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734053 3/1995

GERAGHTY & MILLER, INC.
Environmental Services

A Heidemij Company

EXPLORATORY TEST PIT WORK PLAN
SYRACUSE CHINA LANDFILL
SYRACUSE CHINA MANUFACTURING COMPANY
SYRACUSE, NEW YORK

March 1995

RECEIVED
MAR 24 1995
BUREAU OF WESTERN REMEDIAL ACTION
DIVISION OF HAZARDOUS
WASTE REMEDIATION

Prepared for

Syracuse China Manufacturing Company
Post Office Box 4820
Syracuse, New York 13221-4820

Prepared by

Geraghty & Miller, Inc.
24 Madison Avenue Extension
Albany, New York 12203
(518) 452-7826

cc - G. Robinson DOH
H. Radioff Region 7

GERAGHTY & MILLER, INC.
Environmental Services

A **Heidemij** company

May 1, 1995

Mr. Steven Scharf, P.E.
New York State Department
of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

Re: Addendum to the Exploratory Test Pit Work Plan, Syracuse China Landfill, Syracuse, New York.

Dear Mr. Scharf:

Geraghty & Miller, Inc. has reviewed your approval letter dated April 25, 1995 which provided comments on the Exploratory Test Pit Work Plan for the Syracuse China Landfill (March 1995). The following items are incorporated into the test pit work plan by this addendum:

1) Page 2-2, bullet 1: This bullet will be revised to read "Sustained photoionization detector (PID) readings exceeding 25 parts per million (ppm) in the breathing zone at the excavation".

2) Page 2-2, bullet 2: "above 20%" will be changed to "approaching 20%" to be consistent with Page A-4, second paragraph.

3) Page 2-2, paragraph 3: Insert after first sentence: "If PID readings meet or exceed 25 ppm in the work zone, the downwind perimeter of the site will be continuously monitored".

4) If the number of work zones expand, air monitoring will be increased accordingly.

5) A wind direction indicator will be used to determine the downwind direction.

24 Madison Avenue Extension • Albany, New York 12203 • (518) 452-7826 • FAX (518) 452-4398

Field work for the test pit operations has been scheduled for May 15, 1995. If you have any questions, please contact us.

Sincerely,

GERAGHTY & MILLER, INC.

William J. Gray

William J. Gray
Senior Scientist/Project Manager

Andrew J. Barber
Senior Associate/Project Advisor

WJG/AJB:amb

cc: William Fenn
Phillip Harvard
Ed Jackson
Elaine Bobletz
John Greenthal

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REGION 7-ENV. QUALITY

GERAGHTY
& MILLER, INC.
Environmental Services

A **Heidemij** company

March 24, 1995

Mr. Robert W. Schick, P.E.
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

Re: Exploratory Test Pit Work Plan, Syracuse China Landfill, Syracuse Manufacturing Company, Syracuse, New York.

Dear Mr. Schick:

Enclosed, please find four copies of the above referenced work plan.

If you have any questions, please do not hesitate to contact us.

Sincerely,

GERAGHTY & MILLER, INC.

William J. Gray
Senior Scientist/Project Manager

Andrew J. Barber
Senior Associate/Project Officer

WJG/AJB:amb
Enclosures

cc: Mr. William Fenn
Mr. Phillip Harvard
Mr. Edwin Jackson, Esq.
Mr. John Greenthal, Esq.
Ms. Elaine Bobletz
Mr. Richard M. Williams, Esq.
Salina Free Library

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24 Madison Avenue Extension • Albany, New York 12203 • (518) 452-7826 • FAX (518) 452-4398

TRANSMITTAL MEMORANDUM

TO: Distribution

FROM: Steven M. Scharf, P.E. Actg
Remedial Section A, BWRA, Division of Hazardous Waste Remediation

RE: Syracuse China Facility Landfill, Town of Salina, Onondaga County
Site Name/ID No. Site No 7-34-053

DATE: 3/24/95

Please find ☐ attached ☐ under separate cover the following document(s) regarding the subject site:

☐ Scope of Work: _____ ☒ Work Plan: Testpit work plan

☐ RI Report: _____ ☐ FS Report: _____

☐ Design Documents: _____ ☐ QAPP: _____

☐ PRAP: _____ ☐ ROD: _____

☐ Our Comments Regarding: _____

☐ Other: _____

These are transmitted :

☐ For your review/approval. Please provide written comments by April 7, 1995.

☐ For your information/records.

If you have any questions or need additional information, please contact ☒ myself
or ☐ _____ at (518) 457-4343.

Remarks: _____

_____

Distribution: H. Ratliff Region 7 R Knizek BCM

G. Robinson Syracuse DOH _____

cc: w/o att. R. Schick S. Scharf

RECEIVED
MAR 28 1995
DEPT. OF ENV. CONSERVATION
REGION 7-ENV. QUALITY

EXPLORATORY TEST PIT WORK PLAN
SYRACUSE CHINA LANDFILL
SYRACUSE CHINA MANUFACTURING COMPANY
SYRACUSE, NEW YORK

March 24, 1995

Prepared by GERAGHTY & MILLER, INC.

William J. Gray
Senior Scientist/Project Manager

Andrew J. Barber
Senior Associate/Project Officer

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2.4 DECONTAMINATION OF PERSONNEL AND EQUIPMENT 2-3

FIGURE

1. Location of Surveyed Magnetometer Data Stations and Interpretation of Magnetic Data, Syracuse China Landfill, Syracuse, New York.

APPENDICES

Appendix A. Health and Safety Plan

Appendix B. Contingency Plan

EXPLORATORY TEST PIT WORK PLAN
SYRACUSE CHINA LANDFILL
SYRACUSE CHINA MANUFACTURING COMPANY
SYRACUSE, NEW YORK

1.0 INTRODUCTION

Geraghty & Miller, Inc. was retained to prepare this work plan for conducting exploratory test pits at several locations on the Syracuse China Landfill (Site) which is located on the property of the Syracuse China Manufacturing Company (Syracuse China), in Syracuse, New York. Anecdotal information had raised the possibility that drums may have been disposed of in the western half of the landfill although previous investigations at the site had not indicated the presence of drums. The potential for the existence of buried drums in the landfill has been investigated using a phased approach. The first phase consisted of a magnetometer survey conducted in November 1994 across the western half of the landfill (Geraghty & Miller, Inc. 1995). The results of this survey identified several magnetic anomalies which indicate buried metal. The second phase of the investigation will consist of a determination of the presence or absence of buried drums at the magnetic anomalies which exhibit strength and scattering characteristics typical of buried drums.

The work plan has been prepared to provide a description of the field activities and health and safety requirements necessary to complete the test pits in the areas which have the greatest potential to contain buried drums. A contingency plan is also provided which will be implemented in the event of an emergency situation.

2.0 SCOPE OF WORK

The following scope of work describes the procedures which will be followed to determine if buried drums exist within the landfill.

2.1 TEST PIT EXCAVATION

Exploratory test pits will be initially excavated at the locations of four magnetic anomalies (B, C, F, and J), see Figure 1. Based on the strength and scattering of the anomaly, these four locations are considered the most likely of the anomalies to have the potential for buried drums. If drums are encountered at any of these locations, additional test pits will be excavated at the remaining identified anomalies (A,D,E,G,H, and I). However, if drums are not located at any of these four locations, test pit operations will be discontinued.

The test pit will be excavated using a track excavator. The excavation will be approximately 5 to 10 feet wide and will be terminated at the base of the landfill material. The thickness of the landfill ranges from approximately 15 to 30 feet as determined by a soil boring program conducted in November 1994. The practical vertical depth limit of the excavation is anticipated to be the bottom of the landfill material. If drums are encountered, the excavation subcontractor will not excavate or remove these drums unless the drums are leaking.

One person (a spotter) will be responsible for guiding the equipment during test pit activities. If a drum is encountered, the spotter will observe the condition and situation of each drum. The spotter will decide if excavation of the drum is required due to rupturing or leaking. If the drum appears intact, the spotter will instruct the equipment operator to carefully backfill the excavation. If the drum has been ruptured or is leaking, the spotter will guide the operators of either an excavator or grappler to remove the drum from its immediate area. After removal from the excavation and initial observation, the drum will be overpacked and appropriately staged. The excavation equipment will be equipped with smooth edges to protect drums from puncture.

2.2 AIR MONITORING

Air monitoring will be continuously performed with an organic vapor meter (OVM) and lower explosive limit (LEL) meter during the course of the excavation activities. Air monitoring will be conducted to protect worker and community safety. The Geraghty & Miller field hydrogeologist will assume primary responsibility for these activities.

Since there are occupied buildings adjacent to the site, additional air monitoring may be necessary. The excavation of the test pits has the potential to release contaminants, and therefore, steps will be taken to protect persons immediately adjacent to the site and off-site. The following conditions will trigger real-time monitoring at the perimeter of the site:

- Sustained photoionization detector (PID) readings exceeding 100 parts per million (ppm) in the breathing zone; or
- LEL readings above 20% in the vicinity of the excavations.

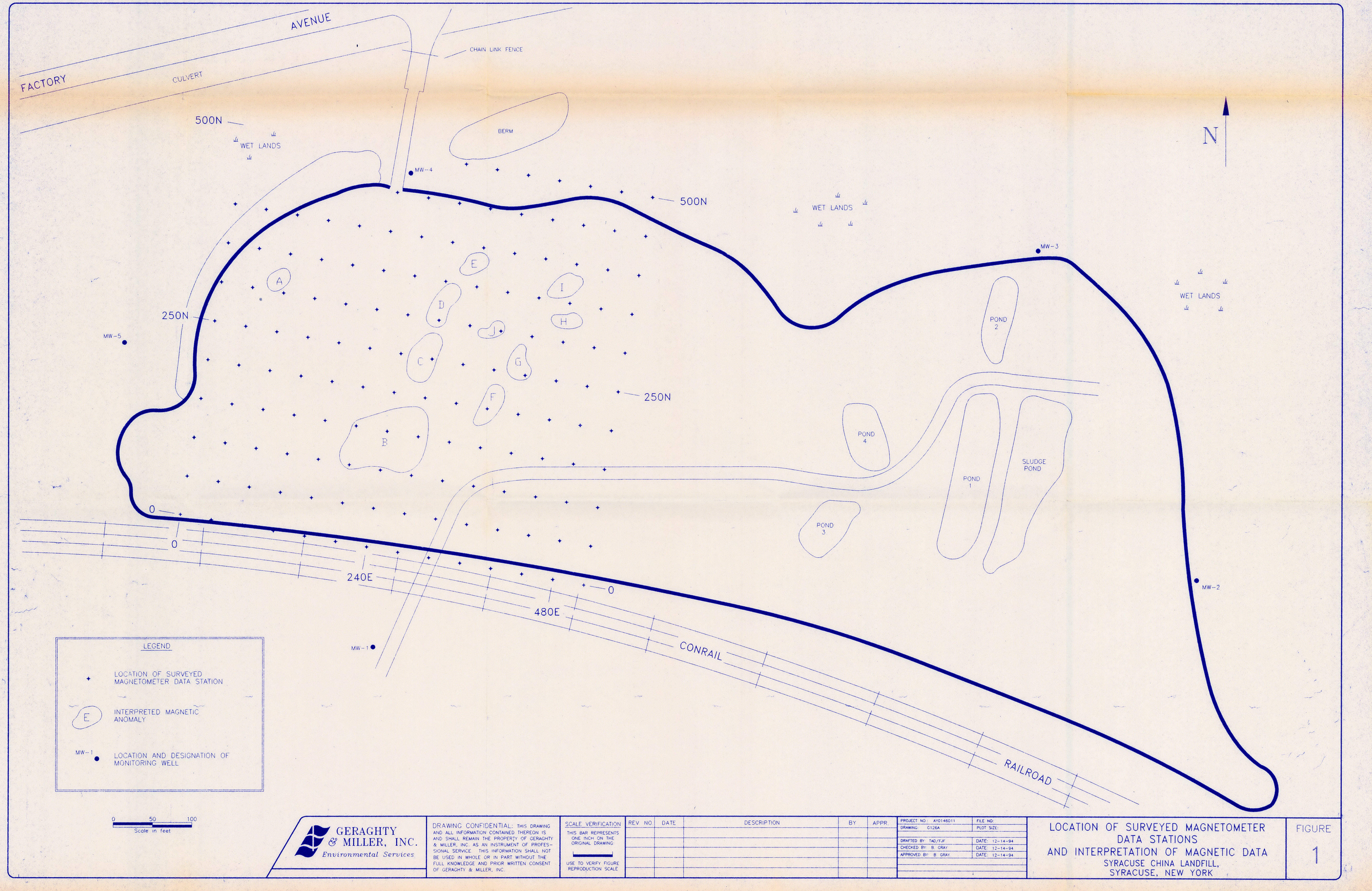
The monitoring will be conducted at several downwind locations at the site perimeter. In the event that this concentration is also detected at the perimeter, work will stop and the New York State Department Of Environmental Conservation (NYSDEC) representative will be notified. The area surrounding the site will be evacuated when air quality monitored at several points downwind indicates a potential threat to the surrounding area, this decision will be made by Geraghty & Miller's field hydrogeologist with the NYSDEC representative, and local emergency personnel listed in the Health and Safety Plan (HASP).

2.3 BACKFILLING OF EXCAVATIONS

Soil which has been excavated will be returned to the excavated areas after the test pit activities are completed. Locations where drums were encountered will be staked and labeled to allow easy identification during subsequent removal activities.

2.4 DECONTAMINATION OF PERSONNEL AND EQUIPMENT

Personnel decontamination procedures are specified in the HASP. The equipment used at the site will require decontamination by high-pressure rinsing using low volume nozzles, supplemented by detergents as needed. To reduce the volume of rinse water generated, brushes and scrapers may be initially used to remove packed or caked soils.



GERAGHTY & MILLER, INC.
Environmental Services

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DRAWING: G126A	PLOT SIZE:
DRAFTED BY: TAD/FJF	DATE: 12-14-94
CHECKED BY: B. GRAY	DATE: 12-14-94
APPROVED BY: B. GRAY	DATE: 12-14-94

LOCATION OF SURVEYED MAGNETOMETER DATA STATIONS AND INTERPRETATION OF MAGNETIC DATA
SYRACUSE CHINA LANDFILL,
SYRACUSE, NEW YORK

FIGURE
1

APPENDIX A

HEALTH AND SAFETY PLAN
TEST PIT EXCAVATION
SYRACUSE CHINA LANDFILL
SYRACUSE, NEW YORK

INTRODUCTION

Geraghty & Miller, Inc. has been authorized by Syracuse China Manufacturing Corporation to conduct test pit excavations at the Syracuse China landfill site, located in Syracuse, New York. This Health and Safety Plan (HASP) has been developed to address the potential physical and chemical hazards that our workers may face while performing the planned field activities. This HASP establishes procedures to minimize worker's exposures though the use of personal protective equipment and safe work practices. This HASP has been developed to meet the requirements of the Occupational Safety and Health Administration (OSHA) regulation, Title 29, Code of Federal Regulations, Part 1910.120 (20 CFR 1910.120), "Hazardous Waste Operations and Emergency Response." It is intended for the protection of our workers. Anyone else, such as subcontractors, client, and visitors may review our HASP and follow its procedures if they choose.

RESPONSIBILITIES

The on-site hydrogeologist has been designated as the Site Safety Officer (SSO). The SSO will be responsible for implementing the procedures and safe work practices established in this HASP. In the event that the SSO must leave the site while the work is in progress, an alternate SSO will be designated to ensure that the HASP will continued to be followed. The SSO will report all health and safety matters to William Gray, Project Manager, who has responsibility for overseeing the planned activities. Andrew J. Barber is the Project Director for this investigation and has overall project responsibility.

SITE DESCRIPTION

The Syracuse China landfill is located at the northern end of the Syracuse China manufacturing facility at 2900 Court Street, Syracuse, New York. Previous investigations and monitoring activities have been conducted since 1986 and have generated data on geology, groundwater, surface water, and surface soil. A Geophysical (magnetometer) Survey conducted by Geraghty & Miller in November of 1994 identified several magnetic anomalies within the landfill. The scope of work for this investigation will include the investigation of selected magnetic anomalies (potential buried drums). For additional information and details of the site and previously conducted activities, please refer to the RI/FS Work Plan (Geraghty & Miller, October 1994).

PLANNED FIELD ACTIVITIES

The following is a brief description of the planned field activities for the site:

Test pit excavation: Test pits will be excavated to determine the source of several magnetic anomalies identified during a magnetometer survey conducted in November, 1994. The condition of drums (if encountered) will be determined. If necessary, drums will be removed and staged.

HAZARD EVALUATION

The potential hazards, physical and chemical, associated with the planned field activities for this site have been evaluated (see Table 1). Existing information such as the task which will be performed, past site experience, and past sampling results, were all used in this evaluation process.

The physical hazards associated with the planned field activities included the possibility of being splashed with potentially contaminated liquids during test pit excavation, slips and falls

due to wet or uneven surfaces, noise exposure during the installation of the test pits, overhead power lines, underground utilities, and being stuck by objects and equipment. Workers will not enter the test pits and, therefore, no confined space entries will be made.

The chemical hazards associated with this site consist of potential exposure hazards associated with organic and chlorinated compounds (see Table 2), and fire and explosion hazard due to the potential presence of flammable gases and vapors. Based upon this information, the following exposure pathways have been identified in order to minimize potential worker's exposure:

- Inhalation of vapors and gases.
- Direct skin contact and absorption with organic and chlorinated compounds.
- Accidental ingestion of contaminants.

AIR MONITORING

Air monitoring will be conducted by the SSO at this site during all planned field activities to ensure that the workers are appropriately protected from potential chemical hazards. An intrinsically safe photoionization detector (PID) instrument (i.e.; OVM, Model 580B) will be used. This instrument is designed to measure trace quantities of VOCs in air and has a parts per million (ppm) sensitivity range. This instrument will be calibrated each morning, before field use, and calibration records will be kept by the SSO. Calorimetric tubes for benzene will also be used to detect the presence of benzene. A combination meter for measuring oxygen deficiency and the presence of flammable/explosive gases and vapors will be used.

ACTION LEVELS

Based upon our knowledge of the site and its potential contaminants, the following action level procedure has been established for all planned field activities in order to evaluate whether actual field conditions will require upgrading from the initial Level D protection. For each task, continuous air monitoring using the PID instrument will be conducted by the SSO. An action level of 1 ppm needle deflection for a sustained period of 5 minutes in the worker's breathing zone has been established based on the potential presence of benzene. Table 2, Current Occupational Airborne Contaminant Standards and Guidelines, provides a listing of the predominant compounds found at this site and their current occupational exposure limits. Should the action level be met or exceeded, the SSO will draw a calorimetric tube to determine the benzene concentration. If the benzene concentration is not equal to or greater than 1 ppm, the work will continue in Level D protection. If the concentration of benzene meets or exceeds 1 ppm, the SSO will discontinue the work, the work area will be permitted to vent and the workers moved to an area upwind. Work will not resume until the benzene concentrations fall below 1 ppm or PID reading fall below the action level. If after 15 minutes, the PID reading does not fall below the action level, the SSO may permit the resumption of work with the level of protection upgraded to Level C using a full face air purifying respirator equipped with organic vapor cartridges and a dust prefilter. If PID readings meet or exceed 25 ppm, the work area will be cleared and permitted to vent as previously described. After the venting period, if PID readings are still 25 ppm or greater, the work may resume with the workers upgraded to Level C protection. Work would also be discontinued should PID readings meet or exceed 1,000 ppm without the presence of benzene and if benzene concentrations meet or exceed 50 ppm.

In addition to the above set action levels, the SSO will collect continuous measurements using a combination meter during all planned field activities. Oxygen levels should be in the range of 19.5 to 23.0 percent, and flammable gases or vapors should be less than 20 percent of the Lower Explosive Limit (LEL). Should any of these parameters not be met, the SSO will discontinue the work and the work area will be permitted to vent until these parameters are all met.

LEVELS OF PROTECTION

Based upon the hazard evaluation results, all tasks will initially be performed in Level D protection. In the event that the established action levels are exceeded, the level of protection will be upgraded to Level C. The following is a description of the personal protective equipment required for each level:

Level D:

- Hard hat.
- Disposable coveralls (optional).
- Safety glasses, goggles, or faceshield.
- Steel-toe and shank, chemical-resistant boots.
- Chemical-resistant gloves.
- Hearing protection, NRR of 35 decibels (as necessary).

Level C:

- Full face air purifying respirator equipped with organic vapor cartridges and dust prefilters.
- Hard hat.
- Disposable coveralls (optional).
- Safety glasses, goggles, or faceshield.
- Steel-toe and shank, chemical-resistant boots.
- Chemical-resistant gloves.
- Hearing protection, NRR of 35 decibels (as necessary).

SAFE WORK PRACTICES

- All Geraghty & Miller site personnel will be participants of the company's health and safety program. This includes 40 hours of initial training, annual 8 hour refresher training and 8 hour manager and supervisor training.

- All Geraghty & Miller site personnel are participants of the company's medical surveillance program.

- All Geraghty & Miller site personnel must review the HASP prior to participating in the planned field activities.

- A copy of the HASP will be available at the site for reference during the planned field activities.

- Clearance of overhead power lines must be maintained. A minimum of 10 feet for lines rated up to 50 kilovolts, and 16 feet for lines rated between 50 kilovolts to 750 kilovolts.

- Dust suppression, using a water spray, will be used when needed to reduce airborne particulates during the field activities.

- A pre-entry, tailgate safety meeting will be conducted prior to the start of each task to discuss the associated hazards. This meeting will be recorded on the form provided in Section 1.

- The SSO will inform all subcontractors of the potential hazards associated with the site and the planned field activities. A copy of the HASP will be made available for their review.

- All underground utilities and structures will be cleared and marked out prior to any ground intrusive work. The clearing and mark out will be recorded on the form provided in Section 2.

- All site visitors requiring access to the Contamination Reduction and/or the Exclusion Zone will be required to review the HASP and sign the Site Visitors Log provided in Section 3.

- No eating, drinking, and smoking will be permitted in the work and support zones.

- No sources of ignition, such as matches or lighters will be permitted in the work and support zones.

- The buddy system will be used in all work areas.

- During hazardous weather conditions, such as lightning and thunder storms, work will cease immediately.

DRUM HANDLING PROCEDURE

During the planned field activity of test pit excavation and sampling, buried drums may be encountered. In the event that buried drum(s) are encountered, caution will be used to slowly expose the drums without damaging them. These buried drums can be in various physical conditions and should be handled in the following manner:

Should old, rusted, broken, and obviously empty drums be encountered, the backhoe bucket should be used to remove these drum(s) and place them in a pre-determined area for proper disposal.

Should leaking drum(s) be encountered, a backhoe equipped with a blast shield and drum grappler should be used to remove these drum(s). The leaking drum should be placed immediately in an overpack drum and sealed. These drums should be staged on pallets in a pre-determined area for sampling purposes. Once sampling results are known, the drums should be re-staged based on chemical compatibility and prepared for proper disposal.

Should bulging drum(s) be encountered, the backhoe equipped with the blast shield and drum grappler should be used to remove these drum(s). The bulging drum should be staged in a pre-determined area for pressure relief (e.g., mechanical or pneumatic spiking). The spiked drum should then be overpacked and staged in the sampling area for sampling and proper disposal.

Should intact (good condition) drum(s) be encountered, the test pit will be backfilled and the location of the drum noted for future reference.

HEAT STRESS

Heat stress is caused by a number of interacting factors, including environmental conditions, personal protective equipment, work load, and the individual characteristics of the worker. Each individual has different susceptibilities to heat stress. Factors affecting an individual's susceptibility to heat stress include age, physical fitness, degree of acclimatization, and the specific task being performed. Symptoms of heat stress are divided into five general categories as follows:

- Behavioral Disorders: A worker suffering from heat fatigue demonstrates symptoms such as the inability to concentrate, impaired performance, and loss of coordination.

- Skin Eruptions: Skin eruptions include profuse, tiny, raised red vesicles (blister-like) on affected areas, prickling sensation during heat exposure, and prickly heat. During heat stress, extensive areas of the skin that do not sweat upon heat exposure, will present a goose-flesh appearance that subside with cool environments.

- Heat Exhaustion: Heat exhaustion is a condition which results from extensive water and/or salt depletion. Symptoms include fatigue, nausea, headaches, giddiness, clammy skin, pale complexion, and fainting. Heat cramps, which are painful muscle spasms (arms, legs, or abdominal), are also a symptom of heat exhaustion occuring during or after work hours.

- Heat Syncope: Symptoms associated with this stage of heat stress include the individual fainting while standing erect and the individual becoming immobile.

- Heat Stroke: Symptoms usually associated with heat stroke are hot, dry skin, which are usually red, mottled, or blue. Additional symptoms include confusion, loss of consciousness, and convulsions.

To minimize workers' exposures to heat stress, it is important for field personnel to recognize the early signs and symptoms of heat stress so that preventive measures can be taken. Preventive measures include work schedule adjustment, rotating personnel, and selection of personal protective equipment.

- Adjustment of Work Schedules: In environments of extreme heat and humidity, work schedules should be modified. Heavy work should be conducted during the cooler hours of early morning or early evening when the ambient temperature is usually lower. During the hotter hours, usually associated with mid-day, light work tasks should be performed whenever possible. Subcontractors should be informed of the potential for adjusted work schedules.

- Rotation of Personnel: By alternating job functions, a single worker may not be overstressed or overexerted as a result of performing heavy tasks throughout the day.

- Increase in Rest Periods: In extreme environmental conditions, the number of rest periods should be increased. Shaded areas or air conditioned facilities (trailer, cars, buildings) should also be provided for these rest periods so that workers can adequately recover.

Bodily fluids should also be maintained at normal levels. A good guideline to follow is for every ounce lost in sweat, the fluid intake should equal that amount. Water is recommended as the fluid of choice. Field showers or hose-down areas should be provided to reduce body temperature.

SITE CONTROL

The SSO will determine and identify the following areas of the work site. These areas will be divided into three zones, designated as the exclusion zone, the contamination reduction zone (CRZ), and the support zone. The exclusion zone is the zone where contamination exists or could occur. All personnel working in an exclusion zone will wear the prescribed level of protection. The area between the exclusion zone and the support zone is the CRZ. This zone provides a transition between a contaminated area (exclusion zone) and a support zone. The support zone serves as an entry for personnel and storage area for material and equipment. The SSO will also specify the equipment, operations, and personnel to occupy these controlled areas.

DECONTAMINATION

All equipment and tools used within the work area will also undergo decontamination. Final inspection of the equipment prior to leaving the work area is the responsibility of the SSO. Equipment will be washed with decontamination solution (i.e., detergent and water), rinsed with clean water, and if required, steam cleaned to the satisfaction of the SSO prior to reuse.

EMERGENCY PLAN

Verbal communications may be difficult at times due to personal protective equipment and noise. A universal set of hand signals will then be used. They are as follows:

Hand gripping throat:	Can't breath
Grip partner's wrist or place hands around waist:	Leave work area immediately
Hand on top of head:	Need assistance
Thumbs up:	Ok, I'm all right
Thumbs down:	No, Negative

All job-related injuries and illnesses will be reported to the SSO. If medical attention is needed, the injured worker will be decontaminated, if possible, prior to leaving the site. The SSO will investigate the cause of the accident and corrective measures will be taken before the work can resume. It will be the responsibility of the SSO to complete the accident reporting form, OSHA 101, provided in Section 4 for all injuries. The completed OSHA 101 should be forwarded to the office health and safety manager within six days for recording into the OSHA 200 log. In the event of a fatality or 5 or more workers hospitalized as a result of a single incident, the SSO will contact the office health and safety manager immediately for OSHA reporting purposes.

SPILL CONTAINMENT

In the event of a spill (i.e., 55 gallon drum of well development water), the SSO will enact spill contaminant measures such as using containment boom and/or absorbent pads will be applied to prevent the spill from spreading. The spilled material will be redrummed via the use of a pump or vacuum truck.

EMERGENCY TELEPHONE NUMBERS

New York State Police	- 911 or (315) 669-2681
Onondaga County Sheriff's Department	- 911 or (315) 425-2111
Lyncourt Fire Department	- 911 or (315) 454-3189
Hospital (St. Joseph's) 301 Prospect Avenue Syracuse, New York	- 911 or (315) 448-5111

Physicians under contract or agreement with Geraghty & Miller:

Environmental Medicine Resources -	(800) 229-3674 or (404) 455-0818
Occupational Medical Resources -	(518) 482-0666

DIRECTIONS TO THE HOSPITAL (see Figure 1)

- Exit Syracuse China, make right onto Court Street (west)
- Take Court Street (west) to North Salina Street
- Make left onto North Salina Street (south)
- Bear left at intersection of North Salina Street and Ash Street onto Prospect Avenue.
- Emergency Room entrance is at the top of the hill.

156764



SCALE

GERAGHTY & MILLER, INC.
Environmental Services

HOSPITAL ROUTE

FIGURE 1

DRAFTER:
MGR.:
COMPILER:
CAD FILE: NON-CAD
FILE NO.:
PRJCT. NO.:
DATE:

REFERENCES

American Conference of Governmental Industrial Hygienist (ACGIH). 1993-1994. Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices.

Geraghty & Miller, Inc. 1995. RI/FS Work Plan, Syracuse China Landfill, Syracuse China, Syracuse, New York, October 1994.

Occupational Safety and Health Administration (OSHA). 1989. Hazardous Waste Operations and Emergency Response, Title 29, Code of Federal Regulations, Part 1910.120.

Table 1. Potential Physical and Chemical Hazards Associated with Planned Field Activities, Syracuse China Landfill, Syracuse China, Syracuse, New York.

TASK	Physical Hazards							Chemical Hazards			
	Splash	Slips and Falls	Noise	Overhead Power Lines	Under-ground Utilities	Struck By/ Against	Flammable gases/vapors	Inhalation	Skin and Eye Contact	Skin Absorption	Accidental Ingestion
Test Pit Excavation and Sampling	X	X	X	X	X	X	X	X	X	X	X

NY0681.001/#01:haz-1.tab

Table 2. Current Occupational Airborne Contaminants Standards and Guidelines, Syracuse China Landfill, Syracuse, New York.

COMPOUND	ACGIH-TLV (ppm) TWA	ACGIH-TLV (ppm) STEL	OSHA-PEL (ppm) TWA	OSHA-PEL (ppm) STEL
Acetone	750	1,000	750	1,000
Benzene	10	--	1	--
Ethylbenzene	100	125	100	125
1,1-dichloroethane	100	--	100	--
1,2-dichloroethene	200	--	200	--
Tetrachloroethene	25	100	25	--
Trichloroethene	50	100	50	200
Styrene	50	100	50	100
1,1,1-trichloroethane	350	450	350	450
Methylene chloride	50	--	25	--

ACGIH American Conference of Governmental Industrial Hygienists, 1993-1994
OSHA Occupational Safety and Health Administration, 1989
TLV Threshold Limit Value
PEL Permissible Exposure Limit
TWA 8-Hour Time Weighted Average
STEL 15-Minute Short Term Exposure Limit
PPM Parts Per Million
-- Not Available

SECTION 1

TAILGATE SAFETY MEETING FORM

TAILGATE SAFETY MEETING

Prepared by _____

Client _____ Project _____

Date _____ Project Number _____

Work Location _____

Type of Work to be Done _____

SAFETY TOPICS PRESENTED

Chemical Hazards _____

_____

Physical Hazards/Underground Utilities _____

_____

Protective Clothing/Equipment _____

_____

Special Equipment _____

Emergency Procedures _____

_____

Hospital/Clinic _____ Phone ( )_____

Paramedic Phone ( )_____

Hospital Address _____

Other _____

ATTENDEES

NAME PRINTED	SIGNATURE
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Meeting Conducted by _____ _____

Name Printed Signature

SECTION 2

UTILITIES AND STRUCTURES CHECKLIST

GERAGHTY & MILLER, INC.
Ground-Water Consultants

UTILITIES AND STRUCTURES CHECKLIST

Project: _____ **Prepared by:** _____

Location: _____ **Date:** _____

Instructions. This checklist has to be completed by a G&M staff member as a safety measure to insure that all underground utility lines, other underground structures as well as above-ground power lines are clearly marked out in the area selected for boring or excavation. **DRILLING OR EXCAVATION WORK MAY NOT PROCEED UNTIL LINES ARE MARKED AND THIS CHECKLIST HAS BEEN COMPLETED.** Arrangements for underground utility markouts are best made at the time of the preliminary site visit to allow client and/or utility company sufficient time. Keep completed checklist and maps onsite; send copy to Project Manager.

Assignment of Responsibility. Client is responsible for having underground utilities and structures located and marked. Preferably, the utilities themselves should mark out the lines.

Drilling or Excavation Sites. Attach a map of the property showing the proposed drilling or excavation site (or if sites are widely separated, several maps) clearly indicating the area(s) checked for underground utilities or underground structures and the location of above-ground power lines.

Utilities and Structures

Type	Not Present	Present	How Marked?[1)]
Petroleum products line			
Natural gas line			
Steam line			
Water line			
Sewer line			
Storm drain			
Telephone cable			
Electric power line			
Product tank			
Septic tank/drain field			
Overhead power line			

1) Flags, paint on pavement, wooden stakes, etc.

Name and affiliation of person who marked out underground lines or structures.

_____ NAME _____ ORGANIZATION _____ PHONE

Emergency Procedures

Persons at site or facility to contact in case of emergency

1. _____ Phone _____

2. _____ Phone _____

Fire Dept.: Phone _____ Ambulance: Phone _____

Utility: Phone _____ Utility: Phone _____

Utility: Phone _____ Utility: Phone _____

Directions to nearest hospital (describe or attach map).

SECTION 3

SITE VISITORS LOG

SITE VISITORS LOG

THE UNDERSIGNED VISITORS REQUIRE ENTRANCE TO THE EXCLUSION ZONE AND HAVE THOROUGHLY READ THE HEALTH AND SAFETY PLANS, UNDERSTAND THE POTENTIAL HAZARDS AT THE SITE AND THE PROCEDURES TO MINIMIZE EXPOSURE TO THE HAZARDS.

NAME (print)	COMPANY	DATE	SIGNATURE

3A:SVL.FRM

SECTION 4

ACCIDENT REPORTING FORM, OSHA 101

OSHA FORM 101

SUPPLEMENTARY RECORD OF OCCUPATIONAL INJURIES AND ILLNESSES

EMPLOYER

1. Name _____

2. Mail Address _____
(No. and street) (City or town) (State)

3. Location, if different from mail address _____

INJURED OR ILL EMPLOYEE

4. Name _____ Social Security No. _____
(First name) (Middle name) (Last name)

5. Home Address _____
(No. and street) (City or town) (State)

6. Age _____ 7. Sex: Male_____ Female_____ (Check one)

8. Occupation _____
(Enter regular job title, not the specific activity he was performing at time of injury.)

9. Department _____
(Enter name of department or division in which the injured person is regularly employed, even though he may have been temporarily working in another department at the time of injury.)

THE ACCIDENT OR EXPOSURE TO OCCUPATIONAL ILLNESS

10. Place of accident or exposure _____
(No. and street) (City or town) (State)
If accident or exposure occurred on employer's premises, give address of plant or establishment in which it occurred. Do not indicate department or division within the plant or establishment. If accident occurred outside employer's premises at an identifiable address, give that address. If it occurred on a public highway or at any other place which cannot be identified by number and street, please provide place references locating the place of injury as accurately as possible.

11. Was place of accident or exposure on employer's premises? _____ (Yes or No)

12. What was the employee doing when injured? _____
(Be specific. If he was using tools or equipment or handling material, name them and tell what he was doing with them.)

13. How did the accident occur? _____
(Describe fully the events which resulted in the injury or occupational illness. Tell what happened and how it happened. Name any objects or substances involved and tell how they were involved. Give full details on all factors which led or contributed to the accident. Use separate sheet for additional space.)

OCCUPATIONAL INJURY OR OCCUPATIONAL ILLNESS

14. Describe the injury or illness in detail and indicate the part of body affected _____
(e.g: amputation of right index finger at second joint; fracture of ribs; lead poisoning; dermatitis of left hand, etc.)

15. Name the object or substance which directly injured the employee. (For example, the machine or thing he struck against or which struck him; the vapor or poison he inhaled or swallowed; the chemical or radiation which irritated his skin; or in cases of strains, hernias, etc., the thing he was lifting, pulling, etc.)

16. Date of injury or initial diagnosis of occupational illness _____
(Date)

17. Did employee die? _____ (Yes or No)

OTHER

18. Name and address of physician _____

19. If hospitalized, name and address of hospital _____

Date of report _____ Prepared by _____

Official position _____

2A:OSHA101.FRM

APPENDIX B

CONTINGENCY PLAN
SYRACUSE CHINA LANDFILL
SYRACUSE, NEW YORK

INTRODUCTION

This contingency plan (CP) has been developed for personnel to follow during the performance of test pit excavations to determine whether drums are buried in the landfill. The drums could potentially contain materials such as solvents. This CP provides procedures and guidelines which will be implemented in the event of an emergency such as a spill, release, fire, explosion, or other emergencies. The plan includes information necessary to prevent or minimize hazards to human health and the environment.

This CP was prepared in accordance with United States Environmental Protection Agency (USEPA) and Occupational Health and Safety Administration (OSHA) guidance documents. This CP supplements the Health and Safety Plan (HASP) that has been prepared for the stated field activities. Reasonable precautions will be taken by Geraghty & Miller, Inc. and its subcontractors to prevent an emergency situation. However, in the event that an emergency occurs, this CP will be carried out immediately and will govern the procedures to be followed. Subcontractors will be provided with copies of this CP and will be required to follow the Geraghty & Miller CP or develop their own CP that is at least as stringent.

RESPONSIBILITIES AND DESIGNATION OF EMERGENCY COORDINATOR

The emergency coordinator (EC) or his alternate is responsible for implementing this CP during an emergency. The EC will be the same as the site safety officer (SSO) to maintain continuity in the lines of authority during an emergency. The EC/SSO will be the Geraghty & Miller on-site hydrogeologist or engineer. The site hydrogeologist reports to the Geraghty & Miller project manager on a daily basis. The site hydrogeologist and project manager both report to Geraghty & Miller's health and safety officer. Employees must be

familiar with the procedures in this plan and are responsible for implementing the plan should the EC or the alternate be unavailable.

At the beginning of the site activities, the EC/SSO will designate one or more employees of the subcontractor in conjunction with the subcontractor's site manager, to serve as part of a rescue team. At a minimum, the rescue team will consist of two persons. The rescue team will respond to emergencies, as needed, and will be under the direction of the EC/SSO. The members of the team must be certified in cardiopulmonary resuscitation (CPR) and emergency first aid.

A list of off-site emergency personnel is provided at the back of this plan. The EC/SSO will either notify off-site personnel or designate someone to do so. The first responders consist of police, fire, ambulance, and possibly the New York State Department of Environmental Conservation (NYSDEC). Arrangements will be made with the first responders prior to initiating excavation activities. They will be alerted as to the type of emergencies that my arise and the types of potential hazards at the site.

COMMUNICATIONS

Communications will be by voice if possible. As a backup, visual signs will be used. Hand signals will be as follows:

Hand gripping throat:	Can't breathe.
Grip partner's wrist or place hands around waist:	Leave work area immediately.
Hand on top of head:	Need assistance.
Thumbs up:	OK. I'm all right.
Thumbs down:	No. Negative.

In an emergency, if necessary, a compressed air horn will be used to notify all workers that an emergency situation exists. The signals shall be as follows:

One long blast:	Evacuate the area by nearest exit.
Two short blasts:	Evacuate by normal exit procedures.

The EC/SSO will notify emergency personnel or designate an alternate to do so. A portable telephone will be used for this purpose. As a backup, telephones are located in the Syracuse China facility. Emergency telephone numbers are included at the back of this plan.

EVACUATION

In the event that the air horn is sounded, employees will evacuate the area. Emergency evacuation routes will be designated at the site, prior to initiating field activities. As field activities progress, it may be necessary to modify the evacuation routes, in accordance with site conditions and layout. Evacuation routes must be clear of obstructions.

SAFE DISTANCE AND REFUGE

The following safe distances have been established. Depending on the nature of the incident, the EC may increase the distances. Any decisions on the need for and distances of evacuation will be made in conjunction with the fire and police department and the NYSDEC:

Minor Spills:	Not established.
Major Spills:	Evacuate non-essential personnel to clean zone or 1,000 feet, whichever is greater.
Minor Fire:	Evacuate non-essential personnel to clean zone.
Fire involving a container:	Evacuate all personnel 1/2 mile in all directions.
Explosion:	Evacuate all personnel 1/2 mile in all directions.

The Syracuse China facility may be used as a place of refuge.

EMERGENCY RESPONSE PROCEDURES

All releases of materials must be responded to immediately and the CP activated. Much of the equipment to respond to an emergency will be on-site and activated already. However, there are additional measures to be taken and equipment that should be present. These are described in the sections that follow. In addition to this CP, all responses to releases are subject to controls designated in the site HASP.

MINOR SPILLS

For purposes of the CP, minor spills would consist of 1 gallon or less. Minor spills will be remediated by removing spill debris with contaminated soil. The spilled material would be handled as hazardous waste. The leaking container will be placed in an overpack drum. Additional emergency measures would not be implemented, unless needed.

MAJOR SPILLS

For purposes of this CP, a major spill is defined as greater than 1 gallon. In the event of a major spill, communication and notification procedures will be implemented. The response will depend upon the nature of the release. Attempts will be made to control the release by diking and draining. A sorbent pad, Oil Dry, or soil will be used to absorb the release. The removed material will be placed into drums and sealed to prevent a fire hazard. Employees should note that absorbents solidify the liquid, but do not remove the fire hazard. Solvents will volatilize from the sorbent and can ignite. Therefore, a fire extinguisher will be brought to the area of the release by the emergency response team, until the material is secured inside a drum. In the event that the release is of sufficient magnitude and can not be controlled by diking, damming, absorbing, or other method, and is a known hazardous substance, the local fire department, NYSDEC, and National Response Center shall be notified within 2 hours of the spill. If the material spilled is an unknown, testing will be conducted to determine if the material exhibits characteristics of a hazardous substance. If the material is characterized as a hazardous substance, the above notifications will be made.

FIRE

A fire extinguisher will be used on minor fires where a container is not involved. If the fire can not be extinguished immediately or a container is involved, the area must be evacuated immediately and the fire department notified from a safe location.

Extinguishing methods include CO_2 or dry chemical. A water spray can also be used (not a direct hose stream). Foam, water spray, or fog may be used on larger spills.

EXPLOSION

In the event of an explosion, the area shall immediately be evacuated and the fire department notified. The reason for the explosion should be assessed and corrected, prior to re-entering the site.

MEDICAL

Medical emergencies are addressed in the HASP. Appropriate first aid will be administered, and if necessary, the injured individual will be sent to the designated medical facility. An ambulance will be summoned, if needed. The cause of the accident will be determined and corrected, prior to continuing operations.

When possible, injured personnel will be decontaminated or partially decontaminated in accordance with the HASP. Based upon the anticipated toxicity of the contaminants, personnel decontamination procedures could be eliminated in a life-threatening situation. Emergency medical personnel will be notified as to the lack of decontamination. Emergency medical personnel will wash with soap and potable water after handling the victim. Appropriate documentation should be completed in accordance with the HASP.

TRAINING

Geraghty & Miller, Inc. employees attend an initial 40-hour health and safety training course, annual 8-hour refresher training, and 8-hour training for managers for conducting work at hazardous waste sites. These courses satisfy the initial and follow-up training requirements of 29 CFR 1910.120 (OSHA regulation of hazardous waste site activities).

EMERGENCY TELEPHONE NUMBERS

Emergency telephone numbers and directions to the nearest medical facility are shown below and will be kept by field personnel while on-site. These telephone numbers should be posted next to the closest phone.

Name	Telephone Number
Fire Department	-911 or (315) 454-3189
Onondaga County Sheriff's Department	-911 or (315) 425-2111
State Police	-911 or (315) 669-2681
Hospital (St. Joseph's) 301 Prospect Avenue Syracuse, New York	-911 or (315) 448-5111
Physicians under contract or agreement with Geraghty & Miller:	
Environmental Medicine Resources	(800) 229-3674 or (404) 455-0818
Occupational Medical Resources	(518) 482-0666
National Response Center	(800) 424-8802
New York Department of Environmental Conservation	(800) 457-7362
Chemtrec (Emergency Technical Information)	(800) 424-9300