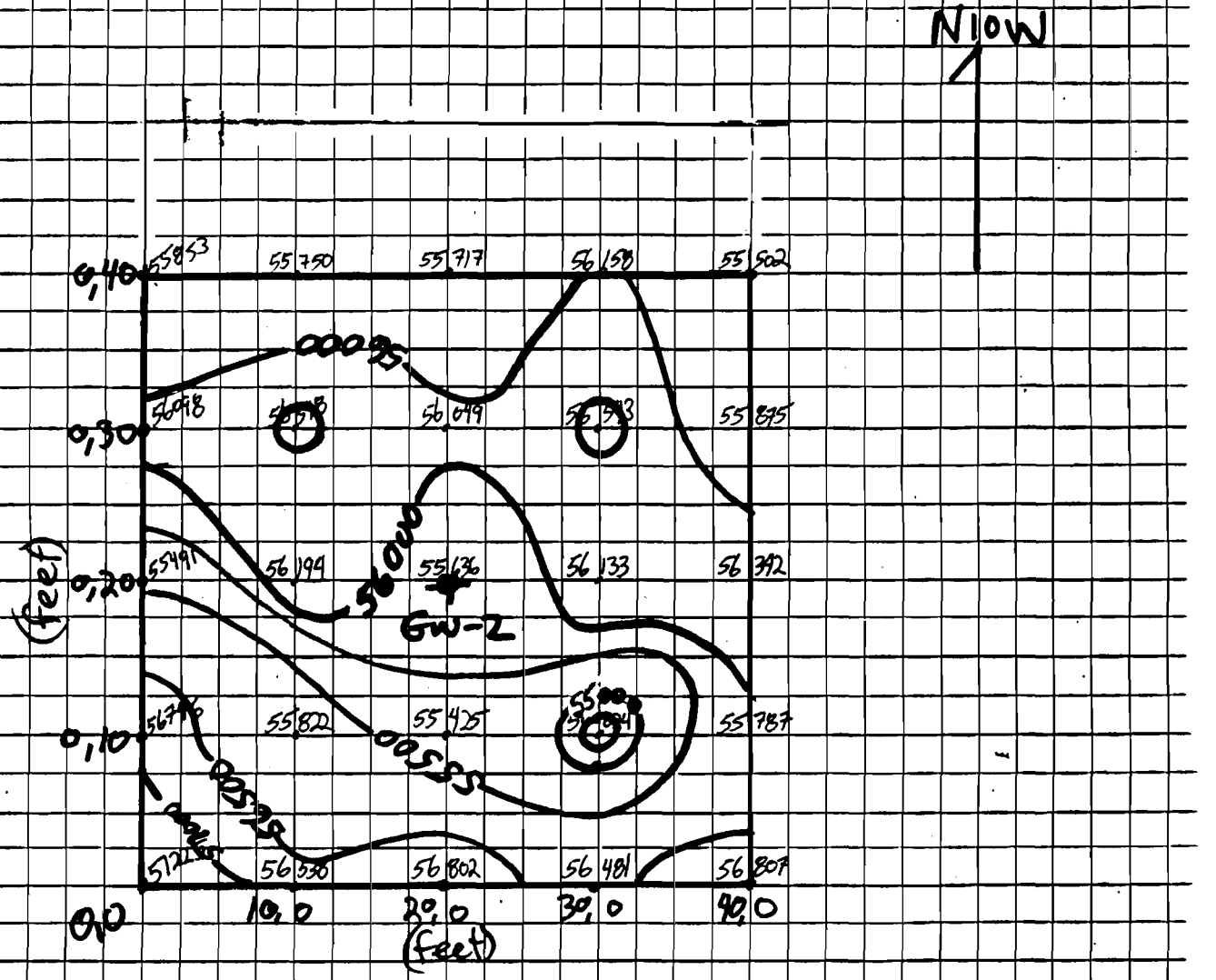
C.I. = 2 millimhos/m
+ = Proposed well location
– – – = Negative Meter Reading
• • • • = Conductivity > 30 millimhos/meter

GOLDEN ROAD SITE

site number 828021

MAGNETOMETER SURVEY

GRID # 2
(Gammas)

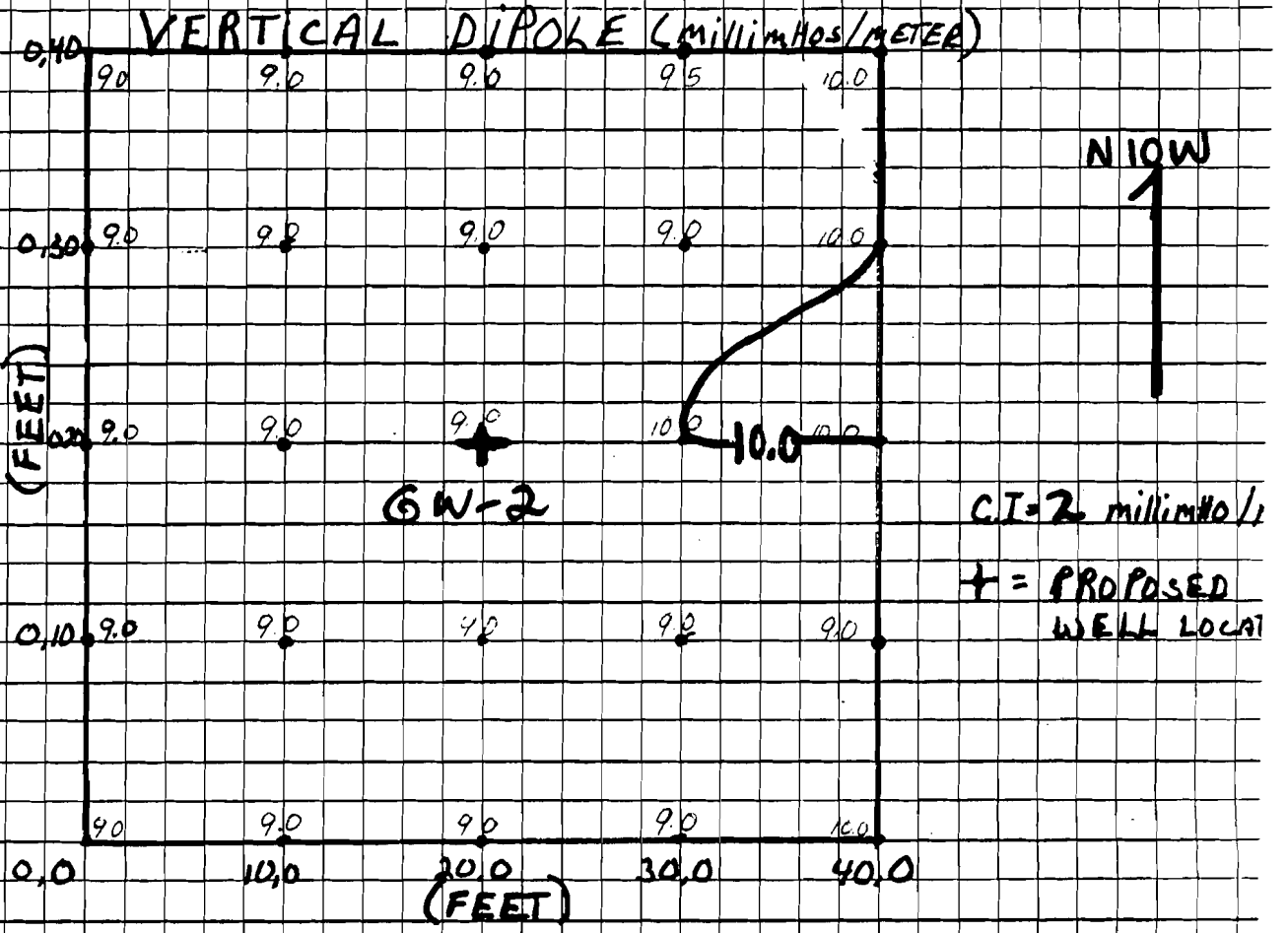


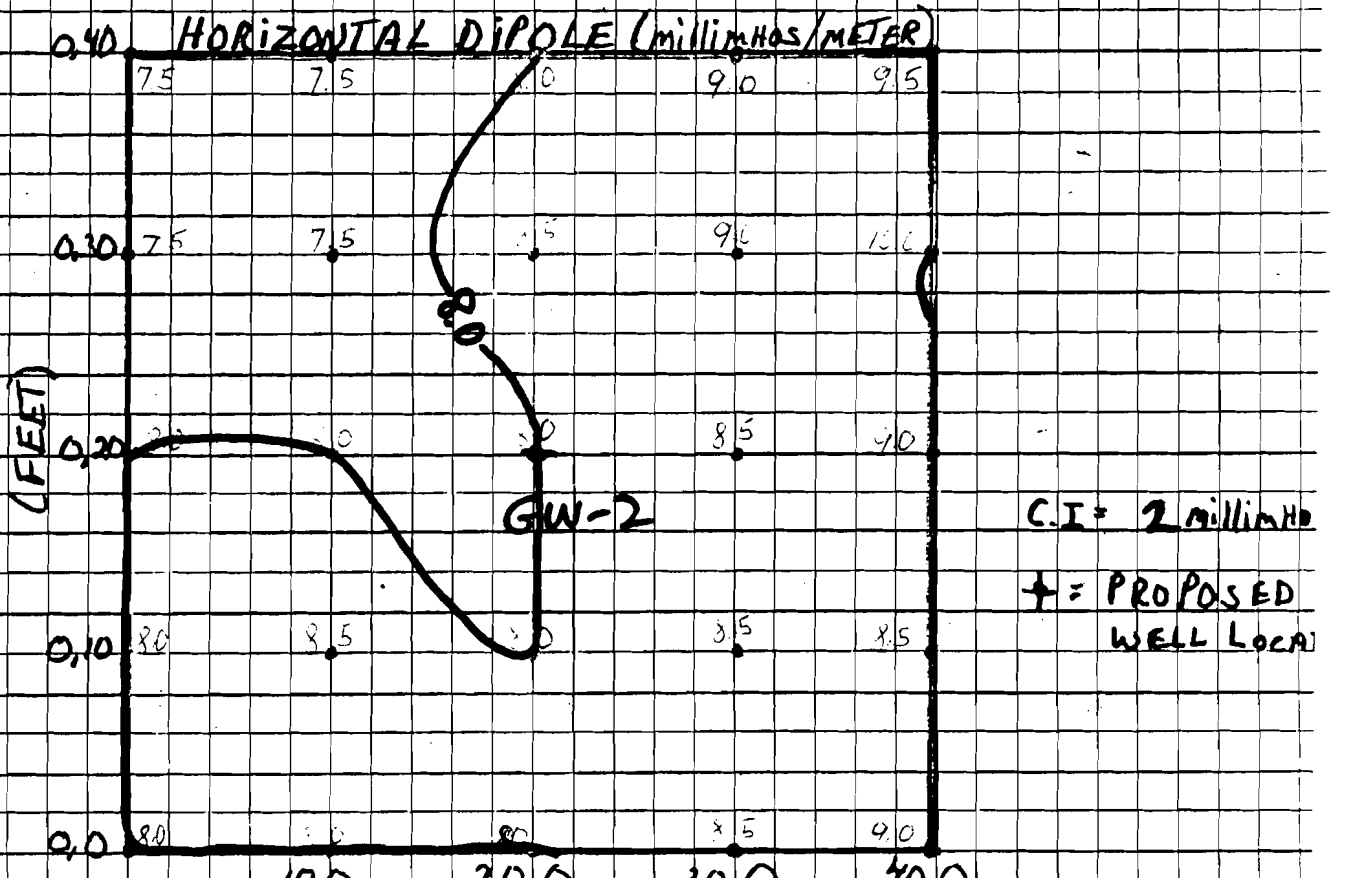
C.I. = 500 gammas

◆ = Proposed well location

GOLDEN ROAD SITE (SITE #: 828021)

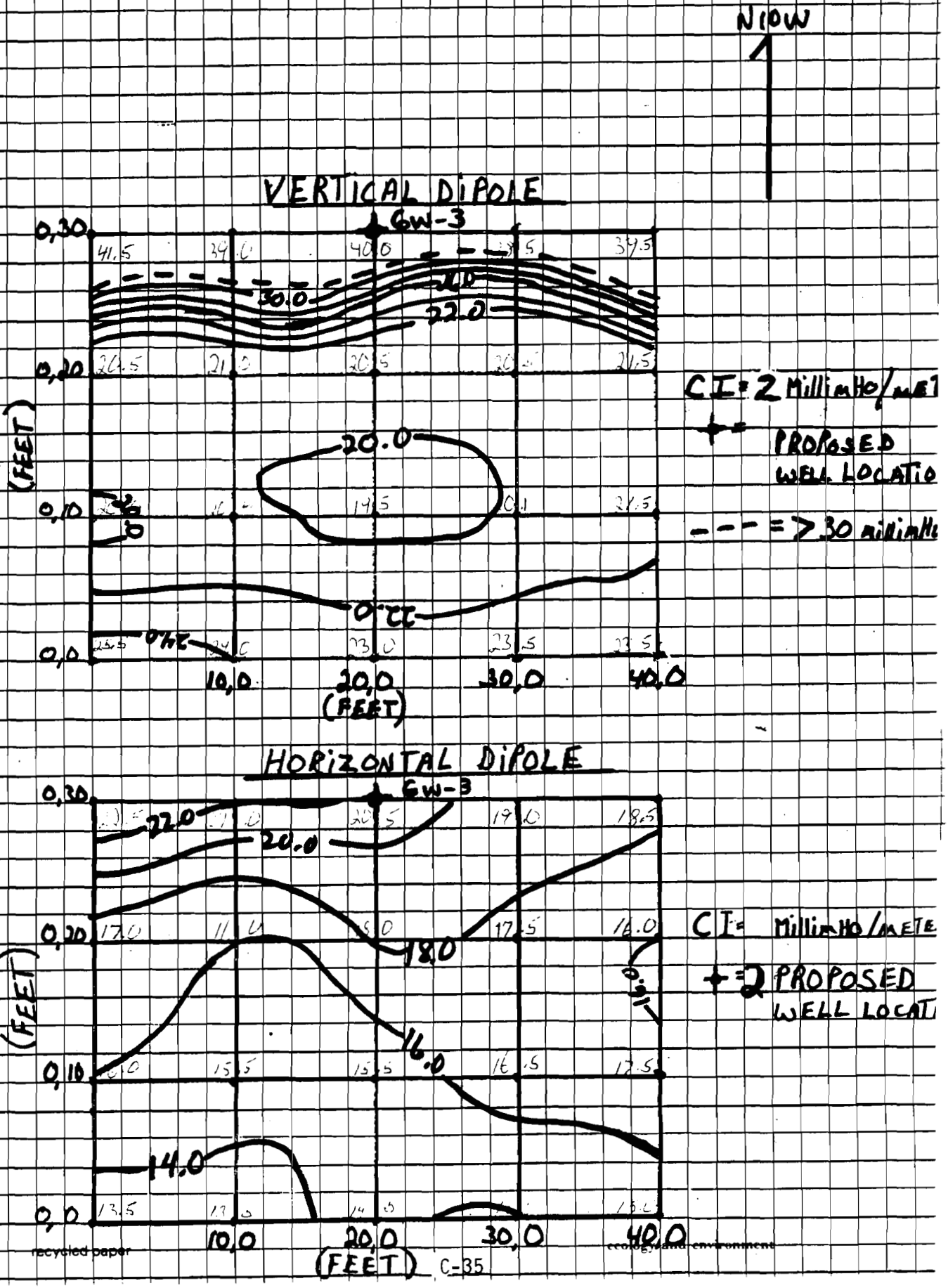
EM31 SURVEY GRID #2





GOLDEN ROAD SITE (SITE # 822021)

EM31 SURVEY GRID # 3

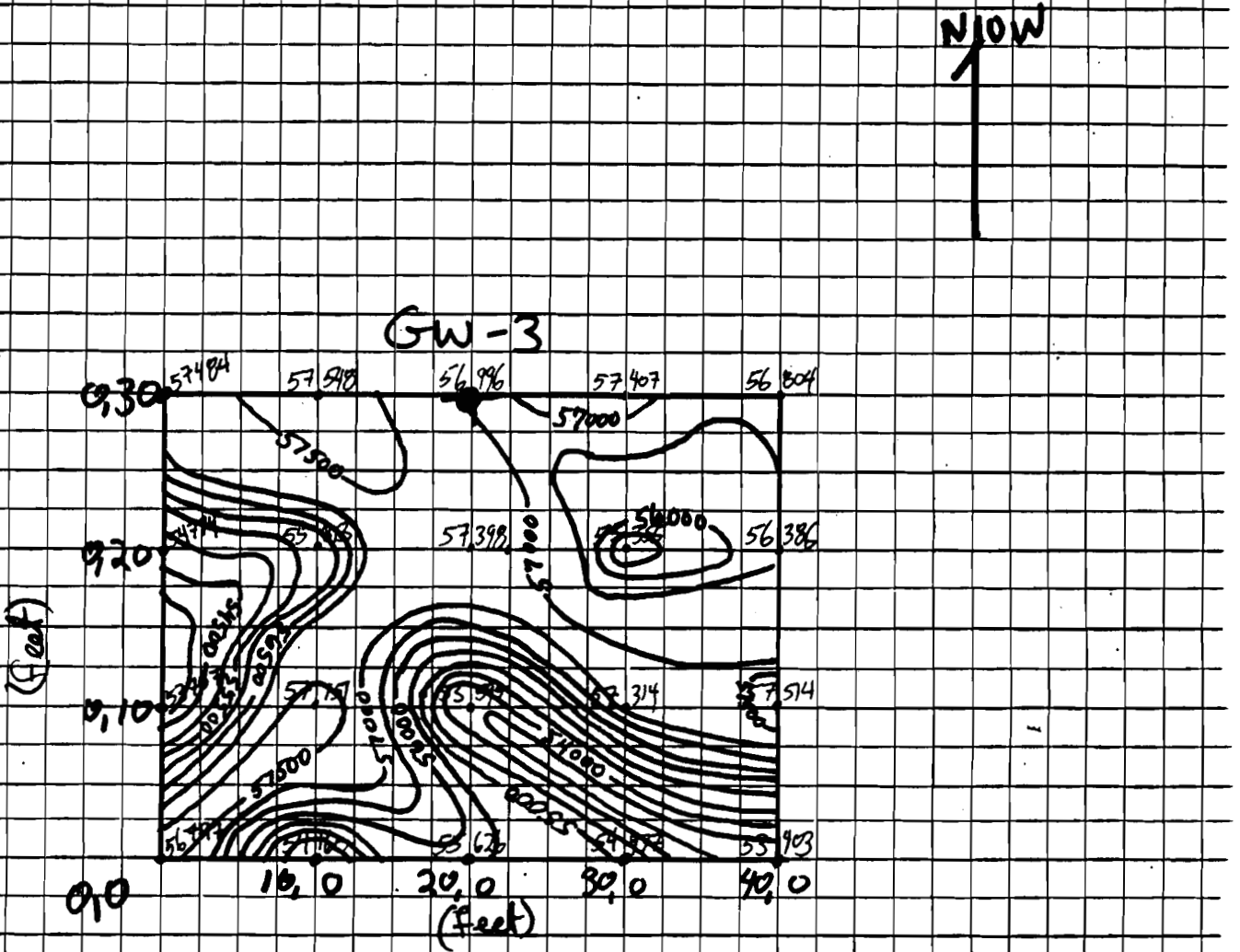


GOLDEN ROAD SITE

Site number 828021

MAGNETOMETER SURVEY

GRID #3
(gammas)



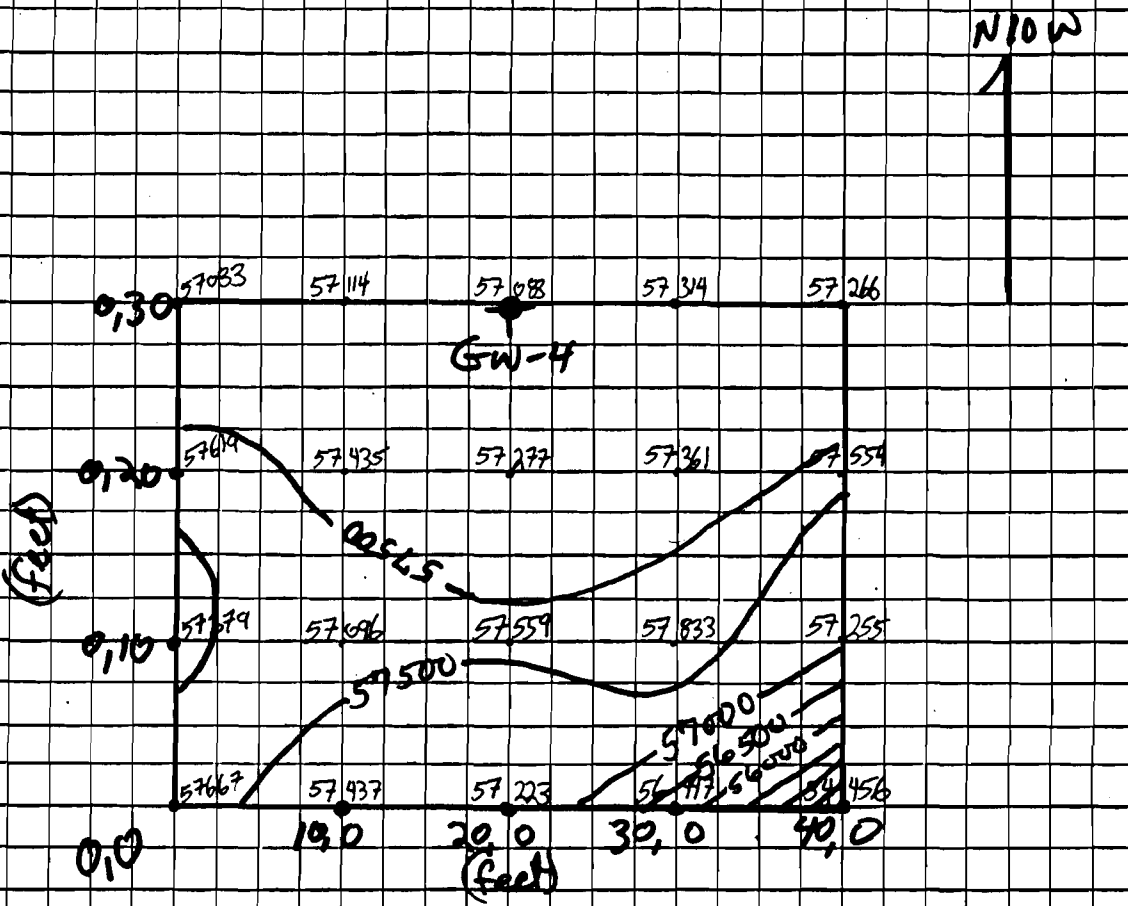
C.I = 500 gammas
• = Proposed well location

GOLDEN ROAD SITE

Site Number 828021

MAGNETOMETER SURVEY

GRID #4
(Gammas)

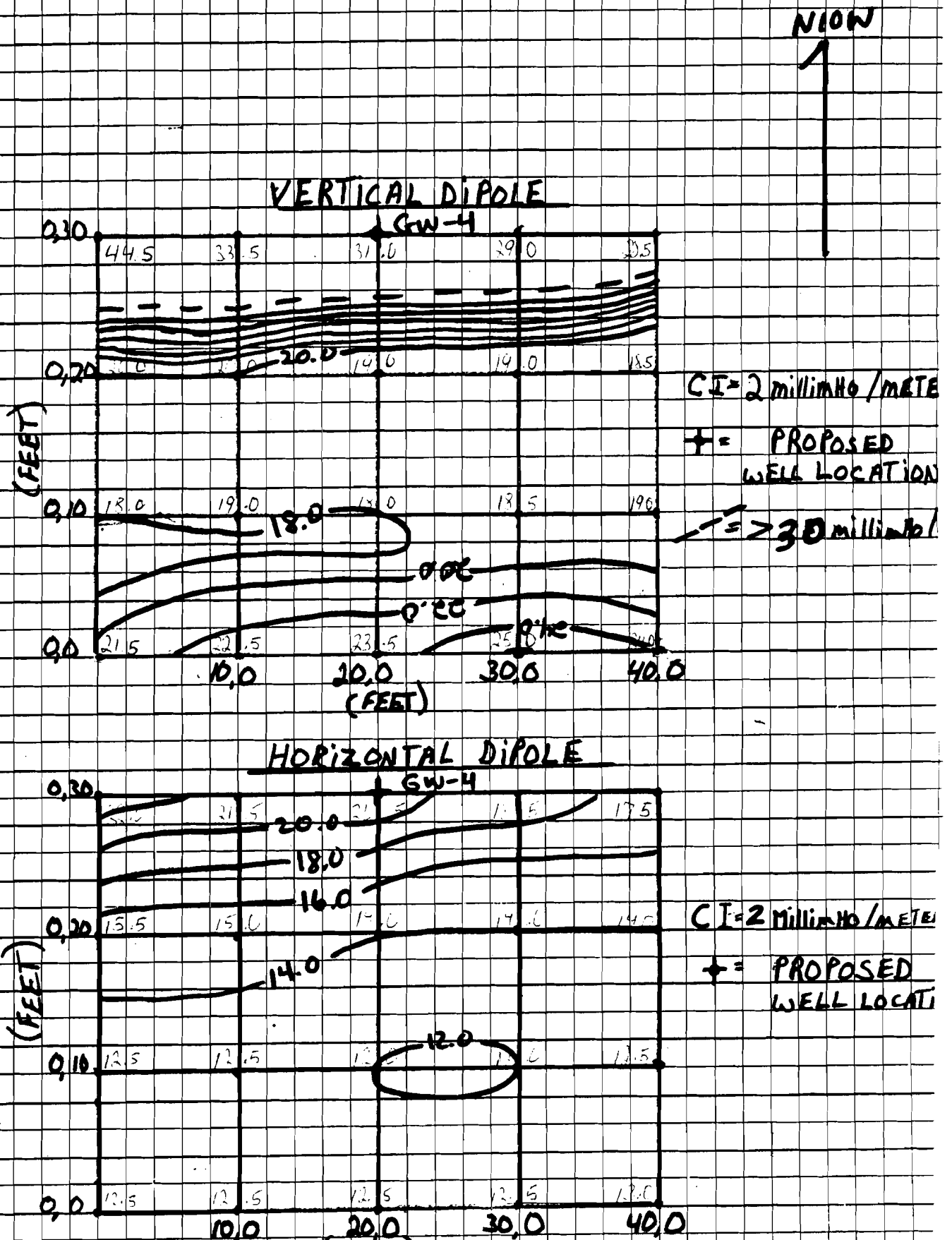


C.I. = 500 gammas

⊕ = Proposed Well location

GOLDEN ROAD SITE (SITE # 822021)

EM31 SURVEY GRID # 4

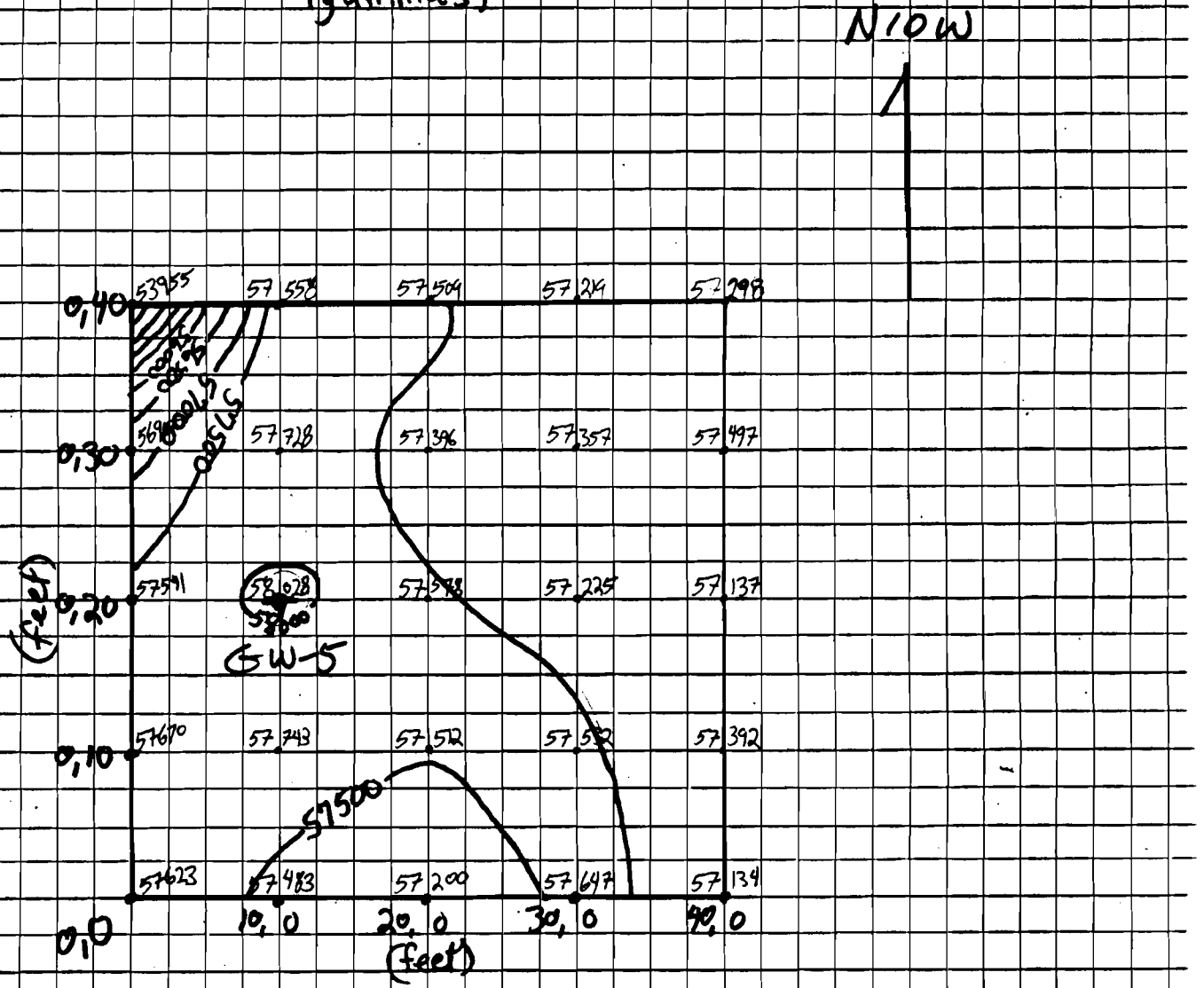


GOLDEN ROAD SITE

Site Number 828021

MAGNETOMETER SURVEY

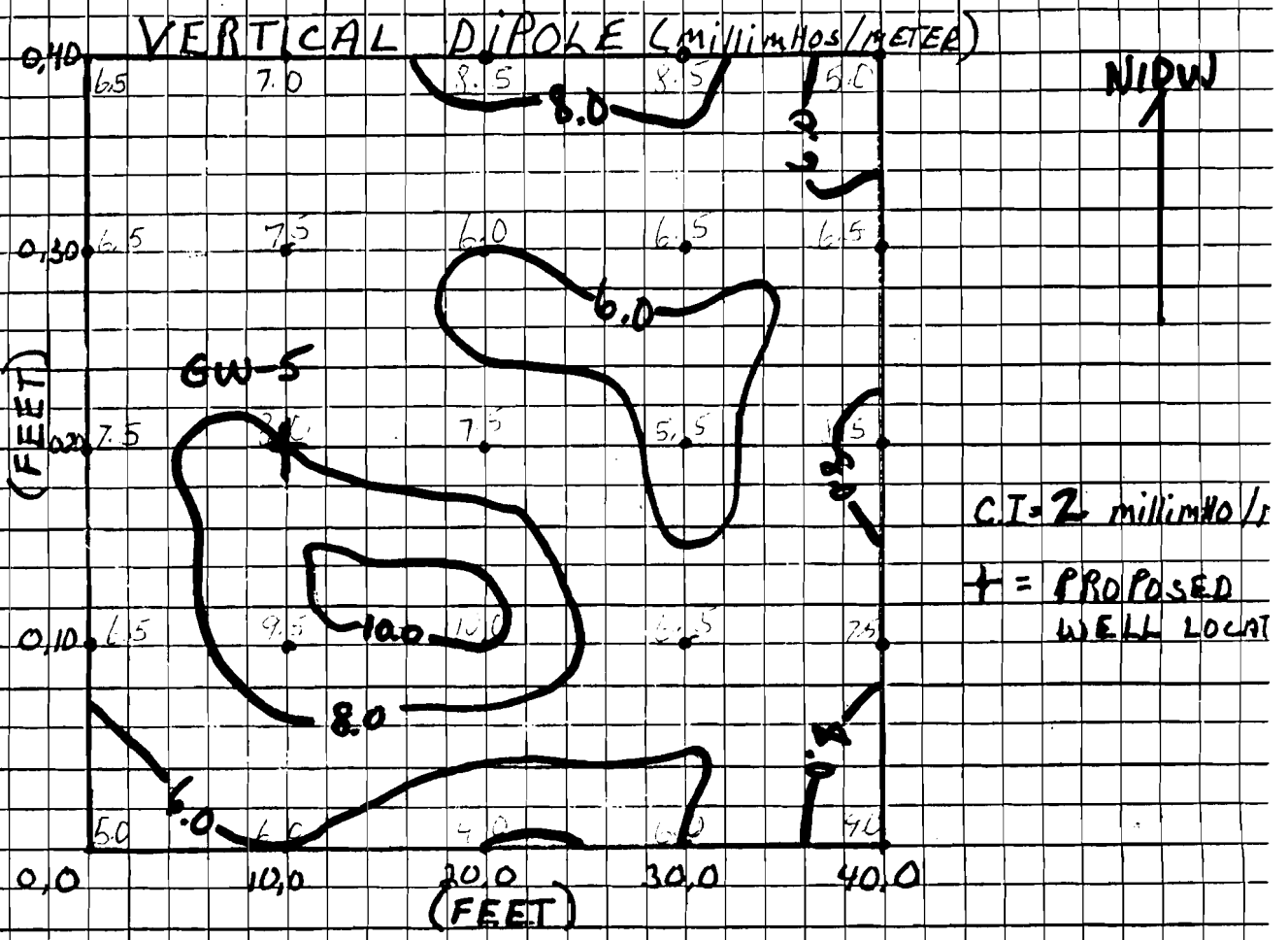
GRID #5
(gammas)

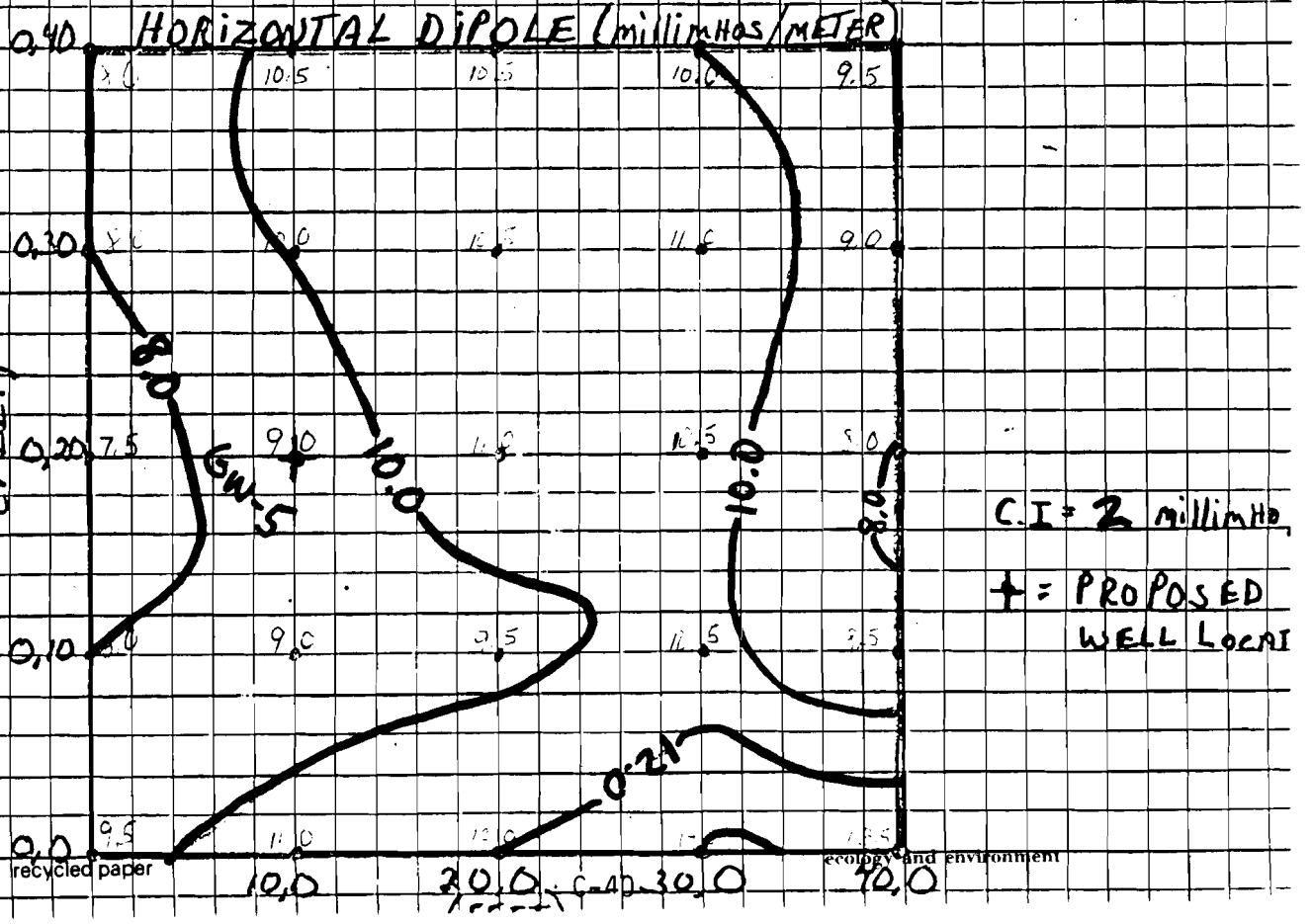


C.I. = 500 gammas
⊕ = Proposed well location

GOLDEN ROAD SITE (SITE # 828021)

EM31 SURVEY GRID #5



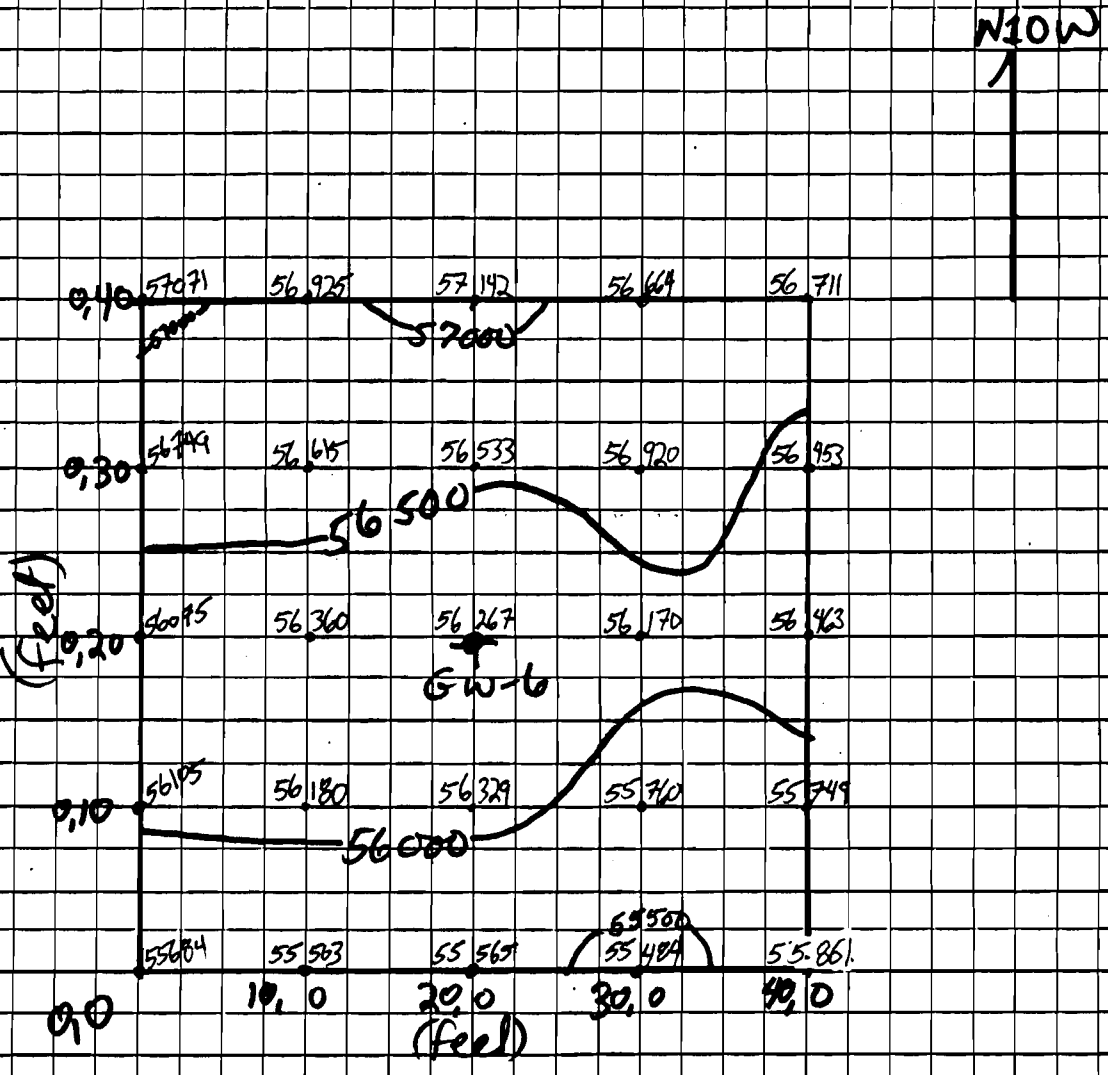


GOLDEN ROAD SITE

Site Number 828021

MAGNETOMETER SURVEY

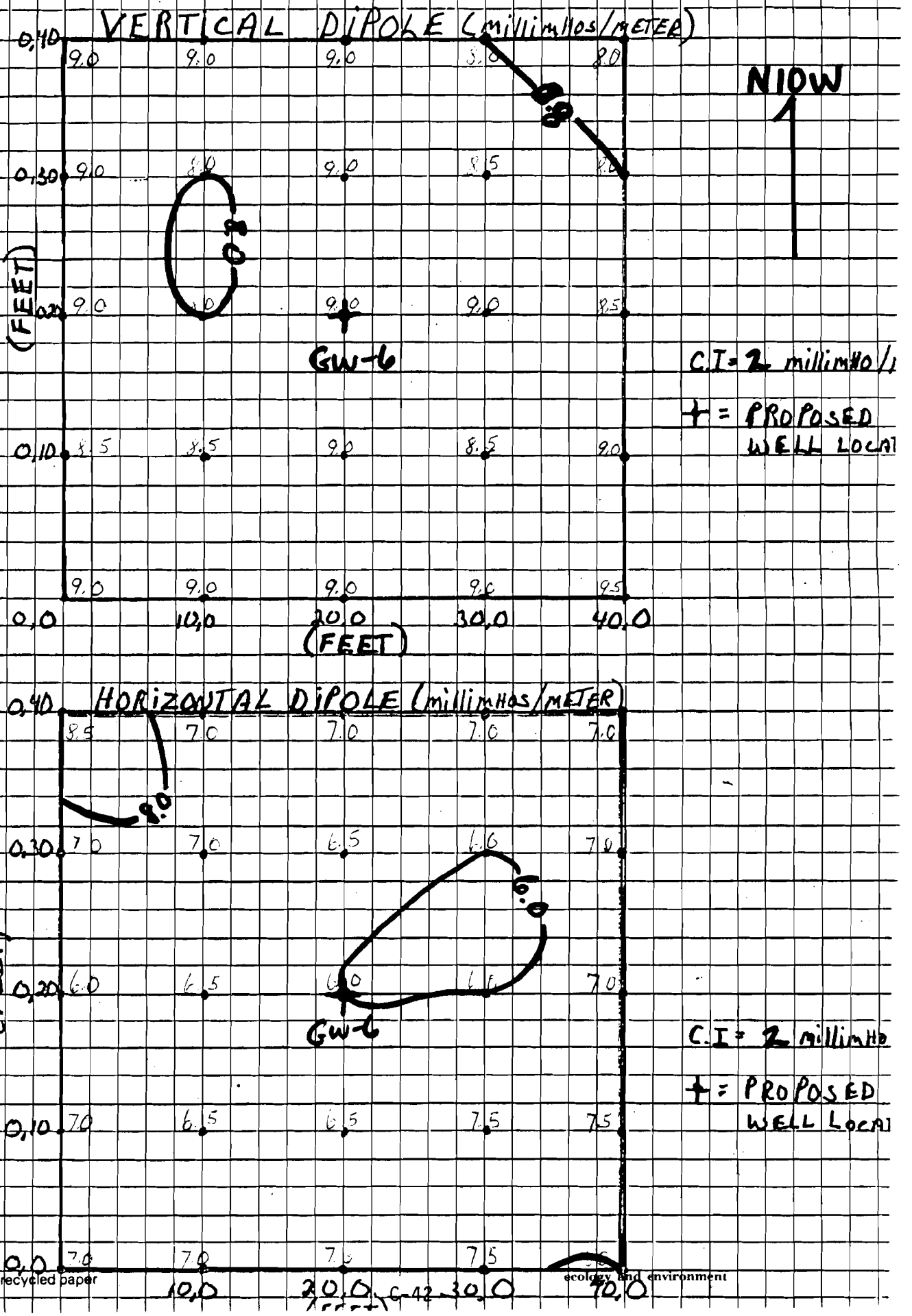
GRID # 6
(gammas)



C.I = 500 gammas
⊕ = Proposed well location

GOLDEN ROAD SITE (SITE #: 828021)

EM31 SURVEY GRID #6

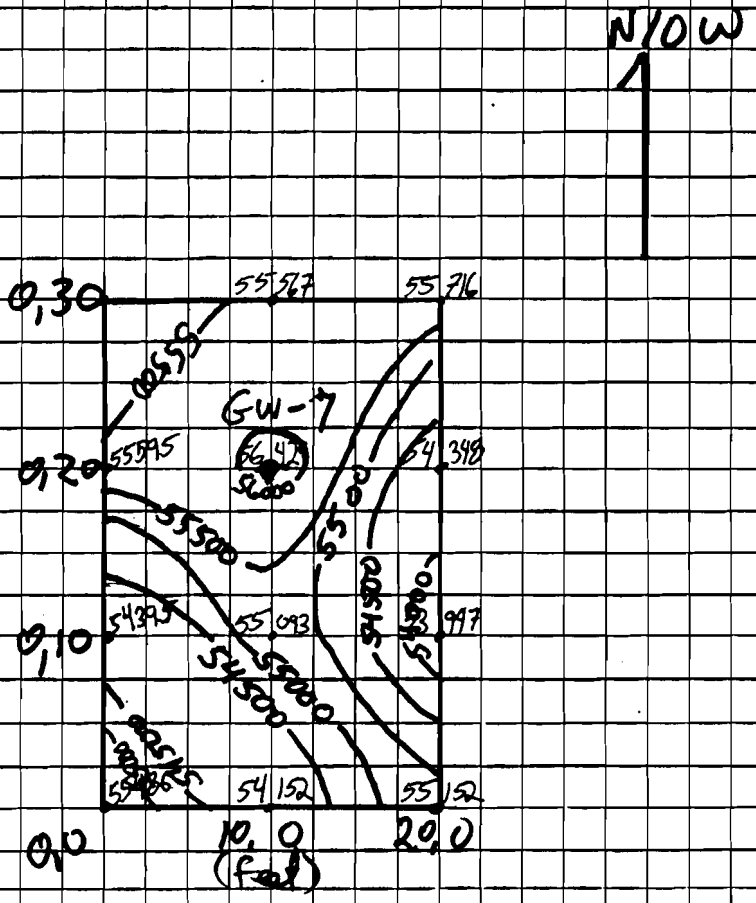


GOLDEN ROAD SITE

Site Number 82802L

MAGNETOMETER SURVEY

GRID # 7
(gammas)

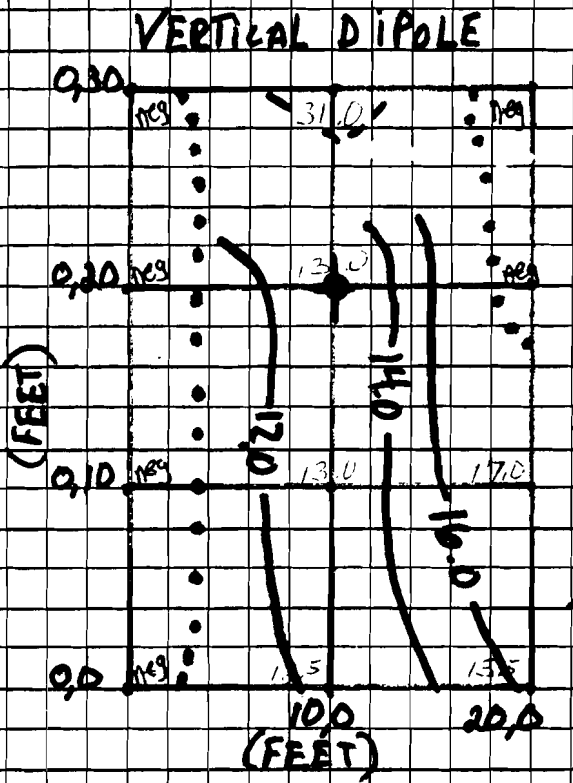


C.I. = 500 gammas
↑ = Proposed well location

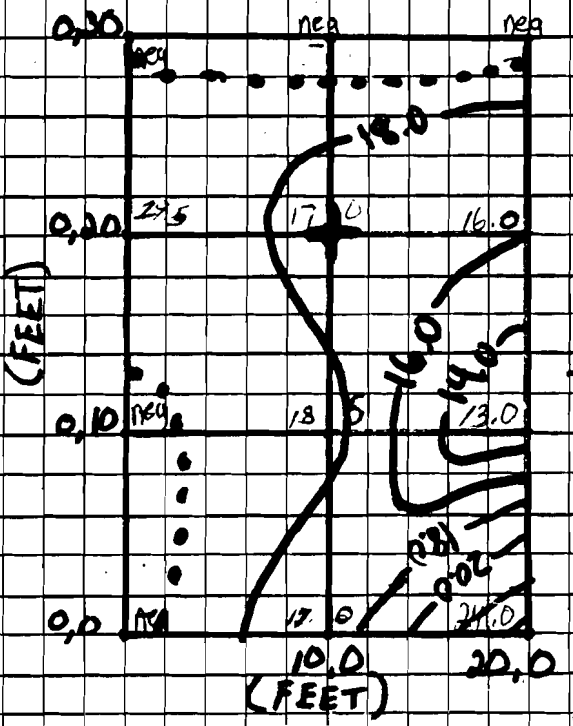
GOLDEN ROAD SITE (SITE # 828021)

EM-31 SURVEY GRID #7

VERTICAL DIPOLE



HORIZONTAL DIPOLE



DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
8/23/89	1345	0.0'	12.0'	cloudy	75°

EMPIRE SOILS INVESTIGATIONS INC

FIELD LOG

HOLE NO. GW-1

GRD. ELEV. _____

PROJECT 828021 Golden Road Disposal Site Logged By: Jeff Danziger

LOCATION Chili, New York Sheet 1 of 1

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24 N	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER HNu DATA readings (ppm)	Time.
1'-3'		4	8	9	13		D		4"	Top 4" - Black silty sand + fill. Bottom 5" - light brown gravelly sand (Fill).	0.0	1350
5'-7'		4	6	7	12		M		17"	red-brown clay with grey streaks. hit water ~ 9.0'. change to gravelly sand at 8.5'	0.0	1355
10'-12'		6	15	40	100/.4'		S		11"	Top 7" - gray brown silty sand with weathered rock fragments. Bedrock at 12.0' depth of well at 11.5' Screen length - 5.0'	0.0	1408

WELL DETAILS: Portland and Bentonite Cement; Bentonite Pellets; sand screen; sand; 12.0; Bedrock

NOTATION: SIZE AUGERS / CASING 4½" I.D. SIZE SPOON 2" x 24" Sample

SIZE THIN-WALLED TUBE _____ SIZE CORE _____

N = NO. OF BLOWS TO DRIVE 2 "SPOON 24" WITH 140 lb. WEIGHT FALLING 30" PER BLOW

C = NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

Moisture: D - dry M - moist S - saturated

Drillers: Todd Jongsma, Ron Brown

ecology and environment

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
8/24/89	1550	0.0'	11.2'	Partly Cloudy	75°

EMPIRE SOILS INVESTIGATIONS INC.

FIELD LOG

HOLE NO. GW-2

GRD. ELEV. _____

PROJECT 828021 Golden Road Disposal Site Logged By: Jeff Danziger

LOCATION Chili, New York Sheet 1 of 1

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER HNu DATA readings (ppm)	Time.
1-3		2	4	9	15		M		12"	Top 1" - dark brown silt. Bottom 11" - red brown silty clay.	0.0	1550
5-7		12	12	9	9		M		9"	red brown sandy gravelly silt.	0.0	1600
10-12		3	9	100/3"			S		8"	gray black gravel and weathered rock fragments.	0.0	1615

8/25/89
standing water at 3.0' below ground surface.

bedrock at 11.2'
depth of well at 11.0'
screen length - 5.0'

Water ▽ 1600

Bentonite Pellets 4.0

5.0

6.0'

11.0'

11.2'

WELL DETAILS: Portland and Bentonite Cement; Bentonite Pellets; Sand; Screen; Bedrock

NOTATION: SIZE AUGERS/CASING 4 1/2" I.D. SIZE SPOON 2"x24" Sample

SIZE THIN-WALLED TUBE _____ SIZE CORE _____

N = NO. OF BLOWS TO DRIVE 2 "SPOON 24" WITH 140 lb. WEIGHT FALLING 30" PER BLOW

C = NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

Moisture O - dry
M - moist
S - saturated

Drillers: Steve Treusen
Ron Brown

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
11/9/94	[illegible]				35°

EMPIRE SOILS INVESTIGATIONS INC

FIELD LOG

HOLE NO. GW3
GRD. ELEV. ______

PROJECT Golden Road Disposal Site
LOCATION Chili, NY Sheet 1 of 2

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER DATA HNU Readings PPM	WELL DETAILS
1-3	1	1	2	2	4		M		19	perched water present around 3", Black silty Sand w/organics	0.0 os	GROUT
3-5	2	4	3	3	4		M		16	Reddish brown silty Clay	0.0 os	Bentonite Pellets
5-7	3	5	8	6	19		M		18	Reddish brown sandy silt water table at 7'	0.0 os 0.0 DH	SAND
7-9	4	9	10	13	14		S		18	Reddish brown sandy silt - trace clay	0.0	
9-11	5	4	4	4	5		S		3	Reddish gray/Brown silt - trace clay	0.0 os 0.0 DH	Screen
11-13	6	3	3	3	3		S		20	Reddish gray/Brown silt trace Clay	0.0 os	
13-15	7	W	2	2	2		S		15	Reddish gray/Brown silty clay	0.0 os	
15-17	8	1	3	3	6		S		0	No Recovery	0.0 os TOR 8.5	~~BEDROCK~~

NOTATION: SIZE AUGERS/CASING 4 1/2 ID SIZE SPOON 2" x 24"
SIZE THIN-WALLED TUBE ______ SIZE CORE ______

N : NO. OF BLOWS TO DRIVE "SPOON " WITH lb. WEIGHT FALLING PER BLOW
C : NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
1/9/89	10:00				35°

EMPIRE SOILS INVESTIGATIONS INC

FIELD LOG

HOLE NO. GW3

GRD. ELEV. _____

PROJECT Genesee Road Disposal Site

LOCATION Caledonia, NY Sheet 2 of 2

DEPTH OF SAMPLE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER DATA (HNU Readings)	WELL DETAILS
17-18.5	4	15	40	100			S		20	Grayish Silt - trace Clay top 16" Fractured Rock Bottom 4"	0.0 OS DH 0.0	

Top of Rock at 18.5

Well Depth 18.2

NOTATION: SIZE AUGERS / CASING 4 1/2 ID SIZE SPOON 2" x 24"

SIZE THIN-WALLED TUBE _____ SIZE CORE _____

N = NO. OF BLOWS TO DRIVE "SPOON "WITH lb. WEIGHT FALLING PER BLOW

C = NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

recycled paper

ecology and environment

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
1/9/89 Jan	2:35				35

EMPIRE SOILS INVESTIGATIONS INC

FIELD LOG

HOLE NO. GW4

GRD. ELEV. ______

PROJECT Golden Road Disposal Site

LOCATION Chili, NY

Sheet 1 of 2

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	N	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER DATA HNu READINGS (ppm)	WELL DETAILS
1-3	1	1	2	2	2		M		3"	Black organic material, light brown sandy silt	0.0 os	Grout
5-7	2	5	9	10	10		M		15"	Reddish Brown sandy silt	0.0 os DH 0.0	
10-12	3	1	2	2	3		S		15	water noted exiting the borehole at approx. 8' Reddish Brown silt trace sand water at 8'	0.0 os	Bentonite Pellets
12-14	4	3	3	4	4		S		22"	Reddish gray silt trace clay	0.0 os	Sand
14-16	5	W	2	2	2		S		15"	Grayish fine silt trace gravel	0.0 os	Screen
16-18	6						S		8"	Grayish Fine Silt trace gravel	0.0 os	
18-20	7						S		15"	Reddish gray fine silt trace sand & gravel	0.0 os	
20-22	8	11	16	100	-		S		3"	Fine gray silt / Trace sand — Fractured Rock bottom 1"	0.0 os 0.0 DH	Bedrock

Top of Rock 21.1 Well Depth 21.1

NOTATION: SIZE AUGERS/CASING ______ SIZE SPOON ______

SIZE THIN-WALLED TUBE ______ SIZE CORE ______

N : NO. OF BLOWS TO DRIVE "SPOON "WITH lb. WEIGHT FALLING PER BLOW

C : NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

W = weight of hammer
M = moist
S = Saturated

ppm = parts per million
DH = Down Hole
OS = On Sample

Drillers: Joe Jensen
: Dave Broach

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
8/24/89	0930	0.0'	25.4'	cloudy	70's

EMPIRE SOILS INVESTIGATIONS INC

FIELD LOG

HOLE NO. GW-5

GRD. ELEV. _____

PROJECT 828021 Golden Road Disposal Site Logged By: Jeff Danziger

LOCATION Chili, New York Sheet 1 of 2

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER HNu DATA readings (ppm)	Time.	WELL DETAILS
1'-3'		4	8	11	13		D		17"	Black Fill (Foundry Sand).	0.0	0931	Portland and Bentonite Cement
5'-7'		4	4	7	8		D		8"	Black Fill (Foundry Sand).	0.0	0938	
										Hit water ~ 10.0'			
10'-12'		26/0"	141	21	20		S		0"	no recovery.	0.0	0950	Bentonite Pellets
12'-14'		10	13	10	6		S		1"	black sandy wood Fill.	0.0	0955	Screen / Sand
14'-16'		6	3	2	2		S		0"	no recovery. black wood Fill. (Float).	0.0	1010	
16'-18'		2	3	3	3		S		0"	no recovery. brown wood Fill (Float). Outside of spoon covered with red brown clay.	0.0	1015	
18'-20'		3	3	4	5		S		0"	no recovery. Outside of spoon covered with red brown clay.	0.0	1022	Bedrock
20'-22'		2	2	3	3		S		24"	Top 10"- red brown clay. Bottom 14"- gray silty clay. - trace sand and gravel.	0.0	1029	

NOTATION: SIZE AUGERS / CASING 4 1/4" I.D. SIZE SPOON 2" x 24" Sample

SIZE THIN-WALLED TUBE _____ SIZE CORE _____

N = NO. OF BLOWS TO DRIVE 2" SPOON 24" WITH 140 lb. WEIGHT FALLING 30" PER BLOW

C = NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

Moisture: D - dry, M - moist, S - saturated

Drillers: Joe Jensen, Ron Brown

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
8/24/89					

EMPIRE SOILS INVESTIGATIONS INC

FIELD LOG

HOLE NO. GW-5

GRD. ELEV. _____

PROJECT 828021 Golden Road Disposal Site. Logged By: Jeff Danziger

LOCATION Chili, New York. Sheet 2 of 2

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER HNu DATA readings (ppm)	Time.	WELL DETAILS
22'-24'		IA1	11	13	65		S		20"	light grayish brown silty clay. -trace sand and gravel. Bottom 2" - weathered rock fragments.	0.0	1035	
											IA1 - wt. of hammer.		
24'-26'		25	65	100/.4'	-		S		12"	weathered rock and silt.	0.0	1114	
										bedrock at 25.4'			
										depth of well at 24.5'			
										screen length - 10.0'			

NOTATION: SIZE AUGERS / CASING 4 1/2" I.D. SIZE SPOON 2" x 24" Sample

SIZE THIN-WALLED TUBE _____ SIZE CORE _____

N = NO. OF BLOWS TO DRIVE 2 "SPOON 24" WITH 140 lb. WEIGHT FALLING 30" PER BLOW

C = NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

Moisture: D - dry M - moist S - saturated

ecology Drillers: Joe Jensen Ron Brown

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
8/22/89	1425	0.0'	16.6'	Partly Cloudy	80°

EMPIRE SOILS INVESTIGATIONS INC

FIELD LOG

HOLE NO. GW-6

GRD. ELEV. _____

PROJECT 82802I Golden Road Disposal Site Logged By: Jeff Danzinger

LOCATION Chili, New York Sheet 1 of 1

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER (0/6 | 6/12 | 12/18 | 18/N 24)	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER HNu DATA readings (ppm)	Time.
1'-3'				D		16"	copper colored sand.	0.0	1425
5'-7'				M		17"	Top 7"- copper brown colored silty sand. Bottom 10"- red brown clay.	0.0	1430
10'-12'				M		20"	red brown clay. -trace pebble. Hit water ~ 14.5'	0.0	1440
15'-17'				S		8"	Top 3"- red brown silty clay. Middle 2"- tan sandy silt. Bottom 3"- gray weathered bedrock. Bedrock at 16.6' Depth of well at 16.6' Screen length - 7.0'	0.0	1445

WELL DETAILS: Portland and Bentonite Cement; Bentonite Pellets; Sand; Screen; Bedrock

NOTATION: SIZE AUGERS/CASING 4½" I.D. SIZE SPOON 2" x 24" Sample

SIZE THIN-WALLED TUBE _____ SIZE CORE _____

N = NO. OF BLOWS TO DRIVE 2 "SPOON 24" WITH 140 lb. WEIGHT FALLING 3' PER BLOW

C = NO. OF BLOWS TO DRIVE "CASING " WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

Moisture: D - dry M - moist S - saturated

Drillers: Joe Jensen. Ron Brown.

DATE	TIME	DRILLED FROM	DRILLED TO	WEATHER	TEMP
8/23/89	0930	0.0'	17.4'	cloudy	75°

EMPIRE SOILS INVESTIGATIONS INC

FIELD LOG

HOLE NO. GW-7

GRD. ELEV. ____

PROJECT 828021 Golden Road Disposal Site — Logged By: Jeff Danziger

LOCATION Chili, New York — Sheet 1 of 1

DEPTH OF SAMPLE	SAMPLE NO	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	BLOWS ON CASING C	MOISTURE	COLOR	SAMPLE RECOVERY	CLASSIFICATION OF MATERIALS DRILLED	OTHER HNu DATA readings (ppm)	Time.	WELL DETAILS
1'-3'		5	7	8	9		M		18"	brown and black Fill. - Foundry sand.	0.0	0930	Portland and Bentonite Cement
											Down Hole 5'-0.0		
5'-7'		5	8	9	8		M		14"	light reddish yellow brown silty sand.	0.0	0935	Bentonite Pellets
										Bottom 1" - red brown sandy silt, - trace clay.	Down Hole 10'-0.0		
10'-12'		5	5	5	6		M		23"	red brown clay with gray streaks. - trace pebble. - occasional thin sandy silt layer.	0.0	0945	Screen / Sand
12'-14'		100/1.1'					M		0"	no recovery.	0.0	0950	
										Hit water ~ 15.0'			
15'-17'		9	10	10	15		S		19"	light brown silty gravelly sand. - some rock Fragments	0.0	0957	
17'-19'		100/.4'	-	-	-		S		5"	black and brown sandy gravel and rock fragments.	0.0	1005	Bedrock
										Full TCL taken - 2 40ml. (VOA) - 1 8oz. (TCL) - called GW7-17'-19'			
										Bedrock at 17.4'			
										Depth of well at 17.2'			
										Screen length - 7.0'			

NOTATION: SIZE AUGERS / CASING 4 1/2" I.D. SIZE SPOON 2" x 24" Sample

SIZE THIN-WALLED TUBE ____ SIZE CORE ____

N = NO. OF BLOWS TO DRIVE 2 "SPOON 24" WITH 140 lb. WEIGHT FALLING 3' PER BLOW

C = NO. OF BLOWS TO DRIVE "CASING" WITH lb. WEIGHT FALLING PER BLOW

FILL OUT BACK OF LOG AND SIGN YOUR NAME

Moisture D - dry
M - moist
S - saturated

ecology Driller: Joe Jensen
Ron Brown
ecology and environment

APPENDIX D

DRILLING LOGS FOR GROUNDWATER MONITORING WELLS

APPENDIX E

GEOTECHNICAL ANALYSES

G. Florentino

Project No. 11420

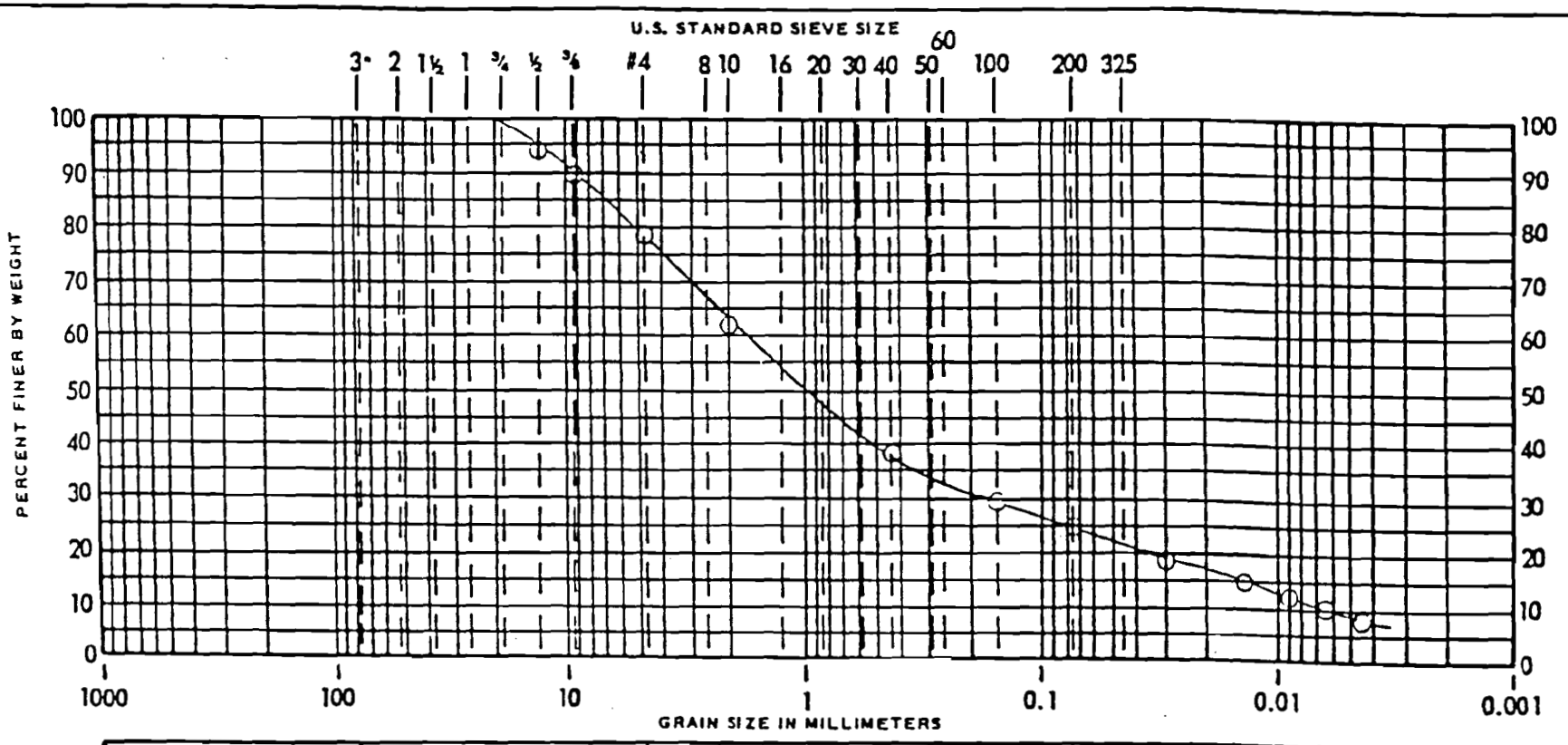
TOLEDO TESTING LABORATORY, INC.

TABULATION OF TEST DATA

Test Boring or Test Pit Number	Sample Number	Depth of Sample Tip	Elevation of Sample Tip	Standard Penetration (Number of Blows/Foot Unless Otherwise Stated)	Natural Water Content (Percent of Dry Weight)	In-Place Dry Density (Pounds per Cubic Foot)	Unconfined Compressive Strength (PSF)		Particle Size Distribution							Atterberg Limits			Group Designation and Index (AASHTO)
									Gravel (Percent)	Coarse Sand (Percent)	Medium Sand (Percent)	Fine Sand (Percent)	Silt (Percent)	Clay (Percent)	Colloids (Percent)	Liquid Limit (Percent)	Plastic Limit (Percent)	Plasticity Index (Percent)	
E-2	GW-1	1'-3'							21	16	22	15	17	9					
	GW-2	1'-3'														NON-PLASTIC			
	GW-3	17'-19'														15	12	3	
	GW-4	5'-7'														NON-PLASTIC			
	GW-5	5'-7'							17	4	7	53	11	8					
	GW-6	1'-3'							0	0	0	64	21	15					
	GW-7	15'-17'														NON-PLASTIC			

YOUR PROJECT NO.: YN-4060
GOLDEN ROAD

SOIL CLASSIFICATION SHEET

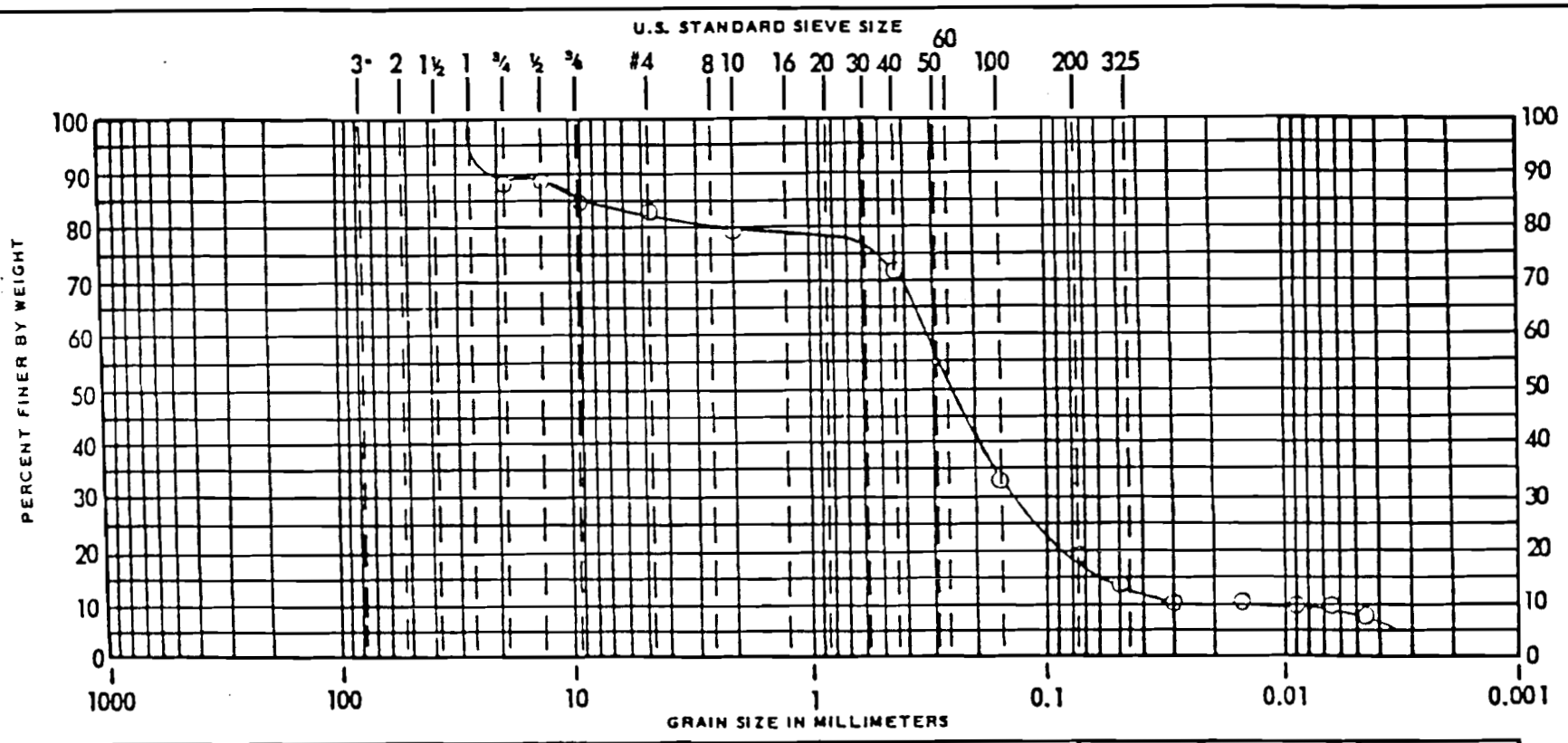


PROJECT GOLDEN ROAD
YOUR PROJECT NO.: YN-4060
BORING NO.
SAMPLE NO. GW-1
DEPTH 1' - 3'
CLASSIFICATION

NATURAL % MOISTURE
LIQUID LIMIT
PLASTIC LIMIT
PLASTICITY INDEX
COLOR
REMARKS 2 of 4

Toledo Testing Laboratory, Inc.

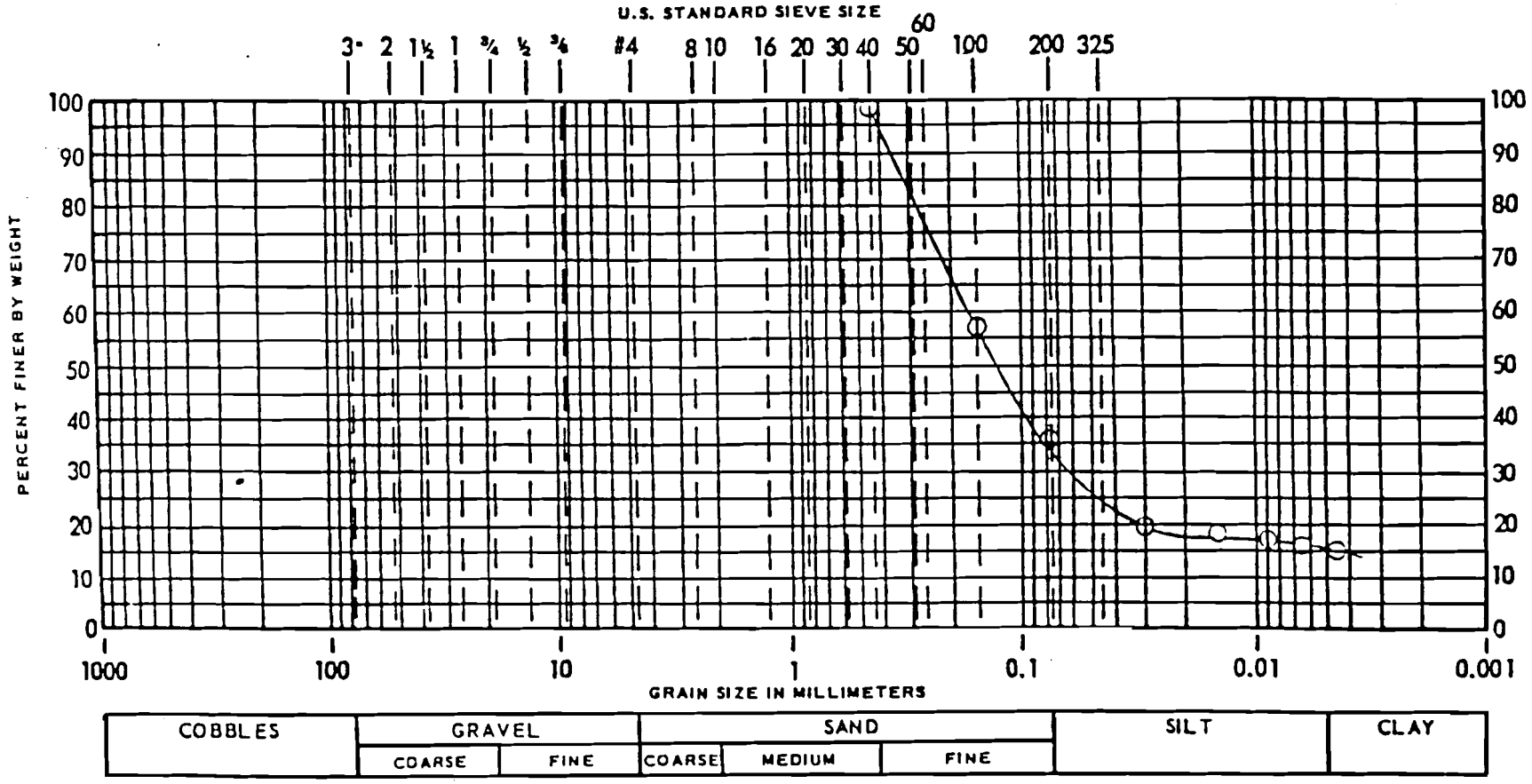
SOIL CLASSIFICATION SHEET



PROJECT GOLDEN ROAD YOUR PROJECT NO.: YN-4060 BORING NO. SAMPLE NO. GW-5 DEPTH 5' - 7' CLASSIFICATION	NATURAL % MOISTURE LIQUID LIMIT PLASTIC LIMIT PLASTICITY INDEX COLOR Grey-black REMARKS 3 of 4	Toledo Testing Laboratory, Inc.

Figure 18

SOIL CLASSIFICATION SHEET



PROJECT GOLDEN ROAD
YOUR PROJECT NO.: YN-4060
BORING NO.
SAMPLE NO. GW-6
DEPTH 1' - 3'
CLASSIFICATION

NATURAL % MOISTURE
LIQUID LIMIT
PLASTIC LIMIT
PLASTICITY INDEX
COLOR
REMARKS 4 of 4

Toledo Testing Laboratory, Inc.

Figure 19

APPENDIX F

RAW ANALYTICAL DATA SUMMARIES

QUALIFIER CODE LEGEND

ORGANIC ANALYSES

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For example, 10 U for phenol in water if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor, the sample quantitation limit for phenol (330 U) would be corrected to:

$$\frac{(330\ U)}{D} \times df \qquad \text{where } D = \frac{100 - \%\ \text{moisture}}{100}$$

and df = dilution factor

$$\text{at 24\% moisture, } D = \frac{100 - 24}{100} = 0.76$$

$$\frac{(330\ U)}{.76} \times 10 = 4{,}300\ U$$ rounded to the appropriate number of significant figures

For soil samples subjected to GPC cleanup procedures, the CRQL is also multiplied by 2 to account for the fact that only half of the extract is recovered.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data TIC indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero. For example, if the sample quantitation limit is 10 µg/L, but a concentration of 3 µg/L is calculated, report it as 3J. The sample quantitation limit must be adjusted for both dilution and percent moisture as discussed for the U flag, so that if a sample with 24% moisture and a 1 to 10 dilution factor has a calculated concentration of 300 µg/L and a sample quantitation limit of 430 µg/kg, report the concentration as 300J on Form I.

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides $\geq$10 ng/µl in the final extract shall be confirmed by GC/MS.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications in Exhibit D. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate Form I's. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted samples, and all concentration values reported on that Form I are flagged with the "D" flag.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the Case Narrative. If more than one is required, use "Y" and "Z" as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags as needed. For instance, the "X" flag might combine the "A," "B," and "D" flags for some sample.

INORGANIC ANALYSES

C - Concentration qualifier: Enter "B" if the reported value is less than the Contract Required Detection Limit (CRDL) but greater than the Instrument Detection Limit (IDL). If the analyte was analyzed for but not detected, a "U" must be entered.

Q - Q qualifier: Specified entries and their meanings are as follows:

E - The reported value is estimated because of the presence of interference. An explanatory note must be included under Comments on the Cover Page (if the problem applies to all samples) or on the specific FORM I-IN (if it is an isolated problem).

M - Duplicate injection precision not met.

N - Spiked sample recovery not within control limits.

S - The reported value was determined by the Method of Standard Additions (MSA).

W - Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance (see Exhibit E).

* - Duplicate analysis not within control limits.

+ - Correlation coefficient for the MSA is less than 0.995.

Entering "S," "W," or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

M - Method qualifier: Enter:

P - for ICP;

A - for Flame AA;

F - for Furnace AA;

CV - for Manual Cold Vapor AA;

AV - for Automated Cold Vapor AA;

AS - for Semi-Automated Spectrophotometric;

C - for Manual Spectrophotometric;

T - for Titrimetric; and

NR - if the analyte is not required to be analyzed.

SURFACE SOIL

DATA SUMMARY FORM: V O L A T I L E S 1

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date(s): 6/15/89

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

	Sample No.	S1		S2		S3		S4		S5		S6		S7		S8		S9	
	Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
	% Moisture	11		17		11		21		24		8		16		11		17	
	Location																		
CRQL	COMPOUND																		
10	Chloromethane																		
10	Bromomethane																		
10	Vinyl Chloride																		
10	Chloroethane																		
5	Methylene Chloride	9	B	6	BJ	5	BJ	5	BJ	4	BJ	10	B	9	B	7	B	8	
10	Acetone	15		20		11	J	17		14		15		12		28		13	B
5	Carbon Disulfide																		
5	1,1-Dichloroethene																		
5	1,1-Dichloroethane	4				5	J												
5	Total-1,2-Dichloroethene	2	J											2	J			2	J
5	Chloroform					2	J												
5	1,2-Dichloroethane																		
10	2-Butanone																		
5	1,1,1-Trichloroethane	19				20													
5	Carbon Tetrachloride																		
10	Vinyl Acetate																		
5	Bromodichloromethane																		

CRDL = Contract Required Detection Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: V O L A T I L E S 1

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date(s): 6/15/87

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND																					
	Sample No.	59MS		59MSD		59MSDRE		S10		S11		S11RE										
	Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0										
	% Moisture	17		17		17		14		25		25										
	Location																					
10	Chloromethane																					
10	Bromomethane																					
10	Vinyl Chloride																					
10	Chloroethane																					
5	Methylene Chloride	7		10		7		5	J	18		33										
10	Acetone	17	B	19	B	21	B	16	B	28	B	26	B									
5	Carbon Disulfide																					
5	1,1-Dichloroethene																					
5	1,1-Dichloroethane																					
5	Total-1,2-Dichloroethene	3	J	2	J					9		6	J									
5	Chloroform																					
5	1,2-Dichloroethane																					
10	2-Butanone																					
5	1,1,1-Trichloroethane																					
5	Carbon Tetrachloride																					
10	Vinyl Acetate																					
5	Bromodichloromethane																					

CRDL = Contract Required Detection Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

Subsurface Soil

DATA SUMMARY FORM: V O L A T I L E S 1

Site Name: Golden Road Dump Site

SOIL SAMPLES (ug/Kg)

Case #: 872.002 **Sampling Date(s):** 11/22/89

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

	Sample No.	GW7		GW7MS		GW7MSD													
	Dilution Factor	1.0		1.0		1.0													
	% Moisture	11		11		11													
	Location	17-19 ft		17-19 ft		17-19 ft													
CRQL	COMPOUND																		
10	Chloromethane																		
10	Bromomethane																		
10	Vinyl Chloride																		
10	Chloroethane																		
5	Methylene Chloride	1	J	2	J														
10	Acetone	17	B	12	BJ	13	BJ												
5	Carbon Disulfide																		
5	1,1-Dichloroethene																		
5	1,1-Dichloroethane																		
5	Total-1,2-Dichloroethene																		
5	Chloroform																		
5	1,2-Dichloroethane																		
10	2-Butanone																		
5	1,1,1-Trichloroethane																		
5	Carbon Tetrachloride																		
10	Vinyl Acetate																		
5	Bromodichloromethane																		

CRDL = Contract Required Detection Limit

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: VOLATILES 1

Site Name: GOLDEN ROAD DISPOSAL SITE

Case #: 9008.406 Sampling Date(s): 2/8 - 2/9/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	SED-1		SED-2		SED-3		SED-4		SED-5		SED-6		SED-7		SED-7RE		SED-8	
	Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
	% Moisture	46		56		50		44		50		53		33		33		26	
	Location																		
10	Chloromethane																		
10	Bromomethane																		
10	Vinyl Chloride																		
10	Chloroethane																		
5	Methylene Chloride	11	B	29	B	26	B	18	B	24	B	26	B	19	B	34		22	B
10	Acetone	51	B	92	B	89	B	120	B	110	B	93	B	150	B	130		100	B
5	Carbon Disulfide																		
5	1,1-Dichloroethene																		
5	1,1-Dichloroethane																		
5	Total-1,2-Dichloroethene																		
5	Chloroform																		
5	1,2-Dichloroethane																		
10	2-Butanone																		
5	1,1,1-Trichloroethane																		
5	Carbon Tetrachloride																		
10	Vinyl Acetate																		
5	Bromodichloromethane																		

CRDL = Contract Required Detection Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: V O L A T I L E S 1

Site Name: GOLDEN ROAD

Case #: 9000.406 — .426 Sampling Date(s): 2/8 – 2/9/90 2/12/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit: (CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	Sample No.		SED-8MS		SED8MSD		SED-9		SED-9RE		SED-10		SED-10RE		SED-10MS		SED-10MSD		SED-11	
		Dilution Factor		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
		% Moisture		26		26		62		62		40		40		40		40		8	
		Location																			
10	Chloromethane																				
10	Bromomethane																				
10	Vinyl Chloride																				
10	Chloroethane																				
5	Methylene Chloride	23	B	32	B	42	B	62	B	24	B	31	B	30	B	28	B	3	BJ		
10	Acetone	62	B	92	B	300	B	260	B	67	B	120	B	140	B	110	B	120	B		
5	Carbon Disulfide																				
5	1,1-Dichloroethene																				
5	1,1-Dichloroethane																				
5	Total-1,2-Dichloroethene																				
5	Chloroform																				
5	1,2-Dichloroethane																				
10	2-Butanone																				
5	1,1,1-Trichloroethane																				
5	Carbon Tetrachloride																				
10	Vinyl Acetate																				
5	Bromodichloromethane																				

CRDL = Contract Required Detection Limit

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: VOLATILES 1

Site Name: GOLDEN ROAD

Case #: 9000.380 Sampling Date(s): 2/6/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	SED-12		SED-13		SED-14		SED-14MS		SED-14MSD		SED-15		SED-15MS		SED-15MSD	
	Sample No.																
	Dilution Factor	1.0		=		1.0		1.0		1.0		1.0		1.0		1.0	
	% Moisture	52		=		65		65		65		64		54		54	
	Location			NOT SAMPLED													
10	Chloromethane					4	J										
10	Bromomethane																
10	Vinyl Chloride																
10	Chloroethane																
5	Methylene Chloride	22	B			24	B	7	B	8	B	6	B	31	B	71	B
10	Acetone	75	B			170	B	4	J	5	J	28	B	151	B	830	BE
5	Carbon Disulfide					4	J										
5	1,1-Dichloroethene																
5	1,1-Dichloroethane																
5	Total-1,2-Dichloroethene																
5	Chloroform																
5	1,2-Dichloroethane																
10	2-Butanone																
5	1,1,1-Trichloroethane																
5	Carbon Tetrachloride																
10	Vinyl Acetate																
5	Bromodichloromethane																

CRDL = Contract Required Detection Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: V O L A T I L E S 1

Site Name: GOLDEN ROAD DISPOSAL SITE

SOIL SAMPLES (ug/Kg)

Case #: 872.001 872.002 Sampling Date(s): 6/15/89 8/24/89

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND																							
	Sample No.	W-1		W-2		W-2RE		W-3		W-3MS		W-3MSD												
	Dilution Factor	1.0		1.0		1.0		2.0		2.0		2.0												
	% Moisture	17		16		16		ND		ND		ND												
	Location																							
10	Chloromethane																							
10	Bromomethane																							
10	Vinyl Chloride																							
10	Chloroethane																							
5	Methylene Chloride	11		6	J	6	J	270	BJ	790	BJ	780	BJ											
10	Acetone	14	B			29	B	3000		4400	B	4700	B											
5	Carbon Disulfide																							
5	1,1-Dichloroethene																							
5	1,1-Dichloroethane																							
5	Total-1,2-Dichloroethene	3	J																					
5	Chloroform																							
5	1,2-Dichloroethane																							
10	2-Butanone																							
5	1,1,1-Trichloroethane																							
5	Carbon Tetrachloride																							
10	Vinyl Acetate																							
5	Bromodichloromethane																							

CRDL = Contract Required Detection Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: VOLATILES 1

Site Name: GOLDEN ROAD DISPOSAL SITE

Case #: 9000.406 Sampling Date(s): 2/8/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

	Sample No.	L-2		L-2RE																	
	Dilution Factor	1.0		1.0																	
	% Moisture	42		42																	
	Location																				
CRQL	COMPOUND																				
10	Chloromethane																				
10	Bromomethane																				
10	Vinyl Chloride																				
10	Chloroethane																				
5	Methylene Chloride	16	B	7	BJ																
10	Acetone	83	B	210	B																
5	Carbon Disulfide																				
5	1,1-Dichloroethene																				
5	1,1-Dichloroethane																				
5	Total-1,2-Dichloroethene																				
5	Chloroform	7	J																		
5	1,2-Dichloroethane																				
10	2-Butanone																				
5	1,1,1-Trichloroethane																				
5	Carbon Tetrachloride																				
10	Vinyl Acetate																				
5	Bromodichloromethane																				

CRDL = Contract Required Detection Limit

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DATA SUMMARY FORM: V O L A T I L E S 2

Site Name: Golden [illegible] **SOIL SAMPLES (ug/Kg)**

Case #: 872.002 **Sampling Date(s):** Aug 23, 1989

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

	Sample No.	GW7	GW 7MS	GW7MSD								
	Dilution Factor	1.0	1.0	1.0								
	% Moisture	11										
	Location	17-19 ft	17-19 ft	17-19 ft								
CRQL	COMPOUND											
5	1,2-Dichloropropane											
5	Cis-1,3-Dichloropropene											
5	Trichloroethene											
5	Dibromochloromethane											
5	1,1,2-Trichloroethane											
5	Benzene											
5	Trans-1,3-Dichloropropene											
5	Bromoform											
10	4-Methyl-2-pentanone											
10	2-Hexanone											
5	Tetrachloroethene											
5	1,1,2,2-Tetrachloroethane											
5	Toluene											
5	Chlorobenzene											
5	Ethylbenzene											
5	Styrene											
5	Total Xylenes											

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: V O L A T I L E S 2

Site Name: Golden Road

SOIL SAMPLES (ug/Kg)

Case #: 9000.406 Sampling Date(s): 2/8/90

To calculate sample quantitation limit: (CRQL * Dilution Factor) / ((100 - % moisture)/100

	Sample No.	L-2	L-2 RE							
	Dilution Factor	1.0	1.0							
	% Moisture	42	42							
	Location									
RQL	COMPOUND									
5	1,2 Dichloropropane									
5	Cis-1,3 Dichloropropene									
5	Trichloroethene									
5	Dibromochloromethane									
5	1,1,2 Trichloroethane									
5	Benzene									
5	Trans-1,3-Dichloropropene									
5	Bromoform									
10	4 Methyl-2-pentanone									
10	2 Hexanone									
5	Tetrachloroethene									
5	1,1,2,2-Tetrachloroethane									
5	Toluene									
5	Chlorobenzene									
5	Ethylbenzene									
5	Styrene									
5	Total Xylenes									

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: V O L A T I L E S 2

Site Name: Golden Road

SOIL SAMPLES (ug/Kg)

Case #: 9000.406 Sampling Date(s): 2/8-2/9/90

To calculate sample quantitation limit: (CRQL * Dilution Factor) / ((100 - % moisture)/100)

	GC	Sed.	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed
Sample No.		SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-7RE	SW-8
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
% Moisture		46	56	50	44	50	53	33	33	26
Location										

CRQL	COMPOUND																			
5	1,2 Dichloropropane																			
5	Cis-1,3 Dichloropropene																			
5	Trichloroethene																			
5	Dibromochloromethane																			
5	1,1,2 Trichloroethane																			
5	Benzene																			
5	Trans-1,3-Dichloropropene																			
5	Bromoform																			
10	4 Methyl 2-pentanone																			
10	2-Hexanone																			
5	Tetrachloroethene																			
5	1,1,2,2-Tetrachloroethane																			
5	Toluene	3	J			6	J	6	J	5	J	2	J	13						
5	Chlorobenzene																			
5	Ethylbenzene																			
5	Styrene																			
5	Total Xylenes																			

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: V O L A T I L E S 2

Site Name: GOLDEN ROAD

SOIL SAMPLES (ug/Kg)

Case #: 9000.406 9000.426

Sampling Date(s): 2/8-2/9/90 2/12/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

	Sample No.	SED-8MS	SED-8MSD	SED-9	SED-9RE	SED-10	SED-10RE	SED-10MS	SED-10MSD	SED-11
	Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	% Moisture	26	26	62	62	40	40	40	40	8
	Location									
CRQL	COMPOUND									
5	1,2-Dichloropropane									
5	Cis-1,3-Dichloropropene									
5	Trichloroethene									
5	Dibromochloromethane									
5	1,1,2-Trichloroethane									
5	Benzene									
5	Trans-1,3-Dichloropropene									
5	Bromoform									
10	4-Methyl-2-pentanone									
10	2-Hexanone									
5	Tetrachloroethene									
5	1,1,2,2-Tetrachloroethane									
5	Toluene			9 J	4 J	5 J				
5	Chlorobenzene									
5	Ethylbenzene									
5	Styrene									
5	Total Xylenes									

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: V O L A T I L E S 2

Site Name: GOLDEN ROAD

SOIL SAMPLES (ug/Kg)

Case #: 9000.380 Sampling Date(s): 2/6/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	Sample No.	SED-12	SED-13	SED-14	SED-14MS	SED-14MSD	SED-15	SED-15MS	SED-15MSD	
		Dilution Factor	1.0	-	1.0	1.0	1.0	1.0	1.0	1.0	
		% Moisture	52	-	65	65	65	54	54	54	
		Location		NOT SAMPLED							
5	1,2-Dichloropropane										
5	Cis-1,3-Dichloropropene										
5	Trichloroethene										
5	Dibromochloromethane										
5	1,1,2-Trichloroethane										
5	Benzene										
5	Trans-1,3-Dichloropropene										
5	Bromoform										
10	4-Methyl 2-pentanone										
10	2-Hexanone										
5	Tetrachloroethene										
5	1,1,2,2-Tetrachloroethane										
5	Toluene										
5	Chlorobenzene										
5	Ethylbenzene										
5	Styrene										
5	Total Xylenes										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: V O L A T I L E S 2

Site Name: GOLDEN ROAD

Case #: 872.001 Sampling Date(s): 6/15/89

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

	Sample No.	W-1		W-2		W-2RE		W-3		W-3MS		W-3MSD								
	Dilution Factor	1.0		1.0		1.0		2.0		2.0		2.0								
	% Moisture	17		16		16		ND		ND		ND								
	Location																			
CRQL	COMPOUND																			
5	1,2-Dichloropropane																			
5	Cis-1,3-Dichloropropene																			
5	Trichloroethene																			
5	Dibromochloromethane																			
5	1,1,2-Trichloroethane																			
5	Benzene																			
5	Trans-1,3-Dichloropropene																			
5	Bromoform																			
10	4-Methyl-2-pentanone																			
10	2-Hexanone																			
5	Tetrachloroethene																			
5	1,1,2,2-Tetrachloroethane																			
5	Toluene	3	J																	
5	Chlorobenzene																			
5	Ethylbenzene																			
5	Styrene																			
5	Total Xylenes							820	J	1100	J	1300								

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: V O L A T I L E S 2

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date(s): 6/15/89

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	Sample No.		S1		S2		S3		S4		S5		S6		S7		S8		S9	
		Dilution Factor		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
		% Moisture		11		17		11		21		24		8		16		11		17	
		Location																			
5	1,2-Dichloropropane																				
5	Cis-1,3-Dichloropropene																				
5	Trichloroethene																				
5	Dibromochloromethane																				
5	1,1,2-Trichloroethane																				
5	Benzene																				
5	Trans-1,3-Dichloropropene																				
5	Bromoform																				
10	4-Methyl-2-pentanone																				
10	2-Hexanone																				
5	Tetrachloroethene			12																	
5	1,1,2,2-Tetrachloroethane																				
5	Toluene			2	J															2	J
5	Chlorobenzene																				
5	Ethylbenzene																				
5	Styrene																				
5	Total Xylenes																				

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: VOLATILES 2

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date(s): 6/15/89

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	Sample No.	S9MS	S9MSD	S9MSDRE	S10	S11	S11RE			
		Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0			
		% Moisture	17	17	17	14	25	25			
		Location									
5	1,2-Dichloropropane										
5	Cis-1,3-Dichloropropene										
5	Trichloroethene						5 J	4 J			
5	Dibromochloromethane										
5	1,1,2-Trichloroethane										
5	Benzene										
5	Trans-1,3-Dichloropropene										
5	Bromoform										
10	4-Methyl-2-pentanone										
10	2-Hexanone										
5	Tetrachloroethene						3 J	1 J			
5	1,1,2,2-Tetrachloroethane										
5	Toluene						9 J	4 J			
5	Chlorobenzene										
5	Ethylbenzene										
5	Styrene										
5	Total Xylenes										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date: 6/15/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((1 - % moisture/100)

	Sample No.	S1		S2		S3		S4		S5		S6		S7		S8		S9	
	Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
	% Moisture	11		17		11		21		24		8		16		11		17	
	Location																		
CRQL	COMPOUND																		
	Hexane Cas No. 110543																		

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date: 6/15/89

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((1 - % moisture/100)

	Sample No.	59MS		59MSD		59MSDRE		S10		S11		S11RE							
	Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0							
	% Moisture	17		17		17		14		25		25							
	Location																		
CRQL	COMPOUND																		
	Hexane CAS# 110543							5.5	J	11	J	9	J						

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Rod Disposal Site

Case #: 872-001 Sampling Date: 6/15/89

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((1 - % moisture/100)

CRQL	COMPOUND	Sample No.		51		52		53		54		55		56		57		58		59	
		Dilution Factor		10.0		2.0		2.0		2.0		2.0		2.0		2.0		2.0		2.0	
		% Moisture		11		17		11		21		24		8		16		11		17	
		Location																			
	CAS # 127639 Benzene, 1,1'-sulfonylbis-			1600	J																
	CAS # 791286 Phosphine oxide, triphenyl																	2800	J		
	bis dimethylethyl Phenol			1900	J																
	Tricresyl phosphate isomer			10,000	J	5200	J														
	"			12,000	J																
	"			9,000	J																

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date: 6/15/89

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((1 - % moisture/100)

CRQL	COMPOUND	Sample No.		Sample No.		Sample No.													
		Dilution Factor		Dilution Factor		Dilution Factor													
		% Moisture		% Moisture		% Moisture													
		Location		Location		Location													
		S10		S11		S11RE													
		14		25		25													
	CAS # 127639 Benzene, 1,1'-sulfonylbis																		
	CAS # 791286 Phosphine oxide, triphenyl	540	J																
	bis dimethylethyl Phenol																		
	Tricresyl phosphate isomer																		

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: T E N T A T I V E L Y I N D E N T I F I E D C O M P O U N D S

Site Name: Golden Road Disposal Site

Case #: 9000.406 **Sampling Date:** 2/8-2/9/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit: (CRQL * Dilution Factor) / ((1 - % moisture/100)

CRQL	COMPOUND	SW-1 CF Sed	SW-2 Sed	SW-3 Sed	SW-4 Sed	SW-5 Sed	SW-6 Sed	SW-7 Sed	SW-8 Sed	SW-9 Sed
	Sample No.	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8	SW-9
	Dilution Factor	1.0	2.0	2.0	1.0	1.0	1.0	4.0	2.0	2.0
	% Moisture	46	56	50	44	50	53	33	26	62
	Location									
	bis(dimethylethyl)phenol		380 BJ		300 J	400 BJ	350 J			
	1,1,2,2-tetrachloroethane Cas No. 79345				420* J	400* J	500* J			
	2-propanol, 1,3-dichloro-, phosph Cas No. 13674878					930 J				

CRQL = Contract Required Quantitation Limit

* This compound is believed to be an artifact of the extraction procedure. If present in the sample, it would have been observed in the volatile analysis.

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Rd.

Case #: 9000.380 9000.446 9000.426 GF Sampling Date: 2/6/90 2/8-2/9/90 2/12/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit: (CRQL * Dilution Factor) / ((1 - % moisture/100)

CRQL	COMPOUND																					
	Sample No.	SW-10		SW-11		SW-11MS		SW-11MSD		SW-12		SW-13		SW-14		SW-15						
	Dilution Factor	2.0		1.0		1.0		1.0		1.0		—		1.0		1.0						
	% Moisture	40		8		8		8		52		—		65		54						
	Location											NOT Sampled										
	bis(dimethylethyl) phenol																					
	1,1,2,2-tetrachloroethane Cas No. 79345													480	J							
	2-propanol, 1,3-dichloro-, phosph Cas No. 13674878																					

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Road Disposal Site

Case #: 9000.406 Sampling Date: 2/8-2/9/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit: (CRQL * Dilution Factor) / ((1 - % moisture/100)

	GC	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed	Sed
Sample No.		SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-7RE	SW-8
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
% Moisture		46	56	50	44	50	53	33	33	26
Location										
CRQL	COMPOUND									
	Hexane	18 BJ	17 BJ	53 BJ	28 BJ	35 BJ	17 BJ	31 BJ	28 BJ	13 BJ
	Cas No. 110543									

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: T E N T A T I V E L Y I N D E N T I F I E D C O M P O U N D S

Site Name: Golden Rd

SOIL SAMPLES (ug/Kg)

Case #: 9000.406 Sampling Date: 2/8-2/9/90
9000.426 GF 2/12/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((1 - % moisture/100)

	Sample No.	Sed SW-8MS		Sed SW-8MSD		Sed SW-9		Sed SW-9RE		Sed SW-10		Sed SW-10RE		Sed SW-10MS		Sed SW-10MSD		Sed SW-11	
	Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
	% Moisture	26		26		62		62		40		40		40		40		8	
	Location																		
CRQL	COMPOUND																		
	Hexane Cas No. 110543					75	BJ	40	BJ	47	BJ	27	BJ						

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Rd

Case #: 9000.038 9000.406 9000.426 Sampling Date: 2/6/90 2/5-2/9/90 2/12/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit: (CRQL * Dilution Factor) / ((1 - % moisture/100)

CRQL	COMPOUND									
	Sample No.	SW-12 sed	SW-13 sed	SW-14 sed	SW-14 MS sed	SW-14 MSD sed	SW-15 sed	SW-15MS sed	SW-15MSD sed	
	Dilution Factor	1.0	–	1.0	1.0	1.0	1.0	1.0	1.0	
	% Moisture	52	–	65	65	65	54	54	54	
	Location		NOT SAMPLED							

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Road Disposal Site

Case #: 9000.406 Sampling Date: 2/8/90

SOIL SAMPLES
(ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((1 - % moisture/100)

	Sample No.	L-2		L-2 RE																	
	Dilution Factor	1.0		1.0																	
	% Moisture	42		42																	
	Location																				
CRQL	COMPOUND																				
	Hexane Cas No. 110543	12	BJ	16	BJ																

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date: 6/15/89

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((1 - % moisture/100)

	Sample No.	W1		W2		W2RE	W-3												
	Dilution Factor	2.0		2.0		2.0	50.0												
	% Moisture	17		16		16	ND												
	Location																		
CRQL	COMPOUND																		
	Phosphine oxide, triphenyl Cas. No. 791286	1100	J	1000	J														

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Rd

Case #: 872.001 Sampling Date: 6/15/89

SOIL SAMPLES
(ug/Kg)

To calculate sample quantitation limit:
(CROL * Dilution Factor) / ((1 - % moisture/100)

	Sample No.	W1	W2	W2RE	W-3	W-3MS	W-3MSD			
	Dilution Factor	1.0	1.0	1.0	2.0	2.0	2.0			
	% Moisture	17	16	16	ND	ND	ND			
	Location									
CROL	COMPOUND									
	Hexane Cas No. 110543			8.8 J						
	trimethyl benzene isomers									
	21.90 RT				4300 J	NA	NA			
	22.84 RT				6200 J					
	23.84 RT				2900 J					

CROL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Road Disposal Site

Case #: 873.002 Sampling Date: Aug 23, 1989

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((1 - % moisture/100)

CRQL	COMPOUND																					
Sample No.		GW7																				
Dilution Factor		2.0																				
% Moisture		11																				
Location																						
	CAS # 2196-4-98 1,13-tetradecadiene	1900	BJ																			

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: B N A S 1

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date(s): 6/15/89

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	Sample No.		51		52		53		54		55		56		57		58		59	
		Dilution Factor		10.0		2.0		2.0		2.0		2.0		2.0		2.0		2.0		2.0	
		% Moisture		11		17		11		21		24		8		16		11		17	
		Location																			
330	Phenol							70	J			84	J					58	J		
330	bis(2-Chloroethyl)ether																				
330	2-Chlorophenol																				
330	1,3-Dichlorobenzene																				
330	1,4-Dichlorobenzene																				
330	Benzyl Alcohol																				
330	1,2-Dichlorobenzene																				
330	2-Methylphenol																				
330	bis(2-Chloroisopropyl)ether																				
330	4-Methylphenol																				
330	N-Nitroso-di-n-propylamine																				
330	Hexachloroethane																				
330	Nitrobenzene																				
330	Isophorone																				
330	2-Nitrophenol																				
330	2,4-Dimethylphenol																				
1600	Benzoic Acid																				
330	bis(2-Chloroethoxy)methane																				
330	2,4-Dichlorophenol																				
330	1,2,4-Trichlorobenzene																				
330	Naphthalene					46	J	79	J			71	J	46	J	110	J			43	J
330	4-Chloroaniline																				

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: B N A S 1

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date(s): 6/15/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

	Sample No.	S10		S11																	
	Dilution Factor	2.0		2.0																	
	% Moisture	14		25																	
	Location																				
CRQL	COMPOUND																				
330	Phenol	46	J	65	J																
330	bis(2-Chloroethyl)ether																				
330	2-Chlorophenol																				
330	1,3-Dichlorobenzene																				
330	1,4-Dichlorobenzene																				
330	Benzyl Alcohol																				
330	1,2-Dichlorobenzene																				
330	2-Methylphenol																				
330	bis(2-Chloroisopropyl)ether																				
330	4-Methylphenol																				
330	N-Nitroso-di-n-propylamine																				
330	Hexachloroethane																				
330	Nitrobenzene																				
330	Isophorone																				
330	2-Nitrophenol																				
330	2,4-Dimethylphenol																				
1600	Benzoic Acid																				
330	bis(2-Chloroethoxy)methane																				
330	2,4-Dichlorophenol																				
330	1,2,4-Trichlorobenzene																				
330	Naphthalene																				
330	4-Chloroaniline																				

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: B N A S 1

Site Name: Golden Rod [illegible]

SOIL SAMPLES (ug/Kg)

Case #: 872.002 Sampling Date(s): Aug 23 '89

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	Sample No.									
		647									
	Dilution Factor	2.0									
	% Moisture	11									
	Location	17-19 ft									
330	Phenol										
330	bis(2-Chloroethyl)ether										
330	2-Chlorophenol										
330	1,3-Dichlorobenzene										
330	1,4-Dichlorobenzene										
330	Benzyl Alcohol										
330	1,2-Dichlorobenzene										
330	2-Methylphenol										
330	bis(2-Chloroisopropyl)ether										
330	4-Methylphenol										
330	N-Nitroso-di-n-propylamine										
330	Hexachloroethane										
330	Nitrobenzene										
330	Isophorone										
330	2-Nitrophenol										
330	2,4-Dimethylphenol										
1600	Benzoic Acid										
330	bis(2-Chloroethoxy)methane										
330	2,4-Dichlorophenol										
330	1,2,4-Trichlorobenzene										
330	Naphthalene										
330	4-Chloroaniline										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: B N A S 1

Site Name: Golden Road Disposal Site

SOIL SAMPLES
(ug/Kg)

Case #: 9000.406 Sampling Date(s): 2/8/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100

RQL	COMPOUND										
	Sample No.	L-2									
	Dilution Factor	2.0									
	% Moisture	42									
	Location										
330	Phenol										
330	bis(2-Chloroethyl)ether										
330	2-Chlorophenol										
330	1,3 Dichlorobenzene										
330	1,4 Dichlorobenzene										
330	Benzyl Alcohol										
330	1,2 Dichlorobenzene										
330	2-Methylphenol										
330	bis(2-Chloroisopropyl)ether										
330	4-Methylphenol										
330	N-Nitroso-di-n-propylamine										
330	Hexachloroethane										
330	Nitrobenzene										
330	Isophorone										
330	2-Nitrophenol										
330	2,4-Dimethylphenol										
1600	Benzoic Acid										
330	bis(2-Chloroethoxy)methane										
330	2,4 Dichlorophenol										
330	1,2,4-Trichlorobenzene										
330	Naphthalene	120	J								
330	4-Chloroaniline										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: B N A S 1

Site Name: GOLDEN ROAD DISPOSAL SITE

SOIL SAMPLES (ug/Kg)

Case #: 872.001 Sampling Date(s): 6/15/87
872.002 8/24/87

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	Sample No.	W-1		W-2		W-3											
		Dilution Factor	2.0		2.0		50.0											
		% Moisture	17		16		ND											
		Location																
330	Phenol																	
330	bis(2-Chloroethyl)ether																	
330	2-Chlorophenol																	
330	1,3-Dichlorobenzene																	
330	1,4-Dichlorobenzene																	
330	Benzyl Alcohol																	
330	1,2-Dichlorobenzene																	
330	2-Methylphenol																	
330	bis(2-Chloroisopropyl)ether																	
330	4-Methylphenol																	
330	N-Nitroso-di-n-propylamine																	
330	Hexachloroethane																	
330	Nitrobenzene																	
330	Isophorone																	
330	2-Nitrophenol																	
330	2,4-Dimethylphenol																	
1600	Benzoic Acid																	
330	bis(2-Chloroethoxy)methane																	
330	2,4-Dichlorophenol																	
330	1,2,4-Trichlorobenzene																	
330	Naphthalene				55	J												
330	4-Chloroaniline																	

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: B N A S 1

Site Name: Golden Road Disposal Site

SOIL SAMPLES (ug/Kg)

Case #: 9000.406 Sampling Date(s): 2/8-2/9/90

To calculate sample quantitation limit: (CRQL * Dilution Factor) / (100 - % moisture)/100

CRQL	COMPOUND	GF Sed. SW-1		Sed SW-2		Sed SW-3		Sed SW-4		Sed SW-5		Sed. SW-6		Sed SW-7		Sed SW-8		Sed SW-9	
	Dilution Factor	1.0		2.0		2.0		1.0		1.0		1.0		4.0		2.0		2.0	
	% Moisture	46		56		50		44		50		53		33		26		62	
	Location																		
330	Phenol																		
330	bis(2-Chloroethyl)ether																		
330	2-Chlorophenol																		
330	1,3 Dichlorobenzene																		
330	1,4 Dichlorobenzene																		
330	Benzyl Alcohol																		
330	1,2 Dichlorobenzene																		
330	2-Methylphenol																		
330	bis(2-Chloroisopropyl)ether																		
330	4-Methylphenol																		
330	N-Nitroso-di-n propylamine																		
330	Hexachloroethane																		
330	Nitrobenzene																		
330	Isophorone																		
330	2-Nitrophenol																		
330	2,4-Dimethylphenol																		
1600	Benzoic Acid																		
330	bis(2-Chloroethoxy)methane																		
330	2,4-Dichlorophenol																		
330	1,2,4-Trichlorobenzene																		
330	Naphthalene											100	J	160	J	140	J	160	J
330	4-Chloroaniline																		

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: B N A S 1

Site Name: GOLDEN ROAD

Case #: 9000.406 9000.422 9000.390

Sampling Date(s): 2/6-2/8-2/9/90 2/12/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	Sample No.	SED-10		SED-11		SED-11MS		SED-11MSD		SED-12		SED-13		SED-14		SED-15			
		Dilution Factor	2.0		1.0		1.0		1.0		1.0		-		1.0		1.0			
		% Moisture	40		8		8		8		52		-		65		54			
		Location											NOT SAMPLED							
330	Phenol																			
330	bis(2-Chloroethyl)ether																			
330	2-Chlorophenol																			
330	1,3-Dichlorobenzene																			
330	1,4-Dichlorobenzene																			
330	Benzyl Alcohol																			
330	1,2-Dichlorobenzene																			
330	2-Methylphenol																			
330	bis(2-Chloroisopropyl)ether																			
330	4-Methylphenol																			
330	N-Nitroso-di-n-propylamine																			
330	Hexachloroethane																			
330	Nitrobenzene																			
330	Isophorone																			
330	2-Nitrophenol																			
330	2,4-Dimethylphenol																			
1600	Benzoic Acid																			
330	bis(2-Chloroethoxy)methane																			
330	2,4-Dichlorophenol																			
330	1,2,4-Trichlorobenzene																			
330	Naphthalene		220	J																
330	4-Chloroaniline																			

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: B N A S 2

Site Name: Golden Road

Case #: 872.001 Sampling Date(s): 6/15/89

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit: (CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	Sample No.		51		52		53		54		55		56		57		58		59	
		Dilution Factor		10.0		2.0		2.0		2.0		2.0		2.0		2.0		2.0		2.0	
		% Moisture		11		17		11		21		24		8		16		11		17	
		Location																			
330	Hexachlorobutadiene																				
330	4-Chloro-3-methylphenol																				
330	2-Methylnaphthalene					79	J	62	J			67	J	50	J	170	J			43	J
330	Hexachlorocyclopentadiene																				
330	2,4,6-Trichlorophenol																				
1600	2,4,5-Trichlorophenol																				
330	2-Chloronaphthalene																				
1600	2-Nitroaniline																				
330	Dimethylphthalate																				
330	Acenaphthylene																				
330	2,6-Dinitrotoluene																				
1600	3-Nitroaniline																				
330	Acenaphthene																				
1600	2,4-Dinitrophenol																				
1600	4-Nitrophenol																				
330	Dibenzofuran																				
330	2,4-Dinitrotoluene																				
330	Diethylphthalate					1700															
330	4-Chlorophenyl-phenylether																				
330	Fluorene																				
1600	4-Nitroaniline																				
1600	4,6-Dinitro-2-methylphenol																				

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: B N A S 2

Site Name: Golden Road Disposal Site

SOIL SAMPLES (ug/Kg)

Case #: 872.001 Sampling Date(s): 6/15/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND																				
	Sample No.	S10		S11																	
	Dilution Factor	2.0		2.0																	
	% Moisture	14		25																	
	Location																				
330	Hexachlorobutadiene																				
330	4-Chloro-3-methylphenol																				
330	2-Methylnaphthalene	46	J	71	J																
330	Hexachlorocyclopentadiene																				
330	2,4,6-Trichlorophenol																				
1600	2,4,5-Trichlorophenol																				
330	2-Chloronaphthalene																				
1600	2-Nitroaniline																				
330	Dimethylphthalate																				
330	Acenaphthylene																				
330	2,6-Dinitrotoluene																				
1600	3-Nitroaniline																				
330	Acenaphthene																				
1600	2,4-Dinitrophenol																				
1600	4-Nitrophenol																				
330	Dibenzofuran																				
330	2,4-Dinitrotoluene																				
330	Diethylphthalate																				
330	4-Chlorophenyl-phenylether																				
330	Fluorene																				
1600	4-Nitroaniline																				
1600	4,6-Dinitro-2-methylphenol																				

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: B N A S 2

Site Name: Golden Rod Disposal site SOIL SAMPLES (ug/Kg)

Case #: 872.002 Sampling Date(s): Aug 23, 1989

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	Sample No.																	
		Dilution Factor	GW 7 2.0																
		% Moisture	11																
		Location	17-19 ft																
330	Hexachlorobutadiene																		
330	4-Chloro-3-methylphenol																		
330	2-Methylnaphthalene																		
330	Hexachlorocyclopentadiene																		
330	2,4,6-Trichlorophenol																		
1600	2,4,5-Trichlorophenol																		
330	2-Chloronaphthalene																		
1600	2-Nitroaniline																		
330	Dimethylphthalate																		
330	Acenaphthylene																		
330	2,6-Dinitrotoluene																		
1600	3-Nitroaniline																		
330	Acenaphthene																		
1600	2,4-Dinitrophenol																		
1600	4-Nitrophenol																		
330	Dibenzofuran																		
330	2,4-Dinitrotoluene																		
330	Diethylphthalate																		
330	4-Chlorophenyl-phenylether																		
330	Fluorene																		
1600	4-Nitroaniline																		
1600	4,6-Dinitro-2-methylphenol																		

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: B N A S 2

Site Name: GOLDEN ROAD

SOIL SAMPLES (ug/Kg)

Case #: 872.001 Sampling Date(s): 6/15/89

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND																			
	Sample No.	W-1		W-2		W-3														
	Dilution Factor	2.0		2.0		50.0														
	% Moisture	17		16		ND														
	Location																			
330	Hexachlorobutadiene																			
330	4-Chloro-3-methylphenol																			
330	2-Methylnaphthalene	53	J	81	J															
330	Hexachlorocyclopentadiene																			
330	2,4,6-Trichlorophenol																			
1600	2,4,5-Trichlorophenol																			
330	2-Chloronaphthalene																			
1600	2-Nitroaniline																			
330	Dimethylphthalate																			
330	Acenaphthylene																			
330	2,6-Dinitrotoluene																			
1600	3-Nitroaniline																			
330	Acenaphthene																			
1600	2,4-Dinitrophenol																			
1600	4-Nitrophenol																			
330	Dibenzofuran																			
330	2,4-Dinitrotoluene																			
330	Diethylphthalate																			
330	4-Chlorophenyl-phenylether																			
330	Fluorene																			
1600	4-Nitroaniline																			
1600	4,6-Dinitro-2-methylphenol																			

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: B N A S 2

Site Name: Golden Road

SOIL SAMPLES (ug/Kg)

Case #: 9000.406 Sampling Date(s): 2/8/90

To calculate sample quantitation limit: (CRQL * Dilution Factor) / ((100 - % moisture)/10

CRQL	COMPOUND																					
	Sample No.	L-2																				
	Dilution Factor	2.0																				
	% Moisture	42																				
	Location																					
330	Hexachlorobutadiene																					
330	4-Chloro-3 methylphenol																					
330	2 Methylnaphthalene	160	J																			
330	Hexachlorocyclopentadiene																					
330	2,4,6-Trichlorophenol																					
1600	2,4,5-Trichlorophenol																					
330	2-Chloronaphthalene																					
1600	2-Nitroaniline																					
330	Dimethylphthalate																					
330	Acenaphthylene																					
330	2,6-Dinitrotoluene																					
1600	3-Nitroaniline																					
330	Acenaphthene																					
1600	2,4 Dinitrophenol																					
1600	4-Nitrophenol																					
330	Dibenzofuran	59	J																			
330	2,4-Dinitrotoluene																					
330	Diethylphthalate																					
330	4-Chlorophenyl-phenylether																					
330	Fluorene																					
1600	4-Nitroaniline																					
1600	4,6-Dinitro-2-methylphenol																					

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: B N A S 2

Site Name: Golden Rd

SOIL SAMPLES (ug/Kg)

Case #: 9000.406 Sampling Date(s): 2/8-2/9/90

To calculate sample quantitation limit: (CROL * Dilution Factor) / ((100 - % moisture)/100)

CROL	COMPOUND	LF Sed SW-1		Sed SW-2		Sed SW-3		Sed SW-4		Sed SW-5		Sed SW-6		Sed SW-7		Sed SW-8		Sed SW-9	
	Sample No.																		
	Dilution Factor	1.0		2.0		2.0		1.0		1.0		1.0		4.0		2.0			
	% Moisture	46		56		50		44		50		53		33		26			
	Location																		
330	Hexachlorobutadiene																		
330	4-Chloro-3 methylphenol																		
330	2 Methylnaphthalene											120	J	94	J	160	J	210	J
330	Hexachlorocyclopentadiene																		
330	2,4,6-Trichlorophenol																		
1600	2,4,5-Trichlorophenol																		
330	2-Chloronaphthalene																		
1600	2-Nitroaniline																		
330	Dimethylphthalate																		
330	Acenaphthylene																		
330	2,6 Dinitrotoluene																		
1600	3-Nitroaniline																		
330	Acenaphthene													51	J	100	J	120	J
1600	2,4-Dinitrophenol																		
1600	4-Nitrophenol																		
330	Dibenzofuran															74	J	110	J
330	2,4-Dinitrotoluene																		
330	Diethylphthalate																		
330	4-Chlorophenyl phenylether																		
330	Fluorene															200	J		
1600	4-Nitroaniline																		
1600	4,6 Dinitro 2-methylphenol																		

CROL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: B N A S 2

Site Name: GOLDEN ROAD

Case #: 9000.380 = : 406 = : 432

Sampling Date(s): 2/6-2/8-2/9-2/12/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	Sample No.		SED-10		SED-11		SED-11MS		SED-11MSD		SED-12		SED-13		SED-14		SED-15			
		Dilution Factor		2.0		1.0		1.0		1.0		1.0		—		1.0		1.0			
		% Moisture		40		8		8		8		52		—		65		54			
		Location												NOT SAMPLED							
330	Hexachlorobutadiene																				
330	4-Chloro-3-methylphenol																				
330	2-Methylnaphthalene	290	J																		
330	Hexachlorocyclopentadiene																				
330	2,4,6-Trichlorophenol																				
1600	2,4,5-Trichlorophenol																				
330	2-Chloronaphthalene																				
1600	2-Nitroaniline																				
330	Dimethylphthalate																				
330	Acenaphthylene	130	J																		
330	2,6-Dinitrotoluene																				
1600	3-Nitroaniline																				
330	Acenaphthene																				
1600	2,4-Dinitrophenol																				
1600	4-Nitrophenol																				
330	Dibenzofuran	110	J																		
330	2,4-Dinitrotoluene																				
330	Diethylphthalate																				
330	4-Chlorophenyl-phenylether																				
330	Fluorene	83	J																		
1600	4-Nitroaniline																				
1600	4,6-Dinitro-2-methylphenol																				

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: B N A S 3

Site Name: Golden Road

SOIL SAMPLES (ug/Kg)

Case #: 9000.406 Sampling Date(s): 2/8/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/10

CRQL	COMPOUND																					
	Sample No.	L-2																				
	Dilution Factor	2.0																				
	% Moisture	42																				
	Location																					
330	N-Nitrosodiphenylamine																					
330	4-Bromophenyl phenylether																					
330	Hexachlorobenzene																					
1600	Pentachlorophenol																					
330	Phenanthrene	490	J																			
330	Anthracene	96	J																			
330	Di-n-butylphthalate	97	BJ																			
330	Fluoranthene	600	J																			
330	Pyrene	590	J																			
330	Butylbenzylphthalate																					
1600	3,3 Dichlorobenzidine																					
330	Benzo(a)anthracene	400	J																			
330	Chrysene	500	J																			
330	bis(2-Ethylhexyl)phthalate	1100	BJ																			
330	Di-n-octylphthalate																					
330	Benzo(b)fluoranthene	740	J																			
330	Benzo(k)fluoranthene																					
330	Benzo(a)pyrene	450	J																			
330	Indeno(1,2,3-cd)pyrene	320	J																			
330	Dibenz(a,h)anthracene	88	J																			
330	Benzo(g,h,i)perylene	330	J																			

CRQL = Contract Required Quantitation Limit

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DATA SUMMARY FORM: B N A S 3

Site Name: Golden Road

SOIL SAMPLES (ug/Kg)

Case #: 872.001 Sampling Date(s): 6/15/89

To calculate sample quantitation limit: (CRQL * Dilution Factor) / ((100 - % moisture)/10

CROL	COMPOUND																			
	Sample No.	W1		W2		W-3														
	Dilution Factor	2.0		2.0		50.0														
	% Moisture	17		16		ND														
	Location																			
330	N Nitrosodiphenylamine																			
330	4-Bromophenyl phenylether																			
330	Hexachlorobenzene																			
1600	Pentachlorophenol																			
330	Phenanthrene																			
330	Anthracene																			
330	Di-n-butylphthalate																			
330	Fluoranthene																			
330	Pyrene																			
330	Butylbenzylphthalate																			
1600	3,3 Dichlorobenzidine																			
330	Benzo(a)anthracene																			
330	Chrysene																			
330	bis(2-Ethylhexyl)phthalate	240	BJ	260	BJ															
330	Di-n-octylphthalate																			
330	Benzo(b)fluoranthene																			
330	Benzo(k)fluoranthene																			
330	Benzo(a)pyrene																			
330	Indeno(1,2,3-cd)pyrene																			
330	Dibenz(a,h)anthracene																			
330	Benzo(g,h,i)perylene																			

CROL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITION

revised 12/88

DATA SUMMARY FORM: B N A S 3

Site Name: Golden Road Disposal — SOIL SAMPLES (ug/Kg)

Case #: 872.002 Sampling Date(s): Aug 23, 1989

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND																					
	Sample No.	GW-7																				
	Dilution Factor	2.0																				
	% Moisture	11																				
	Location	17-19ft																				
330	N-Nitrosodiphenylamine																					
330	4-Bromophenyl-phenylether																					
330	Hexachlorobenzene																					
1600	Pentachlorophenol																					
330	Phenanthrene																					
330	Anthracene																					
330	Di-n-butylphthalate																					
330	Fluoranthene																					
330	Pyrene																					
330	Butylbenzylphthalate																					
1600	3,3-Dichlorobenzidine																					
330	Benzo(a)anthracene																					
330	Chrysene																					
330	bis(2-Ethylhexyl)phthalate	140	BJ																			
330	Di-n-octylphthalate																					
330	Benzo(b)fluoranthene																					
330	Benzo(k)fluoranthene																					
330	Benzo(a)pyrene																					
330	Indeno(1,2,3-cd)pyrene																					
330	Dibenz(a,h)anthracene																					
330	Benzo(g,h,i)perylene																					

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: B N A S 3

Site Name: Golden Road Disposal Site

Case #: 872.001 **Sampling Date(s):** 6/15/87

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

	Sample No.	S1		S2		S3		S4		S5		S6		S7		S8		S9	
	Dilution Factor	10.0		2.0		2.0		2.0		2.0		2.0		2.0		2.0		2.0	
	% Moisture	11		17		11		21		24		8		16		11		17	
	Location																		
CRQL	COMPOUND																		
330	N-Nitrosodiphenylamine	1000	J	110	J														
330	4-Bromophenyl-phenylether																		
330	Hexachlorobenzene																		
1600	Pentachlorophenol																		
330	Phenanthrene			280	J	310	J	230	J	420	J	75	J	100	J	110	J	80	J
330	Anthracene									69	J								
330	Di-n-butylphthalate	9000		150	J	760		240	J	530	J	83	J			51	J	84	J
330	Fluoranthene	520	J	1300		1200		560	J	750	J			62	J	120	J	57	J
330	Pyrene			1300		1400		420	J	1200				56	J	150	J		
330	Butylbenzylphthalate	500	J	85	J														
1600	3,3-Dichlorobenzidine																		
330	Benzo(a)anthracene			1400		1400		390	J	850	J								
330	Chrysene	1000	J	2600		2200		580	J	1300				49	J	140	J		
330	bis(2-Ethylhexyl)phthalate	6800	B	130	B	2700	B	660	BJ	230	B	320	BJ	340	BJ	310	BJ	350	BJ
330	Di-n-octylphthalate																		
330	Benzo(b)fluoranthene	1200	J	6400	E	5600		1100		2800						200	J		
330	Benzo(k)fluoranthene																		
330	Benzo(a)pyrene			2400		2400		540	J	1300						130	J		
330	Indeno(1,2,3-cd)pyrene	1200	J	3200		2400		540	J	1300						150	J		
330	Dibenz(a,h)anthracene			1200		910		140	J	310	J								
330	Benzo(g,h,i)perylene	1400	J	3000		3100		540	J	1400						170	J		

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: B N A S 3

Site Name: Golden Rod Disposal Site

Case #: 872.001 Sampling Date(s): 6/15/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	Sample No.		Sample No.	
	Dilution Factor	2.0		2.0	
	% Moisture	14		25	
	Location				
330	N-Nitrosodiphenylamine				
330	4-Bromophenyl-phenylether				
330	Hexachlorobenzene				
1600	Pentachlorophenol				
330	Phenanthrene	97	J	52	J
330	Anthracene				
330	Di-n-butylphthalate	150	J		
330	Fluoranthene	59	J		
330	Pyrene	84	J		
330	Butylbenzylphthalate				
1600	3,3-Dichlorobenzidine				
330	Benzo(a)anthracene				
330	Chrysene				
330	bis(2-Ethylhexyl)phthalate	240	BJ	290	BJ
330	Di-n-octylphthalate				
330	Benzo(b)fluoranthene				
330	Benzo(k)fluoranthene				
330	Benzo(a)pyrene				
330	Indeno(1,2,3-cd)pyrene				
330	Dibenz(a,h)anthracene				
330	Benzo(g,h,i)perylene				

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: B N A S 3

Site Name: Golden Rd.

SOIL SAMPLES (ug/Kg)

Case #: 9000.406 Sampling Date(s): 2/8 - 2/9/90

To calculate sample quantitation limit: (CRQL x Dilution Factor) / ((100 - % moisture)/100)

CROL	COMPOUND	GF Sed. Sample No. SW-1		Sed SW-2		Sed SW-3		Sed SW-4		Sed SW-5		Sed SW-6		Sed SW-7		Sed SW-8		Sed SW-9	
	Dilution Factor	1.0		2.0		2.0		1.0		1.0		1.0		4.0		2.0		2.0	
	% Moisture	46		56		50		44		50		53		33		26		62	
	Location																		
330	N-Nitrosodiphenylamine																		
330	4-Bromophenyl phenylether																		
330	Hexachlorobenzene																		
1600	Pentachlorophenol																		
330	Phenanthrene											570	J	1200	J	1500		1300	J
330	Anthracene											120	J	140	J	250	J	250	J
330	Di-n-butylphthalate													99	BJ	180	BJ		
330	Fluoranthene	82	J	100	J							1500		4800		2100		2900	
330	Pyrene	85	J	83	J							1300		5100		2500		2500	
330	Butylbenzylphthalate																		
1600	3,3 Dichlorobenzidine																		
330	Benzo(a)anthracene											630	J	4600		1900		1600	J
330	Chrysene	78	J			78	J					810		7400		3200		2800	
330	bis(2-Ethylhexyl)phthalate	1100	B	1600	B	1700	B	1500	B	1800	B	1800	B	1400	BJ	2000	B	2400	B
330	Di-n-octylphthalate																		
330	Benzo(b)fluoranthene	130	J	92	J	160	J					1200		15,000		5800		3100	
330	Benzo(k)fluoranthene																		
330	Benzo(a)pyrene	68	J			71	J					570	J	6900		3000		1600	J
330	Indeno(1,2,3-cd)pyrene					77	J					360	J	8100		2900		1000	J
330	Dibenz(a,h)anthracene											100	J	2500		970		350	J
330	Benzo(g,h,i)perylene					77	J					300	J	8300		3100		1000	J

CROL = Contract Required Quantitation Limit

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DATA SUMMARY FORM: B N A S 3

Site Name: Golden Road

SOIL SAMPLES (ug/Kg)

Case #: 9000.380 / 9000.406 / 9000.426 GF Sampling Date(s): 2/6/90 / 2/8-2/9/90 / 2/12/90

To calculate sample quantitation limit: (CROL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	Sed SW-10		Sed SW-11		Sed SW-11MS		Sed SW-11MSD		Sed SW-12		Sed SW-13		Sed SW-14		Sed SW-15		
	Dilution Factor	2.0		1.0		1.0		1.0		1.0				1.2		1.0		
	% Moisture	40		8		8		8		52				5.2		4.1		
	Location											NOT Sampled						
330	N-Nitrosodiphenylamine																	
330	4-Bromophenyl phenylether																	
330	Hexachlorobenzene																	
800	Pentachlorophenol																	
330	Phenanthrene	1200		330	J	290	J	200	J									
330	Anthracene	210	J	220	J	65	J	69	J									
330	Di-n-butylphthalate																	
330	Fluoranthene	2500		2600		710		420										
330	Pyrene	2500		3300														
330	Butylbenzylphthalate																	
800	3,3-Dichlorobenzidine																	
330	Benzo(a)anthracene	1400		1200		570		440										
330	Chrysene	2000		1500		840		660										
330	bis(2-Ethylhexyl)phthalate	1600	B	850	B	830	B	860	B	1500	B			1900	B	1100	B	
330	Di-n-octylphthalate																	
330	Benzo(b)fluoranthene	2500		2300		1000		1000										
330	Benzo(k)fluoranthene																	
330	Benzo(a)pyrene	1400		760		530		650										
330	Indeno(1,2,3-cd)pyrene	910	J	540		350	J	390										
330	Dibenz(a,h)anthracene	280	J	140	J	100	J	150	J									
330	Benzo(g,h,i)perylene	790	J	470		300	J	310	J									

CROL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: PESTICIDES AND PCBS

Site Name: Golden Road Disposal site

SOIL SAMPLES (ug/Kg)

Case #: 9000.406 Sampling Date(s): 2/8-2/9/90

To calculate sample quantitation limit: (CROL * Dilution Factor) / ((100 - % moisture)/100)

CROL	COMPOUND	SW-1 sed	SW-2 sed	SW-3 sed	SW-4 sed	SW-5 sed	SW-6 sed	SW-7 sed	SW-8 sed	SW-9 sed
	Sample No.	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8	SW-9
	Dilution Factor	1.0	1.0	1.0	1.0	2.0	2.0	2.0	4.0	2.0
	% Moisture	46	56	50	44	50	53	33	26	62
	Location									
8	alpha BHC									
8	beta-BHC									
8	delta BHC									
8	Gamma BHC (Lindane)									
8	Heptachlor									
8	Aldrin									
8	Heptachlor Epoxide									
8	Endosulfan I									
16	Dieldrin									
16	4,4'-DDE									
16	Endrin									
16	Endosulfan II									
16	4,4'-DDD									
16	Endosulfan Sulfate									
16	4,4'-DDT									
80	Methoxychlor									
16	Endrin ketone									
80	Alpha-Chlordane									
80	Gamma-Chlordane									
160	Toxaphene									
80	Aroclor-1016									
80	Aroclor-1221									
80	Aroclor-1232									
80	Aroclor-1242									
80	Aroclor-1248									
160	Aroclor-1254								610 J	
160	Aroclor-1260									

CROL = Contract Required Quantitation Limit

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DATA SUMMARY FORM: P E S T I C I D E S A N D P C B S

Site Name: Golden Rd

Case #: 9000.426 9000.406 9000.380

Sampling Date(s): 2/6/90 2/8-2/9/90 2/12/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit: (CROL * Dilution Factor) / ((100 - % moisture)/100)

CROL	COMPOUND																					
	Sample No.	SW-10		SW-11		SW-12		SW-13		SW-14		SW-15		SW-16		SW-16MS		SW-16MSD	
	Dilution Factor	2.0		5.0		1.0		—		1.0		1.0		4.0		4		4.0	
	% Moisture	40		8		52		—		65		54		36		36		36	
	Location							NOT SAMPLED											
8	alpha-BHC																		
8	beta-BHC																		
8	delta-BHC																		
8	Gamma-BHC (Lindane)																		
8	Heptachlor																		
8	Aldrin																		
8	Heptachlor Epoxide																		
8	Endosulfan I																		
16	Dieldrin																		
16	4,4'-DDE																		
16	Endrin																		
16	Endosulfan II																		
16	4,4'-DDD																		
16	Endosulfan Sulfate																		
16	4,4'-DDT																		
80	Methoxychlor																		
160	Endrin ketone																		
80	Alpha-Chlordane																		
80	Gamma-Chlordane																		
160	Toxaphene																		
80	Aroclor-1016																		
80	Aroclor-1221																		
80	Aroclor-1232																		
80	Aroclor-1242																		
80	Aroclor-1248																		
160	Aroclor-1254																		
160	Aroclor-1260																		

CROL = Contract Required Quantitation Limit

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DATA SUMMARY FORM: PESTICIDES AND PCBS

Site Name: Golden Rd

SOIL SAMPLES
(ug/Kg)

Case #: 9000.406 Sampling Date(s): 2/8-2/9/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

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	Sed	Sed	Sed	Sed	Sed	Sed	Sed		
Sample No.	SW-17	SW-18	SW-19	SW-20	SW-21	SW-22	SW-23		
Dilution Factor	2.0	4.0	1.0	1.0	1.0	1.0	1.0		
% Moisture	21	34	20	44	28	52	49		
Location									

CRQL	COMPOUND	SW-17	SW-18	SW-19	SW-20	SW-21	SW-22	SW-23		
8	alpha-BHC									
8	beta-BHC									
8	delta-BHC									
8	Gamma-BHC (Lindane)									
8	Heptachlor									
8	Aldrin									
8	Heptachlor Epoxide									
8	Endosulfan I									
16	Dieldrin									
16	4,4'-DDE									
16	Endrin									
16	Endosulfan II									
16	4,4'-DDD									
16	Endosulfan Sulfate									
16	4,4'-DDT									
80	Methoxychlor									
16	Endrin ketone									
80	Alpha-Chlordane									
80	Gamma-Chlordane									
160	Toxaphene									
80	Aroclor-1016									
80	Aroclor-1221									
80	Aroclor-1232									
80	Aroclor-1242									
80	Aroclor-1248									
160	Aroclor-1254									
160	Aroclor-1260									

ecology and environment

CRQL = Contract Required Quantitation Limit

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DATA SUMMARY FORM: PESTICIDES AND PCBS

Site Name: Golden Road Disposale Site

SOIL SAMPLES (ug/Kg)

Case #: 9000.406 Sampling Date(s): 2/8/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND									
	Sample No.	L-2								
	Dilution Factor	1.0								
	% Moisture	42								
	Location									
8	alpha BHC									
8	beta-BHC									
8	delta BHC									
8	Gamma-BHC (Lindane)									
8	Heptachlor									
8	Aldrin									
8	Heptachlor Epoxide									
8	Endosulfan I									
16	Dieldrin									
16	4,4'-DDE									
16	Endrin									
16	Endosulfan II									
16	4,4'-DDD									
16	Endosulfan Sulfate									
16	4,4'-DDT									
80	Methoxychlor									
16	Endrin ketone									
80	Alpha-Chlordane									
80	Gamma-Chlordane									
160	Toxaphene									
80	Aroclor-1016									
80	Aroclor-1221									
80	Aroclor-1232									
80	Aroclor-1242									
80	Aroclor-1248									
160	Aroclor-1254									
160	Aroclor-1260									

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: PESTICIDES AND PCBS

Site Name: Golden Road Disposal site

SOIL SAMPLES (ug/Kg)

Case #: 872-001 Sampling Date(s): 6/15/89

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

	Sample No.	W1	W2	W-3						
	Dilution Factor	1.0	1.0	1.0						
	% Moisture	17	16	ND						
	Location									
CRQL	COMPOUND									
8	alpha-BHC									
8	beta-BHC									
8	delta-BHC									
8	Gamma-BHC (Lindane)									
8	Heptachlor									
8	Aldrin									
8	Heptachlor Epoxide									
8	Endosulfan I									
16	Dieldrin									
16	4,4'-DDE									
16	Endrin									
16	Endosulfan II									
16	4,4'-DDD									
16	Endosulfan Sulfate									
16	4,4'-DDT									
80	Methoxychlor									
16	Endrin ketone									
80	Alpha-Chlordane									
80	Gamma-Chlordane									
160	Toxaphene									
80	Aroclor-1016									
80	Aroclor-1221									
80	Aroclor-1232									
80	Aroclor-1242									
80	Aroclor-1248									
160	Aroclor-1254									
160	Aroclor-1260									

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: PESTICIDES AND PCBS

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date(s): 6/15/87

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

	Sample No.	S1		S2		S3		S4		S5		S6		S7		S8		S9	
	Dilution Factor	10.0		10.0		2.0		1.0		2.0		1.0		1.0		1.0		1.0	
	% Moisture	11		17		11		21		24		8		16		11		18	
	Location																		
CRQL	COMPOUND																		
8	alpha-BHC																		
8	beta-BHC																		
8	delta-BHC																		
8	Gamma-BHC (Lindane)																		
8	Heptachlor																		
8	Aldrin																		
8	Heptachlor Epoxide																		
8	Endosulfan I																		
16	Dieldrin																		
16	4,4'-DDE																		
16	Endrin																		
16	Endosulfan II																		
16	4,4'-DDD																		
16	Endosulfan Sulfate																		
16	4,4'-DDT																		
80	Methoxychlor																		
16	Endrin ketone																		
80	Alpha-Chlordane																		
80	Gamma-Chlordane																		
160	Toxaphene																		
80	Aroclor-1016																		
80	Aroclor-1221																		
80	Aroclor-1232																		
80	Aroclor-1242																		
80	Aroclor-1248																		
160	Aroclor-1254																		
160	Aroclor-1260	810	J	770	J											45	J		

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: PESTICIDES AND PCBS

Site Name: Golden Road Disposal Site

SOIL SAMPLES (ug/Kg)

Case #: JNLK80 Sampling Date(s): 6/15/89

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

	Sample No.	S9MS		S9MSD		S10		S11											
	Dilution Factor	1.0		1.0		1.0		1.0											
	% Moisture	18		18		14		25											
	Location																		
CRQL	COMPOUND																		
8	alpha-BHC																		
8	beta-BHC																		
8	delta-BHC																		
8	Gamma-BHC (Lindane)																		
8	Heptachlor																		
8	Aldrin																		
8	Heptachlor Epoxide																		
8	Endosulfan I																		
16	Dieldrin																		
16	4,4'-DDE																		
16	Endrin																		
16	Endosulfan II																		
16	4,4'-DDD																		
16	Endosulfan Sulfate																		
16	4,4'-DDT																		
80	Methoxychlor																		
16	Endrin ketone																		
80	Alpha-Chlordane																		
80	Gamma-Chlordane																		
160	Toxaphene																		
80	Aroclor-1016																		
80	Aroclor-1221																		
80	Aroclor-1232																		
80	Aroclor-1242																		
80	Aroclor-1248																		
160	Aroclor-1254																		
160	Aroclor-1260																		

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: PESTICIDES AND PCBS

Site Name: Golden Road Disposal Site SOIL SAMPLES (ug/Kg)

Case #: 872.002 Sampling Date(s): Aug 23, 1989

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

	Sample No.	GW7									
	Dilution Factor	17-19ft									
	% Moisture	11									
	Location										
CRQL	COMPOUND										
8	alpha-BHC										
8	beta-BHC										
8	delta-BHC										
8	Gamma-BHC (Lindane)										
8	Heptachlor										
8	Aldrin										
8	Heptachlor Epoxide										
8	Endosulfan I										
16	Dieldrin										
16	4,4'-DDE										
16	Endrin										
16	Endosulfan II										
16	4,4'-DDD										
16	Endosulfan Sulfate										
16	4,4'-DDT										
80	Methoxychlor										
16	Endrin ketone										
80	Alpha-Chlordane										
80	Gamma-Chlordane										
160	Toxaphene										
80	Aroclor-1016										
80	Aroclor-1221										
80	Aroclor-1232										
80	Aroclor-1242										
80	Aroclor-1248										
160	Aroclor-1254										
160	Aroclor-1260										

... limit

SEE NARRATIVE FOR CODE DEFINITIONS

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE N: S1

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-4020 SDG No.: L-1

Matrix (soil/water): SOIL Lab Sample ID: 41569

Level (low/med): LOW Date Received: 6/16/89

% Solids: 88.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	1060		*	P	
7440-36-0	Antimony	13.5	U	N	P	
7440-38-2	Arsenic	2.0		*	F	
7440-39-3	Barium	109			P	
7440-41-7	Beryllium	0.45	U		P	
7440-43-9	Cadmium	1.1	U		P	
7440-70-2	Calcium	578	B		P	
7440-47-3	Chromium	85.8		*	P	
7440-48-4	Cobalt	2.3	U		P	
7440-50-8	Copper	40.8		*N	P	
7439-89-6	Iron	9500		*	P	
7439-92-1	Lead	13.4		N*	F	
7439-95-4	Magnesium	295	B		P	
7439-96-5	Manganese	45.8		N	P	
7439-97-6	Mercury	0.11	U		CV	
7440-02-0	Nickel	123		*	P	
7440-09-7	Potassium	74.8	B		P	
7782-49-2	Selenium	1.1	U	WN	F	
7440-22-4	Silver	2.3	U		P	
7440-23-5	Sodium	36.8	B		P	
7440-28-0	Thallium	1.1	U		F	
7440-62-2	Vanadium	4.3	B		P	
7440-66-6	Zinc	36.4			P	
	Cyanide	1.1	U		C	

4/9/25/89

Color Before: _____ Clarity Before: _____ Texture: Homoge

Color After: _____ Clarity After: _____ Artifacts: ___

Comments:

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO: S2

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-4020 SDG No.: L-1

Matrix (soil/water): SOIL Lab Sample ID: 41570

Level (low/med): LOW Date Received: 6/16/89

% Solids: 83.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	918		*	P
7440-36-0	Antimony	14.4	U	N	P
7440-38-2	Arsenic	1.3		*	F
7440-39-3	Barium	64.3			P
7440-41-7	Beryllium	0.48	U		P
7440-43-9	Cadmium	1.2	U		P
7440-70-2	Calcium	1280			P
7440-47-3	Chromium	360		*	P
7440-48-4	Cobalt	2.7	B		P
7440-50-8	Copper	45.0		* N	P
7439-89-6	Iron	10900		*	P
7439-92-1	Lead	121		N *	
7439-95-4	Magnesium	252	B		P
7439-96-5	Manganese	77.4		N	P
7439-97-6	Mercury	0.12	U		CV
7440-02-0	Nickel	261		*	P
7440-09-7	Potassium	73.9	B		P
7782-49-2	Selenium	1.2	U	W N	F
7440-22-4	Silver	2.4	U		P
7440-23-5	Sodium	77.7	B		P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	2.8	B		P
7440-66-6	Zinc	73.1			P
	Cyanide	5.3			C

4/19/25/89

Color Before: _____ Clarity Before: _____ Texture: Homogen

Color After: _____ Clarity After: _____ Artifacts: ___

Comments:

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE N: S3

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-4020 SDG No.: L-1

Matrix (soil/water): SOIL Lab Sample ID: 41571

Level (low/med): LOW Date Received: 6/16/89

% Solids: 89.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1700		*	P
7440-36-0	Antimony	13.4	U	N	P
7440-38-2	Arsenic	1.2		*	F
7440-39-3	Barium	89.7			P
7440-41-7	Beryllium	0.45	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	2420			P
7440-47-3	Chromium	104		*	P
7440-48-4	Cobalt	2.4	B		P
7440-50-8	Copper	31.6		*N	P
7439-89-6	Iron	11500		*	P
7439-92-1	Lead	17.9		N*	F
7439-95-4	Magnesium	1150			P
7439-96-5	Manganese	120		N	P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	309		*	P
7440-09-7	Potassium	166	B		P
7782-49-2	Selenium	1.1	U	WN	F
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	68.0	B		P
7440-28-0	Thallium	1.1	U	W	F
7440-62-2	Vanadium	5.0	B		P
7440-66-6	Zinc	33.9			P
	Cyanide	1.1	U		C

9/25/89

Color Before: _____ Clarity Before: _____ Texture: Homogen

Color After: _____ Clarity After: _____ Artifacts: ___

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE N

S4

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-4020 SDG No.: L-1

Matrix (soil/water): SOIL Lab Sample ID: 41572

Level (low/med): LOW Date Received: 6/16/89

% Solids: 78.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q M	M P	6/19/25/89
7429-90-5	Aluminum	3220		*	P	
7440-36-0	Antimony	15.2	U	N	P	
7440-38-2	Arsenic	2.7		*	F	
7440-39-3	Barium	59.7			P	
7440-41-7	Beryllium	0.51	U		P	
7440-43-9	Cadmium	1.3	U		P	
7440-70-2	Calcium	22700			P	
7440-47-3	Chromium	69.6		*	P	
7440-48-4	Cobalt	5.1	B		P	
7440-50-8	Copper	37.6		*N	P	
7439-89-6	Iron	20100		*	P	
7439-92-1	Lead	91.5		N*		
7439-95-4	Magnesium	8430			P	
7439-96-5	Manganese	357		N	P	
7439-97-6	Mercury	0.13	U		CV	
7440-02-0	Nickel	92.2		*	P	
7440-09-7	Potassium	479	B		P	
7782-49-2	Selenium	1.3	U	W N	F	
7440-22-4	Silver	2.5	U		P	
7440-23-5	Sodium	84.3	B		P	
7440-28-0	Thallium	1.3	U		F	
7440-62-2	Vanadium	9.2	B		P	
7440-66-6	Zinc	68.8			P	
	Cyanide	1.3	U		C	

Color Before: _____ Clarity Before: _____ Texture: Homogen

Color After: _____ Clarity After: _____ Artifacts: ___

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO: 55

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-4020 SDG No.: L-1

Matrix (soil/water): SOIL Lab Sample ID: 41573

Level (low/med): LOW Date Received: 6/16/89

% Solids: 75.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q M	M P	9/25/89
7429-90-5	Aluminum	3290		*	P	
7440-36-0	Antimony	15.8	U	N	P	
7440-38-2	Arsenic	2.8		*	F	
7440-39-3	Barium	86.8			P	
7440-41-7	Beryllium	0.53			P	
7440-43-9	Cadmium	1.3	U		P	
7440-70-2	Calcium	19700			P	
7440-47-3	Chromium	83.3		*	P	
7440-48-4	Cobalt	4.9	B		P	
7440-50-8	Copper	42.0		* N	P	
7439-89-6	Iron	21400		*	P	
7439-92-1	Lead	64.7		N *	F	
7439-95-4	Magnesium	8230			P	
7439-96-5	Manganese	323		N	P	
7439-97-6	Mercury	0.13	U		CV	
7440-02-0	Nickel	158		*	P	
7440-09-7	Potassium	489	B		P	
7782-49-2	Selenium	1.3	U	W N	F	
7440-22-4	Silver	2.6	U		P	
7440-23-5	Sodium	76.2	B		P	
7440-28-0	Thallium	1.3	U	W	F	
7440-62-2	Vanadium	10.0	B		P	
7440-66-6	Zinc	87.9			P	
	Cyanide	1.3	U		C	

Color Before: _____ Clarity Before: _____ Texture: Homog.

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO: S6

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-402D SDG No.: L-1

Matrix (soil/water): SOIL Lab Sample ID: 41574

Level (low/med): LOW Date Received: 6/16/89

% Solids: 92.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	575		*	P
7440-36-0	Antimony	13.0	U	N	P
7440-38-2	Arsenic	1.7		*	F
7440-39-3	Barium	32.3	B		P
7440-41-7	Beryllium	0.43	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	374	B		P
7440-47-3	Chromium	236		*	P
7440-48-4	Cobalt	2.9	B		P
7440-50-8	Copper	33.8		*N	P
7439-89-6	Iron	12400		*	P
7439-92-1	Lead	6.7		N*	F
7439-95-4	Magnesium	243	B		P
7439-96-5	Manganese	90.6		N	P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	312		*	P
7440-09-7	Potassium	86.5	U		P
7782-49-2	Selenium	1.1	U	WN	F
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	43.2	U		P
7440-28-0	Thallium	1.1	U		F
7440-62-2	Vanadium	5.1	B		P
7440-66-6	Zinc	14.3			P
	Cyanide	1.1	U		C

6/19/25/89

Color Before: _____ Clarity Before: _____ Texture: Homog

Color After: _____ Clarity After: _____ Artifacts: ___

Comments:

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE N: S7

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-4020 SDG No.: L-1

Matrix (soil/water): SOIL Lab Sample ID: 41575

Level (low/med): LOW Date Received: 6/16/89

% Solids: 83.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2300		*	P
7440-36-0	Antimony	14.3	U	N	P
7440-38-2	Arsenic	18.7		*	F
7440-39-3	Barium	102			P
7440-41-7	Beryllium	0.48	U		P
7440-43-9	Cadmium	1.2	U		P
7440-70-2	Calcium	2850			P
7440-47-3	Chromium	83.4		*	P
7440-48-4	Cobalt	3.3	B		P
7440-50-8	Copper	41.4		* N	P
7439-89-6	Iron	10100		*	P
7439-92-1	Lead	17.1		N *	F
7439-95-4	Magnesium	737	B		P
7439-96-5	Manganese	85.0		N	P
7439-97-6	Mercury	0.12	U		CV
7440-02-0	Nickel	96.0		*	P
7440-09-7	Potassium	198	B		P
7782-49-2	Selenium	1.2	U	W N	F
7440-22-4	Silver	2.4	U		P
7440-23-5	Sodium	83.2	B		P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	41.9			P
7440-66-6	Zinc	345			P
	Cyanide	1.2	U		C

4/9/25/89

Color Before: _____ Clarity Before: _____ Texture: Homo

Color After: _____ Clarity After: _____ Artifacts: ___

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE N: 58

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-402D SDG No.: L-1

Matrix (soil/water): SOIL Lab Sample ID: 41576

Level (low/med): LOW Date Received: 6/16/89

% Solids: 89.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q M	M P	6/19/25/89
7429-90-5	Aluminum	1150		*	P	
7440-36-0	Antimony	13.4	U	N	P	
7440-38-2	Arsenic	3.9		*	F	
7440-39-3	Barium	83.4			P	
7440-41-7	Beryllium	0.45	U		P	
7440-43-9	Cadmium	1.1	U		P	
7440-70-2	Calcium	756	B		P	
7440-47-3	Chromium	27.9		*	P	
7440-48-4	Cobalt	2.2	U		P	
7440-50-8	Copper	19.7		*N	P	
7439-89-6	Iron	4970		*	P	
7439-92-1	Lead	10.1		N*	F	
7439-95-4	Magnesium	694	B		P	
7439-96-5	Manganese	44.8		N	P	
7439-97-6	Mercury	0.11	U		CV	
7440-02-0	Nickel	43.8		*	P	
7440-09-7	Potassium	89.6	U		P	
7782-49-2	Selenium	1.1	U	N	F	
7440-22-4	Silver	2.2	U		P	
7440-23-5	Sodium	64.3	B		P	
7440-28-0	Thallium	1.1	U		F	
7440-62-2	Vanadium	4.3	B		P	
7440-66-6	Zinc	25.3			P	
	Cyanide	1.1	U		C	

Color Before: _____ Clarity Before: _____ Texture: Homog

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO: 59

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-4020 SDG No.: L-1

Matrix (soil/water): SOIL Lab Sample ID: 41577

Level (low/med): LOW Date Received: 6/16/89

% Solids: 82.8

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q M	M Q	9/25/89
7429-90-5	Aluminum	1060		*	P	
7440-36-0	Antimony	14.5	U	N	P	
7440-38-2	Arsenic	8.2		*	F	
7440-39-3	Barium	63.1			P	
7440-41-7	Beryllium	0.48	U		P	
7440-43-9	Cadmium	1.2	U		P	
7440-70-2	Calcium	912	B		P	
7440-47-3	Chromium	124		*	P	
7440-48-4	Cobalt	3.5	B		P	
7440-50-8	Copper	21.2		* N	P	
7439-89-6	Iron	7480		*	P	
7439-92-1	Lead	9.6		N *	F	
7439-95-4	Magnesium	300	B		P	
7439-96-5	Manganese	80.7		N	P	
7439-97-6	Mercury	0.12	U		CV	
7440-02-0	Nickel	101		*	P	
7440-09-7	Potassium	96.6	U		P	
7782-49-2	Selenium	1.2	U	W N	F	
7440-22-4	Silver	2.4	U		P	
7440-23-5	Sodium	48.3	U		P	
7440-28-0	Thallium	1.2	U		F	
7440-62-2	Vanadium	13.4			P	
7440-66-6	Zinc	17.8			P	
	Cyanide	1.2	U		C	

Color Before: _____ Clarity Before: _____ Texture: Homoc

Color After: _____ Clarity After: _____ Artifacts: ___

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE N: S10

Lab Name: ECOLOGY & ENVIRONMENT INC. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-4020 SDG No.: L-1

Matrix (soil/water): SOIL Lab Sample ID: 41578

Level (low/med): LOW Date Received: 6/16/89

% Solids: 85.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

4th 9/25/89

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1280		*	P
7440-36-0	Antimony	14.0	U	N	P
7440-38-2	Arsenic	4.3		*	F
7440-39-3	Barium	70.0			P
7440-41-7	Beryllium	0.47	U		P
7440-43-9	Cadmium	1.2	U		P
7440-70-2	Calcium	7950			P
7440-47-3	Chromium	139		*	P
7440-48-4	Cobalt	3.2			P
7440-50-8	Copper	18.4		*N	P
7439-89-6	Iron	7940		*	P
7439-92-1	Lead	7.7		N*	F
7439-95-4	Magnesium	3980			P
7439-96-5	Manganese	76.7		N	P
7439-97-6	Mercury	0.12	U		CV
7440-02-0	Nickel	130		*	P
7440-09-7	Potassium	117	B		P
7782-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	2.4	U		P
7440-23-5	Sodium	52.7	B		P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	7.4	B		P
7440-66-6	Zinc	19.7			P
_____	Cyanide	1.2	U		C

Color Before: _____ Clarity Before: _____ Texture: HOMOGE

Color After: _____ Clarity After: _____ Artifacts: ___

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO: S11

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-4020 SDG No.: L-1

Matrix (soil/water): SOIL Lab Sample ID: 41579

Level (low/med): LOW Date Received: 6/16/89

% Solids: 75.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2720		*	P
7440-36-0	Antimony	16.0	U	N	P
7440-38-2	Arsenic	12.2		*	F
7440-39-3	Barium	78.5			P
7440-41-7	Beryllium	0.53	U		P
7440-43-9	Cadmium	1.3	U		P
7440-70-2	Calcium	3030			P
7440-47-3	Chromium	46.6		*	P
7440-48-4	Cobalt	4.4	B		P
7440-50-8	Copper	13.7		*N	P
7439-89-6	Iron	10300		*	P
7439-92-1	Lead	9.3		N *	F
7439-95-4	Magnesium	237	B		P
7439-96-5	Manganese	42.6		N	P
7439-97-6	Mercury	0.13	U		CV
7440-02-0	Nickel	52.4		*	P
7440-09-7	Potassium	212	B		P
7782-49-2	Selenium	1.3	U	N	F
7440-22-4	Silver	2.6	U		P
7440-23-5	Sodium	101	B		P
7440-28-0	Thallium	1.3	U	W	F
7440-62-2	Vanadium	13.4			P
7440-66-6	Zinc	14.9			P
_____	Cyanide	1.3	U		C

Color Before: _____ Clarity Before: _____ Texture: Hmdoom

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

Sed SW-1

Lab Name: ECOLOGY AND ENVIROMENT, INC. Contract: _____ GP

Lab Code: EANDE Case No.: 9000.406 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): SOIL Lab Sample ID: 65785

Level (low/med): LOW Date Received: 02/10/90

% Solids: 53.8

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5770			P
7440-36-0	Antimony	22.3	U		P
7440-38-2	Arsenic	5.3	B		F
7440-39-3	Barium	80.2			P
7440-41-7	Beryllium	0.74	U		P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	17400			P
7440-47-3	Chromium	7.6			P
7440-48-4	Cobalt	3.7	U		P
7440-50-8	Copper	20.1			P
7439-89-6	Iron	9150			P
7439-92-1	Lead	26.4			F
7439-95-4	Magnesium	2820			P
7439-96-5	Manganese	154			P
7439-97-6	Mercury	0.18	U		CV
7440-02-0	Nickel	24.3			P
7440-09-7	Potassium	266	B		P
7782-49-2	Selenium	1.2	B	W	F
7440-22-4	Silver	3.7	U		P
7440-23-5	Sodium	333	B		P
7440-28-0	Thallium	1.1	U	W	F
7440-62-2	Vanadium	11.7	B		P
7440-66-6	Zinc	147			P
	Cyanide	1.8	U		C

Color Before: _____ Clarity Before: _____ Texture: HOMOGENEOUS

Color After: _____ Clarity After: _____ Artifacts: YES

Comments: ROOTS

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO. sed SW-2

Lab Name: ECOLOGY AND ENVIROMENT, INC. Contract: _____ GF

Lab Code: EANDE Case No.: 9000.406 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): SOIL Lab Sample ID: 65786

Level (low/med): LOW Date Received: 02/10/90

% Solids: 44.1

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4830			P
7440-36-0	Antimony	27.2	U		P
7440-38-2	Arsenic	2.4	B		F
7440-39-3	Barium	77.2	B		P
7440-41-7	Beryllium	0.91	U		P
7440-43-9	Cadmium	2.3	U		P
7440-70-2	Calcium	20400			P
7440-47-3	Chromium	5.9			P
7440-48-4	Cobalt	4.5	U		P
7440-50-8	Copper	23.8			P
7439-89-6	Iron	7460			P
7439-92-1	Lead	56.2			F
7439-95-4	Magnesium	2170	B		P
7439-96-5	Manganese	111			P
7439-97-6	Mercury	0.23	U		CV
7440-02-0	Nickel	16.0	B		P
7440-09-7	Potassium	277	B		P
7782-49-2	Selenium	1.2	B	W	F
7440-22-4	Silver	4.5	U		P
7440-23-5	Sodium	1300	B		P
7440-28-0	Thallium	0.91	U	W	F
7440-62-2	Vanadium	16.1	B		P
7440-66-6	Zinc	178			P
	Cyanide	2.9			C

Color Before: _____ Clarity Before: _____ Texture: HOMOGENEOUS

Color After: _____ Clarity After: _____ Artifacts: YES

Comments: ROOTS

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

Sed SW-3

ab Name: ECOLOGY AND ENVIROMENT, INC. Contract: _____ GF

ab Code: EANDE Case No.: 9000.406 SAS No.: YN-4020 SDG No.: _____

atrix (soil/water): SOIL Lab Sample ID: 65787

evel (low/med): LOW Date Received: 02/10/90

Solids: 49.5

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4490			P
7440-36-0	Antimony	24.2	U		P
7440-38-2	Arsenic	3.0	B		F
7440-39-3	Barium	80.1	B		P
7440-41-7	Beryllium	0.81	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	15600			P
7440-47-3	Chromium	14.7			P
7440-48-4	Cobalt	4.0	U		P
7440-50-8	Copper	28.4			P
7439-89-6	Iron	9640			P
7439-92-1	Lead	25.5			F
7439-95-4	Magnesium	2130			P
7439-96-5	Manganese	221			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	28.8			P
7440-09-7	Potassium	330	B		P
7782-49-2	Selenium	1.2	B	W	F
7440-22-4	Silver	4.0	U		P
7440-23-5	Sodium	540	B		P
7440-28-0	Thallium	0.81	U	W	F
7440-62-2	Vanadium	18.2	B		P
7440-66-6	Zinc	168			P
	Cyanide	2.0	U		C

olor Before: _____ Clarity Before: _____ Texture: HOMOGENEOUS

olor After: _____ Clarity After: _____ Artifacts: YES

omments: ROOTS

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

Sed SW-4

ab Name: ECOLOGY AND ENVIROMENT, INC. Contract: _____ GF

ab Code: EANDE Case No.: 9000.406 SAS No.: YN-4020 SDG No.: _____

atrix (soil/water): SOIL Lab Sample ID: 65788

evel (low/med): LOW Date Received: 02/10/90

Solids: 56.4

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3430			P
7440-36-0	Antimony	21.3	U		P
7440-38-2	Arsenic	1.8	U		F
7440-39-3	Barium	46.6	B		P
7440-41-7	Beryllium	0.71	U		P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	16100			P
7440-47-3	Chromium	5.0			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	20.3			P
7439-89-6	Iron	6760			P
7439-92-1	Lead	92.6			F
7439-95-4	Magnesium	2660			P
7439-96-5	Manganese	116			P
7439-97-6	Mercury	0.18	U		CV
7440-02-0	Nickel	14.0	B		P
7440-09-7	Potassium	264	B		P
7782-49-2	Selenium	0.67	B	W	F
7440-22-4	Silver	3.5	U		P
7440-23-5	Sodium	1160	B		P
7440-28-0	Thallium	1.4	U		F
7440-62-2	Vanadium	9.9	B		P
7440-66-6	Zinc	163			P
	Cyanide	1.8	U		C

Color Before: _____ Clarity Before: _____ Texture: HOMOGENEOUS

Color After: _____ Clarity After: _____ Artifacts: YES

Comments:

ROOTS

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

Sed SW-5

Lab Name: ECOLOGY AND ENVIROMENT, INC. Contract: _____ GF

Lab Code: EANDE Case No.: 9000.406 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): SOIL Lab Sample ID: 65789

Level (low/med): LOW Date Received: 02/10/90

Solids: 50.2

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2000			P
7440-36-0	Antimony	23.9	U		P
7440-38-2	Arsenic	2.9	B		F
7440-39-3	Barium	48.4	B		P
7440-41-7	Beryllium	0.80	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	15100			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	4.0	U		P
7440-50-8	Copper	14.9			P
7439-89-6	Iron	6140			P
7439-92-1	Lead	35.8			F
7439-95-4	Magnesium	1520	B		P
7439-96-5	Manganese	103			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.6	B		P
7440-09-7	Potassium	250	B		P
7782-49-2	Selenium	0.80	B	W	F
7440-22-4	Silver	4.0	U		P
7440-23-5	Sodium	504	B		P
7440-28-0	Thallium	0.80	U		F
7440-62-2	Vanadium	5.8	B		P
7440-66-6	Zinc	82.3			P
	Cyanide	2.0	U		C

Color Before: _____ Clarity Before: _____ Texture: HOMOGENEOUS

Color After: _____ Clarity After: _____ Artifacts: YES

Comments: ROOTS

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

Sed SW-6

Lab Name: ECOLOGY AND ENVIROMENT, INC. Contract: _____

Lab Code: EANDE Case No.: 9000.406 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): SOIL Lab Sample ID: 65790

Level (low/med): LOW Date Received: 02/10/90

% Solids: 47.4

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2000			P
7440-36-0	Antimony	25.3	U		P
7440-38-2	Arsenic	9.4			F
7440-39-3	Barium	46.2	B		P
7440-41-7	Beryllium	0.84	U		P
7440-43-9	Cadmium	2.1	U		P
7440-70-2	Calcium	6140			P
7440-47-3	Chromium	4.2	U		P
7440-48-4	Cobalt	4.2	U		P
7440-50-8	Copper	58.2			P
7439-89-6	Iron	13700			P
7439-92-1	Lead	27.2			F
7439-95-4	Magnesium	916	B		P
7439-96-5	Manganese	99.2			P
7439-97-6	Mercury	0.21	U		CV
7440-02-0	Nickel	12.0	B		P
7440-09-7	Potassium	258	B		P
7782-49-2	Selenium	0.42	U	W	F
7440-22-4	Silver	4.2	U		P
7440-23-5	Sodium	329	B		P
7440-28-0	Thallium	0.84	U		F
7440-62-2	Vanadium	4.2	U		P
7440-66-6	Zinc	93.4			P
	Cyanide	2.1	U		C

Color Before: _____ Clarity Before: _____ Texture: HOMOGENEOUS

Color After: _____ Clarity After: _____ Artifacts: YES

Comments:

ROOTS

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SED SW-7

ab Name: ECOLOGY AND ENVIROMENT, INC. Contract: _____

ab Code: EANDE Case No.: 9000.406 SAS No.: YN-4020 SDG No.: _____

atrix (soil/water): SOIL Lab Sample ID: 65791

evel (low/med): LOW Date Received: 02/10/90

Solids: 67.0

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2660			P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.8	B		F
7440-39-3	Barium	91.0			P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	1460	B		P
7440-47-3	Chromium	417			P
7440-48-4	Cobalt	4.8	B		P
7440-50-8	Copper	106.2			P
7439-89-6	Iron	16200			P
7439-92-1	Lead	10.7			E
7439-95-4	Magnesium	664	B		P
7439-96-5	Manganese	103			P
7439-97-6	Mercury	0.15	U		CV
7440-02-0	Nickel	425			P
7440-09-7	Potassium	119	U		P
7782-49-2	Selenium	2.5	B	S	F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	205	B		P
7440-28-0	Thallium	0.60	U		F
7440-62-2	Vanadium	7.6	B		P
7440-66-6	Zinc	39.8			P
	Cyanide	1.5	U		C

Color Before: _____ Clarity Before: _____ Texture: HOMOGENEOUS

Color After: _____ Clarity After: _____ Artifacts: YES

Comments:

ROOTS

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SEC SW-8

Lab Name: ECOLOGY AND ENVIROMENT, INC. Contract: _____

Lab Code: EANDE Case No.: 9000.406 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): SOIL Lab Sample ID: 65792

Level (low/med): LOW Date Received: 02/10/90

Solids: 74.2

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q ~~M~~	M ~~Q~~
7429-90-5	Aluminum	6630			P
7440-36-0	Antimony	16.2	U		P
7440-38-2	Arsenic	2.4	B		F
7440-39-3	Barium	120			P
7440-41-7	Beryllium	0.54	U		P
7440-43-9	Cadmium	1.8			P
7440-70-2	Calcium	4450			P
7440-47-3	Chromium	1640			P
7440-48-4	Cobalt	5.4	B		P
7440-50-8	Copper	37.4			P
7439-89-6	Iron	20200			P
7439-92-1	Lead	16.4			F
7439-95-4	Magnesium	2380			P
7439-96-5	Manganese	569			P
7439-97-6	Mercury	0.23			CV
7440-02-0	Nickel	1170			P
7440-09-7	Potassium	358	B		P
7782-49-2	Selenium	0.35	B	W	F
7440-22-4	Silver	2.7	U		P
7440-23-5	Sodium	266	B		P
7440-28-0	Thallium	0.54	U		F
7440-62-2	Vanadium	10.5	B		P
7440-66-6	Zinc	58.1			P
	Cyanide	1.3	U		C

Color Before: _____ Clarity Before: _____ Texture: HOMOGENEOUS

Color After: _____ Clarity After: _____ Artifacts: YES

Comments:

ROOTS

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SW-9

ab Name: ECOLOGY AND ENVIROMENT, INC. Contract: _____

ab Code: EANDE Case No.: 9000.406 SAS No.: YN-4020 SDG No.: _____

atrix (soil/water): SOIL Lab Sample ID: 65793

evel (low/med): LOW Date Received: 02/10/90

Solids: 38.0

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3590			P
7440-36-0	Antimony	31.6	U		P
7440-38-2	Arsenic	11.7			F
7440-39-3	Barium	69.6	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.6	U		P
7440-70-2	Calcium	6090			P
7440-47-3	Chromium	34.6			P
7440-48-4	Cobalt	5.3	W		P
7440-50-8	Copper	85.1			P
7439-89-6	Iron	20000			P
7439-92-1	Lead	135			P
7439-95-4	Magnesium	1140	B		P
7439-96-5	Manganese	115			P
7439-97-6	Mercury	0.26	U		CV
7440-02-0	Nickel	88.4			P
7440-09-7	Potassium	287	B		P
7782-49-2	Selenium	1.0	B	W	F
7440-22-4	Silver	5.3	U		P
7440-23-5	Sodium	338	B		P
7440-28-0	Thallium	1.1	U		F
7440-62-2	Vanadium	11.3	B		P
7440-66-6	Zinc	235			P
	Cyanide	2.6	U		C

Color Before: _____ Clarity Before: _____ Texture: HOMOGENEOUS

Color After: _____ Clarity After: _____ Artifacts: YES

Comments:

ROOTS

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SED SW-10

ab Name: ECOLOGY AND ENVIROMENT, INC. Contract: _____

ab Code: EANDE Case No.: 9000.406 SAS No.: YN-4020 SDG No.: _____

atrix (soil/water): SOIL Lab Sample ID: 65794

evel (low/med): LOW Date Received: 02/10/90

Solids: 60.5

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4420			P
7440-36-0	Antimony	19.8	U		P
7440-38-2	Arsenic	6.6			F
7440-39-3	Barium	60.8	B		P
7440-41-7	Beryllium	0.66	U		P
7440-43-9	Cadmium	2.3			P
7440-70-2	Calcium	10400			P
7440-47-3	Chromium	10.1			P
7440-48-4	Cobalt	3.3	U		P
7440-50-8	Copper	63.2			P
7439-89-6	Iron	16400			P
7439-92-1	Lead	49.6			F
7439-95-4	Magnesium	2200			P
7439-96-5	Manganese	142			P
7439-97-6	Mercury	0.16	U		CV
7440-02-0	Nickel	20.5			P
7440-09-7	Potassium	419	B		P
7782-49-2	Selenium	0.60	B	W	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	244	B		P
7440-28-0	Thallium	0.66	U		F
7440-62-2	Vanadium	9.5	B		P
7440-66-6	Zinc	110			P
	Cyanide	1.6	U		C

olor Before: _____ Clarity Before: _____ Texture: HOMOGENEOUS

olor After: _____ Clarity After: _____ Artifacts: YES

omments:

Roots

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SED SW-11

Lab Name: ECOLOGY AND ENVIROMENT, INC Contract: _____

Lab Code: EANDE Case No.: 9000.426 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): SOIL Lab Sample ID: 66071

Level (low/med): LOW Date Received: 02/13/90

% Solids: 92.5

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2900			P
7440-36-0	Antimony	13.0	U		P
7440-38-2	Arsenic	2.1	B		F
7440-39-3	Barium	22.8	B		P
7440-41-7	Beryllium	0.43	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	87900			P
7440-47-3	Chromium	9.4			P
7440-48-4	Cobalt	2.2	U		P
7440-50-8	Copper	13.6			P
7439-89-6	Iron	12300			P
7439-92-1	Lead	16.9			F
7439-95-4	Magnesium	3380			P
7439-96-5	Manganese	236			P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	8.2	B		P
7440-09-7	Potassium	432	B		P
7782-49-2	Selenium	0.22	U	W	F
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	234	B		P
7440-28-0	Thallium	0.43	U		F
7440-62-2	Vanadium	8.2	B		P
7440-66-6	Zinc	338			P
	Cyanide	1.1	U		C

Color Before: _____ Clarity Before: _____ Texture: HOMOGENEOU

Color After: _____ Clarity After: _____ Artifacts: YES

Comments: ROOTS

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.
320
SW-12

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): Soil Lab Sample ID: 65327

Level (low/med): Low Date Received: 2/8/90

% Solids: 482

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10100			P
7440-36-0	Antimony	22.8	U		P
7440-38-2	Arsenic	2.1			F
7440-39-3	Barium	108			P
7440-41-7	Beryllium	0.83	U		P
7440-43-9	Cadmium	2.1	U		P
7440-70-2	Calcium	6830			P
7440-47-3	Chromium	12.1			P
7440-48-4	Cobalt	4.1	U		P
7440-50-8	Copper	17.6			P
7439-89-6	Iron	10600		*	P
7439-92-1	Lead	27.8			F
7439-95-4	Magnesium	3130			P
7439-96-5	Manganese	103			P
7439-97-6	Mercury	0.21	U		CV
7440-02-0	Nickel	12.2	B		P
7440-09-7	Potassium	1010	B		P
7782-49-2	Selenium	0.41	U	W	F
7440-22-4	Silver	4.1	U		P
7440-23-5	Sodium	153	B		P
7440-28-0	Thallium	0.83	U		F
7440-62-2	Vanadium	17.8	B		P
7440-66-6	Zinc	102		*	P
	Cyanide	2.1	U		C

Color Before: _____ Clarity Before: _____ Texture: Homogenous

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SB0 SW-14 GF

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): Soil Lab Sample ID: 65328

Level (low/med): LOW Date Received: 2/8/90

% Solids: 34.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1650			P
7440-36-0	Antimony	31.9	U		P
7440-38-2	Arsenic	4.2			F
7440-39-3	Barium	29.6	B		P
7440-41-7	Beryllium	1.2	U		P
7440-43-9	Cadmium	2.9	U		P
7440-70-2	Calcium	12100			P
7440-47-3	Chromium	5.8	U		P
7440-48-4	Cobalt	5.8	U		P
7440-50-8	Copper	17.7			P
7439-89-6	Iron	7760		*	P
7439-92-1	Lead	48.1			F
7439-95-4	Magnesium	1690			P
7439-96-5	Manganese	41.0			P
7439-97-6	Mercury	0.29	U		CV
7440-02-0	Nickel	8.7	U		P
7440-09-7	Potassium	485			P
7782-49-2	Selenium	0.58	U	W	F
7440-22-4	Silver	5.8	U		P
7440-23-5	Sodium	638	B		P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	5.8	U		P
7440-66-6	Zinc	173		*	P
	Cyanide	2.9	U		C

Color Before: _____ Clarity Before: _____ Texture: Homogeneous

Color After: _____ Clarity After: _____ Artifacts: YES

Comments: Roots

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SED
SW-15
GF

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): SOIL Lab Sample ID: 65329

Level (low/med): LOW Date Received: 2/8/90

% Solids: 45.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7370			P
7440-36-0	Antimony	24.1	U		P
7440-38-2	Arsenic	2.8			F
7440-39-3	Barium	75.2	B		P
7440-41-7	Beryllium	0.88	U		P
7440-43-9	Cadmium	2.2	U		P
7440-70-2	Calcium	13400			P
7440-47-3	Chromium	9.6			P
7440-48-4	Cobalt	4.4	U		P
7440-50-8	Copper	26.1			P
7439-89-6	Iron	10900		*	P
7439-92-1	Lead	52.6			F
7439-95-4	Magnesium	2610			P
7439-96-5	Manganese	283			P
7439-97-6	Mercury	0.22	U		CV
7440-02-0	Nickel	10.5	B		P
7440-09-7	Potassium	455	B		P
7782-49-2	Selenium	2.6		S	F
7440-22-4	Silver	4.4	U		P
7440-23-5	Sodium	346	B		P
7440-28-0	Thallium	0.88	U		F
7440-62-2	Vanadium	16.0	B		P
7440-66-6	Zinc	357		*	P
_____	Cyanide	2.2	U		C

Color Before: _____ Clarity Before: _____ Texture: HOMOGENE

Color After: _____ Clarity After: _____ Artifacts: Yes

Comments: ROOTS

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO: W1

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-4020 SDG No.: L-1

Matrix (soil/water): SOIL Lab Sample ID: 41580

Level (low/med): LOW Date Received: 6/16/89

% Solids: 83.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3200		*	P
7440-36-0	Antimony	14.4	U	N	P
7440-38-2	Arsenic	24.8		*	F
7440-39-3	Barium	145			P
7440-41-7	Beryllium	0.48	U		P
7440-43-9	Cadmium	1.2	U		P
7440-70-2	Calcium	2760			P
7440-47-3	Chromium	5.3		*	P
7440-48-4	Cobalt	3.6	B		P
7440-50-8	Copper	12.2		*N	P
7439-89-6	Iron	18000		*	P
7439-92-1	Lead	14.3		+N*	F
7439-95-4	Magnesium	250	B		P
7439-96-5	Manganese	23.0		N	P
7439-97-6	Mercury	0.12	U		CV
7440-02-0	Nickel	11.0		*	P
7440-09-7	Potassium	270	B		P
7782-49-2	Selenium	1.2	U	WN	F
7440-22-4	Silver	2.4	U		P
7440-23-5	Sodium	110	B		P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	21.1			P
7440-66-6	Zinc	14.6			P
	Cyanide	1.2	U		C

Color Before: _____ Clarity Before: _____ Texture: Homogen

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO: W2

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-4020 SDG No.: L-1

Matrix (soil/water): SOIL Lab Sample ID: 41581

Level (low/med): LOW Date Received: 6/16/89

% Solids: 83.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	4th 9/25/89
7429-90-5	Aluminum	3340		*	P	SB
7440-36-0	Antimony	14.3	U	N	P	SB
7440-38-2	Arsenic	32.1		*	F	
7440-39-3	Barium	118			P	300
7440-41-7	Beryllium	0.48	U		P	
7440-43-9	Cadmium	1.2	U		P	SB
7440-70-2	Calcium	1510			P	SB
7440-47-3	Chromium	8.4		*	P	10
7440-48-4	Cobalt	4.4	B		P	30
7440-50-8	Copper	15.8		*N	P	25
7439-89-6	Iron	18900		*	P	2000
7439-92-1	Lead	9.9		N*	F	SB
7439-95-4	Magnesium	197	B		P	SB
7439-96-5	Manganese	28.6		N	P	
7439-97-6	Mercury	0.12	U		CV	
7440-02-0	Nickel	13.2		*	P	13
7440-09-7	Potassium	210	B		P	SB
7782-49-2	Selenium	1.2	U	WN	F	
7440-22-4	Silver	2.4	U		P	SB
7440-23-5	Sodium	102	B		P	
7440-28-0	Thallium	1.2	U	W	F	SB
7440-62-2	Vanadium	40.1			P	150
7440-66-6	Zinc	16.8			P	20
	Cyanide	1.2	U		C	

Color Before: _____ Clarity Before: _____ Texture: Homogene

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO. W-3

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.003 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): ORGANIC LIQUID Lab Sample ID: 47597

Level (low/med): LOW Date Received: 8/25/89

% Solids: —

Concentration Units (ug/L or mg/kg ~~dry weight~~): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	25.7	B		P
7440-36-0	Antimony	12.0	U		P
7440-38-2	Arsenic	1.0	U	W	F
7440-39-3	Barium	7.5	B		P
7440-41-7	Beryllium	0.4	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	3710			P
7440-47-3	Chromium	3.0			P
7440-48-4	Cobalt	162			P
7440-50-8	Copper	2.4	B		P
7439-89-6	Iron	778			P
7439-92-1	Lead	3430			P
7439-95-4	Magnesium	1670			P
7439-96-5	Manganese	9090			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	3.0	U		P
7440-09-7	Potassium	336	B		P
7782-49-2	Selenium	10.0	U		F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	1240			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	231			P
	Cyanide	1.0	U		C

B/M 3/16/90

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: RESULTS ARE REPORTED ON A "AS RECEIVED" BASIS.

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: L-2

Lab Name: ECOLOGY AND ENVIROMENT, INC. Contract: _____

Lab Code: EANDE Case No.: 9000.406 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): SOIL Lab Sample ID: 65803

Level (low/med): LOW Date Received: 02/10/90

% Solids: 58.4

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2950			P
7440-36-0	Antimony	29.5	U		P
7440-38-2	Arsenic	6.7			F
7440-39-3	Barium	75.6			P
7440-41-7	Beryllium	0.68	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	1830.0			P
7440-47-3	Chromium	60.3			P
7440-48-4	Cobalt	3.4	U		P
7440-50-8	Copper	45.4			P
7439-89-6	Iron	16400			P
7439-92-1	Lead	33.7			F
7439-95-4	Magnesium	6810			P
7439-96-5	Manganese	449			P
7439-97-6	Mercury	0.17	U		CV
7440-02-0	Nickel	118			P
7440-09-7	Potassium	364	B		P
7782-49-2	Selenium	0.51	B		F
7440-22-4	Silver	3.4	U		P
7440-23-5	Sodium	226	B		P
7440-28-0	Thallium	0.68	U		F
7440-62-2	Vanadium	7.7	B		P
7440-66-6	Zinc	69.6			P
	Cyanide	1.7	U		C

Color Before: _____ Clarity Before: _____ Texture: HOMOGENEOUS

Color After: _____ Clarity After: _____ Artifacts: ROOTS

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: GW7

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.002 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): SOIL Lab Sample ID: 47477

Level (low/med): LOW Date Received: 8/24/89

% Solids: 89.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2610			P
7440-36-0	Antimony	13.5	U		P
7440-38-2	Arsenic	2.6			F
7440-39-3	Barium	28.3	B		P
7440-41-7	Beryllium	0.45	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	118000			P
7440-47-3	Chromium	4.9			P
7440-48-4	Cobalt	3.4	B		P
7440-50-8	Copper	6.5			P
7439-89-6	Iron	7400			P
7439-92-1	Lead	8.8			F
7439-95-4	Magnesium	54500			P
7439-96-5	Manganese	321			P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	3.7	B		P
7440-09-7	Potassium	725	B		P
7782-49-2	Selenium	1.1	U	W	F
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	1110			P
7440-28-0	Thallium	1.1	U		F
7440-62-2	Vanadium	8.3	B		P
7440-66-6	Zinc	287			P
_____	Cyanide	1.1	U		C

Color Before: _____ Clarity Before: _____ Texture: Homogeneous

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

F-92

FORM I - IN

Surf - water (SW-16→23 PCB's only)

Page ____ of ____

DATA SUMMARY FORM: V O L A T I L E S 1

Site Name: Golden Road Disposal site

WATER SAMPLES (ug/L)

Case #: 9000.405 Sampling Date(s): 2/8-2/9/90

To calculate sample quantitation limit: (CRQL * Dilution Factor)

	Sample No.	SW-1		SW-2		SW-3		SW-4		SW-5		SW-6		SW-7		SW-8		SW-9	
	Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
	Location																		
CRQL	COMPOUND																		
10	Chloromethane																		
10	Bromomethane																		
10	*Vinyl Chloride																		
10	Chloroethane																		
5	*Methylene Chloride	6	B	6	B	6	B	6	B	6	B	6	B	7	B	31	B	8	B
10	Acetone					5	J							66	B	64	B	38	B
5	Carbon Disulfide																		
5	*1,1-Dichloroethene																		
5	1,1-Dichloroethane																		
5	*Total-1,2-Dichloroethene																		
5	Chloroform																		
5	*1,2-Dichloroethane																		
10	*2-Butanone																		
5	*1,1,1-Trichloroethane																		
5	*Carbon Tetrachloride																		
10	Vinyl Acetate																		
5	Bromodichloromethane																		

CRDL = Contract Required Detection Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: V O L A T I L E S 1

Site Name: Golden Road

WATER SAMPLES
(ug/L)

Case #: 9000.405 9000.426 9000.380 Sampling Date(s): 2/8-2/9/90 2/12/90 2/6/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	SW-10	SW-11	SW-12	SW-13	SW-14	SW-14MS	SW-14MSD	SW-15
	Sample No.	SW-10	SW-11	SW-12	SW-13	SW-14	SW-14MS	SW-14MSD	SW-15
	Dilution Factor	1.0	1.0	1.0		1.0	1.0	1.0	1.0
	Location				NOT sampled				
10	Chloromethane								
10	Bromomethane								
10	*Vinyl Chloride								
10	Chloroethane								
5	*Methylene Chloride	8 B	5 B	6 B		5 B	7 B	8 B	6 B
10	Acetone	50 B	15 B	8 J		4 J	4 J	5 J	
5	Carbon Disulfide			1 J					
5	*1,1-Dichloroethene								
5	1,1-Dichloroethane								
5	*Total-1,2-Dichloroethene								
5	Chloroform								
5	*1,2-Dichloroethane								
10	*2-Butanone								
5	*1,1,1-Trichloroethane								
5	*Carbon Tetrachloride								
10	Vinyl Acetate								
5	Bromodichloromethane								

CRQL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

GROUNDWATER / DRILL WATER

DATA SUMMARY FORM: VOLATILES 1

Site Name: Golden Rood Disposal Site

WATER SAMPLES (ug/L)

Case #: 9000.380 Sampling Date(s): 2/6/90-2/7/90

To calculate sample quantitation limit: (CRQL * Dilution Factor)

CRQL	COMPOUND	GW-1	GW-2	GW-3	GW-4	GW-5	GW-6	GW-6 ms	GW-6 msD	GW-7
	Sample No.	GW-1	GW-2	GW-3	GW-4	GW-5	GW-6	GW-6 ms	GW-6 msD	GW-7
	Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Location									
10	Chloromethane									
10	Bromomethane									
10	*Vinyl Chloride									9 J
10	Chloroethane									17
5	*Methylene Chloride	7 B	6 B	6 B	7 B	6 B	7 B	8 B	8 B	5 B
10	Acetone				6 BJ	11 B	11 B	5 BJ	9 BJ	6 B
5	Carbon Disulfide						2 J			
5	*1,1-Dichloroethene									
5	1,1-Dichloroethane									36
5	*Total-1,2-Dichloroethene						1 J			8
5	Chloroform									
5	*1,2-Dichloroethane									
10	*2-Butanone									
5	*1,1,1-Trichloroethane									
5	*Carbon Tetrachloride									
10	Vinyl Acetate									
5	Bromodichloromethane									

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: V O L A T I L E S 1

Site Name: Golden Road Disposal Site

WATER SAMPLES
(ug/L)

Case #: 872.002 Sampling Date(s): Aug 24, 1989

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND									
	Sample No.	Drill-Rig								
	Dilution Factor	1.0								
	Location									
10	Chloromethane									
10	Bromomethane									
10	*Vinyl_Chloride									
10	Chloroethane									
5	*Methylene_Chloride									
10	Acetone	9 J								
5	Carbon_Disulfide									
5	*1,1-Dichloroethene									
5	1,1-Dichloroethane									
5	*Total-1,2-Dichloroethene									
5	Chloroform	24								
5	*1,2-Dichloroethane									
10	*2-Butanone									
5	*1,1,1-Trichloroethane									
5	*Carbon_Tetrachloride									
10	Vinyl_Acetate									
5	Bromodichloromethane	11								

CRQL = Contract Required Detection Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

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LEACHATE

DATA SUMMARY FORM: VOLATILES 1

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date(s): 6/15/89

WATER SAMPLES (ug/L)

To calculate sample quantitation limit: (CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.																			
		Dilution Factor	L1																		
		Location	1.0																		
10	Chloromethane																				
10	Bromomethane																				
10	*Vinyl Chloride																				
10	Chloroethane		23																		
5	*Methylene Chloride		2	JB																	
10	Acetone		24	B																	
5	Carbon Disulfide																				
5	*1,1-Dichloroethene																				
5	1,1-Dichloroethane		7																		
5	*Total-1,2-Dichloroethene																				
5	Chloroform																				
5	*1,2-Dichloroethane																				
10	*2-Butanone																				
5	*1,1,1-Trichloroethane																				
5	*Carbon Tetrachloride																				
10	Vinyl Acetate																				
5	Bromodichloromethane																				

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: V O L A T I L E S 2

Site Name: Golden Road

WATER SAMPLES
(ug/L)

Case #: 9000.405 Sampling Date(s): 2/8 - 2/9/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.	SW-1		SW-2		SW-3		SW-4		SW-5		SW-6		SW-7		SW-8		SW-9	
		Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0					
		Location																		
5	*1,2-Dichloropropane																			
5	Cis-1,3-Dichloropropene																			
5	Trichloroethene																			
5	Dibromochloromethane																			
5	1,1,2-Trichloroethane																			
5	*Benzene														1	J				
5	Trans-1,3-Dichloropropene																			
5	Bromoform																			
10	4-Methyl-2-pentanone																			
10	2-Hexanone																			
5	*Tetrachloroethene																			
5	1,1,2,2-Tetrachloroethane																			
5	*Toluene														1	J				
5	*Chlorobenzene														1	J				
5	*Ethylbenzene																			
5	*Styrene																			
5	*Total Xylenes																			

CRQL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: V O L A T I L E S 2

Site Name: Golden Rod Disposal Site

Case #: 872.001 Sampling Date(s): 6/15/89

WATER SAMPLES
(ug/L)

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.																			
		Dilution Factor	1.0																		
		Location																			
5	*1,2-Dichloropropane																				
5	Cis-1,3-Dichloropropene																				
5	Trichloroethene																				
5	Dibromochloromethane																				
5	1,1,2-Trichloroethane																				
5	*Benzene																				
5	Trans-1,3-Dichloropropene																				
5	Bromoform																				
10	4-Methyl-2-pentanone																				
10	2-Hexanone																				
5	*Tetrachloroethene																				
5	1,1,2,2-Tetrachloroethane																				
5	*Toluene																				
5	*Chlorobenzene																				
5	*Ethylbenzene																				
5	*Styrene																				
5	*Total Xylenes																				

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: V O L A T I L E S 2

Site Name: GOLDEN ROAD

Case #: 9000.405 9000.426 Sampling Date(s): 2/8-2/9/90 2/12/90

SOIL SAMPLES (ug/Kg)

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ((100 - % moisture)/100)

CRQL	COMPOUND	SW-10		SW-11		SW-12		SW-13		SW-14		SW-14MS		SW-14MSD		SW-15			
	Sample No.	SW-10		SW-11		SW-12		SW-13		SW-14		SW-14MS		SW-14MSD		SW-15			
	Dilution Factor	1.0		1.0						1.0		1.0		1.0		1.0			
	% Moisture																		
	Location							NOT SAMPLED											
5	1,2-Dichloropropane																		
5	Cis-1,3-Dichloropropene																		
5	Trichloroethene																		
5	Dibromochloromethane																		
5	1,1,2-Trichloroethane																		
5	Benzene																		
5	Trans-1,3-Dichloropropene																		
5	Bromoform																		
10	4-Methyl-2-pentanone																		
10	2-Hexanone																		
5	Tetrachloroethene																		
5	1,1,2,2-Tetrachloroethane																		
5	Toluene			2	J														
5	Chlorobenzene																		
5	Ethylbenzene																		
5	Styrene																		
5	Total Xylenes																		

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: V O L A T I L E S 2

Site Name: GOLDEN ROAD

Case #: 9000.380 Sampling Date(s): 2/6/90 - 2/7/90

WATER SAMPLES
(ug/L)

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.	GW-1		GW-2		GW-3		GW-4		GW-5		GW-6		GW-6MS		GW-6MSD		GW-7	
		Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
		Location																		
5	*1,2-Dichloropropane																			
5	Cis-1,3 Dichloropropene																			
5	Trichloroethene												2	J						
5	Dibromochloromethane																			
5	1,1,2-Trichloroethane																			
5	*Benzene		36										1	J						
5	Trans-1,3 Dichloropropene																			
5	Bromoform																			
10	4-Methyl-2-pentanone		2	J					3	J	4	J	7	J	2	J	5	J		
10	2 Hexanone												2	J			5	J		
5	*Tetrachloroethene												2	J						
5	1,1,2,2-Tetrachloroethane																			
5	*Toluene												2	J						
5	*Chlorobenzene												1	J						
5	*Ethylbenzene		6										1	J						
5	*Styrene																			
5	*Total Xylenes		4	J									1	J						

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: V O L A T I L E S 2

Site Name: GOLDEN ROAD DISPOSAL SITE

Case #: 872.002 Sampling Date(s): 8/24/89

WATER SAMPLES
(ug/L)

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

	Sample No.	DRM-RIG																	
	Dilution Factor	1.0																	
	Location																		
CRQL	COMPOUND																		
5	*1,2-Dichloropropane																		
5	Cis-1,3-Dichloropropene																		
5	Trichloroethene																		
5	Dibromochloromethane	4	J																
5	1,1,2-Trichloroethane																		
5	*Benzene																		
5	Trans-1,3 Dichloropropene																		
5	Bromoform																		
10	4-Methyl-2-pentanone																		
10	2 Hexanone																		
5	*Tetrachloroethene																		
5	1,1,2,2-Tetrachloroethane																		
5	*Toluene																		
5	*Chlorobenzene																		
5	*Ethylbenzene																		
5	*Styrene																		
5	*Total Xylenes																		

CRQL = Contract Required Detection Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Rd

Case #: 9000.405 Sampling Date: 2/8-2/9/90

WATER SAMPLES
(ug/L)

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.	SW-1		SW-2		SW-3		SW-4		SW-5		SW-6		SW-7		SW-8		SW-9	
		Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
		Location																		
	Hexane Cas No 110543																			

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Rd

Case #: 9000.405 / 9000.426 Sampling Date: 2/8 - 2/9/90 / 2/12/90

WATER SAMPLES
(ug/L)

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

	Sample No.	SW-10	SW-11	SW-12	SW-13	SW-14	SW-14MS	SW-14MSD	SW-15
	Dilution Factor	1.0	1.0	1.0	NOT	1.0	1.0	1.0	1.0
	Location				Sampled				
CRQL	COMPOUND								
	Hexane		14 BJ						
	Cas No. 110543								

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Road

Case #: 9000.380 Sampling Date: 2/6-2/7/90

WATER SAMPLES
(ug/L)

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.	GW-1		GW-2		GW-2RE		GW-3		GW-4		GW-5		GW-6		GW-7		
		Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		
		Location																	
	Cyclotrisiloxane, hexameth Cas No. 541059		14	BJ			20	J											
	Cyclotetrasiloxane, octameth Cas No. 556672		20	J			24	J											

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Road

WATER SAMPLES
(ug/L)

Case #: 9000.380 Sampling Date: 2/6-2/7/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Drill-Rig	Drill-Rig MS	Drill-Rig MSD						
	Dilution Factor	1.0	1.0	1.0						
	Location									
	Cyclotrisiloxane, hexameth Cas No. 541059									
	Cyclotetrasiloxane, octameth Cas No. 556672									

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Rood Disposal Site

WATER SAMPLES
(ug/L)

Case #: 9000.405 Sampling Date: 2/8-2/9/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

	Sample No.	SW-1		SW-2		SW-3		SW-4		SW-5		SW-6		SW-7		SW-8		SW-9	
	Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
	Location																		
CRQL	COMPOUND																		
	5-methyl-2,4,6-tribromopyrimi Cas No. 6041888814											12	J						
	Ethane, 1,1,2,2-tetrachloro- Cas No. 79345																	23*	J

CRQL = Contract Required Quantitation Limit

* This compound is believed to be an artifact from the extraction procedure. If this were real, it would

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Rd

WATER SAMPLES
(ug/L)

Case #: 9000.405 / 9000.426 Sampling Date: 2/8-2/9/90 / 2/12/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.	SW-10		SW-11		SW-11MS		SW-11MSD		SW-12		SW-12MS		SW-12MSD		SW-13		SW-14	
		Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0				1.0	
		Location															NOT SAmpled			
	5 methyl-2,4,6-tribromopyrimi		8	J																
	CAS No. 64158814																			

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: T E N T A T I V E L Y I N D E N T I F I E D C O M P O U N D S

Site Name: Golden Rd

Case #: 9000.380 Sampling Date: 2/6/90

WATER SAMPLES
(ug/L)

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

	Sample No.	SW-15																			
	Dilution Factor	1.0																			
	Location																				
CRQL	COMPOUND																				

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: TENTATIVELY INDENTIFIED COMPOUNDS

Site Name: Golden Rod Disposal Site

Case #: 872.001 Sampling Date: 6/15/85

WATER SAMPLES (ug/L)

To calculate sample quantitation limit: (CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.		Sample No.	
		Dilution Factor: 1.0		Dilution Factor: 1.0	
		Location:		Location:	
	CAS 134623				
	Benzamide, N,N-diethyl-3-met	16	J	14	J
	phenol, bis dimethylethyl	18	J	16	J

CRQL = Contract Required Quantitation Limit

DATA SUMMARY FORM: B N A S 1

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date(s): 6/15/90

WATER SAMPLES
(ug/L)

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.		Dilution Factor		Location																	
		L1		1.0																			
10	Phenol																						
10	bis(2-Chloroethyl)ether																						
10	2-Chlorophenol																						
10	*1,3-Dichlorobenzene																						
10	*1,4-Dichlorobenzene																						
10	Benzyl Alcohol																						
10	1,2-Dichlorobenzene																						
10	2-Methylphenol																						
10	bis(2-Chloroisopropyl)ether																						
10	4-Methylphenol																						
10	N-Nitroso-di-n-propylamine																						
10	Hexachloroethane																						
10	Nitrobenzene																						
10	Isophorone																						
10	2-Nitrophenol																						
10	2,4-Dimethylphenol																						
50	Benzoic Acid																						
10	bis(2-Chloroethoxy)methane																						
10	2,4-Dichlorophenol																						
10	1,2,4-Trichlorobenzene																						
10	Naphthalene																						
10	4-Chloroaniline																						

Sample No.		Dilution Factor		Location
L1RE		1.0		

CRDL = Contract Required Detection Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: B N A S 1

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Site Name: Golden Rd

WATER SAMPLES
(ug/L)

Case #: 9000.380 Sampling Date(s): 2/6/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CROL	COMPOUND	Sample No.																			
		Dilution Factor	SW-15																		
		Location	10																		
10	Phenol																				
10	bis(2-Chloroethyl)ether																				
10	2-Chlorophenol																				
10	*1,3-Dichlorobenzene																				
10	*1,4-Dichlorobenzene																				
10	Benzyl Alcohol																				
10	1,2 Dichlorobenzene																				
10	2-Methylphenol																				
10	bis(2-Chloroisopropyl)ether																				
10	4-Methylphenol																				
10	N-Nitroso-di-n-propylamine																				
10	Hexachloroethane																				
10	Nitrobenzene																				
10	Isophorone																				
10	2-Nitrophenol																				
10	2,4-Dimethylphenol																				
50	Benzoic Acid																				
10	bis(2-Chloroethoxy)methane																				
10	2,4-Dichlorophenol																				
10	1,2,4-Trichlorobenzene																				
10	Naphthalene																				
10	4-Chloroaniline																				

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: B N A S 1

Site Name: Golden Rod Disposal Site

WATER SAMPLES
(ug/L)

Case #: 9000.405 Sampling Date(s): 2/8-2/9/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No. / Dilution Factor / Location								
		SW-1 1.0	SW-2 1.0	SW-3 1.0	SW-4 1.0	SW-5 1.0	SW-6 1.0	SW-7 1.0	SW-8 1.0	SW-9 1.0
10	Phenol									
10	bis(2-Chloroethyl)ether									
10	2-Chlorophenol									
10	*1,3-Dichlorobenzene									
10	*1,4-Dichlorobenzene									
10	Benzyl Alcohol									
10	1,2-Dichlorobenzene									
10	2-Methylphenol									
10	bis(2-Chloroisopropyl)ether									
10	4-Methylphenol									
10	N-Nitroso-di-n-propylamine									
10	Hexachloroethane									
10	Nitrobenzene									
10	Isophorone									
10	2-Nitrophenol									
10	2,4-Dimethylphenol									
50	Benzoic Acid									
10	bis(2-Chloroethoxy)methane									
10	2,4 Dichlorophenol									
10	1,2,4-Trichlorobenzene									
10	Naphthalene									
10	4-Chloroaniline									

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: B N A S 1

Site Name: Golden Road Disposal site

WATER SAMPLES
(ug/L)

Case #: 9000.405 9000.426 9000.380 Sampling Date(s): 2/6-2/9/90 2/12/90 2/6/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	SW-10	SW-11	SW-11MS	SW-11MSD	SW-12	SW-12MS	SW-12MSD	SW-13	SW-14
	Sample No.									
	Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0
	Location								NOT Sampled	
10	Phenol									
10	bis(2-Chloroethyl)ether									
10	2-Chlorophenol									
10	*1,3-Dichlorobenzene									
10	*1,4-Dichlorobenzene									
10	Benzyl Alcohol									
10	1,2-Dichlorobenzene									
10	2-Methylphenol									
10	bis(2-Chloroisopropyl)ether									
10	4-Methylphenol									
10	N-Nitroso-di-n-propylamine									
10	Hexachloroethane									
10	Nitrobenzene									
10	Isophorone									
10	2-Nitrophenol									
10	2,4-Dimethylphenol									
50	Benzoic Acid									
10	bis(2-Chloroethoxy)methane									
10	2,4-Dichlorophenol									
10	1,2,4-Trichlorobenzene									
10	Naphthalene									
10	4-Chloroaniline									

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: B N A S 1

Site Name: Golden Road Disposal Site

Case #: 872-002 Sampling Date(s): Aug 24, 1990

WATER SAMPLES (ug/L)

To calculate sample quantitation limit: (CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.	Drill-Rig	Drill-Rig MS	Drill-Rig MSD											
		Dilution Factor	1.0	1.0	1.0											
		Location														
10	Phenol															
10	bis(2-Chloroethyl)ether															
10	2-Chlorophenol															
10	*1,3-Dichlorobenzene															
10	*1,4-Dichlorobenzene															
10	Benzyl Alcohol															
10	1,2-Dichlorobenzene															
10	2-Methylphenol															
10	bis(2-Chloroisopropyl)ether															
10	4-Methylphenol															
10	N-Nitroso-dl-n-propylamine															
10	Hexachloroethane															
10	Nitrobenzene															
10	Isophorone															
10	2-Nitrophenol															
10	2,4-Dimethylphenol															
50	Benzoic Acid															
10	bis(2-Chloroethoxy)methane															
10	2,4-Dichlorophenol															
10	1,2,4-Trichlorobenzene															
10	Naphthalene															
10	4-Chloroaniline															

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: B N A S 1

Site Name: Golden Rd

WATER SAMPLES
(ug/L)

Case #: 9000.380 Sampling Date(s): 2/6-2/7/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No. / Dilution Factor / Location	GW-1 1.0	GW-2 1.0	GW-2RE 1.0	GW-3 1.0	GW-4 1.0	GW-5 1.0	GW-6 1.0	GW-7 1.0	
10	Phenol										
10	bis(2-Chloroethyl)ether										
10	2-Chlorophenol										
10	*1,3-Dichlorobenzene										
10	*1,4-Dichlorobenzene										
10	Benzyl Alcohol										
10	1,2 Dichlorobenzene										
10	2-Methylphenol										
10	bis(2-Chloroisopropyl)ether										
10	4-Methylphenol										
10	N-Nitroso-di-n-propylamine										
10	Hexachloroethane										
10	Nitrobenzene										
10	Isophorone										
10	2-Nitrophenol										
10	2,4-Dimethylphenol										
50	Benzoic Acid										
10	bis(2-Chloroethoxy)methane										
10	2,4 Dichlorophenol										
10	1,2,4-Trichlorobenzene										
10	Naphthalene										
10	4-Chloroaniline										

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: B N A S 2

WATER SAMPLES
(ug/L)

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date(s): 6/15/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

	Sample No.	4	4RE							
	Dilution Factor	1.0	1.0							
	Location									
RQL	COMPOUND									
10	Hexachlorobutadiene									
10	4-Chloro-3-methylphenol									
10	2-Methylnaphthalene									
10	Hexachlorocyclopentadiene									
10	2,4,6-Trichlorophenol									
50	2,4,5-Trichlorophenol									
10	2-Chloronaphthalene									
50	2-Nitroaniline									
10	Dimethylphthalate									
10	Acenaphthylene									
10	2,6-Dinitrotoluene									
50	3-Nitroaniline									
10	Acenaphthene									
50	2,4-Dinitrophenol									
50	4-Nitrophenol									
10	Dibenzofuran									
10	2,4-Dinitrotoluene									
10	Diethylphthalate									
10	4-Chlorophenyl-phenylether									
10	Fluorene									
50	4-Nitroaniline									
50	4,6-Dinitro-2-methylphenol									

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: B N A S 2

Site Name: Golden Rd

WATER SAMPLES
(ug/L)

Case #: 9000.405 Sampling Date(s): 2/8-2/9/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8	SW-9
		Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
		Location									
10	Hexachlorobutadiene										
10	4-Chloro-3-methylphenol										
10	2-Methylnaphthalene										
10	Hexachlorocyclopentadiene										
10	2,4,6-Trichlorophenol										
50	2,4,5-Trichlorophenol										
10	2-Chloronaphthalene										
50	2-Nitroaniline										
10	Dimethylphthalate										
10	Acenaphthylene										
10	2,6-Dinitrotoluene										
50	3-Nitroaniline										
10	Acenaphthene										
50	2,4-Dinitrophenol										
50	4-Nitrophenol										
10	Dibenzofuran										
10	2,4-Dinitrotoluene										
10	Diethylphthalate										
10	4-Chlorophenyl-phenylether										
10	Fluorene										
50	4-Nitroaniline										
50	4,6-Dinitro-2-methylphenol										

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: B N A S 2

Site Name: Golden Rd

WATER SAMPLES
(ug/L)

Case #: 9000.405 / 9000.426 Sampling Date(s): 2/8 - 2/9/90 / 2/12/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	SW-10	SW-11	SW-11MS	SW-11MSD	SW-12	SW-12MS	SW-12MSD	SW-13	SW-14
	Sample No.									
	Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0
	Location								NOT sampled	
10	Hexachlorobutadiene									
10	4-Chloro-3-methylphenol									
10	2-Methylnaphthalene									
10	Hexachlorocyclopentadiene									
10	2,4,6-Trichlorophenol									
50	2,4,5-Trichlorophenol									
10	2-Chloronaphthalene									
50	2-Nitroaniline									
10	Dimethylphthalate									
10	Acenaphthylene									
10	2,6 Dinitrotoluene									
50	3-Nitroaniline									
10	Acenaphthene									
50	2,4-Dinitrophenol									
50	4-Nitrophenol									
10	Dibenzofuran									
10	2,4-Dinitrotoluene									
10	Diethylphthalate									
10	4-Chlorophenyl-phenylether									
10	Fluorene									
50	4-Nitroaniline									
50	4,6 Dinitro-2-methylphenol									

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: B N A S 2

Site Name: Golden Rd

WATER SAMPLES
(ug/L)

Case #: 9080.380 Sampling Date(s): 2/6/90

To calculate sample quantitation limit:
(CROL * Dilution Factor)

CRQL	COMPOUND	Sample No.																			
		Dilution Factor	SW-15 1.0																		
		Location																			
10	Hexachlorobutadiene																				
10	4-Chloro-3-methylphenol																				
10	2-Methylnaphthalene																				
10	Hexachlorocyclopentadiene																				
10	2,4,6-Trichlorophenol																				
50	2,4,5-Trichlorophenol																				
10	2-Chloronaphthalene																				
50	2-Nitroaniline																				
10	Dimethylphthalate																				
10	Acenaphthylene																				
10	2,6-Dinitrotoluene																				
50	3-Nitroaniline																				
10	Acenaphthene																				
50	2,4-Dinitrophenol																				
50	4-Nitrophenol																				
10	Dibenzofuran																				
10	2,4-Dinitrotoluene																				
10	Diethylphthalate																				
10	4-Chlorophenyl-phenylether																				
10	Fluorene																				
50	4-Nitroaniline																				
50	4,6-Dinitro-2-methylphenol																				

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: B N A S 2

Site Name: Golden Rd

Case #: 9088.38 Sampling Date(s): 2/6-2/7/90

WATER SAMPLES
(ug/L)

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No. / Dilution Factor / Location																			
		GW-1 1.0		GW-2 1.0		GW-2RE 1.0		GW-3 1.0		GW-4 1.0		GW-5 1.0		GW-6 1.0		GW-7 1.0					
10	Hexachlorobutadiene																				
10	4-Chloro-3-methylphenol																				
10	2-Methylnaphthalene																				
10	Hexachlorocyclopentadiene																				
10	2,4,6-Trichlorophenol																				
50	2,4,5-Trichlorophenol																				
10	2-Chloronaphthalene																				
50	2-Nitroaniline																				
10	Dimethylphthalate																				
10	Acenaphthylene																				
10	2,6-Dinitrotoluene																				
50	3-Nitroaniline																				
10	Acenaphthene																				
50	2,4-Dinitrophenol																				
50	4-Nitrophenol																				
10	Dibenzofuran																				
10	2,4-Dinitrotoluene																				
10	Diethylphthalate																				
10	4-Chlorophenyl-phenylether																				
10	Fluorene																				
50	4-Nitroaniline																				
50	4,6-Dinitro-2-methylphenol																				

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: B N A S 2

Site Name: GOLDEN ROAD DISPOSAL SITE

WATER SAMPLES
(ug/L)

Case #: 872.002 Sampling Date(s): 8/24/89

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

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	Sample No.	Drill-Rig	Drill Rig MS	Drill Rig MSD
	Dilution Factor	1.0	1.0	1.0
	Location			
RQL	COMPOUND			
10	Hexachlorobutadiene			
10	4-Chloro-3-methylphenol			
10	2-Methylnaphthalene			
10	Hexachlorocyclopentadiene			
10	2,4,6-Trichlorophenol			
50	2,4,5-Trichlorophenol			
10	2-Chloronaphthalene			
50	2-Nitroaniline			
10	Dimethylphthalate			
10	Acenaphthylene			
10	2,6-Dinitrotoluene			
50	3-Nitroaniline			
10	Acenaphthene			
50	2,4-Dinitrophenol			
50	4-Nitrophenol			
10	Dibenzofuran			
10	2,4-Dinitrotoluene			
10	Diethylphthalate			
10	4-Chlorophenyl-phenylether			
10	Fluorene			
50	4-Nitroaniline			
50	4,6-Dinitro-2-methylphenol			

CRDL = Contract Required Detection Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: B N A S 3

Site Name: Golden Road Disposal Site

Case #: 872.001 Sampling Date(s): 6/15/90

WATER SAMPLES
(ug/L)

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRDL	COMPOUND	Sample No.																	
		Dilution Factor	L1		LIRE														
		Location	1.0		1.0														
10	N-Nitrosodiphenylamine																		
10	4-Bromophenyl-phenylether																		
10	*Hexachlorobenzene																		
50	*Pentachlorophenol																		
10	Phenanthrene																		
10	Anthracene																		
10	Di-n-butylphthalate																		
10	Fluoranthene																		
10	Pyrene																		
10	Butylbenzylphthalate																		
20	3,3-Dichlorobenzidine																		
10	Benzo(a)anthracene																		
10	Chrysene																		
10	bis(2-Ethylhexyl)phthalate		5	BJ	4	BJ													
10	Di-n-octylphthalate																		
10	Benzo(b)fluoranthene																		
10	Benzo(k)fluoranthene																		
10	Benzo(a)pyrene																		
10	Indeno(1,2,3-cd)pyrene																		
10	Dibenz(a,h)anthracene																		
10	Benzo(g,h,i)perylene																		

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: B N A S 3

Site Name: Golden Rd.

WATER SAMPLES
(ug/L)

Case #: 9000.405 Sampling Date(s): 2/8 - 2/9/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRDL	COMPOUND	SW-1		SW-2		SW-3		SW-4		SW-5		SW-6		SW-7		SW-8		SW-9	
	Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
	Location																		
10	N-Nitrosodiphenylamine																		
10	4-Bromophenyl-phenylether																		
10	*Hexachlorobenzene																		
50	*Pentachlorophenol																		
10	Phenanthrene																	2	J
10	Anthracene																		
10	Di-n-butylphthalate	7	BJ																
10	Fluoranthene	2	J															5	J
10	Pyrene	2	J															6	J
10	Butylbenzylphthalate																		
20	3,3-Dichlorobenzidine																		
10	Benzo(a)anthracene	1	J															2	J
10	Chrysene	2	J															4	J
10	bis(2-Ethylhexyl)phthalate	36	B	13	B	11	B	22	B	11	B	18	B	17	B	22	B	12	B
10	Di-n-octylphthalate																		
10	Benzo(b)fluoranthene	3	J															5	J
10	Benzo(k)fluoranthene																		
10	Benzo(a)pyrene	2	J															2	J
10	Indeno(1,2,3-cd)pyrene																	1	J
10	Dibenz(a,h)anthracene																		
10	Benzo(g,h,i)perylene	2	J															1	J

CRDL = Contract Required Detection Limit

*Action Level Exists

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DATA SUMMARY FORM: B N A S 3

Site Name: Golden Rd.

WATER SAMPLES
(ug/L)

Case #: 9000.405 / 9000.426 Sampling Date(s): 2/8 - 2/9/90 / 2/12/90

To calculate sample quantitation limits
(CRQL * Dilution Factor)

CRDL	COMPOUND	Sample No.	SW-10		SW-11		SW-11 MS		SW-11MSD		SW-12		SW-12MS		SW-12MSD		SW-13		SW-14	
		Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0				1.0	
		Location															NOT Sampled			
10	N-Nitrosodiphenylamine																			
10	4-Bromophenyl-phenylether																			
10	*Hexachlorobenzene																			
50	*Pentachlorophenol																			
10	Phenanthrene																			
10	Anthracene																			
10	Di n butylphthalate										3	BJ	3	BJ	10	BJ			5	BJ
10	Fluoranthene																			
10	Pyrene																			
10	Butylbenzylphthalate																			
20	3,3-Dichlorobenzidine																			
10	Benzo(a)anthracene																			
10	Chrysene																			
10	bis(2 Ethylhexyl)phthalate		13	B	17	B	15	BJ	9	BJ	46	B	42	B	24	B			12	B
10	Di n-octylphthalate																			
10	Benzo(b)fluoranthene																			
10	Benzo(k)fluoranthene																			
10	Benzo(a)pyrene																			
10	Indeno(1,2,3-cd)pyrene																			
10	Dibenz(a,h)anthracene																			
10	Benzo(g,h,i)perylene																			

CRDL = Contract Required Detection Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

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revised 12/88

DATA SUMMARY FORM: B N A S 3

WATER SAMPLES
(ug/L)

Site Name: Golden Rd

Case #: 9000.380 Sampling Date(s): 2/6/90

To calculate sample quantitation limits:
(CRQL * Dilution Factor)

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CRDL	COMPOUND	Sample No. SW-15	
	Dilution Factor	1.0	
	Location		
10	N-Nitrosodiphenylamine		
10	4-Bromophenyl-phenylether		
10	*Hexachlorobenzene		
50	*Pentachlorophenol		
10	Phenanthrene		
10	Anthracene		
10	Di-n-butylphthalate	2	BJ
10	Fluoranthene		
10	Pyrene		
10	Butylbenzylphthalate		
20	3,3-Dichlorobenzidine		
10	Benzo(a)anthracene		
10	Chrysene		
10	bis(2-Ethylhexyl)phthalate	8	BJ
10	Di-n-octylphthalate		
10	Benzo(b)fluoranthene		
10	Benzo(k)fluoranthene		
10	Benzo(a)pyrene		
10	Indeno(1,2,3-cd)pyrene		
10	Dibenz(a,h)anthracene		
10	Benzo(g,h,i)perylene		

CRDL = Contract Required Detection Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: B N A S 3

Site Name: Golden Rd

WATER SAMPLES
(ug/L)

Case #: 9080.380 Sampling Date(s): 2/6 - 2/7/90

To calculate sample quantitation limits
(CRQL * Dilution Factor)

CRDL	COMPOUND	Sample No.	GW-1		GW-2		GW-2RE		GW-3		GW-4		GW-5		GW-6		GW-7	
		Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
		Location																
10	N-Nitrosodiphenylamine																	
10	4-Bromophenyl-phenylether																	
10	*Hexachlorobenzene																	
50	*Pentachlorophenol																	
10	Phenanthrene																	
10	Anthracene																	
10	Di n butylphthalate		2	BJ	2	J	2	BJ	1	J	18	BJ	9	BJ	13	B	2	BJ
10	Fluoranthene																	
10	Pyrene																	
10	Butylbenzylphthalate																	
20	3,3-Dichlorobenzidine																	
10	Benzo(a)anthracene																	
10	Chrysene																	
10	bis(2 Ethylhexyl)phthalate		11	B	11	B	13	B	9	BJ	29	B	48	B	22	B	45	B
10	Di n-octylphthalate																	
10	Benzo(b)fluoranthene																	
10	Benzo(k)fluoranthene																	
10	Benzo(a)pyrene																	
10	Indeno(1,2,3-cd)pyrene																	
10	Dibenz(a,h)anthracene																	
10	Benzo(g,h,i)perylene																	

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: B N A S 3

Site Name: Golden Rend Disposal Site

Case #: 872.002 Sampling Date(s): Aug 24, 1989

WATER SAMPLES (ug/L)

To calculate sample quantitation limit: (CRQL * Dilution Factor)

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CRDL	COMPOUND	Sample No.	Drill-Rig	Drill-Rig MS	Drill Rig MSD															
		Dilution Factor	1.0	1.0	1.0															
		Location																		
10	N-Nitrosodiphenylamine																			
10	4-Bromophenyl-phenylether																			
10	*Hexachlorobenzene																			
50	*Pentachlorophenol																			
10	Phenanthrene																			
10	Anthracene																			
10	Di-n-butylphthalate		23		38		35													
10	Fluoranthene																			
10	Pyrene																			
10	Butylbenzylphthalate																			
20	3,3-Dichlorobenzidine																			
10	Benzo(a)anthracene																			
10	Chrysene																			
10	bis(2-Ethylhexyl)phthalate				4	BJ	8	BJ												
10	Di-n-octylphthalate																			
10	Benzo(b)fluoranthene																			
10	Benzo(k)fluoranthene																			
10	Benzo(a)pyrene																			
10	Indeno(1,2,3-cd)pyrene																			
10	Dibenz(a,h)anthracene																			
10	Benzo(g,h,i)perylene																			

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: P E S T I C I D E S A N D P C B S

Site Name: Golden Road Disposal Site

WATER SAMPLES (ug/L)

Case #: 872.001 Sampling Date(s): 6/15/89

To calculate sample quantitation limit: (CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.																	
		Dilution Factor	1.0																
		Location																	
0.05	alpha-BHC																		
0.05	beta-BHC																		
0.05	delta-BHC																		
0.05	*Gamma-BHC (Lindane)																		
0.05	*Heptachlor																		
0.05	Aldrin																		
0.05	Heptachlor Epoxide																		
0.05	Endosulfan I																		
0.10	Dieldrin																		
0.10	4,4'-DDE																		
0.10	*Endrin																		
0.10	Endosulfan II																		
0.10	4,4'-DDD																		
0.10	Endosulfan Sulfate																		
0.10	4,4'-DDT																		
0.5	*Methoxychlor																		
0.10	Endrin ketone																		
0.5	*Alpha-Chlordane																		
0.5	*Gamma-Chlordane																		
1.0	*Toxaphene																		
0.5	*Aroclor-1016																		
0.5	*Aroclor-1221																		
0.5	*Aroclor-1232																		
0.5	*Aroclor-1242																		
0.5	*Aroclor-1248																		
1.0	*Aroclor-1254																		
1.0	*Aroclor-1260																		

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: P E S T I C I D E S A N D P C B S

Site Name: Golden Road Disposal Site

WATER SAMPLES
(ug/L)

Case #: 9000.405 / 9000.426 Sampling Date(s): 2/8-2/9/90 / 5/12/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8	SW-9
		Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
		Location									
0.05	alpha-BHC										
0.05	beta-BHC										
0.05	delta-BHC										
0.05	*Gamma-BHC (Lindane)										
0.05	*Heptachlor										
0.05	Aldrin										
0.05	Heptachlor Epoxide										
0.05	Endosulfan I										
0.10	Dieldrin										
0.10	4,4'-DDE										
0.10	*Endrin										
0.10	Endosulfan II										
0.10	4,4'-DDD										
0.10	Endosulfan Sulfate										
0.10	4,4'-DDT										
0.5	*Methoxychlor										
0.10	Endrin ketone										
0.5	*Alpha-Chlordane										
0.5	*Gamma-Chlordane										
1.0	*Toxaphene										
0.5	*Aroclor-1016										
0.5	*Aroclor-1221										
0.5	*Aroclor-1232										
0.5	*Aroclor-1242										
0.5	*Aroclor-1248										
1.0	*Aroclor-1254										
1.0	*Aroclor-1260										

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: P E S T I C I D E S A N D P C B S

Site Name: Golden Rd

WATER SAMPLES
(ug/L)

Case #: 7000.405, 7000.426, 7000.280 Sampling Date(s): 2/8-2/9/90, 2/12/90, 2/6/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

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CRQL	COMPOUND	Sample No. / Dilution Factor / Location								
		SW-10	SW-11	SW-12	SW-13	SW-14	SW-15	SW-16	SW-17	SW-18
		1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0
					NOT sampled					
0.05	alpha-BHC									
0.05	beta BHC									
0.05	delta BHC									
0.05	*Gamma-BHC (Lindane)									
0.05	*Heptachlor									
0.05	Aldrin									
0.05	Heptachlor Epoxide									
0.05	Endosulfan I									
0.10	Dieldrin									
0.10	4,4'-DDE									
0.10	*Endrin									
0.10	Endosulfan II									
0.10	4,4'-DDD									
0.10	Endosulfan Sulfate									
0.10	4,4'-DDT									
0.5	*Methoxychlor									
0.10	Endrin ketone									
0.5	*Alpha-Chlordane									
0.5	*Gamma-Chlordane									
1.0	*Toxaphene									
0.5	*Aroclor-1016									
0.5	*Aroclor-1221									
0.5	*Aroclor-1232									
0.5	*Aroclor-1242									
0.5	*Aroclor-1248									
1.0	*Aroclor-1254									
1.0	*Aroclor-1260									

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

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DATA SUMMARY FORM: P E S T I C I D E S A N D P C B S

Site Name: Golden Rd

WATER SAMPLES
(ug/L)

Case #: 9011.380 Sampling Date(s): 2/6/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No.	SW-19	SW-20	SW-21	SW-22	SW-23	SW-19 MS	SW-19 MSD		
		Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
		Location									
0.05	alpha-BHC										
0.05	beta-BHC										
0.05	delta-BHC										
0.05	*Gamma-BHC (Lindane)										
0.05	*Heptachlor										
0.05	Aldrin										
0.05	Heptachlor Epoxide										
0.05	Endosulfan I										
0.10	Dieldrin										
0.10	4,4'-DDE										
0.10	*Endrin										
0.10	Endosulfan II										
0.10	4,4'-DDD										
0.10	Endosulfan Sulfate										
0.10	4,4'-DDT										
0.5	*Methoxychlor										
0.10	Endrin ketone										
0.5	*Alpha-Chlordane										
0.5	*Gamma-Chlordane										
1.0	*Toxaphene										
0.5	*Aroclor-1016										
0.5	*Aroclor-1221										
0.5	*Aroclor-1232										
0.5	*Aroclor-1242										
0.5	*Aroclor-1248										
1.0	*Aroclor-1254										
1.0	*Aroclor-1260										

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

DATA SUMMARY FORM: P E S T I C I D E S A N D P C B S

Site Name: Golden Road

WATER SAMPLES
(ug/L)

Case #: 9000.380 Sampling Date(s): 2/6-2/7/90

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND	Sample No. / Dilution Factor / Location								
		GW-1	GW-2	GW-3	GW-4	GW-4MS	GW-4MSD	GW-5	GW-6	GW-7
0.05	alpha-BHC									
0.05	beta-BHC									
0.05	delta-BHC									
0.05	*Gamma-BHC (Lindane)									
0.05	*Heptachlor									
0.05	Aldrin									
0.05	Heptachlor Epoxide									
0.05	Endosulfan I									
0.10	Dieldrin									
0.10	4,4'-DDE									
0.10	*Endrin									
0.10	Endosulfan II									
0.10	4,4'-DDD									
0.10	Endosulfan Sulfate									
0.10	4,4'-DDT									
0.5	*Methoxychlor									
0.10	Endrin ketone									
0.5	*Alpha-Chlordane									
0.5	*Gamma-Chlordane									
1.0	*Toxaphene									
0.5	*Aroclor-1016									
0.5	*Aroclor-1221									
0.5	*Aroclor-1232									
0.5	*Aroclor-1242									
0.5	*Aroclor-1248									
1.0	*Aroclor-1254									
1.0	*Aroclor-1260									

CRDL = Contract Required Detection Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: PESTICIDES AND PCBS

Site Name: Golden Road

WATER SAMPLES
(ug/L)

Case #: 872.002 Sampling Date(s): Aug 24, 1989

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	COMPOUND									
	Sample No.	Drill-Rig	Drill-Rig MS	Drill-Rig MSD						
	Dilution Factor	2.0	2.0	2.0						
	Location									
0.05	alpha-BHC									
0.05	beta-BHC									
0.05	delta-BHC									
0.05	*Gamma-BHC (Lindane)									
0.05	*Heptachlor									
0.05	Aldrin									
0.05	Heptachlor Epoxide									
0.05	Endosulfan I									
0.10	Dieldrin									
0.10	4,4'-DDE									
0.10	*Endrin									
0.10	Endosulfan II									
0.10	4,4'-DDD									
0.10	Endosulfan Sulfate									
0.10	4,4'-DDT									
0.5	*Methoxychlor									
0.10	Endrin ketone									
0.5	*Alpha-Chlordane									
0.5	*Gamma-Chlordane									
1.0	*Toxaphene									
0.5	*Aroclor-1016									
0.5	*Aroclor-1221									
0.5	*Aroclor-1232									
0.5	*Aroclor-1242									
0.5	*Aroclor-1248									
1.0	*Aroclor-1254									
1.0	*Aroclor-1260									

CRDL = Contract Required Detection Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

revised 12/88

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: GW-1

Lab Name: ECOLOGY & ENVIRONMENT INC. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YW-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65317.06

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q M	M P
7429-90-5	Aluminum	90500			P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	29.4			F
7440-39-3	Barium	761			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	31.4			P
7440-70-2	Calcium	2,440,000			P
7440-47-3	Chromium	145			P
7440-48-4	Cobalt	61.7			P
7440-50-8	Copper	214			P
7439-89-6	Iron	243000			P
7439-92-1	Lead	364			P
7439-95-4	Magnesium	840000			P
7439-96-5	Manganese	8020			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	158			P
7440-09-7	Potassium	16700			P
7782-49-2	Selenium	5.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	61900			P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	255			P
7440-66-6	Zinc	1320			P
	Cyanide	10.0	U		C

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: GW-1 FILTERED

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65317.07

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	1.0		W	F
7440-39-3	Barium	68.3	B		P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	15900			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	1140			P
7439-92-1	Lead	1.0	U		F
7439-95-4	Magnesium	48500			P
7439-96-5	Manganese	153			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	2240	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	55500			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	33.6			P
	Cyanide				NR

Color Before: CLEAR Clarity Before: CLEAR Texture: _____

Color After: CLEAR Clarity After: CLEAR Artifacts: _____

Comments:

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NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: GW-2

Lab Name: Ecology & Environment Inc. Contract: D001579

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 6531B.06

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q ~~M~~	M
7429-90-5	Aluminum	128000			P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	10.4			F
7440-39-3	Barium	1230			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	38.0			P
7440-70-2	Calcium	2760000			P
7440-47-3	Chromium	217			P
7440-48-4	Cobalt	88.3			P
7440-50-8	Copper	260			P
7439-89-6	Iron	265000			P
7439-92-1	Lead	180			F
7439-95-4	Magnesium	836000			P
7439-96-5	Manganese	12100			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	205			P
7440-09-7	Potassium	19700			P
7782-49-2	Selenium	5.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	56500			P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	427			P
7440-66-6	Zinc	1120			P
	Cyanide	10.0	U		C

Color Before: Brown Clarity Before: Cloudy Texture: _____

Color After: Yellow Clarity After: Cloudy Artifacts: _____

Comments:

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NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

GW-2 FILTERED

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65318.07

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	1.0	U		F
7440-39-3	Barium	68.7	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	177000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	419			P
7439-92-1	Lead	1.0	U		F
7439-95-4	Magnesium	49100			P
7439-96-5	Manganese	61.6			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	2180	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	54700			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	17.2	B		P
	Cyanide				NR

Color Before: CLEAR Clarity Before: CLEAR Texture: _____

Color After: CLEAR Clarity After: CLEAR Artifacts: _____

Comments:

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NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO. GW-3

Lab Name: ECOLOGY & ENVIRONMENT INC. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65319.06

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7400			P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	3.5	B		F
7440-39-3	Barium	141	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	10.0	U		P
7440-70-2	Calcium	288000			P
7440-47-3	Chromium	14.7			P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	21.0	B		P
7439-89-6	Iron	17000			P
7439-92-1	Lead	15.9			F
7439-95-4	Magnesium	78200			P
7439-96-5	Manganese	596			P
7439-97-6	Mercury	0.28			CV
7440-02-0	Nickel	20.8	B		P
7440-09-7	Potassium	4550	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	69800			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	21.3	B		P
7440-66-6	Zinc	49.9			P
	Cyanide	10.0	U		C

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLOUDY Artifacts: _____

Comments:

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NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: GW-3 FILTERED

Lab Name: ECOLOGY & ENVIRONMENT INC. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65319.07

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q M	M Q
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	1.0	U		F
7440-39-3	Barium	53.0	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	152000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	325			P
7439-92-1	Lead	1.0	U		F
7439-95-4	Magnesium	42300			P
7439-96-5	Manganese	37.7			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	2490	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	70700			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	10.0	U		P
	Cyanide				NR

Color Before: CLEAR Clarity Before: CLEAR Texture: _____

Color After: CLEAR Clarity After: CLEAR Artifacts: _____

Comments:

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NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: GW-4

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65320.06

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	567			P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	1.0	U		F
7440-39-3	Barium	80.1	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	162000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	1130			P
7439-92-1	Lead	1.0	U	W	F
7439-95-4	Magnesium	45200			P
7439-96-5	Manganese	64.9			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	1820	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	71600			P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	10.0	U		P
	Cyanide	10.0	U		C

Color Before: CLEAR Clarity Before: CLOUDY Texture: _____

Color After: CLEAR Clarity After: CLOUDY Artifacts: _____

Comments:

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NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: GW-4 FILTERED

Lab Name: Ecology & Environment Inc. Contract: D001547

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65320.07

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	1.0	U	W	F
7440-39-3	Barium	73.0	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	149000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	111			P
7439-92-1	Lead	1.0	U		F
7439-95-4	Magnesium	42600			P
7439-96-5	Manganese	19.8			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	1280	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	69100			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	10.0	U		P
	Cyanide				NR

Color Before: CLEAR Clarity Before: CLEAR Texture: _____

Color After: CLEAR Clarity After: CLEAR Artifacts: _____

Comments:

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NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: GW-5

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 9100.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65321.06

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q ~~M~~	M ~~Q~~
7429-90-5	Aluminum	58200			P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	23.0			F
7440-39-3	Barium	326			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	16.5			P
7440-70-2	Calcium	672000			P
7440-47-3	Chromium	83.4			P
7440-48-4	Cobalt	50.9			P
7440-50-8	Copper	69.2			P
7439-89-6	Iron	127000			P
7439-92-1	Lead	39.0			F
7439-95-4	Magnesium	197000			P
7439-96-5	Manganese	5120			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	127			P
7440-09-7	Potassium	9230			P
7782-49-2	Selenium	5.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	23300			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	138			P
7440-66-6	Zinc	326			P
	Cyanide	10.0	U		C

Color Before: Brown Clarity Before: Cloudy Texture: _____

Color After: Yellow Clarity After: Cloudy Artifacts: _____

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: GW-5 FILTERED

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 6532L.07

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	4.5	B		F
7440-39-3	Barium	16.8	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	93300			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	159			P
7439-92-1	Lead	1.0	U		F
7439-95-4	Magnesium	57300			P
7439-96-5	Manganese	67.2			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	1600	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	22200			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	10.0	U		P
	Cyanide				AA

Color Before: CLEAR Clarity Before: CLEAR Texture: _____

Color After: CLEAR Clarity After: CLEAR Artifacts: _____

Comments:

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NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: GW-6

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65322.06

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	25000			P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	9.7			F
7440-39-3	Barium	372			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	466000			P
7440-47-3	Chromium	43.8			P
7440-48-4	Cobalt	15.3	B		P
7440-50-8	Copper	47.7			P
7439-89-6	Iron	48400			P
7439-92-1	Lead	44.0			F
7439-95-4	Magnesium	132000			P
7439-96-5	Manganese	1600			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	39.6	B		P
7440-09-7	Potassium	9000			P
7782-49-2	Selenium	5.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	61100			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	59.8			P
7440-66-6	Zinc	185			P
	Cyanide	10.0	U		C

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLOUDY Artifacts: _____

Comments:

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NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: GW-6 FILTERED

Lab Name: ECOLOGY & ENVIRONMENT INC. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65322.07

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	1.0	U		F
7440-39-3	Barium	116	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	9.2			P
7440-70-2	Calcium	118000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	19.8	B		P
7439-89-6	Iron	402			P
7439-92-1	Lead	1.0	U		F
7439-95-4	Magnesium	35500			P
7439-96-5	Manganese	36.7			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	6670			P
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	58200			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	15.4	B		P
	Cyanide				AR

Color Before: CLEAR Clarity Before: CLEAR Texture: _____

Color After: CLEAR Clarity After: CLEAR Artifacts: _____

Comments:

FORM I - IN

693

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: GW-7

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65323.06

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2800			P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	2.0	B		F
7440-39-3	Barium	164	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	219000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	5730			P
7439-92-1	Lead	9.3			F
7439-95-4	Magnesium	74500			P
7439-96-5	Manganese	686			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	2390	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	66000			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	36.6			P
	Cyanide	10.0	U		C

Color Before: Clear Clarity Before: Cloudy Texture: _____

Color After: Clear Clarity After: Cloudy Artifacts: _____

Comments:

FORM I - IN

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: GW-7 FILTERED

Lab Name: ECOLOGY & ENVIRONMENT INC. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65323.07

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q ~~M~~	M ~~Q~~
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	1.0	U		F
7440-39-3	Barium	139	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	169000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	580			P
7439-92-1	Lead	1.0	U		F
7439-95-4	Magnesium	61400			P
7439-96-5	Manganese	343			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	1540	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	63100			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	10.0	U		P
	Cyanide				~~AR~~

Color Before: CLEAR Clarity Before: CLEAR Texture: _____

Color After: CLEAR Clarity After: CLEAR Artifacts: _____

Comments:

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NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

DRILL RIG WATER

Lab Name: ECOLOGY & ENVIRONMENT INC. Contract: D001549

Lab Code: _____ Case No.: 872.002 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 47478

Level (low/med): LOW Date Received: 8/24/89

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	190	B		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	5.0	U		F
7440-39-3	Barium	23.8	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	40300			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	359			P
7439-92-1	Lead	5.0	U	W	F
7439-95-4	Magnesium	8220			P
7439-96-5	Manganese	5.0	U		P
7439-97-6	Mercury	0.22			CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	1330	B		P
7782-49-2	Selenium	5.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	11000			P
7440-28-0	Thallium	5.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	10.0	U		P
	Cyanide	10.0	U		C

Color Before: YELLOW Clarity Before: CLOUDY Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SW-1

Lab Name: ECOLOGY AND ENVIROMENT, INC Contract: _____

Lab Code: EANDE Case No.: 9000.405 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65767

Level (low/med): LOW Date Received: 02/10/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18700			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	16.6			F
7440-39-3	Barium	304			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	9.5			P
7440-70-2	Calcium	142000		E	P
7440-47-3	Chromium	43.0			P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	105			P
7439-89-6	Iron	28700			P
7439-92-1	Lead	193			F
7439-95-4	Magnesium	38500		E	P
7439-96-5	Manganese	862			P
7439-97-6	Mercury	0.37			CV
7440-02-0	Nickel	87.6			P
7440-09-7	Potassium	3450	B		P
7782-49-2	Selenium	3.7	B	S	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	31100		E	P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	57.2			P
7440-66-6	Zinc	803			P
	Cyanide	10.0	U		C

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLOUDY Artifacts: _____

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: SW-2

Lab Name: ECOLOGY AND ENVIROMENT, INC Contract: _____

Lab Code: EANDE Case No.: 9000.405 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65768

Level (low/med): LOW Date Received: 02/10/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2,490			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	2.5	B		F
7440-39-3	Barium	97.0	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	149000		E	P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	29.1			P
7439-89-6	Iron	4810			P
7439-92-1	Lead	56			F
7439-95-4	Magnesium	29800		E	P
7439-96-5	Manganese	249			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	2560	B		P
7782-49-2	Selenium	1.4	B		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	235000		E	P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	152			P
	Cyanide	10.0	U		C

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLOUDY Artifacts: _____

Comments:

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NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: SW-3

Lab Name: ECOLOGY AND ENVIROMENT, INC Contract: _____

Lab Code: EANDE Case No.: 9000.40S SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65769

Level (low/med): LOW Date Received: 02/10/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	147	B		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	1.0	U		F
7440-39-3	Barium	32.1	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	77500		E	P
7440-47-3	Chromium	10.0			P
7440-48-4	Cobalt	10.0			P
7440-50-8	Copper	10.0			P
7439-89-6	Iron	544			P
7439-92-1	Lead	1.0	U	W	F
7439-95-4	Magnesium	20600		E	P
7439-96-5	Manganese	176			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	2110	B		P
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	92300		E	P
7440-28-0	Thallium	20	U		F
7440-62-2	Vanadium	10.0			P
7440-66-6	Zinc	16.9	B		P
	Cyanide	10.0	U		C

Color Before: CLEAR Clarity Before: CLEAR Texture: _____

Color After: CLEAR Clarity After: CLEAR Artifacts: _____

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: SW-4

Lab Name: ECOLOGY AND ENVIROMENT, INC Contract: _____

Lab Code: EANDE Case No.: 9000.40S SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65770

Level (low/med): LOW Date Received: 02/10/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2200			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	2.2	B		F
7440-39-3	Barium	84.8	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	114000		E	P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	25.4			P
7439-89-6	Iron	5000			P
7439-92-1	Lead	66			F
7439-95-4	Magnesium	26100		E	P
7439-96-5	Manganese	199			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	3670	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	272000		E	P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	211			P
	Cyanide	10.0	U		C

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLOUDY Artifacts: _____

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: SW-5

Lab Name: ECOLOGY AND ENVIROMENT, INC Contract: _____

Lab Code: EANDE Case No.: 9000.40S SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65771

Level (low/med): LOW Date Received: 02/10/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	864			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	4.6	B		F
7440-39-3	Barium	49.3	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	70980		E	P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	6010			P
7439-92-1	Lead	19.6			F
7439-95-4	Magnesium	18300		E	P
7439-96-5	Manganese	255			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	1540	B		P
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	78000		E	P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	64.9			P
_____	Cyanide	10.0	U		C

Color Before: BROWN Clarity Before: CLEAR Texture: _____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SW-6

Lab Name: ECOLOGY AND ENVIROMENT, INC Contract: _____

Lab Code: EANDE Case No.: 9000.405 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65772

Level (low/med): LOW Date Received: 02/10/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	463			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	8.8	B		F
7440-39-3	Barium	56.3	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	70800		E	P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	23.8	B		P
7439-89-6	Iron	9830			P
7439-92-1	Lead	13.1			F
7439-95-4	Magnesium	19800		E	P
7439-96-5	Manganese	259			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	3560	B		P
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	36500		E	P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0			P
7440-66-6	Zinc	69.9			P
	Cyanide	10.0	U		C

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLOUDY Artifacts: _____

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: SW-7

Lab Name: ECOLOGY AND ENVIROMENT, INC Contract: _____

Lab Code: EANDE Case No.: 9000.40S SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65773

Level (low/med): LOW Date Received: 02/10/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2120			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	22.7			F
7440-39-3	Barium	146	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	9.7			P
7440-70-2	Calcium	99900		E	P
7440-47-3	Chromium	37.9			P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	138			P
7439-89-6	Iron	76300			P
7439-92-1	Lead	134			F
7439-95-4	Magnesium	18600		E	P
7439-96-5	Manganese	705			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	210			P
7440-09-7	Potassium	3350	B		P
7782-49-2	Selenium	1.1	B	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	19900		E	P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	24.7	B		P
7440-66-6	Zinc	302			P
	Cyanide	10.0	U		C

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLOUDY Artifacts: _____

Comments:

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NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: SW-8

Lab Name: ECOLOGY AND ENVIROMENT, INC Contract: _____

Lab Code: EANDE Case No.: 9000.40S SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65774

Level (low/med): LOW Date Received: 02/10/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	687			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	3.1	B		F
7440-39-3	Barium	164	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	84800		E	P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	19.1	B		P
7439-89-6	Iron	24800			P
7439-92-1	Lead	14.7			F
7439-95-4	Magnesium	34000		E	P
7439-96-5	Manganese	1270			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	252			P
7440-09-7	Potassium	5420			P
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	68200		E	P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	151			P
_____	Cyanide	10.0	U		C

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLOUDY Artifacts: _____

Comments:

_____

_____

_____

_____

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SW-9

Lab Name: ECOLOGY AND ENVIROMENT, INC Contract: _____

Lab Code: EANDE Case No.: 9000.405 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65775

Level (low/med): LOW Date Received: 02/10/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3900			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	33.4			F
7440-39-3	Barium	175	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	14.5			P
7440-70-2	Calcium	108000		E	P
7440-47-3	Chromium	19.8			P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	182			P
7439-89-6	Iron	89800			P
7439-92-1	Lead	178			F
7439-95-4	Magnesium	19300		E	P
7439-96-5	Manganese	1660			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	164			P
7440-09-7	Potassium	2590	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	13300		E	P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	30.8	B		P
7440-66-6	Zinc	587			P
	Cyanide	10.0	U		C

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLOUDY Artifacts: _____

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: SW-10

Lab Name: ECOLOGY AND ENVIROMENT, INC Contract: _____

Lab Code: EANDE Case No.: 9000.405 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65776

Level (low/med): LOW Date Received: 02/10/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7420			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	8.7	B		F
7440-39-3	Barium	123	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	97700		E	P
7440-47-3	Chromium	15.9			P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	151			P
7439-89-6	Iron	22600			P
7439-92-1	Lead	107			F
7439-95-4	Magnesium	18100		E	P
7439-96-5	Manganese	422			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	37.7	B		P
7440-09-7	Potassium	3580	B		P
7782-49-2	Selenium	1.1	B	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	11600		E	P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	29.8	B		P
7440-66-6	Zinc	311			P
	Cyanide	10.0	U		C

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLOUDY Artifacts: _____

Comments:

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: SW-11

Lab Name: ECOLOGY AND ENVIRONMENT, INC Contract: _____

Lab Code: EANDE Case No.: 9000.426 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 66070

Level (low/med): LOW Date Received: 02/13/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	113	B		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	1.0	U		F
7440-39-3	Barium	26.4	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	57600			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	248			P
7439-92-1	Lead	1.0	U	W	F
7439-95-4	Magnesium	19200			P
7439-96-5	Manganese	25.7			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	2530	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	29600			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	11.9	B		P
	Cyanide	10.0	U		C

Color Before: CLEAR Clarity Before: CLEAR Texture: _____

Color After: CLEAR Clarity After: CLEAR Artifacts: _____

Comments:

FORM I - IN

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: SW-12

Lab Name: Ecology & Environment Inc. Contract: D005549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65324.06

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	449			P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	2.0	B		F
7440-39-3	Barium	34.2	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	46900			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	1530			P
7439-92-1	Lead	3.8	B		F
7439-95-4	Magnesium	16900			P
7439-96-5	Manganese	177			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	17900			P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	9020			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	26.2			P
	Cyanide	10.0	U		C

Color Before: Yellow Clarity Before: Clear Texture: _____

Color After: Yellow Clarity After: Clear Artifacts: _____

Comments:

FORM I - IN

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: SW-14

Lab Name: ECOLOGY & ENVIRONMENT INC. Contract: D001549

Lab Code: _____ Case No.: 9000.380 SAS No.: YN-4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65325.06

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	139	B		P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	1.7	B		F
7440-39-3	Barium	33.9	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	90300			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	1790			P
7439-92-1	Lead	2.9	B		F
7439-95-4	Magnesium	31200			P
7439-96-5	Manganese	93.9			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	1780	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	34100			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	49.8			P
	Cyanide	10.0	U		C

Color Before: YELLOW Clarity Before: CLEAR Texture: _____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

FORM I - IN

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: SW-15

Lab Name: ECOLOGY & ENVIRONMENT INC Contract: D001547

Lab Code: _____ Case No.: 9000.380 SAS No.: YN4020 SDG No.: _____

Matrix (soil/water): WATER Lab Sample ID: 65326

Level (low/med): LOW Date Received: 2/8/90

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1050			P
7440-36-0	Antimony	55.0	U		P
7440-38-2	Arsenic	1.2	B		F
7440-39-3	Barium	47.9	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	79100			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	2710			P
7439-92-1	Lead	11.6			F
7439-95-4	Magnesium	28600			P
7439-96-5	Manganese	235			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	15.0	U		P
7440-09-7	Potassium	1560	B		P
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	34800			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	90.0			P
	Cyanide	10.0	U		C

Color Before: YELLOW Clarity Before: CLEAR Texture: _____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

FORM I - IN

NYSDEC

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO: L1

Lab Name: Ecology & Environment Inc. Contract: D001549

Lab Code: _____ Case No.: 872.001 SAS No.: YN-4020 SDG No.: L-1

Matrix (soil/water): WATER Lab Sample ID: 41582

Level (low/med): LOW Date Received: 6/16/89

% Solids: 0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	M	Q
7429-90-5	Aluminum	1360			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	164			F
7440-39-3	Barium	1260			P
7440-41-7	Beryllium	3.0	B		P
7440-43-9	Cadmium	38.4			P
7440-70-2	Calcium	312000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	13.1	B		P
7440-50-8	Copper	78.2			P
7439-89-6	Iron	326000			P
7439-92-1	Lead	61.9			F
7439-95-4	Magnesium	53700			P
7439-96-5	Manganese	4650			P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	667			P
7440-09-7	Potassium	11100			P
7782-49-2	Selenium	5.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	62000			P
7440-28-0	Thallium	5.0	U		F
7440-62-2	Vanadium	107			P
7440-66-6	Zinc	312			P
	Cyanide	10.0	U		C

Color Before: _____ Clarity Before: _____ Texture: ___

Color After: _____ Clarity After: _____ Artifacts: ___

Comments:

APPENDIX G

SUBSURFACE SOIL, GROUNDWATER, SURFACE SOIL, SURFACE WATER/SEDIMENT, AND LEACHATE SAMPLING PROCEDURES

Subsurface Soil Sampling

One subsurface soil sample was collected during drilling for chemical analysis and seven for geotechnical analysis. The sample for chemical analysis was collected from the soil horizon exhibiting discoloration and odor (17-19 feet) from GW-7 well bore. All of the samples were collected using a decontaminated split-spoon sampler driven by a 140-pound hammer on the drill rig. Blow counts and total recovery were recorded for each sample (see Appendix D). After retrieving the sample, it was screened with the HNu and a pre-cleaned stainless steel spoon was used to place the sample for chemical analysis in a pre-cleaned, acid-rinsed, 8-ounce jar equipped with a Teflon-lined lid. Samples for geotechnical analyses were placed in 16-ounce Mason jars.

Groundwater Sampling

Seven groundwater samples were obtained from each of the seven wells on site and analyzed for TCL organics and inorganics. A dedicated, decontaminated PVC bailer was used with new, dedicated nylon rope at each well. Prior to sampling, a groundwater-level reading was obtained, along with a total depth-of-well reading. An amount equaling three standing water volumes was calculated and purged prior to sampling. The first bottles to be filled were those containing sample water for volatile organic compound analysis. This was to minimize the turbidation of the water so that the volatile content would remain intact. The second bottles to be filled were those for total metals and dissolved metals analysis. A reading of the turbidity was immediately taken using a portable nephelometer. If the reading was greater than 50 NTUs, the dissolved metals bottle was retained for filtration. If the turbidity was lower than 50 NTUs, only the total metals analysis was performed.

Additional field parameters measured included pH, temperature, and conductivity. Measurements of pH were taken in triplicate, while measurements of conductivity were taken in quadruplicate for accuracy purposes. Prior to filling, all sample bottles were labeled with water-proof ink and labels were covered with clear mylar tape. After all bottles were filled, the bailer was placed in the well and suspended above the water table, and the well casing lid was locked. The filled

bottles were packed into coolers containing vermiculite and ice, then transported at the end of the day back to E & E's ASC for analysis. All samples for metals, both total and dissolved, were preserved by adding concentrated nitric acid to the sample until the pH of the sample was lowered to less than 2.0. All samples for cyanide analysis were preserved by the addition of sodium hydroxide. Pellets of NaOH were added until the pH was raised to greater than 12.0.

Surface Soil Sampling

Eleven locations were selected for surface soil sampling. All samples were analyzed for TCL organic and inorganic compounds. The individual soil sample was obtained from the top 6 inches of topsoil by using a pre-cleaned stainless steel spoon to fill a pre-cleaned, acid-rinsed, 8-ounce clear glass soil jar equipped with a Teflon-lined lid. This volume served for total metals, base/neutral and acid extractables analysis and PCB/ pesticide and cyanide analysis. In addition to the 8-ounce jar, two 40-ml clear glass vials, each equipped with Teflon septum, were filled for volatile organic analysis.

Surface Water/Sediment Sampling

Fifteen points were delineated in the work plan as locations at which both a surface water and sediment (SW/SWS) sample would be obtained. The field locations were matched as closely as possible to the locations described in the work plan. These samples were analyzed for TCL organics and inorganics. Eight additional samples were collected, as directed by the NYSDEC on-site representative for the railroad drainage swale off site. These samples were analyzed for PCBs/pesticides only.

Sediment samples were obtained by using a pre-cleaned stainless steel spoon to fill an 8-ounce pre-cleaned, acid-rinsed jar equipped with a Teflon-lined lid. This volume served for total metals, base/ neutrals and acid extractables, PCB/pesticide, and cyanide analyses. In addition to the eight-ounce jar, two 40-ml glass vials, each equipped with a Teflon septum, were filled with sediment for volatile organics analysis.

Waste

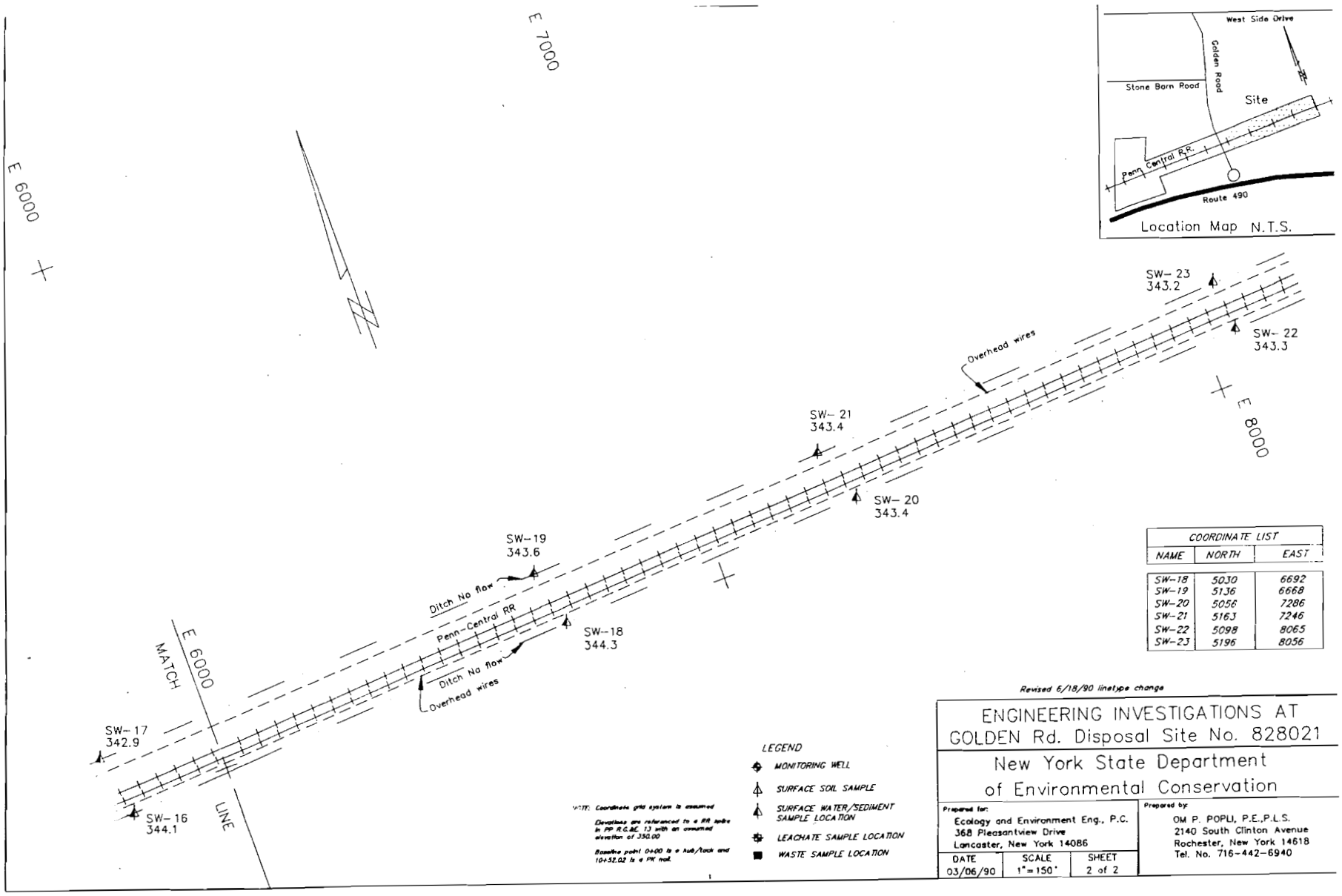
Three waste samples were collected at the Golden Road site. Two samples were foundry sand and one sample was a resin-like substance obtained from a partially buried drum. The samples were collected using the sample procedures outlined in the surface soil sampling section, and all of the samples were analyzed for TCL organics and inorganics.

Leachate

Two leachate samples were collected at the Golden Road site. One was in liquid form and one consisted of leachate-stained sediment due to insufficient liquid content. The liquid sample was collected by direct immersion of the appropriate sample bottles (see Section 4.4.2). The soil sample was collected using the same procedures as the surface soil and sediment samples. Both of the samples were analyzed for TCL organics and inorganics.

APPENDIX H

SITE SURVEY MAP



COORDINATE LIST		
NAME	NORTH	EAST
SW-18	5030	6692
SW-19	5136	6668
SW-20	5056	7286
SW-21	5163	7246
SW-22	5098	8065
SW-23	5196	8056

Revised 6/18/90 linetype change

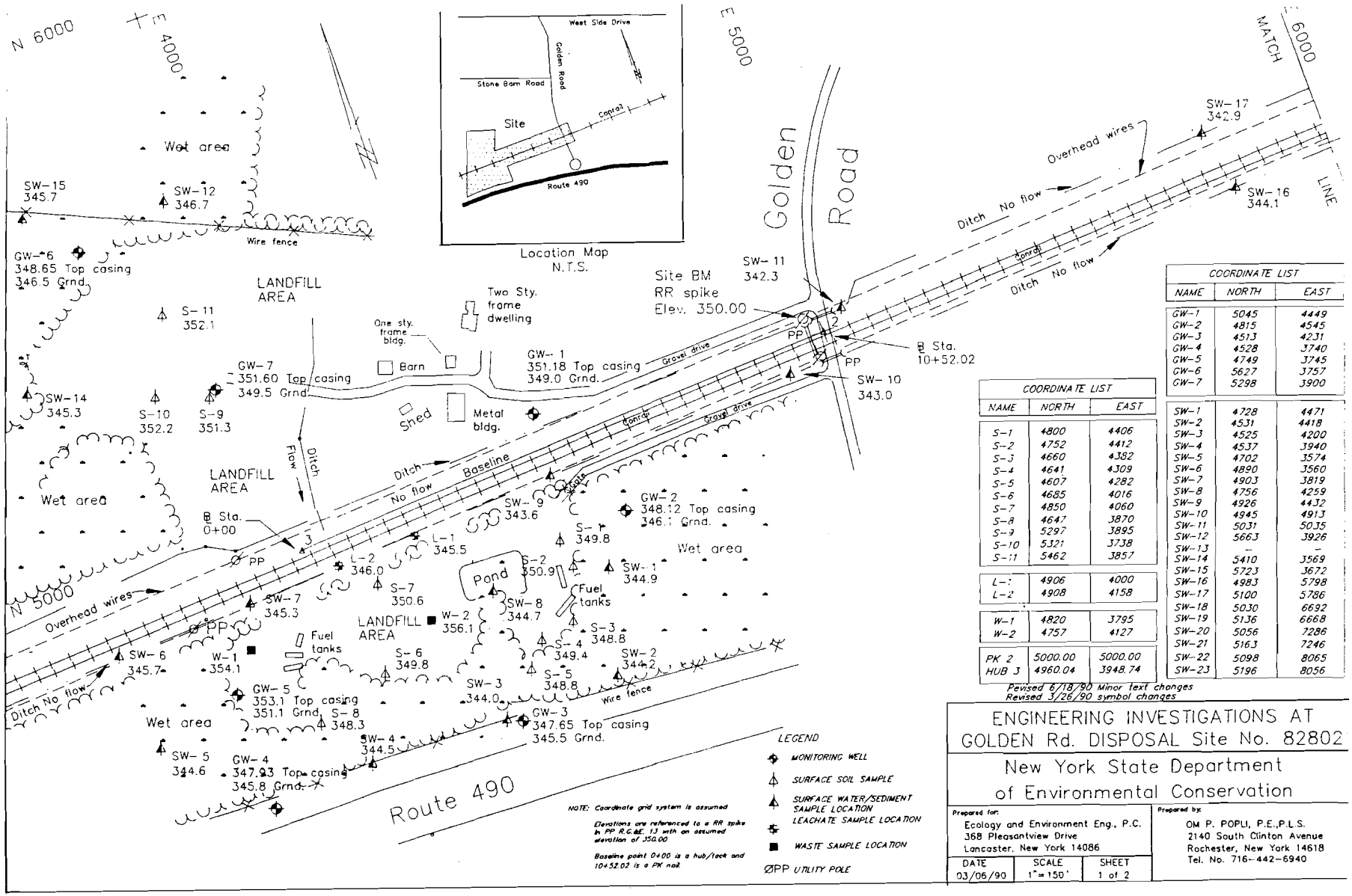
ENGINEERING INVESTIGATIONS AT GOLDEN Rd. Disposal Site No. 828021

New York State Department of Environmental Conservation

Prepared for:
Ecology and Environment Eng., P.C.
368 Pleasantview Drive
Lancaster, New York 14086

DATE	SCALE	SHEET
03/06/90	1"=150'	2 of 2

Prepared by:
OM P. POPLI, P.E.,P.L.S.
2140 South Clinton Avenue
Rochester, New York 14618
Tel. No. 716-442-6940



COORDINATE LIST		
NAME	NORTH	EAST
S-1	4800	4406
S-2	4752	4412
S-3	4660	4382
S-4	4641	4309
S-5	4607	4282
S-6	4685	4016
S-7	4850	4060
S-8	4647	3870
S-9	5297	3895
S-10	5321	3738
S-11	5462	3857
L-1	4906	4000
L-2	4908	4158
W-1	4820	3795
W-2	4757	4127
PK 2	5000.00	5000.00
HUB 3	4960.04	3948.74

COORDINATE LIST		
NAME	NORTH	EAST
GW-1	5045	4449
GW-2	4815	4545
GW-3	4513	4231
GW-4	4528	3740
GW-5	4749	3745
GW-6	5627	3757
GW-7	5298	3900
SW-1	4728	4471
SW-2	4531	4418
SW-3	4525	4200
SW-4	4537	3940
SW-5	4702	3574
SW-6	4890	3560
SW-7	4903	3819
SW-8	4756	4259
SW-9	4926	4432
SW-10	4945	4913
SW-11	5031	5035
SW-12	5663	3926
SW-13	–	–
SW-14	5410	3569
SW-15	5723	3672
SW-16	4983	5798
SW-17	5100	5786
SW-18	5030	6692
SW-19	5136	6668
SW-20	5056	7286
SW-21	5163	7246
SW-22	5098	8065
SW-23	5196	8056

Revised 6/18/90 Minor text changes
Revised 3/26/90 symbol changes

ENGINEERING INVESTIGATIONS AT GOLDEN Rd. DISPOSAL Site No. 82802

New York State Department of Environmental Conservation

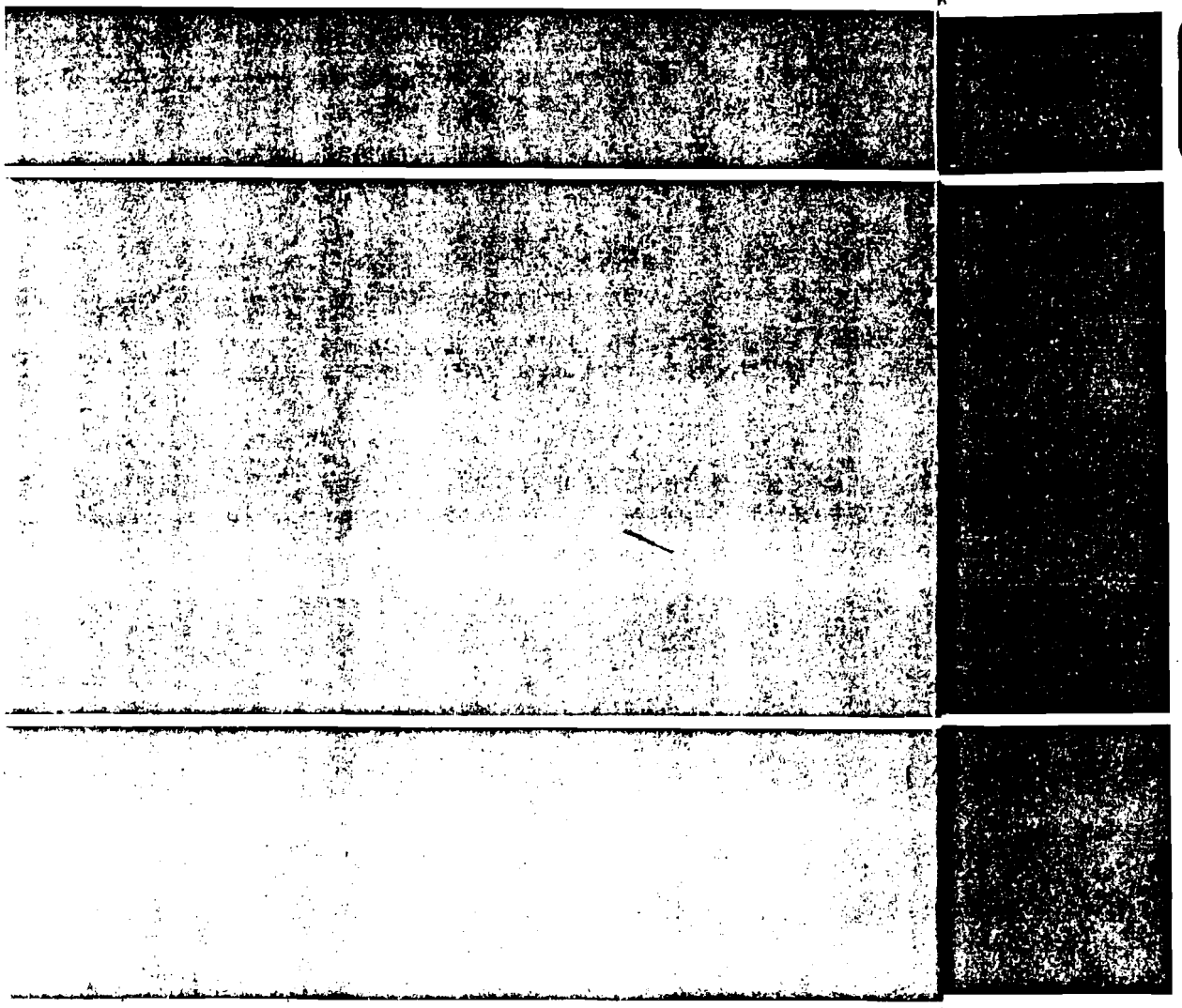
Prepared for:
Ecology and Environment Eng., P.C.
368 Pleasantview Drive
Lancaster, New York 14086

DATE	SCALE	SHEET
03/06/90	1"= 150'	1 of 2

Prepared by:
OM P. POPLI, P.E.,P.L.S.
2140 South Clinton Avenue
Rochester, New York 14618
Tel. No. 716-442-6940

APPENDIX I

SITE FIELD LOGBOOKS



ecology and environment, inc.

International Specialists in the Environment

Job Number 1N - 4CIV

Golden Road Disposal Site
Monroe County
Chili, NY

Site Activity LOG

ecology and environment, inc.

E & E Job Number YN - 4000

Telephone Code Number 716-684-8060

Site Name Golden Road Disposal Site

State/City Chili, NY

TDD

PAN

SSID

Start/Finish Date 4/26/89 /

Book 1 of

E & E Emergency Response Center: (716) 684-8940

Wednesday 4/26/89

Weather: Sunny, warm 60°F, wind from north at 5 mph

1445 G. Florentino and T. Ferrara arrived at Howard Fitzsimmons Residence

Today's Objective: walk over site to determine access problems and to perform air monitoring with an HNu

Mr. Fitzsimmons brought ETE crew to the landfill area

HNu was calibrated at previous site (Brakport L.F.)
ETE crew will also carry mini-rad and wearing TLD Badges. Mini Rad background readings are higher than previous site

Access Road is blocked off with a locked gate, however the site is not secure.

Access to mw-2 is limited by trees and change in topography

Frame 14 View to SW from access road of large tanks

1545 Frame 15 View to south of large tanks in SW section of site

1555 Frame 16 View to west of old Tanker truck

Gene Florentino 4/26/89

Wednesday 4/26/89

1600 Frame #17 View to south of large tank and of large metal debris

1604 Frames #18 & #19 ponded water on west end of fill area. Water is a brownish-red color

Access to GW-5 is limited by ponded water and change in topography

1610 Frame #20 View to east from west end of site at metal debris

1615 Frame #21 View to east of large tanks with white insulating material, possibly asbestos

1620 Frame #22 View to north along fill edge/marsh of buried drums

Half-buried drums appear all along marsh

ETE Access to GW-6

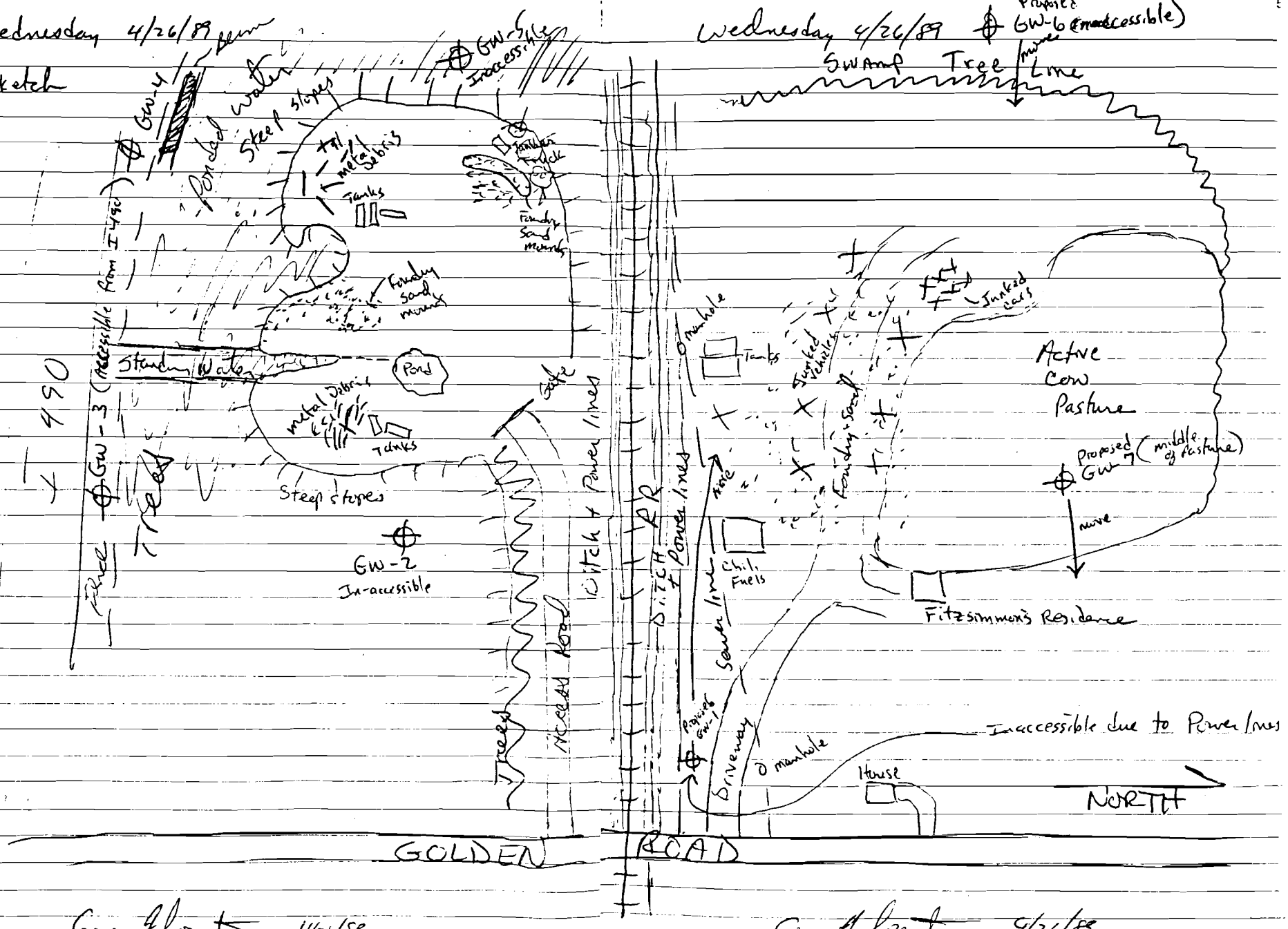
GW-1 inaccessible due to power lines. It can be moved west past chain fruits bldg

1715 Departed Site

Gene Florentino 4/26/89

Wednesday 4/26/89 pm

Site Sketch



Wednesday 4/26/89

Proposed GW-6 (Inaccessible)

Swamp Tree Line

move

Gene Florentine 4/26/89

Gene Florentine 4/26/89

Wednesday 5/17/89

Weather: Sunny, temp. expected to reach 70°F

0730 Crew loading equipment
G. Florentino
J. Ramen
J. Richert

Today's objective: Perform Geophysical Survey

0800 Departed ETE headquarters

0900 Arrived onsite
Departed site to drive hospital route

0914 Arrived at Hospital (6.9 miles from site

Stopped at lumber store to pick up wood stakes

0940 Arrived back onsite

Setting up Grid 1 (south of driveway - btwn driveway and ditch)
Proposed well GW-1 is surrounded by metal debris and power lines on 3 sides which will cause interference in the geophysical survey.
The grid is small and narrow due to abandoned machinery on either side of the well location

Gene Florentino 5/17/89

Wednesday 5/17/89

1055 Completed Grid 1

Setting up Grid 6

1120 Began surveying Grid 6

1145 Completed Grid 6

Setting up Grid 7
Junk cars and scrap throughout Grid.
Geophysical readings will be high and untrue due to interference, however, NYSDEC requested survey anyway.

1220 Completed Grid 7

Frame 6 on Little League/Granger/Pittsford/Evans roll ⇒ View to North of GW-7 location

1145 Frame 0 on Manilla Roll ⇒ View to West of GW-6 location

1235 Crew breaks for lunch - departs site

Frame 5 View to South of GW-1 location

1335 Crew returned to site
Setting up Grid 2, will need Bulldozer for RG

1345 Frame 4 View to North of GW-2 location

Gene Florentino 5/17/89

Wednesday 5/17/89

1430 Proposed location of GW-5 is inaccessible from any direction:
- north: RR tracks and very low power lines inhibiting entry
- South: Very marshy and large trees all the way to Rt 490
- east: 6 ft drop from top of fill would need major bulldozing and alot of fill material
- west: Continued marsh

Will survey a Grid on edge of fill and check with NYSDEC for approval before cutting. Frame 3

1505 Finished Surveying Grid 5

Nick Harding Arrived onsite (LaBella Assoc.) Showed Nick all proposed well locations. Nick agreed that GW-5 is inaccessible and was concerned about GW-7, near the junked cars due to poor geophysical data.

Question of whether GW-3 and GW-4 can be put on right-of-way or if they have to be on the other side of the fence. Access is limited on the west side of the fence
Gene Flowers 5/17/89

Wednesday 5/17/89

1530 Setting up Grid 3 Nick Harding departed site

1620 Finished Grid 3
Setting up Grid 4
Frame 32 View to west of GW-4

1700 Finish Grid
Packing up equipment

1710 Frame 21 View to west of GW-3

1715 Departed Site for Day

8-22-89 TUES.

TRIP TO GET DRILLING STARTED

0800 J. RICHERT ARRIVES AT BUDGET AUTO RENTAL

0845 J. RICHERT DEPARTS BUDGET w/ compact CAR $43.00 per day w/unlimited miles

0910 J. RICHERT ARRIVES ON SITE
DISTANCE DRIVEN WAS 55 MILES
TOOK RT 90 TO LEROY EXIT (1.20 TOLL)
EXIT 47 - ONTO THE I490.
TOOK 490 TO EXIT #5 CHILI CENTER
MAKE LEFT at stop sign - go to and Make left on westside road go 3 mile to GOLDEN ROAD - TURN left + go to trailer.

WEATHER = sunny 75°F CALM.
EXPECT CLOUDS + SOME RAIN later.

0920 MIKE RYAN FROM THE DEC ALBANY OFFICE ARRIVES ON SITE - we briefly discuss site + plan for day + where is OM POPLI.

0925 MIKE RYAN departs site to Call NICK HARDING of OM POPLI TO SEE WHEN HE EXPECT TO ARRIVE ON SITE.

Jim Richert

8-22-89 TUES

0940 J. RICHERT - waits return of DEC + OR NICK HARDING AT END OF FITZSIMMONS' DRIVEWAY.

0950 - Mike Ryan returns on site

1000 MIKE RYAN + JIM RICHERT MEET WITH HOWARD FITZSIMMONS - SITE OWNER.

WE DECIDED TO MOVE THE STEAK OF GW-7 FROM THE STEEL JUNK AREA TO A CLEARING ≈ 125' SW of previous location just NORTH of a pile of dirt or fill.

Mr. Fitzsimmons requested GW-6 be drilled 1st so he can fence in the fence in his cows - M. Ryan said O.K.

Also Mr. Fitzsimmons brought to our attention that GW-2 is not on his Property but on the HYDE PROPERTY.

1045 Mike Ryan + Jim Richert found stake for GW-2 it is ≈ 50' EAST of PROPERTY LINE ON THE HYDE PROPERTY

1055 M. Ryan + J. Richert - visit the Hyde Residence to ask permission to drill - No one was home -

1150 Jeff + Steve of OM POPLI and Joe from Empire Soils - Rochester office arrive on site.

Jim Richert

8-22-89

1210 Ryan + Richart show drillers 1st location.

1215 all depart site for a phone + food

1230 Richart + Ryan arrive back on site - Nick Harding + a driller helper is on site.
water for drilling will be obtained from a fire hydrant at the end of Golden Road - East side.
On pgm set up the meter with the County of Monroe

1240 Driller is at hydrant filling his water tank.

1255 Richart + Ryan show Harding locations of GW-6 + 7.
Harding says GW-6 looks OK but GW-7 may require doing a geophysical survey, dependant on what they find digging a 2' hole by hand. Mr. Fitzsimmons said the fill is only ≈ 1-foot deep at GW-7 (new loc).

1300 Richart + Harding investigate GW-3 + 4 to see if it would be possible to move those 2 sites to the north off of the 490 RIGHT-OF-WAY, because permission from FED'S is a problem.
Jim Richart

8-22-89 TUES

GW-3 + 4 could be moved north if fence was cut + the feds allow us to drive to the well sites over the 490 R-O-W. No final decision made yet

1330 Empire soils clean (steam-clean) Rig, auger, PPE, TOOLS, ETC

site Safety Meeting Conducted By:
Steve Campbell - on PSPLI
Joe Jensen - EMPIRE SOILS
Ron Braun
Jeff Sanzenga - on PSPLI
Jim Richart - ERE
Mike Ryan - DEC

1345 Empire Soils driller Joe Jensen said the well on the 490 R-O-W. was put at the intersection of the 490 - the Spencerport Expressway.
The dump was right under the 490.

1410 Steve Campbell of our PSPLI conducted the site Safety meeting.

1420 Richart departs site as drilling is about to start.

1600 Richart arrives at Budget car rental - charged 45.82 for car 5.00 parking - $60 - GAS
J. Richart

recycled paper

I-10

ecology and environment

ecology and environment, inc.

International Specialists in the Environment

Job Number YN - 4030

Golden Road Site
N. Chili, NY
Of ~~Site Log and~~
Geophysical Survey
DATA
EM31

ecology and environment, inc.

ecycled Paper/569058

E & E Job Number YN-4030

Telephone Code Number 716-684-8060

Site Name Golden Road Site

State/City Chili, NY

TDD

PAN

SSID

Start/Finish Date 5/17/89 /

Book 2 of

E & E Emergency Response Center: (716) 684-8940

Wednesday 5/17/89

20 Zeroed EM31 at base station set up on west side of large pine tree on field btwn Golden Road and Fitzsimmons house.

0 GRID 1 Orientation N-S / E-W (without declination correction)

Sta	VERT N-S	VERT E-W	HORIZ N-S	HORIZ E-W	Comments
60	11	11	9	8	No. side of Driveway
60	10	12	10	8	" " " "
60	16	56 *	7	18 *	*Adj. to Hay Wagon
50	7	15	8	15	on drive way near "
50	4	13	10	15	
50	Neg	5	12	24	center of driveway (Sewer?)
40	12	12	11	12	
40	9	11	10	12	edge of driveway (South)
40	7	10	9	14	" " "
30	13	13	2	5	5' No. of machinery
30	6	10	10	7	
30	12	11	8	8	
20	10	11	7	9	10' from machinery
20	5	9	9	8	GW-1 location
20	14	34	Neg	Neg	3' east of machinery
10	13	60 *	Neg	Neg	*" " " Steel Box
10	9	9	7	8	
10	10	11	7	10	
0	10	10	8	10	edge of ditch — Power lines over Ditch
0	8	8	7	7	" " "
0	10	9	8	8	" " " (SW corner of Grid)

155 Cele Flovette 5/17/89

Wednesday 5/17/89

40'x40' GRID 0-0 is SW CORNER

GRID 6 Orientation N-S/E-W (without declination Correction)

11:05 Located in wooded area west of Cow Pasture

Sta #	VERT N-S	VERT EW	HORIZ N-S	HORIZ E-W	Comments
0-0	9	9	7	7	all readings taken
10-0	9	9	7	7	in wooded area
20-0	9	9	7	7	with standing water
30-0	9	9	7	8	
40-0	10	9	8	8	OLD BARBED WIRE
40-10	9	9	7	7	FENCE RUNS N-S
30-10	9	8	7	7	BETWEEN 0+10 line
20-10	9	9	6	7	
10-10	8	8	7	6	
0-10	8	9	7	7	
0-20	9	9	6	6	
10-20	8	8	7	6	
20-20	9	9	6	6	WELL LOCATION
30-20	9	9	6	6	
40-20	8	9	7	7	
40-30	8	8	7	7	
30-30	8	9	6	6	
20-30	9	9	6	7	
10-30	8	8	7	7	
0-30	9	9	7	7	
0-40	9	9	8	7	
10-40	9	9	7	7	
20-40	9	9	7	7	
30-40	8	8	7	7	
40-40	8	8	7	7	

1145 DONE W/ GW # well & SERVED

[illegible] Eckert

Wednesday 5/17/83

1205 GRID 7

New Junked Cars

GRID is Completely littered with metal debris, EM31 readings will be erroneous

Orientation N-S/E-W (without declination correction)

Sta	VERT.		HORIZ		Comments
	N-S	E-W	N-S	E-W	
20,30	—	38	~~30~~	neg	metal debris/bags blocking N-S reading
10,30	24	38 ~~neg~~	neg	neg	"
0,30	—	—	—	—	" " (no reading - blocked)
0,20	33	neg	30	9	" "
10,20	13	13	17	17	" " (well location)
20,20	neg	24	27	5	" "
20,10	10	24	12	14	" "
20,0	17	14	12	36	" "
10,0	20	5	19	15	" "
10,10	14	12	14	23	" "
0,10	neg	30	neg	25	" "
0,0	neg	neg	22	neg	" "

20

1335 setting up GRID 2

Location South of RR, east of fill in wooded area.

Orientation N-S/E-W (without declination correction)

Gene Fleuter 5/17/83

Wednesday 5/17/83

1345 GRID 2

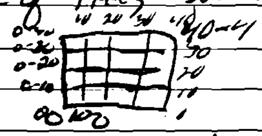
Sta	VERT		HORIZ		Comments
~~40,40~~	N-S	E-W	N-S	E-W	
40,40	10	10	10	9	
30,40	10	9	9	9	
20,40	9	9	8	8	
10,40	9	9	8	7	
0,40	9	9	8	7	
0,30	9	9	7	8	
10,30	9	9	7	8	
20,30	9	9	8	9	
30,30	9	9	9	9	
40,30	10	10	10	10	
40,20	10	10	9	9	
30,20	10	10	9	8	
20,20	9	9	8	8	GW-2 location
10,20	9	9	8	8	
0,20	9	9	8	8	
0,10	9	9 8	8	8	
10,10	9	9	8	8	
20,10	9	9 8	8	8	
30,10	9	9	9	8	
40,10	9	9	9	8	
40,0	10	10	9	9	
30,0	9	9	9	8	
20,0	9	9	8	8	
10,0	9	9	8	8	
0,0	9	9	8	8	SW Corner of Grid

1405

Gene Fleuter 5/17/83

Wednesday 5/17/89

GRID 5
ORientation N-S/E-W (without declination correction)
location = west edge of fill, south of RR



STATION NO.	VERTICLE N-S	VERTICLE E-W	HORIZONTAL N-S	HORIZONTAL E-W	COMMENTS
-0	4	6	10	9	0-0 = SW CORNER
0-0	7	5	9	13	ALL BEARINGS
0-0	4	4	10	14	ON FILL
0-0	3	7	17	11	* MATERIAL
0-0	7	4	15	12	STEEL DEBRIS
[illegible]-10	10	5	8	9	(Buried Drum Ooze on ground)
0-10	7	6	11	10	
0-10	10	10	10	9	
0-10	10	9	9	9	
-10	5	8	9	7	
-20	7	8	8	7	
0-20	7	9	10	8	WELL STAKE
0-20	7	8	11	11	
30-20	5	6	10	11	
0-20	9	8	8	8	
10-20	6	7	9	9	
30-30	7	6	11	11	
0-30	6	6	11	10	
0-30	7	7	10	10	
0-30	7	6	8	8	
0-40	6	7	9	7	
0-40	7	7	11	10	
20-40	9	8	10	10	
30-40	8	9	10	10	
[illegible]	11	1	10	9	

I-14

[signature]

5/17/89 WED

1505 finished GRID 5 survey

Grid 3 south of
10 ft ~~east~~ south of fence along Right-of-way
along I 490

1530 Orientation N-S/E-W (without declination correction)

Sta	VERT N-S	VERT E-W	HORIZ N-S	HORIZ E-W	Comments
0, 30	~~44~~ 48	35	28	17	fence ten feet north, poll 3 feet west
0, 20	21	20	17	17	
0, 10	20	20	15	17	
0, 0	26	25	14	13	ten feet from Rt 490
10, 0	25	23	15	12	
10, 10	21	20	15	16	
20, 10	20	19	15	16	
20, 0	24	22	15	14	ten feet from Rt 490
30, 0	24	23	15	13	" " " " "
40, 0	24	23	15	15	" " " " "
40, 10	21	22	17	18	
30, 10	21	20	15	18	
10, 20	21	21	15	17	#
10, 30	48	30	25	19	ten feet from fence
20, 20	20	21	18	18	
30, 20	20	21	17	18	
40, 20	21	22	15	17	~~ten feet from fence~~
40, 30	42	37	19	18	"
30, 30	42	35	26	18	ten feet from fence
20, 30	44	36	22	19	" " " well location

1600

Gene [signature] 5/17/89

Wednesday 5/17/89

1630 Grid 4
orientation N-S/E-W (without declination correction)
location along I490 right-of-way south of fence

Ft GT	Vert		Horiz		
40,0	N-S	E-W	N-S	E-W	Comments
40,0	26	22	14	12	Along I490
30,0	25	25	13	12	
20,0	24	23	13	12	
10,0	24	22	14	11	
0,0	22	21	13	12	SW corner of Grid
0,10	18	18	12	13	
10,10	19	19	12	13	
20,10	18	18	12	12	
30,10	18	19	12	12	
40,10	19	19	13	12	
40,20	19	18	14	14	
30,20	19	19	14	14	
20,20	19	19	14	14	
10,20	20	20	15	15	
0,20	20	20	15	15	
0,30	55	34	22	22	10' from fence
10,30	40	27	24	19	" " "
20,30	36	20	24	17	" " " (well 4 location)
30,30	32	26	20	17	10' from fence
40,30	32	25	19	14	" " "

1700 Finish Survey for Day

Carl Flores 5/17/89

ecology and environment, inc.
International Specialists in the Environment

Job Number YN-4030

Golden Road Site
N. Chili, NY
GEOPHYSICAL SURVEY
MAGNETOMETER
SURVEY
DATA

I-16

ecology and environment, inc.

ecycled Paper/569058

E & E Job Number 4N-4030

Telephone Code Number 716-684-8060

Site Name Golden Road site

State/City N. Chili, NY

TDD

PAN

SSID

Start/Finish Date 5/17/89 /

Book 3 of

E & E Emergency Response Center: (716) 684-8940

5/17/89 wednesday

[illegible]20 Background station Adjacent to large Pine tree (west side) on field between Golden road and Fitzsimmons residence
UNIMAG II EG+G Proton Procession MAGNETOMETER

N-S	E-W
53186	52481
52299	52493
52167	52094

30 GRID #1

Station	N-S	E-W	Comment
,0	52131	52140	SW corner of grid
,0	52139	52137	top edge of bank
,0	52140	52137	" " " "
10	52138	52130	large metal box 4 feet to west
10	52141	52136	corn harvester 6 feet to E
10	52140	52143	
20	53343	52844	large engine 2 feet to west
20	52134	52132	GW-1 site-well
20	52139	52137	corn harvester 6 feet east
30	52144	52143	adjacent pile of gravel & dirt
30	52135	52132	corn harvester 10 feet east
3[illegible]	521[illegible]	52144	
[illegible]	521[illegible]	52141	
0	521[illegible]	52140	in road way
[illegible]	521[illegible]0	52145	" " "
[illegible]	52153	52150	" " "
[illegible]	52151	52149	" " "
[illegible]	52147	52139	" " "
[illegible]	52137	52139	
[illegible]	52144	52139	
[illegible]	52147	52148	hay trailer 4 feet to east

John Kramer

5/17/89 Wednesday

1052 finished surveying grid #1

1055 Background Readings at station by pine tree

N-S	E-W
52148	52145
52542	52142
52545	52150

Grid 6
West of Cow Pasture in wooded area

1120 Start

Sta	N-S	E-W	Comments
40,0	52599		
40,10			
40,20			
40,30			
40,40	56 ~~348~~ 799 GF	~~57301~~ 57884 GF	
30,40	57181	56540	
20,40	GF ~~55406~~ 57185	57625	
10,40	57416	57089	
0,40	57073	57857	
0,30	57310	57107	
10,30	57151	57130	
20,30	GF ~~56[illegible]2~~ 57147	~~56705~~ GF 57100	
30,30	57492	57662	
40,30	57344	57608	
40,20	57263	57239	
30, ~~40~~ 20 GF	57012	57036	
20,20	57191	57183	well 6 location
1135	Gene	4 Lovett	5/17/89

5/17/89 Wednesday

GRID 6 (Cont)

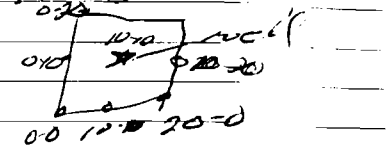
Sta	N-S	E-W	Comments
0,20	57567	57122	
,20	57088	57164	
,10	57424	57020	
,0	57459	57269	
20 10 OF	57362	57791	
20 10 OF	57007	57229	
40 10 OF	57176	57154	
,10	57255	57132	
,1	57559	57185	
,2	57066	57056	
,0	57054	57359	
,0	57247	57175	
,0	5783	57050	
5 END survey			

2	background N-S	Reading E-W	Comments
	56327	56740	readings varied widly while getting background samples
	57104	56420	
	57100	56559	

5/17/89 WEDNESDAY

GRID #7 GW-7

WELL STAKE IN MIDDLE OF STEEL JUNK YARD EXPECT MUCH INTERFERENCE. GRID IS NOT COMPLETE DUE TO ACCESS (JUNK) PROBLEM. SW CORNER OF GRID = 0-0



1210 BEGIN SURVEY

STATION	N-S	E-W	COMMENTS
0-0	56561	54151	2' EAST of steel JNK
10-0	52793	54993	ADJACENT TO CAR ENGINE
20-0	54508	54721	
~~10-20~~ 20,10 OF	52858	54060	INCONSISTANT READING
~~10-10~~ 10,10 OF	53550	55319	
~~10-0~~ 0,10 OF	53297	53939	IN JUNK PILE
~~20-E~~ 0,20 OF	53192	56183	" " "
~~20-E~~ 10,20 OF	55499	55287	WELL STAKE
20-20	54340	52073	2' from truck frame
~~30-20~~ 20,30 OF	54990	54751	1' SOUTH of A BUS
~~20-30~~	54013	54270	0-30
~~30-0~~ 0-30			30-30 NOT ACCESSABLE

1225 done with Grid #7

Jim Richert

5/17/89 wednesday

1232 background readings

NS	EW
52785	54047
52241	52701
51973	53573

1337 background reading

N-S	E-W
52800	53178
56444	52570
53600	53030

1346 Start Grid number 2 in forested area

Station	N-S	E-W	Comments
0,0	57423	57142	
10,0	57694	55614	
20,0	57032	56919	
30,0	56950	56476	
40,0	57353	56841	
0,10	56958	57230	
10,10	56244	56212	
20,10	55367	56410	
30,10	55149	53943	
40,10	56164	56582	
0,20	55238	57032	
10,20	56965	56827	
20,20	55720	57071	well location
30,20	57136	56166	
40,20	57304	57132	

[signature]

7 20

5/17/89 wednesday

Station	N-S	E-W	Comments
0,30	56753	57310	
10,30	57503	57577	
20,30	56843	57355	
30,30	57726	57576	
40,30	56978	57103	
0,40	57189	56965	
10,40	56887	57177	
20,40	57094	57000	
30,40	57420	57691	
40,40	56781	57120	

1407 finished grid 2

background readings

1415

N-S	E-W
54207	57162
57009	54711
56949	57319

1435 GRID 5

Sta	N-S	E-W	Comments
40,40	57133	57465	
30,40	57195	57247	
20,40	57648	57375	
10,40	56567	58557	
0,40	54101	53818	edge of fill
0,30	57898	55913	" " "
10,30	57870	57600	
20,30	57114	57657	

1440 Gene Alvarez [signature] 5/17/89

1440 GRID 5 Continued 5/17/89

MAGNEtometer

Sta	N-S	E-W	Comment
30,30	57400	57332	
40,30	57573	57441	
0,20	37039	57256	
30,20	57435	57038	
20,20	57564	57618	
10,20	58208	57875	GW-5 location
0,20	57683	57428	edge of fill
0,10	57094	58778	" " "
10,10	57556	57763	
20,10	57579	57480	
30,10	57588	57513	
40,10	57330	57491	
40,0	57052	57257	
30,0	57784	57553	
20,0	57347	57099	
10,0	57174	57837	
0,0	57461	57836	SW corner of Grid edge of fill

1455 END

1525 BACKGROUND

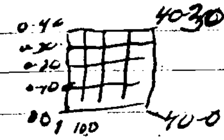
NS	EW
53446	56764
57172	56711
56627	57217

5/17/89 WED

GRID #3 ON RT 490 RIGHT OF WAY
EAST OF GW#4

1600 Begin SURVEY AT (0-0) southwest point

GRID HAS 20 ~~points as before~~ 5' spacing



JR JR JR JR

STA	N+S	E+W	COMMENTS
~~40-20~~ JR	—	—	~~SHOULDER of Road~~ JR
~~40-10~~			
40-0	53537	53242	
30-0	56379	53523	
20-0	57711	53464	
10-0	55001	53217	
0-0	56554	56912	
0-10	54785	52594	
10-10	~~57365~~ JR	~~57467~~ JR	N-S 57533 / E+W 57788
20-10	53043	53542	
30-10	56760	57638	↑
40-10	57305	57467	
0-20	54686	54577	
10-20	56328	54990	erratic readings
20-20	57205	57259	"
30-20	55424	56927	"
40-20	56708	55680	"
40-30	57130	56067	" TOOK 7 Trys FOR GOOD REA
30-30	57338	57039	"
20-30	56490	57042	WELL STAKE
10-30	~~continued on p. 10~~		N-S 57537 / E+W 57072
0-30	END JR		57209 / 57246 Jim Richert

5/17/89 WE

GRID #3 CONT.

STA	NS	E+W	Comments

JR

decided not to survey the 5 points located on the shoulder of Rt [illegible]

1630 End grid #3

Jim Reichert

5/17/89 WED

1640 starting grid #4

station	NS	E-W	comments
40, 0	55161	53212	
30, 0	55911	56419	
20, 0	57024	56833	
10, 0	57243	57017	
0, 0	57158	57536	
0, 10	57243	56850	
0, 10	57076	56424	
10, 10	57079	57322	
10, 10	57197	57727	
10, 10	57066	56675	
10, 20	57069	57244	
30, 20	57048	56853	
20, 20	57038	56672	
10, 20	56925	57075	
0, 20	57061	57280	
0, 30	56223	56921	
0, 30	56480	56800	
20, 30	56726	56468	Well location
30, 30	56820	56808	
40, 30	56886	56622	

1655 finished grid #4

Background readings

NS	E-W
52935	53140
56998	56293
56975	57052

Little League/Grange and Golden rd. 8/22/89

1015 GW-8
Temperature: 59°F
conductivity: 1740 u/cm.
pH: 7.92

1020 - development of GW-8 complete.

1040 - Leave site

1130 Arrive at Golden Rd site
S. Campbell J. JENSEN (driller)
J. DANZINGER (NYSDEC)
Already on-site - M. RYAN and J. RICKER. (E+E)

1200 - Break for lunch + make phone calls - driller calls his office.

1230 Back to work.
- Ron Brown, driller arrives at Golden Rd site.

1235 - Nick Harding arrives at Golden Rd.

8/22/89 Golden Road

1425 begin drilling GW-6
HNU background - 0.6 ppm.

1500 well installation at GW-6 begins.
PVC - 7.0 ft. screen.
PVC riser →
sand (100 lb/bag) - 2 bags.
bentonite pellets - ½ 5 gal bucket
Portland cement (94 lb/bag) 2 bags
bentonite cement. - 2 Lg. handfuls.
1 4" O.D. protective casing with locking cap.

1635 GW-6 well installation complete

1700 we leave site

8/23/89 Golden Road

0800 S. Campbell + myself arrive at site
Mike Ryan says that he and the drillers were here at 0730.

0800 - drillers decon. equipment and drill rig at GW-6 location

0845 - decon. complete
- mobilize to GW-7
span = 710 + background = 0.6.

0855 - HNu and GAS tech calibrated by S. Campbell & J. Danzinger
Monitox & Minirad checked by J Danzinger

0900 Background reading HNu taken by J. Danzinger .6 ppm

1005 Full TCL TAKEN 2 40 ml VOA - 1 8 oz JAR not Full
Samples GW7-17-191
Samples TAKEN at NYSDEC Request After S. Campbell and J. Danzinger ~~decon~~ cc smelled an odor emited when

split spoon was opened.

8/23/89 Golden Road

GW-7

PVC screen - 7.0'
PVC riser - 12.2'
sand (100lb/bag) - 2 bags
bentonite pellets - (5 gallon bucket) - 1/2 bucket
portland cement (94 lb/bag) - 2 bags
bentonite cement - 2 handfuls
4" O.D. protective casing 49" long.

grout mixed in 5 gallon buckets.
2 Full buckets are used in the hole.

1135 installation of monitoring well at GW-7 is complete.

1135 drillers begin decon of rig and equipment.

1200 Break for lunch
1230 Back to work.
1300 - decon started up again.
1330 - decon complete
- mobilize to GW-1 location.

Golden Road 8/23/89

1343 pictures of GW-7.
3rd roll frames 1+2.

GW-6 pictures.
3rd roll, frames 3+4.

1345 begin drilling at GW-1.

1400 - NYSDEC, Bob Hall, arrives at site. He and Mike RYAN go to talk with owner, Mr. Fitzsimons.

GW-1 well specs.

PVC screen → 5.0'
PVC riser → 8.5'
sand → almost a whole bag (100lbs/bag)
Bentonite pellets → (5 gallon bucket) 1/3 bucket.
portland cement → (94lb/bag) → 2 bags.
bentonite cement → 3 handfuls.
1 4" O.D. protective

slurry mixed in 5 gallon bucket
3 buckets worth to fill hole.

8/23/89 Golden Road.

1525 well installation complete at GW-1

1530 drillers begin decon of rig and equipment

1620 everyone leaves site.

Golden Road 8/24/89

0800 S. Campbell + myself arrive at site. NYSDEC, Mike RYAN, and drillers already here.
- bulldozer is here. Joe Jensen driller will operate it.

0820 Drill crew steam clean Bulldozer at NYSDEC Request

0850 well Developement begins at GW6 location

Air Surge method used

1150 - Ph 8.5 1380 µm 53°F
1250 Ph 8.3 1470 56°F

0850 Steam clean of bulldozer complete

0845 - drill rig water samples taken
VOA - 2(40 ml)
BNA - 1(1/2 gallon amber)
PEST/PCB - 1(1/2 gallon amber)
HSL Metals - 1(liter-plastic) HNO_3
Cyanide - 1(liter-plastic) NaOH

8/24/89 Golden Road.

0930 start drilling at GW-5

0920 Calibration of PI 101 Gas tech monitor and Minirad by S. Campbell background reading upwind & downwind at .6 ppm Span setting 7.25

1135 Full TCL of drum spill on ground surface
Sample name is W-3
- yellow to orange resin like substance
- located just south of GW-5
- received O.K. to take the sample from NYSDEC, Mike Ryan

MOR

1200 Monroe County Health dept. Bob Albert + Todd CaFoe, arrive at site and talk with Mike RYAN

1230 Break for Lunch.

1240 development of GW-6 complete

1300 development of GW-7 begins

1300-1400 Back to work.

GW-7
Temperature: 61°F
Conductivity: 1170 µ/cm
pH: 8.5

Golden Road. 8/24/89

1400 installation of GW-5 complete.

1435 pictures of GW-5 and resiny spill roll #3 frames 5 + 6
ooze. GW-5.

1435 decon of drill rig and equip begins

1500 Well GW-7
ph 8.5
cond 1280 µ/cm
Temp 58°

1505 Shut the compressor down at GW-7

1525 decon of rig + equipment complete

1550 drilling at GW-2 begins.

1630 - drillers leave site.
1635 - NYSDEC, Mike Ryan leaves site.
1700 - S. Campbell + J. Danzinger leave site.

8/25/89

0745 S. Campbell + J. Danzinger arrive at site
- Mike RYAN, NYSDEC, and drillers already here.

0755
0858 development of GW-1 begins.

0845 well installation at GW-2 begins
PVC screen - 5.0'
PVC riser - 8.0'
sand (100 lbs/bag) - 1 1/2
bentonite pellets (5 gal. bucket) - 1/2
portland cement (94 lb/bag) - 1 3/4
bentonite cement - 4 handfuls.

0900 GW1 Temp 62
Conductivity 1280 µ/cm
ph- 8.5

0945 installation of well at GW-2 complete.

1000 Bob VanderHorst, Empire, visits site.

Golden Road. 8/25/89

1015 decon of rig + equipment begins

1020 Bob Lang, NYSDEC, visits site.

1030 development of GW-1 complete.

1045 decon complete

1150 - development of GW-5 begins.

1230 - break for lunch

1300 - back to work

1740 GW-5
Temperature : 66°F
conductivity : 960 µ/cm
pH : 9.0

1350 Development at GW5 completed

1405 Leave the site

1520 Hand delivered W3 to E&E LAB and relinquished sample to STEVE TAYLOR E+E.

1630 - arrive at office.

8/28/89 Golden Road

1045 S. Campbell + J. Danzinger arrive at site.
John Cuerto from empire soils is already there and is in the midst of developing GW-2 by air surge method.
- He started at 1000 and will finish development of GW-2 at 1200

12:04 On Road Back to site
1320 On Fitzsimmons site
Began sampling
N Sample # 9 # 9MS / MSD
N " # 10
N # 11
All taken w/ stainless steel spoons
Rusty soil discoloration at Sample 10 Location
no surface water present at this time
cattle
14:05 Finished samples 9, 10, 11 and Left the area
14:15 Dressed and Entered area Across the tracks From mr Fitzsimmons.
14:15 - 15:35 Samples W1 W2 S8 S7 N and L1 taken (N, S, S)
soil discoloration noted at S8 location Rustlike color.
Petroleum sheen noted While sampling L1
Representative Sample at L1 taken at areas Diagramed

All soil samples and waste pile samples. taken a depths of 0-12 inches w a representative sample of that area. All Sampling spoons covered w/ Alum foil to prevent cross contamination.

15:40 Left Sampling Area
note: All sample locations marked by Survey Flags
15:40 - 1600 hrs Packed cooler for Fed ex Shipment under COC Procedures & decon'ed area.
1625 Left Golden Rd Site

recycled paper
Geology and engineering
T-30.

6/15/89 06:50 AM arrive at Golden Rd site in Chili proceed to site Access road Along Railroad tracks

N real breeze Cloudy Slight rain 65° approx

06:55 AM I dressed then calibrated the HNu with isobutylene according to Standard operating procedure (S.O.P)

Nick made sure Gas tech monitor were in order by checking readings per site Recon S.O.P

07:10 Reconed site by Railroad tracks for leachate. Found 1 active seep

08:30 Mr Fitzsimmons stopped by to say Hello

09:00 Nick and I recalibrated HNu due to moisture

Began Sampling on S1 No HNu readings no Discoloration in soil ~~odor~~ slight petro odor

N 09:20 N Began S2 Soil Sample a blue Chunky substance was encountered during Sampling in the soil no HNu readings

09:40 N Began Sampling S3 no discoloration in Soil no HNu readings no odor

09:55 S Began Sampling S4 no HNu readings no discoloration in soil no odor

10:10 S Began Sampling S5 no HNu readings no discoloration in soil no odor

10:20 S Sampled S6 discoloration in Soil Detected Rust Color no odor

→ All samples taken with SS spoons removed from Railroad Composites at 0-12 inches

10:30 Returned to Truck with Samples S1-S6

11:00 Left site at 11:00 had Lunch Returned to shop for bottles

1/9/89 Golden Road Site

Personnel Empire Soils
Dave Brange
Joe Jensen

Om Poplis S. Campbell
P. Vandrei

NYSDEC R. Long

Steam Cleaning of all equipment took place on 1/8/89 at Empire HQ 2 1/2 hrs

Weather Overcast 35-40°

Objective Install two monitoring wells along I 490 Westbound adjacent to Golden Road disposal site.

0900 I arrive on-site Empire Crew already Present. at GW3 location

I tell them they can cut a few trees to give the Rig access off the Roadway otherwise the rig will be partially in the Road

0930 R Long & Pam Vandrei arrive Decon area is set up and drillers get into Truck.

1000 Site safety meeting held by S. Campbell

1000 P Vandrei takes Van back

recycled paper

I-32

ecology and environment

1005 Drilling at GW3 Begins
1115 HIT TOP OF BEDROCK - WELL 18.5'
INSTALLATION BEGINS

1130 USED 1 BAG OF SAND AROUND SCREEN

1145 USED 1 BAG OF SAND AROUND SCREEN
1/2 OF ANOTHER BAG SAND

1220 Bentonite seal placed from 6.2 to 4' water in hole is readily flowing out at ground surface 6 more miles of bentonite are added to try to stop this flow. Perry approves.

1235 Break for lunch

1:20 Return to Work
Drillers have already grouted the well in place

1:30 While waiting for the grout to dry the drillers cut up some of the trees that were removed from the GW3 area

2:00 Materials that will be used again SC
are decontaminated
5 foot rods
Rod plug
Tape measure
Shovel

2:25 Decon complete at GW3
2:30 1 tree cut / trimmed.
2:35 Drilling Begins at GW4

3:15 HIT BEDROCK AT 21.1'
WELL INSTALLATION BEGINS

3:35 1/2 BAG SAND USED AROUND SCREEN
4:05 1 BAG SAND USED
4:20 1 BAG SAND USED

OM P. POPLI, P. E.

SUMMARY

NYSDEC PHASE II INVESTIGATIONS

Equipment Use

DAILY SITE REPORT

Date 6/15/89 - 10/3/89 NYSDEC ID# 828021

Site Name GOLDEN ROAD DISPOSAL SITE Site No. YN4020 (AE02)

Work Start _____ Lunch _____ Finish _____

Weather Conditions _____

Personnel On Site:

NYSDEC	Om P. Popli, P.E.	Driller

Personnel Safety Equipment:	**Om P. Popli, P. E.**	**Driller**
Level of Protection		
# of Tyveks		
# of Tyvek Booties		
# of Disposable Gloves		

Environmental Equipment On Site:

	Meter #	days Used ~~Today~~	Calib. Date	By	Readings Above Background*
HNu Meter	901394	5			
Explosimeter	C2537	4			
Monitox (HCN)	035863	4			
Mini-Rad	20655	4			
pH Meter		3			NA
Nephlometer		0			NA
Camera	30302174	2	NA	NA	NA
Water Level Indicator		1	NA	NA	NA
TLD Badge	SC-6954 0004		NA	NA	NA
	NH-6950 0003		NA	NA	NA

*If meter readings exceeded background, see reverse side for Comments.

OM P. POPLI, P. E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date 6/15/89 - THUR. NYSDEC ID# 828021
Site Name GOLDEN ROAD DISPOSAL SITE Site No. YN4020(AEC2)
Work Start 0650 hrs. — Lunch 1100 - 1130 hrs. Finish 1625 hrs.
Weather Conditions OVERCAST, SLIGHT BREEZE, LIGHT RAIN, 65°F ±

Personnel On Site:

NYSDEC	Om P. Popli, P.E.	Driller
—	NICK HARDING	—
	STEVE CAMPBELL	

Personnel Safety Equipment:	Om P. Popli, P. E.	Driller
Level of Protection	D	
# of Tyveks	4	
# of Tyvek Booties	2 pr.	
# of Disposable Gloves	6 pr.	

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	Y	6/15	SC	N
Explosimeter	C2537	Y	6/15	NH	N
Monitox (HCN)	035863	Y	6/15	NH	N
Mini-Rad	20655	Y	6/15	NH	N
pH Meter		N	—	—	NA
Nephlometer		N	—	—	NA
Camera	30302174	N	NA	NA	NA
Water Level Indicator		N	NA	NA	NA
TLD Badge	SC-6954 0004	Y	NA	NA	NA
	NH-6950 0003	Y	NA	NA	NA

*If meter readings exceeded background, see reverse side for Comments.

Equipment On Site:

Drill Rig Type _____
Water Tanker _____
Steam Jenny _____
Bulldozer _____
Air Compressor _____
Other _____

Decontamination Zone:

Detergent Wash ✓
Potable H_2O ✓
Methanol ✓
Distilled Water ✓
Plastic Cover _____
Other _____

DESCRIPTION OF WORK COMPLETED

- SITE WALK THROUGH PERFORMED PRIOR TO SAMPLING
- ENVIRONMENTAL SAMPLING WAS COMPLETED ACCORDING TO SITE WORK PLAN:
  - SOIL SAMPLES - S1 - S11
  - WASTE PILES - W1 & W2
  - LEACHATE - L1
- FLAGS SECURED AT SOIL SAMPLING SITES, AS WELL AS WASTE PILES & LEACHATE.
- SAMPLES WERE PACKAGED AND SHIPPED VIA FEDEX UNDER CHAIN-OF-CUSTODY CONTROL.
- MR. FITZSIMMONS VISITED CONSULTANT AT FRONT GATE TO SITE @ 0900 hrs.

SPECIAL COMMENTS

SEE ENVIR. FIELD SAMPLING FORM THIS DATE.

Approvals. Nicholas J. Hardin
Om P. Popli, P. E. — Driller — NYSDEC

6/15

OM P. POPLI, P. E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date Tuesday 8/22/89 NYSDEC ID# 828021
Site Name Golden Road Disposal Site. Site No. YN4020
Work Start 1130 Lunch 1200-1230 Finish 1700
Weather Conditions cloudy 80° - light drizzle end of day

Personnel On Site:

NYSDEC	Om P. Popli, P.E.	Driller
Mike RYAN	J. Danzinger	Ron Brown
	S. Campbell	Joe Jensen
	N. Harding	

Personnel Safety Equipment:	**Om P. Popli, P. E.**	**Driller**
Level of Protection	D	D
# of Tyveks	2	2
# of Tyvek Booties	-	-
# of Disposable Gloves	7 pair	-

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	Y	8/22/89	S.C.	-
Explosimeter	C2537	Y	8/22/89	S.C.	-
Monitox (HCN)	035863	Y	8/22/89	S.C.	-
Mini-Rad	20655	Y	8/22/89	S.C.	-
pH Meter		N			NA
Nephlometer		N			NA
Camera	30302174	N	NA	NA	NA
Water Level Indicator		N	NA	NA	NA
TLD Badge	SC-6954 0004	Y	NA	NA	NA
	JD 6954 0002	Y			
	NH-6950 0003	Y	NA	NA	NA

*If meter readings exceeded background, see reverse side for Comments.

Equipment On Site:

Drill Rig Type Y Acker
Water Tanker Y
Steam Jenny Y
Bulldozer N
Air Compressor Y
Other

Decontamination Zone:

Detergent Wash Y Alconox
Potable H_2O Y
Methanol Y
Distilled Water Y
Plastic Cover Y
Other steam clean

DESCRIPTION OF WORK COMPLETED

1425 - 1650 - drilling to 16.6' (bedrock) at GW-6.
- 4 split-spoons at 5' intervals.
- installation of monitoring well at GW-6.
- 7.0' screen. approved by M. Ryan NYSDEC
- Water depth at 14.6' (last encountered) MR

1300 - 1400 → decontamination of drill-rig and equipment prior to use on GW-6.

SPECIAL COMMENTS

Approvals
Om P. Popli, P.E.
Driller
NYSDEC

8/22

OM P. POPLI, P. E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date Wednesday, 8/23/89 NYSDEC ID# 828021
Site Name Golden Road Site No. YN4020
Work Start 0730 — Lunch 1200-1230 Finish 1630
Weather Conditions cloudy, mid 70's, slight breeze

Personnel On Site:

NYSDEC	Om P. Popli, P.E.	Driller
M. Ryan	S. Campbell	T. Jensen
	J. Danzinger	R. Brown

Personnel Safety Equipment:	**Om P. Popli, P. E.**	**Driller**
Level of Protection	D	D
# of Tyveks	4	4
# of Tyvek Booties	—	
# of Disposable Gloves	10 pair	—
		1 pair

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	Y	8/23/89	JD	—
Explosimeter	C2537	Y	8/23/89	SC	—
Monitox (HCN)	035863	Y	8/23/89	JD	—
Mini-Rad	20655	Y	8/23/89	JD	—
pH Meter		N	—	—	NA
Nephlometer		N	—	—	NA
Camera	30302174	Y	NA	NA	NA
Water Level Indicator		N	NA	NA	NA
TLD Badge	SC-6954 0004	Y	NA	NA	NA
	JD-6954 0002	Y			
	NH-6950 0003		NA	NA	NA

*If meter readings exceeded background, see reverse side for Comments.

Equipment On Site:

Drill Rig Type Acker
Water Tanker Y
Steam Jenny Y
Bulldozer N
Air Compressor Y
Other

Decontamination Zone:

Detergent Wash Y Alconox
Potable H_2O Y
Methanol Y
Distilled Water Y
Plastic Cover Y
Other Steam clean

DESCRIPTION OF WORK COMPLETED

0800-0845 decontamination of drill-rig and equipment.

0930-1135 drilling and well installation at GW-7
- 6 split spoons (3 continuous)
- drilled to 17.4'
- full TCL taken at GW7-17'-19'
  - 2 40ml-VOA
  - 1 Box-TCL
- 7.0' screen used
- depth of well 17.2'

1135-1200 + 1300-1330 decontamination of drill-rig and equipment.

1240-1345 - Pictures taken of: GW-7 3rd roll, frames 1+2
GW-6 3rd roll, frames 3+4

1345-1525 drilling and well installation at GW-1
- 3 split-spoons
- drilled to 12.0'
- depth of well is 11.5' and screen length is 5.0'
  - 1.0' of sand above screen at total 1.0'

1530-1620 decontamination of drill-rig and equipment.

SPECIAL COMMENTS

Approvals Guy P. Popli, P.E. Driller NYSDEC

OM P. POPLI, P. E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date Thursday 8/24/89 NYSDEC ID# 828021
Site Name Golden Road Disposal Site Site No. 9N4020
Work Start 0730 Lunch 1230-1300 Finish 1630
Weather Conditions partly cloudy 70's

Personnel On Site:

NYSDEC	Om P. Popli, P.E.	Driller
M. RYAN	J. DANZINGER	J. JENSEN
	S. CAMPBELL	R. BROWN

Personnel Safety Equipment:	**Om P. Popli, P. E.**	**Driller**
Level of Protection	D	D
# of Tyveks	4	4
# of Tyvek Booties	—	—
# of Disposable Gloves	25 pair	—
		rubber boots

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	Y	8/24/89	S. C.	—
Explosimeter	C2537	Y	8/24/89	S. C.	—
Monitox (HCN)	035863	Y	8/23/89	S. C.	—
Mini-Rad	20655	Y	8/24/89	S. C.	—
pH Meter		U			NA
Nephlometer		N			NA
Camera	30302174	Y	NA	NA	NA
Water Level Indicator		N	NA	NA	NA
TLD Badge	SC-6954 0004	Y	NA	NA	NA
	JD 6954 0002	Y			
	NH-6950 0003	N	NA	NA	NA

*If meter readings exceeded background, see reverse side for Comments.

Equipment On Site:

Drill Rig Type Y Acker
Water Tanker Y
Steam Jenny Y
Bulldozer Y
Air Compressor Y
Other

Decontamination Zone:

Detergent Wash Y Alconox
Potable H_2O Y
Methanol Y
Distilled Water Y
Plastic Cover Y
Other steam clean

DESCRIPTION OF WORK COMPLETED

0820 - 0850 - decontamination of bulldozer

0850 - 1240 → development of GW-6 monitoring well.
- pH, Temperature, and conductivity are checked and eventually water shows no further improvements in quality with time.
- air surge method.

0845 - 0850 → Full TCL water sample taken from drill-rig.
VOA - 240ml ; BNA - 1 amber ; PEST/PCB - 1 amber ; CN - NaOH plastic
HSL metals - HNO_3 plastic.

0930 - 1230 + 1300 - 1400 → drilling and installation of GW-5 monitoring well.
- 10 split spoons (8 of them are continuous)
- drilled to 25.4'
- depth of well - 24.5' with 10.0' screen.

1135 → Full TCL taken from waste spill on ground surface
- sample called: W-3.
- sample location 10' south of GW-5 spill GW-5

1435 → Pictures taken of GW-5 and waste spill 3rd roll Frames 5. + 6.

1435 - 1525 → decontamination of drill rig and equipment

1300 - 1505 → development of GW-7, air surge method, monitored with conductivity/pH and Temperature device

1550 - 1630 → drilling at GW-2 location.
- 3 split spoons (none continuous)
- drilled to bedrock at 11.2'.

~~SPECIAL COMMENTS~~

Approvals Jim P. Popli, P.E. Driller NYSDEC

OM P. POPLI, P. E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date Friday 8/25/89 NYSDEC ID# 828021
Site Name Golden Road Disposal Site. Site No. YN4020
Work Start 0730 Lunch 1200-1230 Finish 1700
Weather Conditions sunny 75°

Personnel On Site:

NYSDEC	Om P. Popli, P.E.	Driller
Mike Ryan	S. Campbell	Joe Jensen
	J. Danzinger	Ron Brown.

Personnel Safety Equipment:	**Om P. Popli, P. E.**	**Driller**
Level of Protection	D	D
# of Tyveks	—	2
# of Tyvek Booties	—	—
# of Disposable Gloves	—	—

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	N	—	—	—
Explosimeter	C2537	N	—	—	—
Monitox (HCN)	035863	N	—	—	—
Mini-Rad	20655	N	—	—	—
pH Meter		Y	8/25/89	S.C.	NA
Nephlometer		N			NA
Camera	30302174	N	NA	NA	NA
Water Level Indicator		N	NA	NA	NA
TLD Badge	SC-6954 0004		NA	NA	NA
	NH-6950 0003		NA	NA	NA

*If meter readings exceeded background, see reverse side for Comments.

Equipment On Site:

Drill Rig Type Y Acker
Water Tanker Y
Steam Jenny Y
Bulldozer N
Air Compressor Y
Other

Decontamination Zone:

Detergent Wash	N
Potable H_2O	N
Methanol	N
Distilled Water	Y
Plastic Cover	Y
Other	steam clean

DESCRIPTION OF WORK COMPLETED

0755-1030 → development of GW-1 monitoring well
- air surge method
- checked for water quality using conductivity, temperature, and ph meter.

0845-0945 → installation of monitoring well at GW-2.
- 5.0' screen
- sand 1.0' above screen
- depth of well at 11.0'
- 1.0' of bentonite pellets above sand

1015-1045 decontamination of drill-rig and equipment.

1150-1350 → development of GW-5 monitoring well
- air surge method

SPECIAL COMMENTS

Approvals Tom P. Popli, P.E. Driller NYSDEC

8/25

OM P. POPLI, P. E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date 10/3/89 NYSDEC ID# 89034-05
Site Name Golden Road Site No. YN4020 - AE02
Work Start 0800 Lunch — Finish 1200
Weather Conditions Cloudy, Slight rain, breezy

Personnel On Site:

NYSDEC	Om P. Popli, P.E.	Driller
—	J. Danziger	—
	S. Campbell	

Personnel Safety Equipment:

	Om P. Popli, P. E.	Driller
Level of Protection	D	—
# of Tyveks	—	—
# of Tyvek Booties	—	—
# of Disposable Gloves	—	—
		—

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	Y	10/3	SC	—
Explosimeter	C2537	N	—	—	—
Monitox (HCN)	035863	N	—	—	—
Mini-Rad	20655	N	—	—	—
pH Meter		N	—	—	NA
Nephlometer		N	—	—	NA
Camera	30302174	N	NA	NA	NA
Water Level Indicator		Y	NA	NA	NA
TLD Badge	SC-6954 0004	N	NA	NA	NA
	NH-6950 0003	N	NA	NA	NA

*If meter readings exceeded background, see reverse side for Comments.

Equipment On Site:

Drill Rig Type —
Water Tanker —
Steam Jenny —
Bulldozer —
Air Compressor —
Other

Decontamination Zone:

Detergent Wash —
Potable H_2O —
Methanol —
Distilled Water —
Plastic Cover —
Other —

DESCRIPTION OF WORK COMPLETED

- all wells were marked appropriately for identification
- Soil & waste pile sampling locations were also marked
- Leachate sampling location was marked
- Surface water sampling locations were located for future sampling visit.
- Well aprons were redone as appropriate where grout settling had occurred.

SPECIAL COMMENTS

Approvals

O. Campbell		
Om P. Popli, P. E.	Driller	NYSDEC

Equipment Use

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date Tuesday 1/9/90 - 1/10/90 NYSDEC ID# 828021

Site Name Golden Rd. Disposal Site Site No. NY4020 (DEC?)

Work Start ______ Lunch ______ Finish ______

Weather Conditions ______

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection		
# of Tyveks		
# of Tyvek Booties		
# of Disposable Gloves		

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	1			
Explosimeter	C2537	1			
Monitox	(HCN)035863	1			
Mini-Rad	20655	1			
pH Meter		1			NA
Nephlometer		1			NA
Camera	30302174	0	NA	NA	NA
Water Lever Indicator	6954V0002	1	NA	NA	NA
TLD Badge	~~SC-6954-0004~~	2	NA	NA	NA
	NH-6950 0003		NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Page 1 of 2

Equipment On Site:

Drill Rig Type	_____
Water Tanker	_____
Steam Jenny	_____
Bulldozer	_____
Air Compressor	_____
Other	_____

Decontamination Zone:

Detergent Wash	_____
Potable H20	_____
Methanol	_____
Distilled Water	_____
Plastic Cover	_____
Other	_____

DESCRIPTION OF WORK COMPLETED

SPECIAL COMMENTS

Approvals

Om P. Popli, P.E.	Driller	NYSDEC

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date TUESDAY 1/9/90 **NYSDEC ID#** [illegible]

Site Name GOLDEN RD. DISPOSAL SITE **Site No.** [illegible]

Work Start 930 AM **Lunch** 1200-100 **Finish** 530 PM

Weather Conditions OVERCAST, 35°F

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER
ROB LONG	S. CAMPBELL	JOE JENSEN
	P. VANDEL	DAVID [illegible]

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection	D	D
# of Tyveks	4	4
# of Tyvek Booties	—	—
# of Disposable Gloves	5 PRS.	

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	Y	1/9/90	PV	NONE
Explosimeter	C2537	Y	1/9/90	|	|
Monitox (HCN)	035863	Y	1/9/90	|	|
Mini-Rad	20655	Y	1/9/90	PV	NONE
pH Meter		N	|	|	NA
Nephlometer		N	|	|	NA
Camera	30302174	N	NA	NA	NA
Water Lever Indicator		N	NA	NA	NA
TLD Badge	~~SC-6954 0004~~ 6954 V 0002	Y	NA	NA	NA
	NH-6950 0003		NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Equipment On Site:		Decontamination Zone:	
Drill Rig Type		Detergent Wash	Y
Water Tanker	Y	Potable H20	Y
Steam Jenny	N	Methanol	Y
Bulldozer	N	Distilled Water	Y
Air Compressor	N	Plastic Cover	Y
Other		Other	

DESCRIPTION OF WORK COMPLETED

930 – 1200 - DRILLING TO 18.5' (BEDROCK) AT GW-3

1200 – 200 - INSTALLATION OF MONITERING WELL AT GW-3

200 - 230 - DECON DRILL RIG PRIOR TO USE ON GW-4

230 – 530 - DRILLING TO 21.1' (BEDROCK) AT GW-4
- INSTALLATION OF MONITERING WELL AT GW-4

SEE DRILL LOGS FOR MORE INFORMATION

SPECIAL COMMENTS

APPROX. 9 TREES 2"-6" & 16 TREES 2" & UNDER WERE CUT DOWN AT GW-3 LOCATION SO AS TO GET DRILL RIG OFF THE EXPRESSWAY

ALL EQUIP. WAS CLEANED CLEANED THE PREVIOUS DAY / ENOUGH EQUIP. FOR BOTH WELLS

Approvals

Om P. Popli, P.E. _____ Driller _____ NYSDEC

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date TUESDAY 1/9/90 NYSDEC ID# 822021

Site Name GOLDEN RD. DISPOSAL SITE Site No. YN4020 (4E02)

Work Start 930 AM Lunch 1200 - 100 Finish 530 PM

Weather Conditions OVERCAST, 35°F

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER
BOB LONG	B. CAMPBELL	JOE JENSEN
	P. VINCREL	DAVID BRAUGHT

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection	D	D
# of Tyveks	4	4
# of Tyvek Booties	—	—
# of Disposable Gloves	5 PRS.	

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	Y	1/9/90	N	NONE
Explosimeter	C2537	Y	1/9/90		
Monitox (HCN)	035863	Y	1/9/90		
Mini-Rad	20655	Y	1/9/90	N	NONE
pH Meter		N			NA
Nephlometer		N			NA
Camera	30302174	N	NA	NA	NA
Water Lever Indicator		N	NA	NA	NA
TLD Badge	6954Y0002	Y	NA	NA	NA
	~~SC-6954-0004~~				
	NH-6950 0003		NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Equipment On Site:		Decontamination Zone:	
Drill Rig Type		Detergent Wash	Y
Water Tanker	Y	Potable H20	Y
Steam Jenny	N	Methanol	Y
Bulldozer	N	Distilled Water	Y
Air Compressor	N	Plastic Cover	Y
Other		Other	

DESCRIPTION OF WORK COMPLETED

930 – 1200 - DRILLING TO 18.5' (BEDROCK) AT GW-3

1000 – 2300 - INSTALLATION OF MONITERING WELL AT GW-3

2300 - 3000 - DECON DRILL RIG PRIOR TO USE ON GW-4

3000 - 5300 - DRILLING TO 21.1' (BEDROCK) AT GW-4
- INSTALLATION OF MONITERING WELL AT GW-4

SEE DRILL LOGS FOR MORE INFORMATION

SPECIAL COMMENTS

APPROX. 9 TREES 2"-6" & 6 TREES 2" & UNDER WERE CUT DOWN AT GW-3 LOCATION SO AS TO GET DRILL RIG OFF THE ROAD SAFELY

ALL EQUIP. WAS STEAMED CLEANED THE PREVIOUS DAY / ENOUGH EQUIP. FOR BOTH WELLS

Approvals

Pamela Vandrei
Om P. Popli, P.E.

Driller

NYSDEC

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date WEDNESDAY 1/10/90 NYSDEC ID# 829021

Site Name GOLDEN RD. DISPOSAL SITE Site No. YN1420 (1602)

Work Start 830 AM Lunch 12:00 - 12:30 Finish 500 PM

Weather Conditions RAIN, 37°F

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER
	P. VINCIPEL	JOE JENSEN
		DAVID BRAUCH

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection	D	D
# of Tyveks		
# of Tyvek Booties		
# of Disposable Gloves		

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	N			
Explosimeter	C2537	N			
Monitox (HCN)	035863	N			
Mini-Rad	20655	N			
pH Meter		N			NA
Nephlometer		Y	1/10/89	PV	NA
Camera	30302174	N	NA	NA	NA
Water Lever Indicator	GRSHV0002	Y	NA	NA	NA
TLD Badge	~~SC-6954-0004~~	Y	NA	NA	NA
	NH-6950 0003	N	NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Equipment On Site:		Decontamination Zone:	
Drill Rig Type	N	Detergent Wash	Y
Water Tanker	N	Potable H20	Y
Steam Jenny	N	Methanol	Y
Bulldozer	N	Distilled Water	Y
Air Compressor	Y	Plastic Cover	Y
Other		Other	

DESCRIPTION OF WORK COMPLETED

8³⁰ - 10⁴⁵ WAIT FOR ARRIVAL OF DRILLERS TO GET ON SITE
CHECK OUT AREA TO BE SURE AREA WAS CLEANED PROPERLY
OF DEBRIS.

11¹⁰ - 1¹⁰ DEVELOPMENT OF GW-3 MONITERING WELL - AIR SURGE METHOD
WATER DID NOT CLEAR UP DURING DEVELOPMENT SO WENT A
FULL 2 HOURS

1²³ - 2³⁰ WAIT 1 HR BEFORE DEVELOPMENT OF GW-4 CAN BEGIN

2³⁰ - 4³⁰ DEVELOPMENT OF GW-4 MONITERING WELL - AIR SURGE METHOD
FULL 2 HRS.

3²⁰ - 3⁴⁵ BOB LONG STOPS BY SITE

4¹⁶ - 5⁰⁰ DRILL HOLES INTO THE METAL WELL CASINGS FOR DRAINAGE

SPECIAL COMMENTS

S. CAMPBELL WAS OK TO DEVELOPE THE WELLS

Approvals

Pamela Vandall — Om P. Popli, P.E.

Driller

NYSDEC

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date MONDAY 1/22/90 NYSDEC ID# 932021

Site Name GOLDEN ROAD DISPOSAL SITE Site No. YM4020 (AF02)

Work Start 730am Lunch Finish 830am

Weather Conditions

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER
	P. VANCREL	

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection		
# of Tyveks		
# of Tyvek Booties		
# of Disposable Gloves		

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394				
Explosimeter	C2537				
Monitox (HCN)	035863				
Mini-Rad	20655				
pH Meter					NA
Nephlometer					NA
Camera	30302174		NA	NA	NA
Water Lever Indicator			NA	NA	NA
TLD Badge	SC-6954 0004		NA	NA	NA
	NH-6950 0003		NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Equipment On Site:		Decontamination Zone:	
Drill Rig Type		Detergent Wash	
Water Tanker		Potable H20	
Steam Jenny		Methanol	
Bulldozer		Distilled Water	
Air Compressor		Plastic Cover	
Other		Other	

DESCRIPTION OF WORK COMPLETED

1 HR. TO PICK UP NALGENE DISPOSABLE FILTERS FROM CALIX

SPECIAL COMMENTS

Approvals Tom P. Popli, P.E. _____ Driller _____ NYSDEC

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date FRIDAY 2/2/90 NYSDEC ID# 928021

Site Name GOLDEN ROAD DISPOSAL SITE Site No. YN4020 (SEQ)

Work Start 730 AM Lunch 1200-1230 Finish 400 PM

Weather Conditions

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER
	PRINCIPAL	

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection		
# of Tyveks		
# of Tyvek Booties		
# of Disposable Gloves		

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394				
Explosimeter	C2537				
Monitox (HCN)	035863				
Mini-Rad	20655				
pH Meter					NA
Nephlometer					NA
Camera	30302174		NA	NA	NA
Water Lever Indicator			NA	NA	NA
TLD Badge	SC-6954 0004		NA	NA	NA
	NH-6950 0003		NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Equipment On Site:

Drill Rig Type	
Water Tanker	
Steam Jenny	
Bulldozer	
Air Compressor	
Other	

Decontamination Zone:

Detergent Wash	
Potable H20	
Methanol	
Distilled Water	
Plastic Cover	
Other	

DESCRIPTION OF WORK COMPLETED

PREPARE FOR BUILDING OF GOLDEN RD. SITE
SHOP FOR BUILDING & HOLD THE VAN

SPECIAL COMMENTS

Approvals

Om P. Popli, P.E. _____ Driller _____ NYSDEC

SUMMARY
EQUIPMENT USE

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date 2/6/90-2/9/90 & 2/12/90 5 DAYS NYSDEC ID# 828021

Site Name GOLDEN ROD DISPOSAL SITE Site No. 734020 (AE02)

Work Start _____ Lunch _____ Finish _____

Weather Conditions _____

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection		
# of Tyveks		
# of Tyvek Bootles		
# of Disposable Gloves		

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	5 DAYS			
Explosimeter	C2537	0			
Monitox (HCN)	035863	0			
Mini-Rad	20655	0			
pH Meter		2 DAYS			NA
Nephlometer		2 DAYS			NA
Camera	30302174	0	NA	NA	NA
Water Lever Indicator		2 DAYS	NA	NA	NA
TLD Badge	SC-6954 0004	5 DAYS	NA	NA	NA
	NH-6950 0003	5 DAYS	NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date TUESDAY 2/6/90 **NYSDEC ID#** 828021

Site Name GOLLEN RD. DISPOSAL SITE **Site No.** VA 4020 (DEC2)

Work Start 840 AM **Lunch** 1230 - 100 PM **Finish** 530 PM

Weather Conditions SUNNY, 35°F

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER
BOB LONG	B. MERRITT	
	P. VANDEPEI	

Personnel Safety Equipment:

	OM P. POPLI, P.E.	DRILLER
Level of Protection	D	
# of Tyveks	2	
# of Tyvek Booties	—	
# of Disposable Gloves	10 PRS.	

Environmental Equipment On Site:

	Meter #	Used Today	Callb. Date	By	Readings Above Background*
HNu Meter	901394	Y	2/6/90	PV	NONE
Explosimeter	C2537	N			
Monitox (HCN)	035863	N			
Mini-Rad	20655	N			
pH Meter		Y	2/6/90	PV	NA
Nephlometer		Y	2/6/90	PV	NA
Camera	30302174	N	NA	NA	NA
Water Lever Indicator		Y	NA	NA	NA
TLD Badge	6954V0001 ~~SC-6954-0004~~	Y	NA	NA	NA
	6954V0002 ~~NH-6950-0003~~	Y	NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Equipment On Site:

Drill Rig Type	
Water Tanker	
Steam Jenny	
Bulldozer	
Air Compressor	
Other	

Decontamination Zone:

Detergent Wash	✓
Potable H20	✓
Methanol	✓
Distilled Water	✓
Plastic Cover	✓
Other	

DESCRIPTION OF WORK COMPLETED

940 - 1100 MEET WITH D. CAMPBELL ON SITE - NOTIFY OWNER OF PROPERTY THAT WE WILL BE WORKING ON SITE THIS WEEK - STAKE OUT SAMPLE LOCATION AREAS

1115 - 1140 SET UP AT GW-7 & DECON SAMPLING EQUIP. HNU READING TAKEN DOWNHOLE WATER LEVEL MEASUREMENT TAKEN - PURGE 3+ WELL VOLUMES (PH, TEMP, CONDUCTIVITY) & TURBIDITY READINGS ARE TAKEN

1145 - 1215 SET UP AT GW-6 & DECON SAMPLING EQUIP. HNU READING TAKEN DOWNHOLE WATER LEVEL MEASUREMENT TAKEN - PURGE 3+ WELL VOLUMES (PH, TEMP, CONDUCTIVITY) & TURBIDITY READINGS ARE TAKEN

120 - 150 SET OUT TO FIND REASONABLE AREA TO SAMPLE SW-12 (LOCATED NEAR COW PASTURE & ACCUMULATES OUT OF RUNOFF FROM PASTURE) SET UP & COLLECT SAMPLE

150 - 215 SET UP AT SW-13 & COLLECT SAMPLE

220 - 230 SET UP AT SW-14 & COLLECT SAMPLE

235 - 245 SET UP AT GW-6 & COLLECT SAMPLE

250 - 305 SET UP AT GW-7 & COLLECT SAMPLE

315 - 400 CREW LEAVES SITE TO GET ICE & HEADS BACK TO OFFICE

400 - 530 CREW UNLOADS & PACKS SAMPLES IN ICE IN COOLERS

SPECIAL COMMENTS

NYSDEC - BOB LONG SAYS TO DISREGARD SAMPLE LOCATION SW-13 - NO SURFACE WATER IN THIS AREA & DOESN'T EVER APPEAR TO BE ANY THERE. SOIL SAMPLES ALREADY COLLECTED IN THIS AREA * SEE SAMPLING LOGS FOR ADDITIONAL INFORMATION

Approvals

Om P. Popli, P.E.	Driller	NYSDEC

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date WEDNESDAY 2/7/90 NYSDEC ID# 828021

Site Name GOLDEN RD. DISPOSAL SITE Site No. YN4020(NEOC)

Work Start 840 am Lunch 1230 - 100 Finish 325 pm

Weather Conditions OVERCAST, 44°'s F

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER
BOB LONG	B. MERRITT	
	P. VANDEL	

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection	D	
# of Tyveks	4	
# of Tyvek Bootles	—	
# of Disposable Gloves	20 PRS	

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	Y	2/7/90	PV	NONE
Explosimeter	C2537	N			
Monitox	(HCN)035863	N			
Mini-Rad	20655	N			
pH Meter		Y	2/7/90	PV	NA
Nephlometer		Y	2/7/90	PV	NA
Camera	30302174	N	NA	NA	NA
Water Lever Indicator	WA54V0001	Y	NA	NA	NA
TLD Badge	~~SC-6954 0004~~	Y	NA	NA	NA
	WA54V0002 ~~NH-6950 0003~~	Y	NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Equipment On Site:

Drill Rig Type	
Water Tanker	
Steam Jenny	
Bulldozer	
Air Compressor	
Other	

Decontamination Zone:

Detergent Wash	Y
Potable H20	Y
Methanol	Y
Distilled Water	Y
Plastic Cover	Y
Other	

DESCRIPTION OF WORK COMPLETED

0940-1010 - SET UP AT GW-1 & DECON SAMPLING EQUIP. - HNU READING TAKEN DOWNHOLE MEASURE WATER LEVEL IN PVC CASING - PURGE WELL OF 3+ WELL VOLUMES (pH, TEMP, CONDUCTIVITY & TURBIDITY READINGS ARE TAKEN - SAMPLES ARE THEN COLLECTED FROM GW-1

1020-1105 SET UP AT GW-5 & DECON SAMPLING EQUIP - HNU READING TAKEN DOWNHOLE - MEASURE WATER LEVEL IN PVC CASING - PURGE WELL OF 3+ WELL VOLUMES (pH, TEMP, CONDUCTIVITY & TURBIDITY READINGS)

1110-1120 SET UP AT GW-2 & DECON SAMPLING EQUIP - HNU READING TAKEN DOWNHOLE, WATER LEVEL MEASUREMENT TAKEN - PURGE WELL OF 3+ WELL VOLUMES (pH, TEMP, CONDUCTIVITY & TURBIDITY READINGS ARE TAKEN)

1135-1145 - SET UP AT GW-3 & DECON SAMPLING EQUIP - HNU READING TAKEN DOWNHOLE WATER LEVEL MEASUREMENT TAKEN - PURGE WELL OF 3+ WELL VOLUMES (pH, TEMP, COND. & TURBIDITY)

1150-1705 SET UP AT GW-4 - HNU READING TAKEN DOWNHOLE, MEASURE WATER LEVEL - PURGE WELL OF 3+ WELL VOLUMES (pH, TEMP, CONDUCTIVITY & TURBIDITY READINGS ARE TAKEN)

1110-1135 - SET UP AT GW-5 & COLLECT SAMPLE / LABEL & PACK IN COOLER

1150-215 - SET UP AT GW-2 & COLLECT SAMPLE " " " " "

225-250 - SET UP AT GW-3 & COLLECT SAMPLE " " " " "

305-320 - SET UP AT GW-4 & COLLECT SAMPLE / LABEL & PACK IN COOLER

325 - CREW LEAVES SITE FOR THE DAY TO PICK UP ICE

WORK OFF SITE FOR 2 HRS FILLING OUT LABELS FOR UPCOMING SAMPLES

SPECIAL COMMENTS

X SEE SAMPLING LOGS FOR ADDITIONAL INFORMATION

Approvals

Om P. Popli, P.E.	Driller	NYSDEC

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date THURSDAY 2/8/90 NYSDEC ID# 822021

Site Name GOLDEN RD. DISPOSAL SITE Site No. YN4020(1E02)

Work Start 830 AM Lunch 1230-100 Finish 440 PM

Weather Conditions SUNNY, 45°F

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER
BOB LONG	B. MERRITT	
	P. VANDEPEL	

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection	D	
# of Tyveks	2	
# of Tyvek Booties	—	
# of Disposable Gloves	15 PR	

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	Y	2/8/90	PV	NONE
Explosimeter	C2537	N			
Monitox (HCN)	035863	N			
Mini-Rad	20655	N			
pH Meter		N			NA
Nephlometer		N			NA
Camera	30302174	N	NA	NA	NA
Water Lever Indicator	6954V0001	N	NA	NA	NA
TLD Badge	~~SC-6954-0004~~ 6954V0002	Y	NA	NA	NA
	~~NH-6950-0003~~	Y	NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Equipment On Site:

Drill Rig Type	
Water Tanker	
Steam Jenny	
Bulldozer	
Air Compressor	
Other	

Decontamination Zone:

Detergent Wash	✓
Potable H20	✓
Methanol	✓
Distilled Water	✓
Plastic Cover	✓
Other	

DESCRIPTION OF WORK COMPLETED

0730-0915 - CREW ARRIVES ON SITE AND WAITS FOR SURVEY CREW - MAKE OUT CHAIN-OF-CUSTODY RECORDS AND SET UP COOLERS

0915 - 1140 - DRIVE TO BUFFALO TO DELIVER SAMPLES AND PICK UP SUPPLIES FROM E&E LAB

1140 ARRIVE BACK ON SITE - BOB LONG ARRIVES ON SITE GO OVER WORK PLAN FOR THE DAY

CLEAN UP VAN & ORGANIZE

1100 - 1120 - SET UP AT SW-10 & COLLECT SAMPLE, LABEL & PACK SAMPLES

1135 - 1145 - SET UP AT SW-9 & COLLECT SAMPLE " " "

1200 - 1215 - SET UP AT SW-1 & COLLECT SAMPLE " " "

1230 - 1255 - SET UP AT SW-8 & COLLECT SAMPLE, LABEL & PACK SAMPLES

1302 - 1315 SET UP AT L-2, WHICH IS LOCATED NEAR A DRAINAGE SOURCE, BUT THERE IS NO FLOW HERE. NO EVIDENCE OF LECHATE IN THIS AREA - COLLECT SEDIMENT ONLY

1325 - 1345 SET UP AT SW-2 & COLLECT SAMPLE, LABEL & PACK

1355 - 1405 SET UP AT SW-3 & COLLECT SAMPLE, LABEL & PACK SAMPLES

1415 - 1430 SET UP AT SW-4 & COLLECT SAMPLE, LABEL & PACK

1440 - CREW LEAVES SITE FOR THE DAY TO GO GET ICE

WORK OFF SITE FOR THIS FILLING OUT CHAIN-OF-CUSTODY SEALS / RECORDS FOR THE FOLLOWING DAY

SPECIAL COMMENTS

*SEE SAMPLING LOGS FOR ADDITIONAL INFORMATION

Approvals

Pamela Vendrasi
Om P. Popli, P.E.

Driller

NYSDEC

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date FRIDAY 2/9/90 NYSDEC ID# 829021

Site Name GOLDEN RD. DISPOSAL SITE Site No. YA14020(NEOE)

Work Start 845am Lunch 1215-1245 Finish 1030am

Weather Conditions RAIN, 45°F

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER
BOB LONG	B. MERRITT	/
	P. VANLEFEL	/
		/

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection	D	/
# of Tyveks	4	/
# of Tyvek Booties	—	/
# of Disposable Gloves	20PRS.	/
		/
		/

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	Y	2/9/90	PV	NONE
Explosimeter	C2537	N	|	|	/
Monitox (HCN)	035863	N	|	|	/
Mini-Rad	20655	N	|	|	/
pH Meter		N	|	|	NA
Nephlometer		N	|	|	NA
Camera	30302174	N	NA	NA	NA
Water Lever Indicator		N	NA	NA	NA
TLD Badge	~~SC-6954-0004~~ 6954V0001	Y	NA	NA	NA
	~~NH-6950-0003~~ 6954V0002	Y	NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Equipment On Site:		Decontamination Zone:	
Drill Rig Type		Detergent Wash	Y
Water Tanker		Potable H20	Y
Steam Jenny		Methanol	Y
Bulldozer		Distilled Water	Y
Air Compressor		Plastic Cover	Y
Other		Other	

DESCRIPTION OF WORK COMPLETED

900-920 SET UP FOR SW-5, BOB LONG ARRIVES ON SITE, COLLECT SAMPLE LABEL & PACK SAMPLES

935-950 SET UP AT SW-7 & COLLECT SAMPLE, AREA SMELLS LIKE SEWAGE, LABEL & PK.

1005-1015 SET UP AT SW-6 & COLLECT SAMPLE, AREA SMELLS LIKE SEWAGE, LABEL & PK

1045-1105 SET UP AT SW-23 & COLLECT SAMPLE. LABEL & PACK

1110-1125 SET UP AT SW-22 & COLLECT SAMPLE, DITCH HERE IS LOCATED RIGHT AT BOTTOM OF STEEP SLOPE OF THE RAILROAD BED & CONTAINS ALOT OF GREASE & OIL (SOUTH SIDE OF TRACKS)

1135-1145 SET UP AT SW-21 & COLLECT SAMPLE, LABEL & PACK

1150-1200 SET UP AT SW-20 & COLLECT SAMPLE, ALSO LOCATED ON SOUTH SIDE OF R.R. TRACKS WATER IS MUCH CLEANER HERE. LABEL & PACK SAMPLES

105-115 SET UP AT SW-19 & COLLECT SAMPLE

120-125 SET UP AT SW-18 & COLLECT SAMPLE

130 BOB LONG ARRIVES BACK ON SITE

135-140 SET UP AT SW-17 & COLLECT SAMPLE

140-150 SET UP AT SW-16 & COLLECT SAMPLE

204-215 SET UP AT SW-11 & COLLECT SAMPLE

225 - STARTS TO RAIN VERY HARD - LEAVE SITE & HEAD BACK TO OFFICE

300 ARRIVE AT OFFICE - FINISH CUSTODY SEALS & CHAIN-OF-CUSTODY RECORDS, PACK & SEAL COOLERS

600-630 HEAD TO FEDERAL EXPRESS TO SHIP COOLERS TO THE LAB

SPECIAL COMMENTS

SW-16 THRU SW-23 ARE ADDITIONAL SAMPLES AS REQUESTED BY E & E TO BE TAKEN AT 1000' INTERVALS ON BOTH SIDES OF R.R. TRACKS TO INTERSECTION OF WEST SIDE DR. #'S SW-16, 18, 20, 22 ARE ON THE SOUTH SIDE OF TRACKS #'S SW-17, 19, 21, 23 ARE ON THE NORTH SIDE

Approvals	Om P. Popli, P.E.	Driller	NYSDEC

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date MONDAY 2/12/90 NYSDEC ID# 932021

Site Name GOLDEN PD. DISPOSAL SITE Site No. 9-14-020 (1502)

Work Start _____ Lunch _____ Finish _____

Weather Conditions SNOW, 35°F

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER
	B. MERRITT	
	M. IVES	

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection	D	
# of Tyveks	—	
# of Tyvek Booties	—	
# of Disposable Gloves	2PR	

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	Y	2/12/90	N	NONE
Explosimeter	C2537	N			
Monitox (HCN)	035863	N			
Mini-Rad	20655	N			
pH Meter		N			NA
Nephlometer		N			NA
Camera	30302174	N	NA	NA	NA
Water Lever Indicator		N	NA	NA	NA
TLD Badge	6954V0001 ~~SC-6954-0004~~	Y	NA	NA	NA
	6954V0003 ~~NH-6950-0003~~	Y	NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Equipment On Site:

Drill Rig Type	
Water Tanker	
Steam Jenny	
Bulldozer	
Air Compressor	
Other	

Decontamination Zone:

Detergent Wash	✓
Potable H20	✓
Methanol	✓
Distilled Water	✓
Plastic Cover	✓
Other	

DESCRIPTION OF WORK COMPLETED

CREW MEMBERS WERE ON SITE PERFORMING SURVEYING SERVICES. 1 SAMPLE BOTTLE FROM GW-11 WAS DISCOVERED MISSING ON 2/9/90 AFTER CREW LEFT SITE. FROM 11:30-12:00 CREW RESAMPLED GW-11 TO COMPLETE ALL SAMPLING FOR GOLDEN RD. SITE

SPECIAL COMMENTS

GW-11 SAMPLES WERE HAND DELIVERED ON 2/13/90

Approvals

Pamela Landrigan
Om P. Popli, P.E.

Driller

NYSDEC

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date: Wednesday 2/14/90   NYSDEC ID# 929021

Site Name: Golden Rd. Disposal Site   Site No. YN14030(AE02)

Work Start: 1030am   Lunch: 1200-1230   Finish: 430pm

Weather Conditions: ____

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER
|	P. Vanderpel	|
|		|
|		|

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection	|	|
# of Tyveks	|	|
# of Tyvek Booties	|	|
# of Disposable Gloves	|	|
	|	|
	|	|

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394	|	|	|	|
Explosimeter	C2537	|	|	|	|
Monitox	(HCN)035863	|	|	|	|
Mini-Rad	20655	|	|	|	|
pH Meter		|	|	|	NA
Nephlometer		|	|		NA
Camera	30302174	|	NA	NA	NA
Water Lever Indicator		|	NA	NA	NA
TLD Badge	SC-6954 0004	|	NA	NA	NA
	NH-6950 0003	|	NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Equipment On Site:

Drill Rig Type	
Water Tanker	
Steam Jenny	
Bulldozer	
Air Compressor	
Other	

Decontamination Zone:

Detergent Wash	
Potable H20	
Methanol	
Distilled Water	
Plastic Cover	
Other	

DESCRIPTION OF WORK COMPLETED

WRITE UP DAILY REPORTS FOR WORK PERFORMED ON SITE

SPECIAL COMMENTS

Approvals [signature] Om P. Popli, P.E. ______ Driller ______ NYSDEC

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date THURSDAY 2/15/90 **NYSDEC ID#** 829021

Site Name GOLDEN FD. DISPOSAL SITE **Site No.** YW4C20 (4EC2)

Work Start 1030 hrs **Lunch** 1200 - 1230 **Finish** 4:00 pm

Weather Conditions _____

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER
	P. POPLI	

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection		
# of Tyveks		
# of Tyvek Bootles		
# of Disposable Gloves		

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394				
Explosimeter	C2537				
Monitox (HCN)	035863				
Mini-Rad	20655				
pH Meter					NA
Nephlometer					NA
Camera	30302174		NA	NA	NA
Water Lever Indicator			NA	NA	NA
TLD Badge	SC-6954 0004		NA	NA	NA
	NH-6950 0003		NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Equipment On Site:

Drill Rig Type	
Water Tanker	
Steam Jenny	
Bulldozer	
Air Compressor	
Other	

Decontamination Zone:

Detergent Wash	
Potable H20	
Methanol	
Distilled Water	
Plastic Cover	
Other	

DESCRIPTION OF WORK COMPLETED

WRITE UP DAILY REPORTS FOR WORK PERFORMED ON SITE

SPECIAL COMMENTS

Approvals

Pamela Vanderbilt
Om P. Popli, P.E.

Driller

NYSDEC

Page 2 of 2

OM P. POPLI, P.E.

NYSDEC PHASE II INVESTIGATIONS

DAILY SITE REPORT

Date FRIDAY 2/16/90 NYSDEC ID# 828021

Site Name GOLDEN RD. DISPOSAL SITE Site No. YN4020 (AEC2)

Work Start 930 AM Lunch 1200-1230 Finish 400 PM

Weather Conditions

Personnel On Site:

NYSDEC	OM P. POPLI, P.E.	DRILLER
	P. VINCREL	

Personnel Safety Equipment:	OM P. POPLI, P.E.	DRILLER
Level of Protection		
# of Tyveks		
# of Tyvek Booties		
# of Disposable Gloves		

Environmental Equipment On Site:

	Meter #	Used Today	Calib. Date	By	Readings Above Background*
HNu Meter	901394				
Explosimeter	C2537				
Monitox (HCN)	035863				
Mini-Rad	20655				
pH Meter					NA
Nephlometer					NA
Camera	30302174		NA	NA	NA
Water Lever Indicator			NA	NA	NA
TLD Badge	SC-6954 0004		NA	NA	NA
	NH-6950 0003		NA	NA	NA

* If Meter readings exceeded background, see reverse side for Comments.

Equipment On Site:		Decontamination Zone:	
Drill Rig Type		Detergent Wash	
Water Tanker		Potable H20	
Steam Jenny		Methanol	
Bulldozer		Distilled Water	
Air Compressor		Plastic Cover	
Other		Other	

DESCRIPTION OF WORK COMPLETED

FINISH WRITING UP DAILY REPORTS FOR WORK PERFORMED ON SITE
SUMMARIZE EQUIPMENT USE
MAKE COPIES OF DAILY REPORTS AND SAMPLING LOGS FROM LINDLEY
LANDFILL & GOLDEN RD. DISPOSAL SITE TO SEND TO JIM GRIFFIS

SPECIAL COMMENTS

Approvals			
	Om P. Popli, P.E.	Driller	NYSDEC

OM P. POPLI, P.E.

ENVIRONMENTAL FIELD SAMPLING FORM

Site Location GOLDEN ROAD DISPOSAL SITE Site Number YN 4020 (1AEC2)

Weather OVERCAST, SLIGHT BREEZE, LIGHT RAIN, MID 60's Date THUR, 6/15/89

1.) **Surfical Soil Sampling** Yes [✓] No [ ]

Equipment Used: Auger [ ] Number of Samples Taken 12
Trowel [ ] S.S. Spoons [✓] Sample Designations S1 - S11 + ~~S12~~ S9 MS/MSD
Trier [ ] S.S. Bowl [✓] Depth of Samples 0-12"
Comments Other [ ]_____ # of Photos Taken 0

DISCOLORATION OF SOIL WAS NOTED AT S2, S6 & S10; SLIGHT PETROLEUM ODOR @ S2.

2.) **Sediment Sampling** Yes [ ] No [✓]

Equipment Used: Other [ ]_____ Number of Samples Taken _____
Ladle [ ] Sample Designations _____
Bottle [ ] Depth of Samples _____
Comments # of Photos Taken _____

3.) **Surface Water Sampling** Yes [ ] No [✓]

Equipment Used: Dip Bottle [ ] Number of Samples Taken _____
Ladle [ ] Other [ ]_____ Sample Designations _____
Thief [ ] Depth of Samples _____
Comments # of Photos Taken _____

4.) **Leachate Sampling** Yes [✓] No [ ]

Equipment Used: Bottle [ ] Number of Samples Taken 1
Ladle [✓] S.S. Bowl [✓] Sample Designations L1
Thief [ ] Funnel [ ] Depth of Samples SURFACE
Comments Other [ ]_____ # of Photos Taken 0
A PETROLEUM-LIKE SHEEN WAS NOTED ON SURFACE OF LEACHATE; NO UNUSUAL ODORS WERE NOTED.

5.) **Waste Pile Sampling** Yes [✓] No [ ]

Equipment Used: Auger [ ] Number of Samples Taken 2
Trowel [ ] S.S. Spoons [✓] Sample Designations W1 & W2
Trier [ ] Other [ ]_____ Depth of Samples 0-12"
Comments # of Photos Taken 0

OBSERVATIONS/COMMENTS

Signature of Sampler Nicholas J. Karolin

OM P. POPLI, P. E.

ENVIRONMENTAL FIELD SAMPLING FORM

Site Location GOLDEN ROAD DISPOSAL SITE Site Number NYN4020 (1EZ)

Weather SUNNY, 40's F Date 2/6/90

1.) **Surfical Soil Sampling** Yes [ ] No [✓]

Equipment Used: Auger [ ] Number of Samples Taken _____
Trowel [ ] S.S. Spoons [ ] Sample Designations _____
Trier [ ] S.S. Bowl [ ] Depth of Samples _____
Comments Other [ ] _____ # of Photos Taken _____

2.) **Sediment Sampling** Yes [✓] No [ ]

Equipment Used: Other [✓] STAINLESS STEEL SPOON Number of Samples Taken 3
Ladle [ ] Sample Designations SW-12, SW-14, SW-15
Bottle [ ] Depth of Samples 0-12"
Comments # of Photos Taken NONE
NO SAMPLE TAKEN AT SW-13 - SOIL SAMPLES WERE TAKEN ON PREVIOUS DATES THAT SURROUND THIS LOCATION - DEC SAID TO DISREGARD THIS AREA

3.) **Surface Water Sampling** Yes [✓] No [ ]

Equipment Used: Dip Bottle [✓] Number of Samples Taken 3
Ladle [ ] Other [ ] _____ Sample Designations SW-12, SW-14, SW-15
Thief [ ] Depth of Samples SURFACE
Comments # of Photos Taken NONE
DEC SUGGESTED TO DISREGARD SAMPLE LOCATION SW-13 AS THERE WAS NO SURFACE WATER NEAR THIS LOCATION & DOESN'T APPEAR TO EVER HAVE ANY IN THIS AREA. ADEQUATE SAMPLING HAS ALREADY BEEN DONE ON THE SOIL IN THIS AREA

4.) **Leachate Sampling** Yes [ ] No [✓]

Equipment Used: Bottle [ ] Number of Samples Taken _____
Ladle [ ] S.S. Bowl [ ] Sample Designations _____
Thief [ ] Funnel [ ] Depth of Samples _____
Comments Other [ ]_____ # of Photos Taken _____

5.) **Waste Pile Sampling** Yes [ ] No [✓]

Equipment Used: Auger [ ] Number of Samples Taken _____
Trowel [ ] S.S. Spoons [ ] Sample Designations _____
Trier [ ] Other [ ]_____ Depth of Samples _____
Comments # of Photos Taken _____

OBSERVATIONS/COMMENTS

SW-12 WAS LOCATED NEAR A COW PASTURE AND GETS RUNOFF FROM THIS AREA

NO UNUSUAL OBSERVATIONS

Signature of Sampler Pamela Vaudrey

OM P. POPLI, P. E.

OM P. POPLI, P.E.

ENVIRONMENTAL FIELD SAMPLING FORM

Site Location GOLDEN POND DISPOSAL SITE Site Number 1114020 (1E02)

Weather SUNNY, 45°F Date 2/8/90

1.) **Surfical Soil Sampling** Yes [ ] No [✓]

Equipment Used: Auger [—]
Trowel [ ] S.S. Spoons [ ]
Trier [ ] S.S. Bowl [ ]
Comments Other [ ]

Number of Samples Taken
Sample Designations
Depth of Samples
# of Photos Taken

2.) **Sediment Sampling** Yes [✓] No [ ]

Equipment Used: Other [✓] STAINLESS STEEL SPOON
Ladle [ ]
Bottle [ ]
Comments

Number of Samples Taken 7
Sample Designations SED-1, SED-2, SED-3, SED-4, SED-8
Depth of Samples SED-9 & SED-10 0-12"
# of Photos Taken NONE

3.) **Surface Water Sampling** Yes [✓] No [ ]

Equipment Used: Dip Bottle [✓]
Ladle [ ] Other [ ]
Thief [ ]
Comments

Number of Samples Taken 7
Sample Designations SW-1, SW-2, SW-3, SW-4, SW-8
Depth of Samples SW-9 & SW-10 SURFACE
# of Photos Taken NONE

SW-8 IS LOCATED IN CENTER OF POND LIKE LOCATION & APPEARED LIKE SEEPAGE

4.) **Leachate Sampling** Yes [✓] No [ ]

Equipment Used: Bottle [ ] Number of Samples Taken 1
Ladle [ ] S.S. Bowl [ ] Sample Designations L-2
Thief [ ] Funnel [ ] Depth of Samples 0-12"
Comments Other [✓] STAINLESS STEEL SPOON # of Photos Taken NONE

NO LEACHATE APPEARED TO BE IN THIS AREA - SEDIMENT SAMPLE TAKEN

5.) **Waste Pile Sampling** Yes [ ] No [✓]

Equipment Used: Auger [ ] Number of Samples Taken
Trowel [ ] S.S. Spoons [ ] Sample Designations
Trier [ ] Other [ ] Depth of Samples
Comments # of Photos Taken

OBSERVATIONS/COMMENTS

NO UNUSUAL OBSERVATIONS

Signature of Sampler Pamela Vandrei

OM P. POPLI, P.E.

ENVIRONMENTAL FIELD SAMPLING FORM

Site Location GOLDEN ROAD DISPOSAL SITE   Site Number YN 4???? (1502)

Weather RAIN, 45°F   Date 2/9/90

1.) **Surfical Soil Sampling** Yes [ ] No [√]

Equipment Used: Auger [–]   Number of Samples Taken

Trowel [ ] S.S. Spoons [ ]   Sample Designations

Trier [ ] S.S. Bowl [ ]   Depth of Samples

Comments Other [ ]   # of Photos Taken

Sediment Sampling Yes [√] No [ ]

Equipment Used: Other [√] STAINLESS STEEL SPOON   Number of Samples Taken 12

Ladle [ ]   Sample Designations SW-5, SW-6, SW-7, SW-11, SW-16, SW-18, SW-19, SW-20, SW-21, SW-22, S

Bottle [ ]   Depth of Samples 0-12"

Comments   # of Photos Taken NONE

3.) **Surface Water Sampling** Yes [√] No [ ]

Equipment Used: Dip Bottle [√]   Number of Samples Taken 12

Ladle [ ] Other [ ]   Sample Designations SW-5, SW-6, SW-7, SW-11, SW-16, SW-17, SW-18, SW-19, SW-20, SW-21, SW-22, S

Thief [ ]   Depth of Samples SURFACE

Comments   # of Photos Taken NONE

SAMPLES SW-16 THRU SW-23 WERE ADDITIONAL SAMPLES REQUESTED BY E&E TO BE ANALYZED FOR PCB/PESTICIDES ONLY (1 AMBER, 1-8OZ & 4 VOA'S)

OM P. POPLI, P.E.

ENVIRONMENTAL FIELD SAMPLING FORM

Site Location GOLDEN ROD DISPOSAL SITE Site Number NJHO20 (DEOE)

Weather SNOW, 30°'s F Date 2/12/90

1.) **Surfical Soil Sampling** Yes [ ] No [✓]

Equipment Used: Auger [—] Number of Samples Taken _____
Trowel [ ] S.S. Spoons [ ] Sample Designations _____
Trier [ ] S.S. Bowl [ ] Depth of Samples _____
Comments Other [ ]_____ # of Photos Taken _____

2.) **Sediment Sampling** Yes [✓] No [ ]

Equipment Used: Other [✓] STAINLESS STEEL SPOON Number of Samples Taken 1
Ladle [ ] Sample Designations SW-11
Bottle [ ] Depth of Samples 0-12"
Comments # of Photos Taken NONE

3.) **Surface Water Sampling** Yes [✓] No [ ]

Equipment Used: Dip Bottle [✓] Number of Samples Taken 1
Ladle [ ] Other [ ]_____ Sample Designations SW-11
Thief [ ] Depth of Samples SURFACE
Comments # of Photos Taken NONE
RESAMPLED SW-11 BECAUSE ONE OF THE CONTAINERS GOT BROKEN FROM 2/9/90 & WAS NOT ABLE TO SHIP SAMPLE IN THAT CONDITION

4.) **Leachate Sampling** Yes [ ] No [✓]

Equipment Used: Bottle [ ] Number of Samples Taken _____
Ladle [ ] S.S. Bowl [ ] Sample Designations _____
Thief [ ] Funnel [ ] Depth of Samples _____
Comments Other [ ]_____ # of Photos Taken _____

5.) **Waste Pile Sampling** Yes [ ] No [✓]

Equipment Used: Auger [ ] Number of Samples Taken _____
Trowel [ ] S.S. Spoons [ ] Sample Designations _____
Trier [ ] Other [ ]_____ Depth of Samples _____
Comments # of Photos Taken _____

OBSERVATIONS/COMMENTS

NO UNUSUAL OBSERVATIONS

Signature of Sampler Pamela Pandini

4.) **Leachate Sampling** Yes [ ] No [✓]

Equipment Used: Bottle [ ] Number of Samples Taken _____
Ladle [ ] S.S. Bowl [ ] Sample Designations _____
Thief [ ] Funnel [ ] Depth of Samples _____
Comments Other [ ]_____ # of Photos Taken _____

5.) **Waste Pile Sampling** Yes [ ] No [✓]

Equipment Used: Auger [ ] Number of Samples Taken _____
Trowel [ ] S.S. Spoons [ ] Sample Designations _____
Trier [ ] Other [ ]_____ Depth of Samples _____
Comments # of Photos Taken _____

OBSERVATIONS/COMMENTS

Signature of Sampler Pamela Vandrei

Well depths meas. from Ground level

OM P. POPLI, P. E.
GROUNDWATER MONITORING FIELD FORM

Site Location: GOLDEN ROAD DISPOSAL SITE Site Number: YN4020 (JEOZ)

Weather: OVERCAST, 44°F Date: 2/7/90

Well ID# GW-1

PURGE INFORMATION

Purge Method: Bailer: [✓] PVC [✓] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

- Volume Calculation -

Well Depth (ft) 11.5

Static Water Level (ft) 3.2 below grd

Depth of Water Column (ft) 8.3

X. Well Constant (gal/ft) X = 0.16

Volume Standing in Well 1.3 gallons = 4gals.

-Groundwater Elevation Calculation-

Well Elevation (ft) MSL _____

Static Water Level (ft) _____

Groundwater Elev. MSL _____ ft

Well Constants (X):

[0.16 gal/ft = 2" OD well; 0.65 gal/ft = 4" OD well. Calc. to Determine Constant:]

$$[\text{Constant } X = \frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}]$$

Purge Time: 5 MINS. 900-905

Total Volume Purged: 4+ gallons

# of Volume Casings purged: 3

Purging Observation\Measurements

WHEN WELL UNCAPPED IT SMELLED LIKE PETROLEUM

Sampling Information: Sample Method: Bailer: [✓] PVC [✓] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

Time: 905 hrs

7 Number of Bottles Taken: ____ ____ Field Preservation (Y or N): Y METALS & CYANIDES

Field Filtered (Y or N), Date/Time 2/7/90 Filtering Method NALGENE DISPOSABLE FILTER 0.80 MICRON

Sample Appearance: RUSTY IN COLOR

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
	pH	S.U.	8.1	8.3	8.3	8.1
	Spec. Cond.	umhos/cm	2000	2300	2200	2200
	Temp.	°C	8.3	8.4	8.9	8.9
	Turbidity	NTU	OFF-SCALE	OFF-SCALE	OFF-SCALE	OFF-SCALE

METER CALIBRATIONS

pH: Buffer 7.00 - APPROX. 7.0 set
Buffer 4.00 - " 4.0 set/ read
Buffer 10.0 - " 10.0 set/read
Buffer 7.00 - " 7.0 read

Field Meter Calibrations Date/Time 2/7/90

Field Observations:

NO UNUSUAL OBSERVATIONS

Crew Members: B. MERRITT, P. VANDEBEL

NYSDEC _____

Pamela Kendrick
Om P. Popli, P. E. Signature

OM P. POPLI, P. E.
GROUNDWATER MONITORING FIELD FORM

Site Location: GOLDEN POND DISPOSAL SITE Site Number: NJ4020 (SEO2)

Weather: OVERCAST, 44°F Date: 2/7/90

Well ID# GW-2

PURGE INFORMATION

Purge Method: Bailer: [✓] PVC [✓] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

- Volume Calculation -

Well Depth (ft) 11.0

Static Water Level (ft) 0.5' Above grd

Depth of Water Column (ft) 10.5

X Well Constant (gal/ft) X = 0.16

Volume Standing in Well 1.7 gallons = 5gals

-Groundwater Elevation Calculation-

Well Elevation (ft) MSL _____

Static Water Level (ft) _____

Groundwater Elev. MSL _____ ft

Well Constants (X):

[0.16 gal/ft = 2" OD well; 0.65 gal/ft = 4" OD well, Calc. to Determine Constant:]

$$[\text{Constant X} = \frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}]$$

Purge Time: 5 MINS. 1115-1120

Purging Observation\Measurements

Total Volume Purged: 5+ gallons

# of Volume Casings purged: 3

Sampling Information: Sample Method: Bailer: [✓] PVC [✓] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

Time: 1150

7 Number of Bottles Taken: ____ ____ Field Preservation (Y or N): Y METALS & CYANIDES

Field Filtered (Y) or N), Date/Time 2/7/90 Filtering Method NALGENE DISPOSABLE FILTER 0.80 MICRON

Sample Appearance: MUDDY

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
	pH	S.U.	8.4	7.9	7.8	7.8
	Spec. Cond.	umhos/cm	3000	3200	2900	2920
	Temp.	°C	6.1	6.7	6.7	6.7
	Turbidity	NTU	OFF-SCALE	OFF-SCALE	OFF-SCALE	OFF-SCALE

METER CALIBRATIONS

pH: Buffer 7.00 - ~~APPROX.~~ 7.0 set
Buffer 4.00 - " 4.0 set/ read
Buffer 10.0 - " 10.0 set/read
Buffer 7.00 - " 7.0 read

Field Meter Calibrations Date/Time 2/7/90

Field Observations:

NO UNUSUAL OBSERVATIONS

Crew Members: B. MERRITT, P. VANDREL

NYSDEC _____

Pamela Vandrei
Om P. Popli, P. E. Signature

OM P. POPLI, P. E.
GROUNDWATER MONITORING FIELD FORM

Site Location: GOLDEN ROD DISPOSAL SITE Site Number: NY4020 (1502)

Weather: OVERCAST, SOME SUN, 44°F Date: 2/7/90

Well ID# GW-3

PURGE INFORMATION

Purge Method: Bailer: [✓] PVC [✓] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

- Volume Calculation -

Well Depth (ft) 18.2

Static Water Level (ft) 1.5 Above grd

Depth of Water Column (ft) 16.7

X. Well Constant (gal/ft) X = 0.16

Volume Standing in Well 2.67 gallons = 8gals

-Groundwater Elevation Calculation-

Well Elevation (ft) MSL _____

Static Water Level (ft) _____

Groundwater Elev. MSL _____ ft

Well Constants (X):

[0.16 gal/ft = 2" OD well; 0.65 gal/ft = 4" OD well. Calc. to Determine Constant:]

[Constant X = $\frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}$]

Purge Time: 5 MINS 1140-1145

Purging Observation\Measurements

Total Volume Purged: 8+ gallons WATER REMAINS FAIRLY CLEAR

# of Volume Casings purged: 3

Sampling Information: Sample Method: Bailer: [✓] PVC [✓] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

Time: 1225

7 Number of Bottles Taken: ____ ____ Field Preservation (Y or N): Y METALS & CYANIDES

Field Filtered (Y or N). Date/Time 2/7/90 Filtering Method MILLEENE DISPOSAL FILTER 0.80 MICRON

Sample Appearance: FAIRLY CLEAR BUT NOT LESS THAN 50 NTU's

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
	pH	S.U.	8.2	8.1	7.9	7.8
	Spec. Cond.	umhos/cm	3200	3100	2770	3100
	Temp.	°C	8.3	8.3	9.4	9.4
	Turbidity	NTU	OFF-SCALE	OFF-SCALE	OFF-SCALE	OFF-SCALE

METER CALIBRATIONS

pH: Buffer 7.00 - APPROX. 7.0 set
Buffer 4.00 - " 4.0 set/ read
Buffer 10.0 - " 10.0 set/read
Buffer 7.00 - " 7.0 read

Field Meter Calibrations Date/Time 2/7/90

Field Observations:

NO UNUSUAL OBSERVATIONS

Crew Members: B. MERRITT, P. VANDEEL

NYSDEC _____

Pamela Vandeel
Om P. Popli. P. E. Signature

OM P. POPLI, P. E.
GROUNDWATER MONITORING FIELD FORM

e Location: GOLDEN ROAD DISPOSAL SITE Site Number: YN 4020 (1602)

Weather: CLEAR, 44° F Date: 2/7/90

Well ID# GW-5

PURGE INFORMATION

Purge Method: Bailer: [✓] PVC [✓] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

- Volume Caiculation - -Groundwater Elevation Calculation-

Well Depth (ft) 24.5 Well Elevation (ft) MSL _____

Static Water Level (ft) 5.2 below grd Static Water Level (ft) _____

Depth of Water Column (ft) 19.3 Groundwater Elev. MSL _____ ft

X Well Constant (gal/ft) X = 0.16

Volume Standing in Well 3.1 gallons = 9.3 gals.

l Constants (X):

o gal/ft = 2" OD well; 0.65 gal/ft = 4" OD well. Calc. to Determine Constant:]

onstant X = $\frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}$]

Purge Time: 20 MINS 1045-1105 Purging Observation\Measurements

Total Volume Purged: 9.3+ gallons _____

# of Volume Casings purged: 3 _____

Sampling Information: Sample Method: Bailer: [✓] PVC [✓] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

Time: 1110

7 Number of Bottles Taken: ____ ____ Field Preservation (Y or N): Y METALS & CYANIDES

Field Filtered (Y or N). Date/Time 2/7/90 Filtering Method NALGENE DISPOSABLE FILTER 0.20 MICRON

mple Appearance: MUDDY

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
	pH	S.U.	8.1	8.3	8.3	8.1
	Spec. Cond.	umhos/cm	2000	2800	2200	2200
	Temp.	°C	8.3	8.9	8.9	8.9
	Turbidity	NTU	OFF-SCALE	OFF-SCALE	OFF-SCALE	OFF-SCALE

METER CALIBRATIONS

pH: Buffer 7.00 - APPROX 7.0 set
Buffer 4.00 - " 4.0 set/ read
Buffer 10.0 - " 10.0 set/read
Buffer 7.00 - " 7.0 read

Field Meter Calibrations Date/Time 2/7/90

Field Observations:

NO UNUSUAL OBSERVATIONS

Crew Members: B. MERRITT & P. VANCREL

NYSDEC _____

Pamela Vanhall
Om P. Popli, P. E. Signature

OM P. POPLI, P. E.
GROUNDWATER MONITORING FIELD FORM

Site Location: GOLDEN POND DISPOSAL SITE Site Number: YN4020 (2502)

Weather: PARTLY SUNNY, 44°F Date: 2/7/90

Well ID# GW-4

PURGE INFORMATION

Purge Method: Bailer: [✓] PVC [✓] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

- Volume Calculation -

Well Depth (ft) 21.1

Static Water Level (ft) 2.1 above grd

Depth of Water Column (ft) = 19.0

X. Well Constant (gal/ft) X = 0.16

Volume Standing in Well 3.0 gallons = 9gals

-Groundwater Elevation Calculation-

Well Elevation (ft) MSL _____

Static Water Level (ft) _____

Groundwater Elev. MSL _____ ft

Well Constants (X):

[0.16 gal/ft = 2" OD well; 0.65 gal/ft = 4" OD well, Calc. to Determine Constant:]

[Constant X = $\frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}$]

Purge Time: 10 MINS. 1155-1205

Total Volume Purged: 9+ gallons

# of Volume Casings purged: 3

Purging Observation\Measurements

WATER REMAINED VERY CLEAR

Sampling Information: Sample Method: Bailer: [✓] PVC [✓] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

Time: 250

7 Number of Bottles Taken: ____ ____ Field Preservation (Y or N): Y METALS & CYANIDES

Field Filtered (Y) or N). Date/Time 2/7/90 Filtering Method NALGENE DISPOSABLE FILTER 0.80 MICRON

Sample Appearance: WATER VERY CLEAR BUT NOT LESS THAN 50 NTU'S

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
	pH	S.U.	7.8	8.0	8.1	7.9
	Spec. Cond.	umhos/cm	2970	2920	3000	2910
	Temp.	°C	8.9	8.9	9.4	8.9
	Turbidity	NTU	OFF-SCALE	OFF-SCALE	OFF-SCALE	OFF-SCALE

METER CALIBRATIONS

pH: Buffer 7.00 - APPROX. 7.0 set
Buffer 4.00 - " 4.0 set/ read
Buffer 10.0 - " 10.0 set/read
Buffer 7.00 - " 7.0 read

Field Meter Calibrations Date/Time 2/7/90

Field Observations:

NO UNUSUAL OBSERVATIONS

Crew Members: B. MERRITT & P. VANDREI

NYSDEC _____

Pamela Vandrei
Om P. Popli, P. E. Signature

OM P. POPLI, P. E.
GROUNDWATER MONITORING FIELD FORM

Site Location: GOLDEN ROAD DISPOSAL SITE Site Number: YN 4020 (NEO2)

Weather: SUNNY, 35°F Date: 2/6/90

Well ID# GW-6

PURGE INFORMATION

Purge Method: Bailer: [√] PVC [√] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

- Volume Calculation -

Well Depth (ft) 16.6

Static Water Level (ft) 0.70 above grd

Depth of Water Column (ft) 15.9

X. Well Constant (gal/ft) X = 0.16

Volume Standing in Well 2.5 gallons = 7.6 gals.

-Groundwater Elevation Calculation-

Well Elevation (ft) MSL _____

Static Water Level (ft) _____

Groundwater Elev. MSL _____ ft

Well Constants (X):

[0.16 gal/ft = 2" OD well; 0.65 gal/ft = 4" OD well, Calc. to Determine Constant:]

$$[\text{Constant X} = \frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}]$$

Purge Time: 15 MINS 12^00-12^15

Purging Observation\Measurements

Total Volume Purged: 7.6+ gallons

# of Volume Casings purged: 3

Sampling Information: Sample Method: Bailer: [√] PVC [√] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

Time: 2^35

7 Number of Bottles Taken: ____ ____ Field Preservation (Y or N): √ METALS & CYANIDES

Field Filtered (Y) or N), Date/Time 2/6/90 Filtering Method VALEENE DISPOSABLE FILTER 0.80 NUCFLON

Sample Appearance: MUDDY

Field Measurements:

Meter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
	pH	S.U.	9.4	9.5	9.9	9.[illegible]
	Spec. Cond.	umhos/cm	1820	1820	1870	1910
	Temp.	°C	6.1	6.1	6.1	6.1
	Turbidity	NTU	OFF-SCALE	OFF-SCALE	OFF-SCALE	OFF-SCALE

METER CALIBRATIONS

pH: Buffer 7.00 - APPROX. 7.0 set
Buffer 4.00 - " 4.0 set/ read
Buffer 10.0 - " 10.0 set/read
Buffer 7.00 - " 7.0 read

Field Meter Calibrations Date/Time 2/6/90

Field Observations:

NO UNUSUAL OBSERVATIONS

Crew Members: B. MERRITT & P. VANDREL

NYSDEC _____

Pamela Vandrei
Om P. Popli, P. E. Signature

OM P. POPLI, P. E.
GROUNDWATER MONITORING FIELD FORM

Site Location: GOLDEN POND DISPOSAL SITE Site Number: YN 4020 (1E02)

Weather: SUNNY, 40°F Date: 2/6/90

Well ID# GW-7

SOURCE INFORMATION

Purge Method: Bailer: [✓] PVC [✓] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

Volume Calculation - Groundwater Elevation Calculation-

Well Depth (ft) 17.2 Well Elevation (ft) MSL _____

Static Water Level (ft) 4.25 below grd Static Water Level (ft) _____

Depth of Water Column (ft) 12.95 Groundwater Elev. MSL _____ ft

X. Well Constant (gal/ft) X = 0.16

Volume Standing in Well 2.1 gallons = 6.3 gals.

Well Constants (X):

[0.16 gal/ft = 2" OD well: . 0.65 gal/ft = 4" OD well. Calc. to Determine Constant:]

$$\text{Constant X} = \frac{0.7854 \times (\text{casing diameter in inches})^2 \times 12}{231}$$

Purge Time: 15 MINS. 1125-1140 Purging Observation\Measurements

Total Volume Purged: 6+ gallons _____

# of Volume Casings purged: 3 _____

Sampling Information: Sample Method: Bailer: [✓] PVC [✓] Teflon [ ] St. Steel [ ] Other _____

Pump: [ ] Paristaltic [ ] Submergible [ ] Other _____

Time: 1250

7 Number of Bottles Taken: ____ ____ Field Preservation (Y) or N): METALS & CYANIDES

Field Filtered (Y) or N), Date/Time 2/6/90 Filtering Method MILLIPORE DISPOSABLE FILTER 0.80 MICRON

Sample Appearance: RUSTY IN COLOR

Field Measurements:

ıeter Number	Parameter	Unit	Replicate 1	Replicate 2	Replicate 3	Replicate 4
	pH	S.U.	7.5	7.2	7.0	6.8
	Spec. Cond.	umhos/cm	2220	2250	2320	2300
	Temp.	°C	8.3	8.3	8.9	8.9
	Turbidity	NTU	OFF-SCALE	OFF-SCALE	OFF-SCALE	OFF-SCALE

METER CALIBRATIONS

pH: Buffer 7.00 – APPROX. 7.0 set — Field Meter Calibrations Date/Time 2/6/90
Buffer 4.00 – " 4.0 set/read
Buffer 10.0 – " 10.0 set/read
Buffer 7.00 – " 7.0 read

Field Observations:

NO UNUSUAL OBSERVATIONS

Crew Members: B. MERRITT & P. VANDREI

NYSDEC _____

Pamela Vandrei
Om P. Popli, P. E. Signature