V00073

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of the
Implementation of an
Investigation Program for a
Rochester Gas & Electric Corporation
facility located on Front Street in
Rochester, New York

AGREEMENT

by

(INDEX NUMBER: D8-0001-96-07)

Buckingham Properties
and Rochester Gas & Electric Corporation
Volunteers.

CONSIDERING,

1. The New York State Department of Environmental Conservation (the "Department") is responsible for enforcement of the Environmental Conservation Law of the State of New York ("ECL"). This Agreement is entered into pursuant to the Department's authority under that law.

2. A. The site consists of a parcel of land located at the corner of Front and Andrews Streets in the City of Rochester, New York (the "Site"). Exhibit "A" of this Agreement is a map of the Site showing its general location.

B. 1. The Site was used for coal gas manufacturing until approximately 1880 and for a power line maintenance shop, line truck repair, power system control, offices, and other uses until approximately 1993.

2. The previously described operations appear to have resulted in the presence of coal tar and possibly other compounds and analytes of concern at the Site, the full extent of which has yet to be determined.

3. A. Buckingham Properties is a New York State general partnership, with offices located at 1100 University Avenue, Rochester, New York 14607 ("Buckingham"); and Rochester Gas and Electric Corporation ("RG&E") is a New York State corporation with offices at 89 East Avenue, Rochester, New York. All references in this Agreement to "Volunteers" are to Buckingham and RG&E.

B. Volunteers respectively represent, and for the purposes of this Agreement, the Department relies on those representations, that RG&E is the current owner of the Site and that Buckingham's involvement with the Site and with the facility on that Site is limited to the following: Buckingham has not yet taken title to the Site, has not previously owned or operated the Site, and is not otherwise responsible under law to remediate any compounds or analytes of concern existing on the Site as of the effective date of this Agreement (the "Existing

Environmental Concerns").

4. The Department has the power, inter alia, to provide for the prevention and abatement of water, land, and air pollution. ECL 3-0301.1.i.

5. A. Buckingham wishes to enter into this Agreement in order to resolve its potential liability as a responsible party under ECL Article 27, Title 13, under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), or under comparable statutory or common law theories of remedial liability which may arise as a result of Volunteers' investigation of the Site. The Department finds that such resolution, undertaken in accordance with the terms of this Agreement, is in the public interest.

B. Volunteers, desirous of implementing an investigation program acceptable to the Department, consent to the terms and conditions of this Agreement.

6. The Department and Volunteers agree that the goals of this Agreement are for Volunteers to, (i) implement a Department-approved investigation program for the Site ("Investigation Program"); and (ii) reimburse the State's administrative costs as provided in this Agreement.

7. Volunteers agree to be bound by the terms of this Agreement. Volunteers consent to and agree not to contest the authority or jurisdiction of the Department to issue or enforce this Agreement, and agree not to contest the validity of this Agreement or its terms.

IN CONSIDERATION OF AND IN EXCHANGE FOR THE DEPARTMENT'S NOT CONSIDERING BUCKINGHAM TO BE A RESPONSIBLE PARTY UNDER ECL ARTICLE 27, TITLE 13, UNDER CERCLA, OR UNDER COMPARABLE STATUTORY OR COMMON LAW THEORIES OF REMEDIAL LIABILITY UNDER THE CIRCUMSTANCES SET FORTH IN THIS AGREEMENT AND FOR OTHER GOOD AND VALUABLE CONSIDERATION, VOLUNTEERS AGREE TO THE FOLLOWING:

I. Performance and Reporting of the Investigation Program

A. Within 30 days after the effective date of this Agreement, Volunteers shall commence implementation of the Investigation Program work plan (the "Work Plan") attached to this Agreement and made part of it as Exhibit "B."

B. Volunteers shall perform the Investigation Program in accordance with the Work Plan. Volunteers shall notify the Department of any significant difficulties that may be encountered in implementing the Work Plan or any Department-approved modification to the Work Plan and shall not modify any obligation unless first approved by the Department.

C. During implementation of all investigation activities identified in the Work Plan, Volunteers shall have on-Site a full-time representative who is qualified to supervise the work done.

D. In accordance with the schedule contained in the Work Plan, Volunteers shall submit to the Department a final investigation report. The final investigation report shall:

1. include all data generated and all other information obtained during the investigation;

2. provide all of the assessments and evaluations identified in the Work Plan;

3. identify any additional data to be collected; and

4. include a certification by the individual or firm with primary responsibility for the day to day performance of the investigation that all activities that comprised the investigation were performed in full accordance with the approved Work Plan.

E. The Department shall not consider Volunteers to be responsible parties for the Site merely for having carried out the activities that comprise the investigation under the Work Plan to the Department's satisfaction.

II. Progress Reports

A. Volunteers shall submit to the parties identified in Subparagraph IX.A.1 in the numbers specified therein copies of written monthly progress reports that:

1. describe the actions which have been taken toward achieving compliance with this Agreement during the previous month;

2. include all results of sampling and tests and all other data relating to the Site received or generated by Volunteers or Volunteers' contractors or agents in the previous month, including quality assurance/quality control information, whether conducted pursuant to this Agreement or conducted independently by Volunteers;

3. identify all reports and other deliverables required by this Agreement that were completed and submitted during the previous month;

4. describe all actions, including, but not limited to, data collection and implementation of the Work Plan, that are scheduled for the next month and provide other information relating to the progress at the Site;

5. include information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule for implementation of Volunteers' obligations under the Agreement, and efforts made to mitigate those delays or anticipated delays; and

6. include any modifications to the Work Plan that Volunteers have proposed

to the Department and any that the Department has approved.

B. Volunteers shall submit these progress reports to the Department by the twentieth day of every month following the effective date of this Agreement.

C. Volunteers also shall allow the Department to attend, and shall provide the Department at least five days advance notice of any meeting between one of the Volunteers and one or more professionals retained by that Volunteer relating to the Work Plan's implementation, other than meetings which include counsel of either of the Volunteers during which exclusively matters subject to the attorney-client communication are to be discussed.

III. Review of Submittals

A. The Department shall review each of the submittals Volunteers make pursuant to this Agreement to determine whether it was prepared, and whether the work done to generate the data and other information in the submittal was done, in accordance with this Agreement and generally accepted technical and scientific principles. The Department shall notify Volunteers in writing of its approval or disapproval of the submittal. All Department-approved submittals shall be incorporated into and become part of this Agreement.

B. 1. If the Department disapproves a submittal, it shall so notify Volunteers in writing and shall specify the reasons for its disapproval within 30 days after its receipt of the submittal and may request Volunteers to modify or expand the submittal; provided, however, that the matters to be addressed by such modification or expansion are within the specific scope of work as described in the Work Plan. Within 30 days after receiving written notice that Volunteers' submittal has been disapproved (or within such other period of time agreed to by Volunteers and the Department), Volunteers shall make a revised submittal to the Department which endeavors to address and resolve all of the Department's stated reasons for disapproving the first submittal.

2. After receipt of the revised submittal, the Department shall notify Volunteers in writing within 30 days of its approval or disapproval. If the Department disapproves the revised submittal, the Department and Volunteers may pursue whatever remedies at law or in equity (by declaratory relief) that may be available to them, without prejudice to either's right to contest the same. If the Department approves the revised submittal, it shall be incorporated into and become part of this Agreement.

IV. Enforcement

A. This Agreement shall be enforceable as a contractual agreement under the laws of the State of New York.

B. Volunteers shall not suffer any penalty under this Agreement or be subject to any proceeding or action if they cannot comply with any requirement of this Agreement because of

fire, lightning, earthquake, flood, adverse weather conditions, strike, shortages of labor and materials, war, riot, judicial intervention or intervening action of a competent governmental agency or court, obstruction or interference by adjoining landowners, or any other fact or circumstance beyond Volunteers' reasonable control ("force majeure event"). Volunteers shall, within five working days of when either of them obtains knowledge of any such force majeure event, notify the Department in writing. Volunteers shall include in such notice the measures taken and to be taken by Volunteers to prevent or minimize any delays and shall request an appropriate extension or modification of this Agreement. Volunteers shall have the burden of proving by a preponderance of the evidence that an event is a defense to compliance with this Agreement pursuant to this Subparagraph IV.B of this Agreement.

V. Entry upon Site

Volunteers hereby consent to the entry upon the Site or areas in the vicinity of the Site under the control of Volunteers by any duly designated employee, consultant, contractor, or agent of the Department or any State agency having jurisdiction with respect to the Work Plan for purposes of inspection, sampling, and testing and to ensure Volunteers' compliance with this Agreement. The Department shall abide by the health and safety rules in effect for work performed at the Site under the terms of this Agreement. Upon request, Volunteers shall permit the Department full access to all records relating to Work Plan (other than those portions of records constituting attorney-client communications that are protected by the attorney-client privilege or that are otherwise privileged) and to job meetings.

VI. Payment of State Costs

Within thirty days after receipt of an itemized invoice from the Department, Volunteers shall pay to the Department a sum of money which shall represent reimbursement for the State's reasonable expenses including, but not limited to, direct labor, fringe benefits, indirect costs, travel, analytical costs, and contractor costs incurred by the State of New York for reviewing and revising submittals made pursuant to this Agreement, overseeing activities conducted pursuant to this Agreement, collecting and analyzing samples taken in accordance with standard Department procedure, and administrative costs associated with this Agreement; provided, however, that Volunteers' obligation to reimburse the Department under this Paragraph VI of this Agreement shall not exceed $15,000. Each such payment shall be made by certified check payable to the Department of Environmental Conservation and shall be sent to:

Bureau of Program Management
Division of Environmental Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233-7010

Personal service costs shall be documented by reports of Direct Personal Service, which shall identify the employee name, title, biweekly salary, and time spent (in hours) on the project

during the billing period, as identified by an assigned time and activity code. Approved agency fringe benefit and indirect cost rates shall be applied. Non-personal service costs shall be summarized by category of expense (e.g., supplies, materials, travel, contractual) and shall be documented by expenditure reports.

VII. Reservations of Rights

A. Nothing contained in this Agreement shall be construed as barring, diminishing, adjudicating, or in any way affecting any of the Department's rights with respect to any party other than Volunteers.

B. Nothing contained in this Agreement shall prejudice any rights of the Department to take any investigatory or remedial action it may deem necessary if Volunteers fail to comply with this Agreement.

C. Nothing contained in this Agreement shall be construed to prohibit the Commissioner or his duly authorized representative from exercising any summary abatement powers.

D. Nothing contained in this Agreement shall be construed to affect the Department's right to terminate this Agreement at any time during its implementation if Volunteers fail to comply substantially with this Agreement's terms and conditions.

E. Except as otherwise provided in this Agreement, Volunteers specifically reserve all defenses Volunteers may have under applicable law respecting any Departmental assertion of remedial liability against Volunteers; and reserve all rights Volunteers may have respecting the enforcement of this Agreement by the Department, including the rights to notice, to be heard, to appeal and any other due process. The existence of this Agreement shall not be construed as an admission of liability, fault, or wrongdoing by Volunteers; and shall not give rise to any presumption of law or finding of fact which shall inure to the benefit of any third party.

VIII. Indemnification

Volunteers shall indemnify and hold the Department, the State of New York, and their representatives and employees harmless for all claims, suits, actions, damages, and costs of every name and description arising out of or resulting from the fulfillment or attempted fulfillment of this Agreement by Volunteers and/or any of Volunteers' directors, officers, employees, servants, agents, successors, and assigns; provided, however, that such indemnity and hold harmless obligation shall not apply to acts or omissions constituting gross negligence or intentional misconduct of the Department, the State of New York or their representatives or employees.

IX. Communications

A. All written communications required by this Agreement shall be transmitted by

United States Postal Service, by private courier service, or hand delivered.

1. Communication from Volunteers shall be sent to:

Mary Jane Peachey, P.E.
New York State Department of Environmental Conservation
6274 Avon-Lima Road
Avon, New York 14414

with copies to:

G. Anders Carlson, Ph.D.
Director, Bureau of Environmental Exposure Investigation
New York State Department of Health
2 University Place
Albany, New York 12203

Charles E. Sullivan, Jr., Esq.
New York State Department of Environmental Conservation
50 Wolf Road, Room 410A
Albany, New York 12233-5550

Copies of work plans and reports shall be submitted as follows:

- Four copies (one unbound) to Ms. Peachey
- Two copies to Dr. Carlson
- One copy to Mr. Sullivan

2. Communication to be made from the Department to Volunteers shall be sent to:

Laurence C. Glazer
Buckingham Properties
1100 University Avenue
Rochester, New York 14607

with copies to:

Mark A. Chertok, Esq.
Sive, Paget & Riesel, P.C.
460 Park Avenue
New York, New York 10022-1906

Thomas Moran
Galson Corporation
6601 Kirkville Road
East Syracuse, New York 13057

Thomas F. Walsh, Esq.
Jaeckle, Fleischmann & Mugel
89 State Street
Rochester, NY 14614-1310

Debra A. Wegman
Rochester Gas & Electric Corporation
89 East Avenue
Rochester, NY 14649

B. The Department and Volunteers reserve the right to designate additional or different addressees for communication on written notice to the other given in accordance with this Paragraph IX.

X. Miscellaneous

A. Implementation of Volunteers' obligations under this Agreement is first the responsibility of Buckingham. Subject to the provisions of the Work Plan, the inability for any reason of Buckingham to carry out the terms of this Agreement does not excuse the obligation of the general partners jointly and severally to carry out the terms of this Agreement.

B. 1. By entering into this Agreement, Volunteers certify that Volunteers have fully and accurately disclosed to the Department all readily available information known to Volunteers and all readily available information in the possession or control of Volunteers' employees, contractors, and agents which relates in any way to any Existing Environmental Concerns. Buckingham also certifies that it has not caused or contributed to a release or threat of release of hazardous substances or pollutants or contaminants at, or from, the Site.

2. If the Department determines that information Volunteers provided and certifications made are not materially accurate and complete, this Agreement, within the sole discretion of the Department, shall be null and void, and the Department shall reserve all rights that it may have.

3. Subject to Subparagraph X.B.2 of this Agreement, Volunteers' entry into this Agreement and compliance with its terms shall not in any way be construed as an admission that either has any remedial liability respecting the Site.

C. 1. Volunteers shall retain professional consultants, contractors, laboratories, quality assurance/quality control personnel, and data validators acceptable to the Department to

perform the technical, engineering, and analytical obligations required by this Agreement. The responsibility for the performance of the professionals retained by Volunteers shall rest solely with Volunteers. Subject to the foregoing, Volunteers retain the right to select or change professionals in their sole discretion.

2. The Department acknowledges that Galson Corporation is an acceptable consulting firm to assist Volunteers in carrying out the terms of this Agreement.

D. The Department shall have the right to obtain split samples, duplicate samples, or both, of all substances and materials sampled by Volunteers, and the Department also shall have the right to take its own samples. Volunteers shall make available to the Department the results of all sampling and/or tests or other data generated by Volunteers with respect to implementation of this Agreement and shall submit these results in the progress reports required by this Agreement. Volunteers shall have the right to obtain split samples and/or a copy of the analytical results of all substances and material samples obtained or taken by the Department.

E. Volunteers shall notify the Department at least five working days in advance of any field activities to be conducted pursuant to this Agreement.

F. 1. Subject to Subparagraph X.F.2 of this Agreement, Volunteers shall seek to obtain all permits, easements, rights-of-way, rights-of-entry, approvals, or authorizations necessary to perform the Volunteers' obligations under this Agreement.

2. In carrying out the activities identified in the Work Plan, the Department may exempt Volunteers from the requirement to obtain any Department permit for any activity that is conducted on the Site and that satisfies all substantive technical requirements applicable to like activity conducted pursuant to a permit.

G. Volunteers and Volunteers' officers, agents, servants, and employees (in the performance of their designated duties on behalf of Volunteers) shall be bound by this Agreement. Any change in ownership of Volunteers including, but not limited to, any transfer of assets or real or personal property, shall in no way alter Volunteers' responsibilities under this Agreement.

H. Volunteers shall be responsible for ensuring that Volunteers' contractors and subcontractors perform the work in satisfaction of the requirements of this Agreement.

I. All references to "days" in this Agreement are to calendar days unless otherwise specified.

J. The section headings set forth in this Agreement are included for convenience of reference only and shall be disregarded in the construction and interpretation of any of the provisions of this Agreement.

K. 1. No term, condition, understanding, or agreement purporting to modify or vary any term of this Agreement shall be binding unless made in writing and subscribed by the party to be bound. No informal advice, guidance, suggestion, or comment by the Department regarding any report, proposal, plan, specification, schedule, or any other submittal shall be construed as relieving Volunteers of Volunteers' obligation to obtain such formal approvals as may be required by this Agreement.

2. If Volunteers desire that any provision of this Agreement be changed, Volunteers shall make timely written application, signed by Volunteers, to the Commissioner setting forth reasonable grounds for the relief sought. Copies of such written application shall be delivered or mailed to Ms. Peachey and to Mr. Sullivan.

L. This Agreement is not subject to review under the State Environmental Quality Review Act. 6 NYCRR 617.5(c)(18).

M. In undertaking the work required under this Agreement, Buckingham and its partners, employees, representatives, agents, contractors and subcontractors are deemed for the purpose of ECL 27-1321.3 and any other similar provision of state or federal law, to be performing services related to cleanup or restorative work which is conducted pursuant to a contract with the Department.

N. The provisions of this Agreement do not constitute and shall not be deemed a waiver of any right Volunteers otherwise may have to seek and obtain contribution, recovery and/or indemnification from other potentially responsible parties or their insurers, or Volunteers' insurers, for payments made previously or in the future for response costs. To the extent authorized under 42 USC 9613 and any other applicable law, Volunteers shall not be liable for any claim, now or in the future, in the nature of contribution by potentially responsible parties concerning the investigation of the nature and extent of the Existing Environmental Concerns. In any future action brought by Volunteers against a potentially responsible party under Section 113(f) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended [42 USC 9613], the provision of 42 USC 9613(f)(3) shall apply.

O. Volunteers and Volunteers' partners, officers, directors, employees, servants, agents, lessees, successors, and assigns hereby affirmatively waive any right they had, have, or may have to make a claim pursuant to Article 12 of the Navigation Law with respect to the costs incurred to effectuate the Work Plan at the Site, and further release and hold harmless the New York State Environmental Protection and Spill Compensation Fund from any and all legal or equitable claims, suits, causes of action, or demands whatsoever that any of same has or may have as a result of Volunteers' entering into or fulfilling the terms of this Agreement with respect to the costs incurred to effectuate the Work Plan.

P. The effective date of this Agreement shall be the date it is signed by the

Commissioner or his designee.

DATED: OCT 18 1996

MICHAEL D. ZAGATA, COMMISSIONER
NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION

CONSENT BY VOLUNTEER
BUCKINGHAM PROPERTIES

Volunteer Buckingham Properties hereby consents to the issuing and entering of this Agreement, waives Volunteer's right to a hearing herein as provided by law, and agrees to be bound by this Agreement.

BUCKINGHAM PROPERTIES

By:

Laurence C. Glazer: _____

Harold Samloff: _____

STATE OF NEW YORK)
)s.s.:
COUNTY OF)

On this 1ST day of October, 1996, before me personally came Laurence C. Glazer and Harold Samloff, to me known, who being duly sworn, did depose and say that they are the above named individuals and that they signed the above document as their respective free act and deed individually and in their capacities as general partners of Buckingham Properties.

Sharyn A. LiPari
Notary Public

SHARYN A. LiPARI
Notary Public in the State of New York
MONROE COUNTY
Commission Expires April 15, 1998

CONSENT BY VOLUNTEER
ROCHESTER GAS AND ELECTRIC CORPORATION

Volunteer Rochester Gas and Electric Corporation hereby consents to the issuing and entering of this Agreement, waives Volunteer's right to a hearing herein as provided by law, and agrees, to be bound by this Agreement.

ROCHESTER GAS AND ELECTRIC

By: _____
[name and title of signatory]

Its: CORPORATE COUNSEL

STATE OF NEW YORK)
)s.s.:
COUNTY OF MONROE)

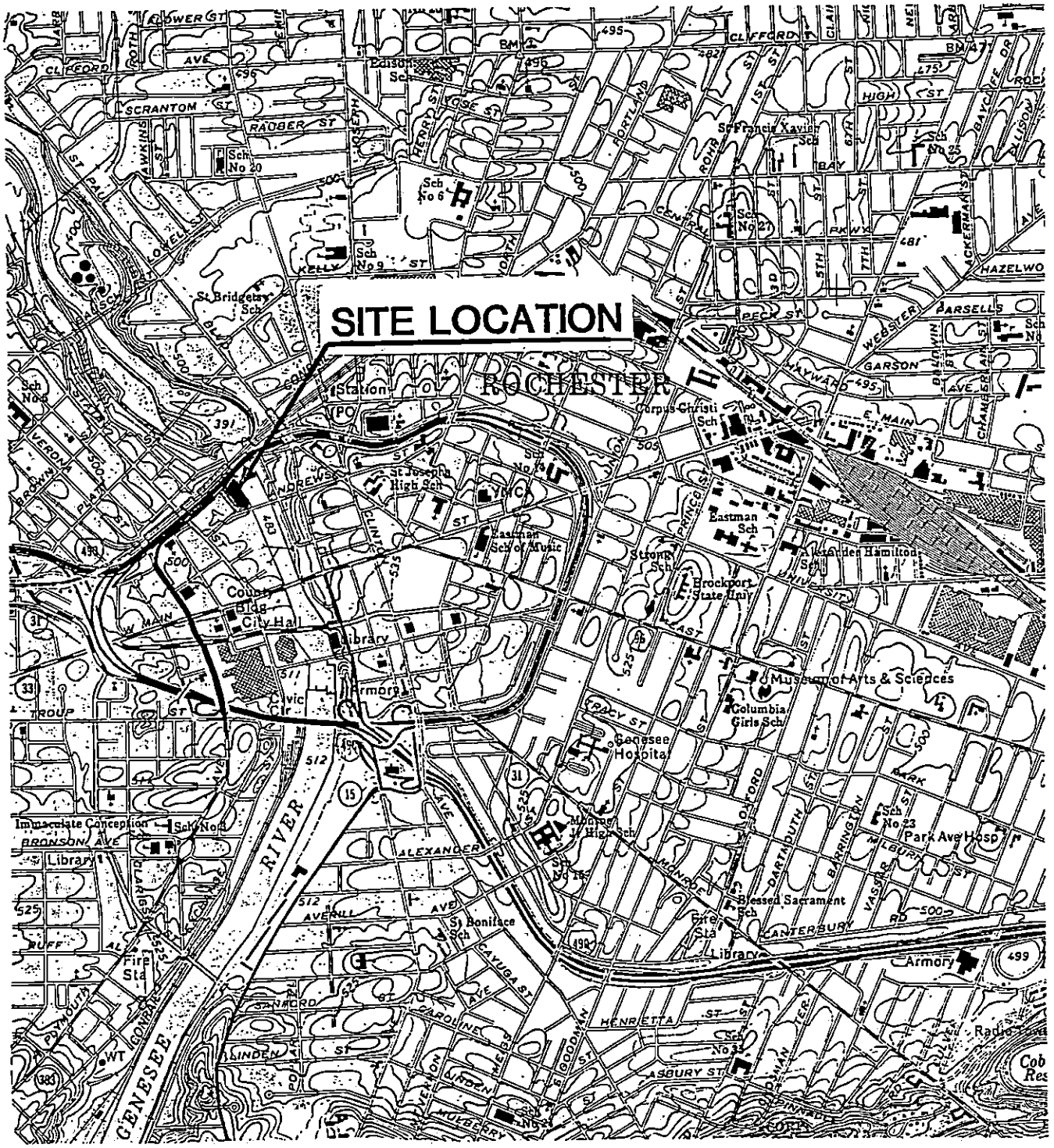
On this 27th day of SEPTEMBER, 1996, before me personally came JEFFREY R. CLARK and _____, to me known, who being duly sworn, did depose and say that he/~~she~~ resides in MENDON, NY; that ~~s~~he is the CORP. COUNSEL of Rochester Gas and Electric Corporation, the corporation described in the Agreement and which executed the foregoing instrument; and that HE signed his/~~her~~ name on behalf of Rochester Gas and Electric Corporation and was authorized to do so.

Marie C. Villeneuve
Notary Public

MARIE C. VILLENEUVE
Notary Public, State of New York
Monroe County
Commission Expires October 31, 1996

EXHIBIT "A"

Map of Site



NOT TO SCALE

REF.	GALSON	GALSON / LOZIER ENGINEERS 360 LINDEN OAKS ROCHESTER, NY 14625 (716-381-2210)	TITLE TOPOGRAPHIC MAP	DATE 8/96 BY DSS
SPEC.			REFERENCE U.S. GEOLOGICAL SURVEY ROCHESTER EAST QUADRANGLE	FILE NO. 964057
CORRES.				

EXHIBIT "B"

Department-Approved Work Plan

CES:eb:C:wp51:Sullivan\vclean:r8vcp032.cst

Work Plan

Former Rochester Gas & Electric Facility
Front Street
Rochester, New York

August, 1996

Galson Project No. 964041

Galson Consulting
6601 Kirkville Road
East Syracuse, New York 13057

Table of Contents

List of Figures

Tables

Appendices

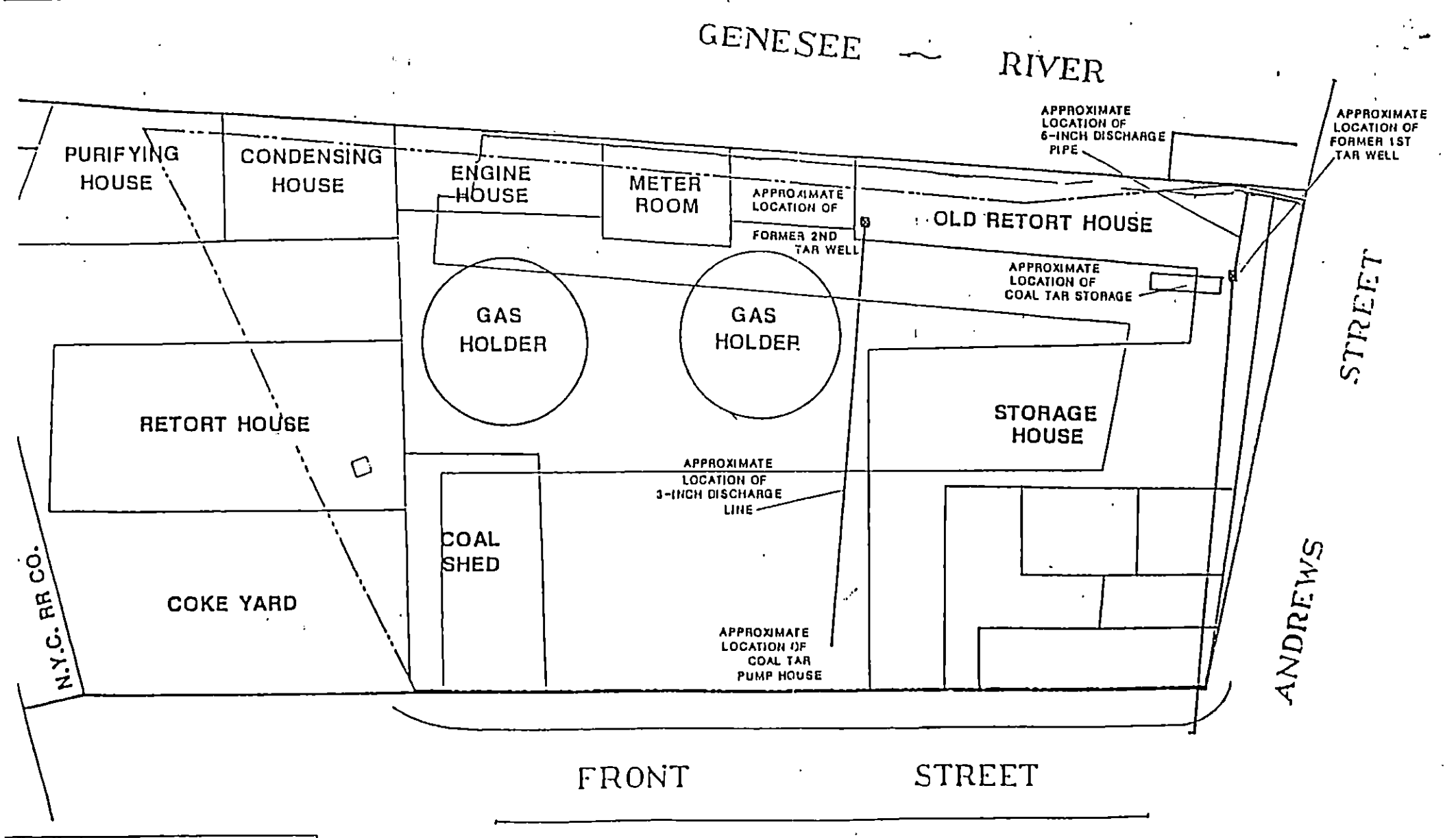
Section 1
Background and Purpose

Buckingham Properties plans to redevelop a vacant property located on Front Street, Rochester, New York (Figure 1). The property was formerly a coal gasification operation in the 1800's. After the coal gasification structures (tar wells, pipeline, gas holders) on the site were closed in the 1920's, construction of the current building was initiated. Additions to the building occurred, with the current structure occupying approximately three quarters of the site.

In 1989, an investigation occurred at the property that included installing several monitoring wells outside of the building outline (Figure 2). Soil samples collected from the borings for the wells indicated the soils to be heavily stained with tar and/or strong petroleum odors.

This document provides a sampling plan for further investigating the potential for the presence of coal tar in the overburden at the Front Street site. This investigation will concentrate in the area of the two former gas holders, the three-inch discharge pipeline, and the two former coal tar pits. In addition, it will evaluate the potential for contaminants to leave the site in the overburden groundwater. This plan provides a site description, a sampling program, and sets the sampling procedures to be used in the investigation.

This sampling program is directly based upon previous draft conceptual investigation plans previously subject to review by NYSDEC.

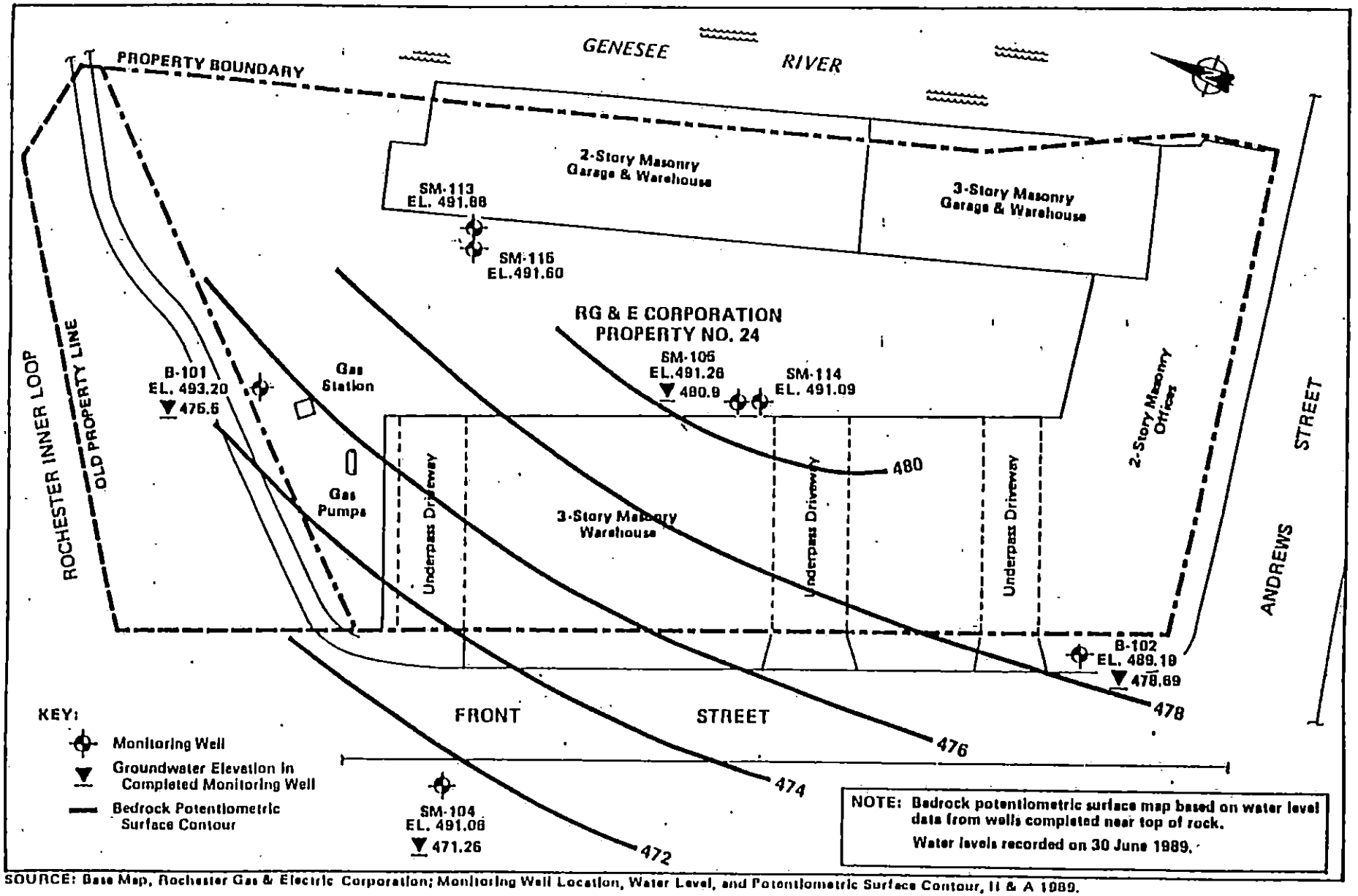


NOTE: Site plan provided by RG & E, and represents the coal manufacturing plant layout in 1848.

SCALE
0 25 50 100 Feet

Figure 1-3
HISTORICAL SITE PLAN
CIRCA 1880

FIGURE 1. HISTORICAL LOCATION OF FORMER COAL GASIFICATION STRUCTURES



SOURCE: Base Map, Rochester Gas & Electric Corporation; Monitoring Well Location, Water Level, and Potentiometric Surface Contour, H & A 1989.

Figure 1–2
SITE MAP AND GROUNDWATER MONITORING WELL LOCATIONS: RG & E's FRONT STREET PROPERTY

FIGURE 2. LOCATION OF PREVIOUS MONITORING WELLS

Section 2
Site Description

The investigation subject site is bounded by physical features on all four sides as follows:

North: I-490 Inner Loop
East: Gennesse River
South: Andrews Street
West: Front Street

The site is approximately 77,000 ft^2 in size. A building covers approximately 43,000 ft^2 of the surface area of the site. This two and three story masonry, "U" shaped building is open to the north and encompasses over 100,000 ft^2 of floor space. Two partial basements are present, one in the east-west leg, and one in the northeast corner of the western leg of the building. The building outline to the east, south, and west is abutted to the river and public sidewalks respectively.

The locations of the former coal gasification structures of concern (tar wells, pipeline, and gas holders) are based upon the locations presented in the Sanborne Fire Insurance Maps and other historical information. The limited historical data indicate the two tar wells were small (~4 feet diameter x ~6 feet deep). The gas holders appear to have been above grade structures 60 feet diameter x 20 feet high.

As shown in Figure 2, this building outline covers both of the former tar wells, portions of the pipeline and small portions of the two gas holders.

Section 3
Investigation Program

The investigation will focus on ascertaining whether coal tar contamination is present in the courtyard. In addition, localized investigation to determine presence of coal tar at the two former coal tar pit locations will be performed. To accomplish this effort, the investigation program will consist of the following elements:

- four borings at the identified locations of the two former coal gas holders
- one boring at the former coal tar pipeline location
- six borings in the area of the two former tar pits
- two overburden groundwater monitoring wells, one each in the north and west (downgradient) portions of the site
- inclusion of two (B-102 and B101) redeveloped bedrock groundwater monitoring wells previously installed in the 1989 groundwater sampling program

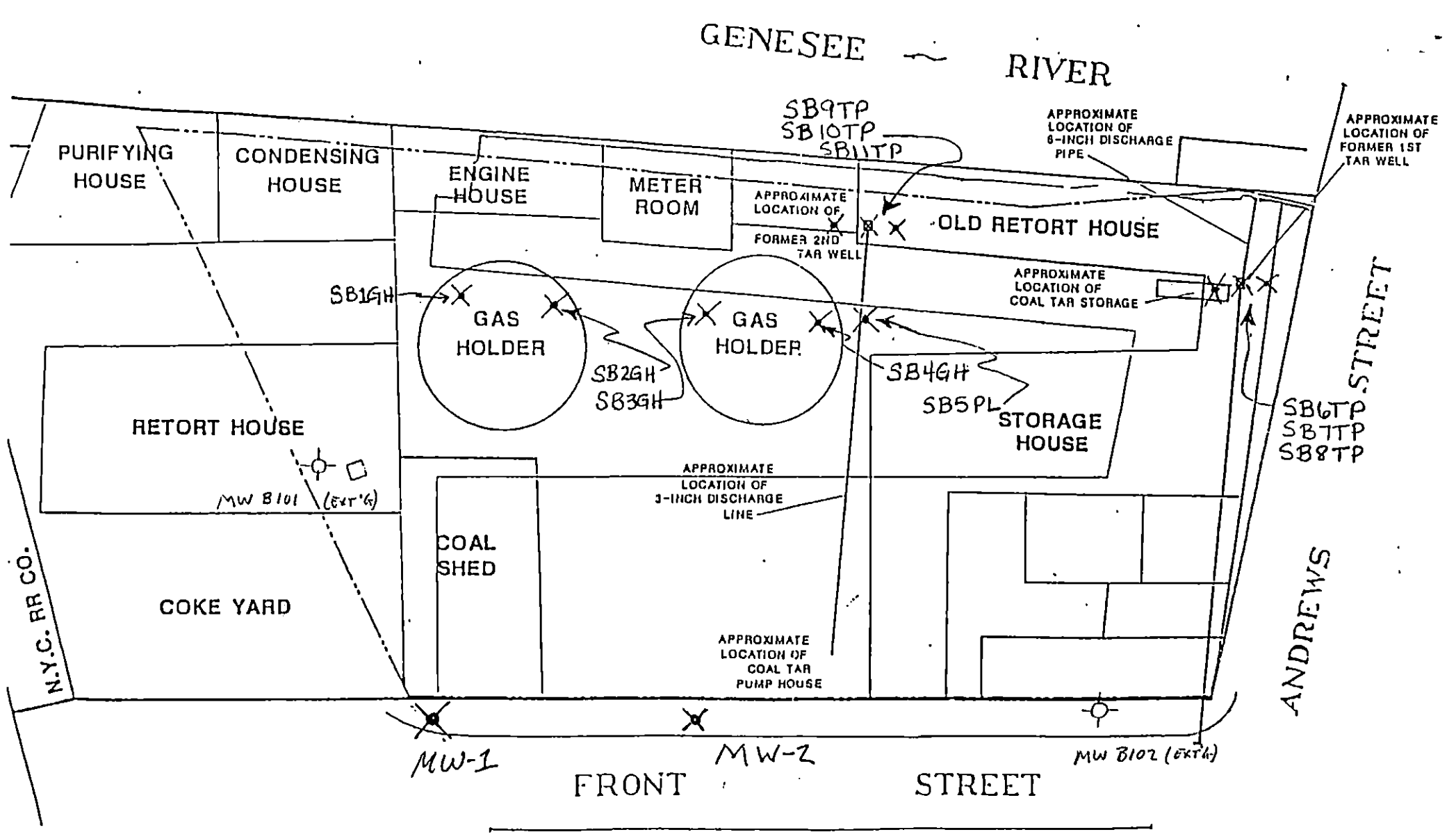
Figure 3 denotes the boring and monitoring well locations.

The shallow soil borings outside the building as well as in the garage bay (northern suspect tar well) will be advanced using Geoprobe techniques, subsurface conditions permiting. Shallow soil borings within the building outline evaluating the southern suspect tar well will be advanced using a tripod rig (due to access restrictions).

The two overburden groundwater monitoring wells will be installed using hollow stem auger drill rig.

Evaluation of the presence of coal tar in the soils will be based primarily upon field techniques, i.e. visual and olfactory observations, along with direct reading field instruments. Four of these shallow soil samples showing evidence of coal tar, if encountered, will be submitted for RCRA hazardous waste characteristic (excepting pesticides and herbicides) analyses.

Following development, groundwater from the two new and two existing wells will be sampled and submitted for analysis for volatile organic compounds, semi-volatile organic compounds, RCRA eight (totals) metals, and cyanide.



TE: Site plan provided by RG & E, and represents the coal manufacturing plant layout in 1848.

SCALE
0 25 50 100 Feet

Figure 1–3
HISTORICAL SITE PLAN
CIRCA 1880

FIGURE 3. PROPOSED SAMPLE PLAN LOCATIONS

Section 4
Field Investigation Procedures

The investigation will be performed according to the procedures outlined below. These procedures, sampling, field equipment decontamination, soil boring, and monitoring well installation are specified in the Standard Operating Procedures (SOPs) contained in Appendix A. All field activities including sampling will be documented using the data sheets contained in Appendix B.

Table 1 presents each of the sampling locations and identification, along matrix and analytical parameters to be evaluated.

4.1 Soil Borings

A total of eleven soil borings will be advanced as part of this sampling program. Five borings will be located outside of the building outline and the remaining six borings will be located inside the building.

Sampled soils will be screened for headspace readings using a photoionization detector (HNu). A geologist will field characterize each sample soil type, color, percent recovery, moisture content, texture, grain size and shape, consistency, and visible evidence of contamination.

4.1.1 Soil Borings Outside Building

Four subsurface overburden soil borings will be advanced in the courtyard to ascertain whether coal tar is present on-site at the former coal gas holders locations. These soil borings, SB1GH through SB4GH, will be accomplished with a Geoprobe. If desired depths are not achievable using the Geoprobe, then a hollow stem auger will be used to extend to bedrock. The exact locations of the borings are based upon identified locations of the former structures, combined with safety concerns for underground utilities and building structural integrity. These four soil borings will be oriented in a north-south direction across the two former gas holder locations.

One soil boring, SB5PL, will be advanced in the area of the former tar pipeline. The same boring techniques will be employed as for the gas holder evaluation.

Table 1. Summary Sample Data

Sample I.D.	Sample Location	Sample Matrix	Laboratory Analytical Parameters
SB1GH	northern former gas holder - north	Soil	None *
SB2GH	northern former gas holder - south	Soil	None *
SB3GH	southern former gas holder - north	Soil	None *
SB4GH	southern former gas holder - south	Soil	None *
SB5PL	former coal tar pipeline	Soil	None *
SB6TP	southern former tar pit - south	Soil	None *
SB7TP	southern former tar pit - central	Soil	None *
SB8TP	southern former tar pit - north	Soil	None *
SB9TP	northern former tar pit - south	Soil	None *
SB10TP	northern former tar pit - central	Soil	None *
SB11TP	northern former tar pit - north	Soil	None *
MW 1	monitoring well - near sidewalk along Front Street, NW corner of building	Ground-water	VOAs; semi-VOAs, RCRA 8 metals, cyanide
MW 2	monitoring well - near sidewalk along Front Street, south of MW 1	Ground-water	VOAs; semi-VOAs, RCRA 8 metals, cyanide
B 101	current bedrock groundwater monitoring well, along Front Street, SW corner of building	Ground-water	VOAs; semi-VOAs, RCRA 8 metals, cyanide
B 102	current bedrock groundwater monitoring well, outside fenceline north of building	Ground-water	VOAs; semi-VOAs, RCRA 8 metals, cyanide

* A maximum of four shallow soil samples will be submitted for laboratory analyses for TCLP parameters (excluding pesticides and herbicides). These samples will be selected based upon "worst case" determination by field evaluation.

4.1.2 Soil Borings Inside Building

A total of six shallow borings will be advanced, three each in the immediate vicinity of each of the two former coal tar wells. One each of these sets of three borings will be advanced as close to directly through the determined former tar pit location as practical, one each of the other two will be advanced to either side.

Soil borings for the northern former tar well located within the garage bay, SB9TP - SB11TP, will be accomplished using a Geoprobe.

Due to building access limitations, the borings (SB1TP through SB3TP) evaluating the southern former tar well will be advanced with a portable tripod system, following boring through the concrete building floor.

4.2 Groundwater Monitoring Wells

Two 4" diameter overburden groundwater monitoring wells, MW 1 and MW 2, will be installed in the overburden to top of bedrock. Hollow stem augers will be used to advance the borings using ASTM-D 1586 methods. Monitoring wells will be provided with locking covers.

4.3 Groundwater Well Development and Sampling

The newly installed groundwater monitoring wells will be adequately developed to ensure proper sampling conditions. Recovered water will be containerized for proper disposal based upon sample results.

The two bedrock groundwater monitoring wells remaining from the previous sampling program (B101 and B102) will be will be redeveloped to assure proper sampling conditions.

Following proper development, all four wells will be sampled in accordance with accepted protocols as specified in the Standard Operating Procedure included in Appendix A.

At the time of the sampling, the stage of the Genessee River will be noted.

4.4 Field Equipment Decontamination

Sampling equipment will be decontaminated prior to use and between sampling events to ensure no cross contamination of samples.

Drill rig equipment and downhole tools will be cleaned by washing equipment with a high pressure steam cleaner using a brush as needed to remove any particulates.

The procedures are presented in the Field Equipment Decontamination Standard Operating Procedure in Appendix A.

Small sampling equipment will be decontaminated by scrubbing equipment with soapy (non-phosphate soap) tap water and brush, rinse equipment with tap water, rinse equipment with a 10 percent solution of nitric acid (one percent for carbon steel split spoons), rinse with tap water, rinse equipment with methanol followed by hexane (pesticide grade or better), wrap in aluminum foil (as appropriate).

4.5 Investigation Derived Waste Handling and Disposal

Wastes generated as part of this investigation program will be properly containerized and secured as they are generated pending determination of proper disposal requirements. Disposal determination will, in part, be developed using the data generated by the investigation program. Anticipated IDW includes: soils from borings, purge waters from well development, wash waters from equipment decontamination.

4.6 Groundwater Elevational Survey

Following installation of the two new monitoring wells, an elevational survey will be conducted to provide groundwater gradient information. Included in this survey will be both new wells, the two existing wells, the Genessee River water surface, and several easily identifiable benchmarks across the site. The stage of the Genesee River at the time of the survey will also be determined.

Section 5
Laboratory Analyses

The following labroatory analyses will be performed on the soil and water samples collected.

5.1 Soils

Four of the shallow soil samples showing evidence of coal tar, if encountered, will be submitted for RCRA hazardous waste characteristic (except pesticides and herbicides) analyses.

5.2 Groundwaters

Following development, groundwater from the four wells will be sampled and submitted for analysis for volatile organic compounds by USEPA Method 8240, semi-volatile organic compounds by USEPA Method 8270, RCRA eight (totals) metals by Method 6000/7000 and cyanide by Method 9010.

5.3 QA Samples

Samples collected as part of the quality assurance efforts will be analysed using the same analytical methods specified for the base sample analyses.

Table 2 QA Sample Summary

Sample Designation	Sample Criteria	Matrix	Analytical Parameters
QCEQ1	Monitoring well drill rig decontamination evaluation	Water	VOAs, semi-VOAs, RCRA 8 metals, cyanide
QCEQ2	Geoprobe drill rig decontamination evaluation	Water	semi-VOAs
QCEQ3	Tripod drill rig decontamination evaluation	Water	semi-VOAs
QCDUP1	Duplicate shallow soil sample	Soil	RCRA hazardous waste characteristics (except pesticides and herbicides)
QCDUP2	Duplicate groundwater sample		VOAs, semi-VOAs, RCRA 8 metals, cyanide
QCTB1	Trip blank evaluating potential VOA contamination	Water	VOAs

Section 6
QA Project Plan

The investigation program has integrated elements to assure the quality of the data gathered, both in the field and laboratory. A field quality assurance plan is presented in full in Appendix C. Major elements of this plan are outlined below. Laboratory procedures will follow standard protocol. Galson Laboratory is a fully accredited and certified laboratory for the anlayses requested by this investigation program.

The personnel to be used in the field efforts are all trained and experienced in the tasks assigned. All procedures employed during the field investigation will be accomplished in accordance with accepted procedures.

Specific positioning of the sample locations presented in the proposed sampling site plan will be reviewed by NYSDEC representatives on site.

Quality assurance samples will be collected as part of the field investigation program in accordance with the following schedule.

Appendix A
Standard Operating Procedures
(SOPs)

STANDARD OPERATING PROCEDURES

MONITORING WELL INSTALLATION

1.0 Purpose: To describe the procedures for installing a monitoring well. Two separate procedures will be outlined: (1) installing a monitoring well when no soil sample is to be collected, (2) installing a monitoring well when a soil sample is to be collected.

2.0 Responsibilities:

2.1 A Galson geologist or engineer will examine the property and locate points for the installation of the monitoring well. These wells are usually installed in a triangular array.

2.2 A qualified drilling contractor will be employed and will construct the monitoring well.

2.3 The Galson geologist will supervise all drilling and well installations as well as complete a *Monitoring Well Installation Log*.

3.0 Procedures:

3.1 Typically, hollow stem auger drilling methods are used.

3.2 Underground utilities will be located prior to drilling procedures.

3.3 If an obstruction is encountered and the hollow stem auger will not penetrate, the drilling rig can be moved several feet and a new borehole begun

3.4 Below the water saturated zone, horizons of low permeability (clay layers) are not penetrated unless specifically within the scope of the project. This is to prevent the migration of potential contaminants into lower aquifers.

3.5 2" PVC flush threaded well screen and casing will be installed by the drilling contractor. Well screen will be set to intersect the water table. Several feet of well screen will extend above and below the water table to allow for seasonal fluctuations.

3.6 All wellheads will be secured with locking protective casings or locking watertight closures and curb boxes.

This will prevent the monitoring wells from being vandalized or from functioning as a migration path for surface contaminants into the groundwater.

3.7 All monitoring wells will be purged to insure proper development unless free product is encountered.

3.8 In addition to the above procedures, If soil is to be sampled the following procedures are to be followed.

3.8.1 Split spoon samples are driven ahead of the auger flights to obtain representative samples of soil and fill material

3.8.2 The Galson geologist will examine all split spoon cores and will classify all soil samples while in the field.

3.8.3 All split spoon core samples are to be screened in the field for volatile organics using an Organic vapor Analyzer (OVA) or a Photoionization detector (PID). This will indicate possible on-site information regarding soil contamination and potential hazards.

3.8.4 Soil samples are placed in containers for laboratory analysis. A *Chain of Custody Log* will be completed for each sample collected.

3.8.5 In the event soil contamination is encountered during drilling operations, contaminated soil will be either staged on and covered by plastic sheets or placed within steel drums. No identified contaminated soil will be used as backfill material during well construction. Unless otherwise specified in the scope of the project, galson will not remove contaminated soil from the work site.

3.9 Equipment is decontaminated as outlined in the Equipment Decontamination Procedure.

4.0 Forms Required:

4.1 Groundwater Monitoring Well Log

4.2 Chain of Custody Log

4.3 Equipment Decontamination Log

5.0 Supporting Documents (see attached):

5.1 NYSDEC Sampling Guidelines and Protocols Section 5.5
monwell April-96

STANDARD OPERATING PROCEDURES

SOIL BORING SAMPLES

1.0 Purpose: To describe the procedures for collecting soil samples when using a truck or track mounted drill rig using a hollow stem auger and split spoon.

2.0 Responsibilities:

2.1 A geologist will be on site during drilling operations to fully describe each soil sample and note in the *Test Boring Log*.

2.2 The drill operator will assure accurate and representative samples are taken, inform geologist of changes in drilling pressure, and keep a separate general log of soils encountered.

3.0 Definitions:

3.1 Hollow Stem Auger: A drilling device used to advance the hole to the desired depth of sample collection.

3.2 Split Spoon: This is added to the correct length of drill rod and forced into the soil with a weight. It is then retrieved from the hole and opened to reveal the sample.

4.0 Procedure:

4.1 Soil samples will be screened with the PID for the relative measure of the total volatile concentration immediately following retrieval of the sample.

4.2 Once the split spoon is retrieved it is open to expose the soil sample. The top two or three inches undisturbed portion should then be placed in a glass or Teflon pan by means of a clean, stainless steel spoon or spatula. This procedure is repeated until the desired amount of sample is obtained.

4.3 For non-volatile analysis, the sample is then thoroughly mixed in the pan and then placed in the sampling container.

4.4 For volatile organic analysis it is imperative the sample is placed within the container immediately, no mixing is required.

4.5 Samples will be placed in laboratory provided sample containers. A *Chain of Custody Log* must be completed for each sample.

4.6 Equipment is decontaminated as outlined in Equipment Decontamination guideline.

5.0 Forms required(see attached)

5.1 Test Boring Log

5.2 Chain Of Custody Log.

5.3 Equipment Decontamination Log

6.0 Supporting Documents

6.1 NYSDEC Sampling Guidelines and Protocols Section 5.7

STANDARD OPERATING PROCEDURES

FIELD EQUIPMENT DECONTAMINATION

1.0 Purpose: To describe the procedure for decontaminating sampling equipment and containers.

2.0 Responsibilities:

2.1 Field Team leader will assign personnel to clean all equipment so that new contaminants are not transported to the site, risk of exposure to field personnel is minimized and contaminants are not transported off the site.

3.0 Definitions:

3.1 Cleaning is accomplished by steam cleaning or a high pressure wash and manual scrubbing.

3.2 Decontamination includes washing equipment in a phosphate-free detergent solution and rinsing with tap water or distilled water until all detergent and residue are washed away. Final rinse is then completed as outlined in section 4.2.3

3.3 Heavy equipment includes drilling rigs, backhoes, etc...

3.4 Sampling equipment includes split spoon samplers, trowels, scoops, etc... .

3.5 Employee decontaminating will record actions in the *Equipment Decontamination Log*.

4.0 Procedure:

4.1 Heavy Equipment

4.1.1 Upon arriving and prior to leaving the sampling site, all heavy equipment should thoroughly be cleaned. Parts that come in close proximity to sampling activity should be decontaminated.

4.2 Sampling Equipment

4.2.2 Remove all solid particulates from the equipment by brushing and then rinsing with available tap water. A steam or high pressure wash may also be used.

4.2.2 Equipment is then decontaminated as outlined in section 3.2.

4.2.3 Final rinsing will depend upon the sampling strategy employed and the laboratory analytical methods used. For organic analysis and metals, a rinse with methanol,acetone, or other appropriate solvent is follow by a final rinse od deionized or distilled water. plastic and glass equipment utilized for metals sampling should be rinsed with a 10% nitric acid solution followed by a deionized water final rinse.

5.0 Forms required:

5.1 Equipment Decontamination Log

6.0 Other:

6.1 Containment and storage of wash water and particulate matter resulting from decontamination activities will vary with site conditions and the scope of the project. Personnel protective clothing use and it's subsequent disposal will also depend on the scope of the project.

7.0 Supporting Documents:

7.1 NYSDEC Sampling Guidelines and Protocols Section 4.0

Appendix B
Field Data Sheets

GAISON

DAILY SITE LOG

Client: _____ Site Location: _____
Project/Job No. _____ Date(s): _____
Project Name: _____ Project Manager: _____

Purpose of Trip: _____
Field Members Present: _____

Environmental Agency: _____
Represented By: _____

Describe Work Completed Below:

Any Forms Completed This Day? None ____ See Below ____

Water Sample Log: _____
Dye Trace Test Log: _____
Instrument Calibration Log: _____
Thin Wall Tube Field Log: _____
Field data Site Summary: _____
Soil Vapor Sampling Log: _____
Groundwater Monitoring Well Log: _____
Biological Sample Data Sheet: _____
Misc. Logs (List): _____

Shallow Soil Sample Log: _____
Pump Test Log: _____
Water sample Log: _____
Geoprobe Field Data Sheet: _____
Groundwater Well Level Record: _____

Slug Test Log: _____
Test Boring Log: _____
Test Pit Log: _____

SPDES Monitoring Field Data Sheet: _____
Groundwater Sampling Data Summery: _____

Completed By: _____ Comments (If Applicable, Include Weather Conditions): _____

sitelog.xls Feb-96

GEOPROBE FIELD DATA SHEET

Client:
Project/Job No.

Project Name:
Site Location:

Date(s):
Project Manager:

Sample Collection Equipment:

Sample No.	Boring No.	Time	Sample Depth	Water Depth	Sample Matrix Collected (Soil/Groundwater/Soil Gas)	Observations

Completed By:

Comments: (If Applicable, Include Weather Conditions:

GALSON

TEST BORING LOG

Client: ____________________ Site Location: ____________________

Project/Job No. ____________________ Date(s): ____________________

Project Name: ____________________ Project Manager: ____________________

Consultant: ____________ Start Date: ____________ Finish Date: ____________

Boring No. ____________ Contractor: ____________

Elevation: ____________ Total Depth of Boring: ____________ Well/Test Pit Diameter: ____________

Groundwater Depth: ____________ Hammer Weight/Fall: ____________

Casing Size/Type Drilling/Excavation Method:

Depth in Feet	Sample Number	Blows or RQD	Rec Rod ft. / %	Field Tests	Sample Description And Observations
			/		

Completed By: ____________ Comments: (If Applicable, Include Weather Conditions). ____________

Boring No.

tstborng.xls Feb-96

Albany New York Rochester Syracuse Philadelphia Oakland

INSTRUMENT CALIBRATION LOG

GAISON

Client: _____ Site Location: _____
Project/Job No. _____ Date(s): _____
Project Name: _____ Project Manager: _____

Type of Instrument: _____

Model: _____

Part Number: _____

Comments:

Completed By: _____ Comments (Include Weather): _____

instcal.xls Feb-96

GROUND WATER SAMPLING
FIELD DATA LOG

GALSON

Client: _____ Site Location: _____

Project/Job No. _____ Date(s): _____

Project Name: _____ Project Manager: _____

Well Number: _____

Water Level Measurements (Before Purging)

Date: _____ Time: _____ Method (Check One): _____ Steel Tape _____ Well Sounder _____ Electric Meter _____ Other (Specify)

Reference Point (Check One): _____ Top of Well Casing _____ Top of Protective Casing _____ Top of Curb Box _____ Top of Screen

A). Depth of Water From Reference Point: _____

B). Height of Reference Point Above Ground Surface: _____

C). Depth of Water From Ground Surface (A-B): _____

Units: _____ Feet _____ Meters

PURGING

Date: _____ Time: _____ Method: Bailer Type_____ Pump Type_____

Inside Diameter of Well_____Inches

Calculated Amount to be Purged:

3 Volumes=(_____Feet - _____Feet) x _____=_____Gallons

(Total Depth of Well; Depth of Water (C Above); Conversion Factor *)

* Conversion Factors: For a 2 in. Well = .49 or For a 4 in. Well = 1.95

Amount Actually Purged:_____Gallons OR Dry Well Y___ N___

SAMPLING

Date: _____ Time: _____ Method: Bailer Type_____ Pump Type_____

Component Materials:(e.g., Tubing, Pump Parts, Bailer Material): _____

List Containers Filled in Field: If Applicable, Specify if Filtered/Unfiltered, Type of Preservative Used (if Any), and Type of Container:

FIELD MEASUREMENTS Date: _____ Time: _____ Meter Type: _____

Temperature:	1 _____	pH_____.____	Conductivity 1 _____	Turbidity:	1 _____
	2 _____	pH_____.____	2 _____		2 _____
	3 _____	pH_____.____	3 _____		3 _____
D.O.	1 _____	Eh (mv): 1 _____			
	2 _____	2 _____			
	3	3			

SAMPLE PREPARATION Date: _____ Time Completed:_____

Filtering Method: _____

Required Preservation Completed: _____ Sample Preparer's Name: _____

Completed By: _____ Comments: (Include Weather): _____

Well No.

Galson Laboratories

6601 Kirkville Road East
E. Syracuse, New York 13057
315-432-0506 or 800-950-0506

Company Name

Project Name / Number

Turnaround Time
☐ - Standard Service
☐ - * Rush Service
Date requested by: _____
Ph # ( ) - -
Fax # ( ) - -

Send Report to: _____

Send Invoice to: _____

P.O. # _____

Chain of Custody Record

Laboratory ID Number

SAMPLE ID	Date	Time	TYPE Comp.	TYPE Grab	Aqueous	Soil	Other	PARAMETERS FOR ANALYSIS

REMARKS:

Total Containers -

SAMPLER'S NAME: SIGNATURE:

SAMPLES RELINQUISHED BY:		SAMPLES RECEIVED BY:	
NAME: SIGNATURE:	DATE: TIME:	NAME: SIGNATURE:	DATE: TIME:
NAME: SIGNATURE:	DATE: TIME:	NAME: SIGNATURE:	DATE: TIME:
NAME: SIGNATURE:	DATE: TIME:	Received For Laboratory By: (Signature)	DATE: TIME:

Custody Seal Intact? Sample ☐ *Yes* ☐ *No* ☐ *N.A.*
Shipment Complete? ☐ *Yes* ☐ *No*

Temp _____ ° C TS TB TM

Airbill #

Appendix C
Field QA Plan

Appendix C
Field QA Plan

1 General Requirements

Critical objectives for each field team member are to:

1. Collect a sample that is representative of the matrix being sampled, and
2. Maintain sample integrity from the time of sample collection to receipt by the laboratory.

All field notes will be recorded in indelible ink on standard forms in bound notebooks. The field team leader will complete a Daily Site Log form (Appendix B). This form will be signed and dated daily. Significant events occurring during the day will be reported to the base project manager at the end of each day's activities. Daily communication is essential to ensure that timely corrective actions can be implemented, if necessary.

All forms in the field notebook(s) must provide a place for the field team members to sign and date the entries. The field team leader must review all field notes and document approval of these notes by either signing each page or stating that the notes were reviewed.

Prefield meetings/conference calls will be held prior to field investigations. These meetings are intended to ensure that all laboratory and field personnel are aware of the field activity and can plan accordingly. The project manager will schedule a meeting/conference call with the project QA supervisor, field team leader, and analytical task manager at least 1 week prior to the sampling effort.

2 Special Sampling Requirements

Samples will be analyzed in the parts per billion range for many compounds; therefore, extreme care must be exercised to prevent sample contamination. When sampling for BTEX, field team members must use caution to ensure that the samples are not exposed to the atmosphere unnecessarily.

The following precautions should be taken when sampling for all trace contaminants:

1. A clean pair of new, disposable gloves are worn for each new sampling station;
2. Sampling must be performed so that any material or liquid being collected contacting the gloves (and/or any external surface of the sample container) does not contaminate the sample;
3. When possible, samples should be collected from stations that are least contaminated (i.e., background) followed by stations in increasing order of contamination; and
4. When possible, in sampling surface waters, the water sample should be collected working from downstream to upstream.

When sampling for the presence of organic parameters, the following additional precautions will be taken:

1. All sample bottles and equipment must be kept away from fuels and solvents.
2. All sampling equipment should be made of Teflon®, glass, or stainless steel that is decontaminated.

3. Water samples for volatiles analysis must be collected so that no air passes through them (to prevent volatiles from being stripped from the samples); the bottles should be filled by slowly running the sample down the side of the bottle until there is a convex meniscus over the neck of the bottle. The Teflon® side of the septum (in cap) should be positioned against the meniscus and the cap screwed on tightly, and the sample should be inverted and the bottle lightly tapped. The absence of an air bubble indicates a successful seal; if a bubble is evident, the cap should be removed, more sample added, and the bottle resealed.
4. Soil samples for volatiles analysis should be collected with as little air space as possible to prevent loss to the headspace.
5. BTEX samples should not be composited due to the potential for loss when homogenizing the sample.

3 Sampling Site Selection

Soil and water sampling locations and analytical parameters were selected to document current conditions at potentially contaminated areas. These sampling sites, their description and analytical scope are listed in Table 1.

4 Sample Blanks and Field Duplicates

Two types of sample blanks must be processed: trip blanks and equipment (rinsate) blanks. Field duplicate samples are also addressed in this section.

4.1 Trip Blank

Trip blanks are analyzed for purgeable compounds only and consist of sample bottles filled in the laboratory with organic-free water; the sample bottles are then sent to the sampling location with sampling kits. The trip blanks are returned from the sampling location along with the samples designated for VOC analysis.

4.2 Equipment Blank

Equipment blanks are produced by rinsing decontaminated sampling equipment with ultrapure water obtained from the laboratory. The rinse water is collected in sample bottles, preserved, and handled in the same manner as the samples. Approximately three equipment blank samples will be collected during the program, as outlined in Table 2 covering the various matrices and types of sampling equipment. Collection of three equipment blanks meets an accepted minimum five percent requirement.

4.3 Field Duplicates

Field duplicate samples are collected to measure the precision of the sampling process. A total of two field duplicates will be collected during this program, as summarized in Table 3. Collection of two field duplicates meets an accepted minimum ten percent requirement. The field duplicate samples will be identified on the labels and chain-of-custody forms (Appendix B).

The field duplicate samples will be identified on the labels and chain-of-custody forms as

"QCDUPxx" (where xx represents a field assigned designation for sample identification) without further information as to the source of the replicate. The source information will be recorded in the field notes, but not on the chain-of-custody form recorded by the field team at the time of collection. The identity of the duplicates will not be given to the contractor laboratory. The source information will be forwarded to the QA reviewer to aid in review of the data.

5 Field Equipment Decontamination

Decontamination of sampling equipment is addressed in Appendix A of this field investigation plan.

6 Sample Containers And Preservation Techniques

Appropriate sample containers will be provided by the analytical laboratory which meet the requirements for each analyte and media. The field team leader is responsible for proper sampling, labeling of samples, preservation, and shipment of samples to the laboratory to meet required holding times.

With hazardous samples, it may be necessary to rinse the outer portion of sample containers with deionized water prior to packaging for shipment. The latest DOT and USDA procedures for shipment of environmental samples will be used in all cases. The quantity of acids or bases added as preservatives generally should not exceed 0.15 percent by weight, or the samples must be shipped as corrosives.

7 Sample Security, Custody, Handling, Preparation, and Documentation

7.1 Security

Security involves procedures used to ensure sample integrity from sample collection until sample disposal after laboratory analyses are complete.

Once collected, samples will be in the possession of field team members or locked in coolers in the field facility.

Samples will be stored in the laboratory in a secure area with access limited to authorized laboratory personnel. Upon receipt of coolers containing samples, laboratory personnel will check to ensure that the chain-of-custody seals are intact, measure the temperature of each cooler, and document the condition of the samples.

7.2 Sample Custody

The primary objective of sample custody is to create an accurate, written, verified record that can be used to trace the possession and handling of the samples from the moment of collection until receipt by the laboratory. Adequate sample custody will be achieved by means of approved field and analytical documentation. A sign-in and sign-out log will be maintained at the laboratory.

A sample for this project is defined to be in a person's custody if it is:

1. In one's actual physical possession;
2. In one's view, after being in one's physical possession;

3. In one's physical possession and then locked or otherwise sealed so that tampering will be evident; or
4. Kept in a secure area, restricted to authorized personnel only.

7.3 Sample Handling, Preparation, and Field Documentation

Field procedures will be designed to minimize sample handling and transfers. During sampling, field team members will record the following information in field notebooks and on the field chain-of-custody logsheet (Appendix B) using indelible ink:

1. Unique sample number as obtained from the sample label,
2. Source of sample (including site name, location, and sample type),
3. Date and time of sample collection,
4. Preservatives used,
5. Name(s) of collector(s), and
6. Field data (pH, temperature) for aqueous samples.

All samples will be appropriately preserved and chilled to 4°C prior to shipment. Each sample fraction contained in the cooler will be specified on the logsheet. Other field information, such as sample type, time and date of sample collection, new station code (if different from tentative station ID), and field measurements results (e.g., pH, temperature), is also entered on the logsheet. The method of shipment is entered on the logsheet, and the sampler signs and dates the logsheet. The logsheet is placed in a waterproof container, taped to the inside lid of the cooler, and sealed in the cooler with the samples. The custody seal will not be removed until the samples arrive in the analytical laboratory and are checked in by the analytical task manager or designee. The field team leader will alert the analytical task manager to pertinent shipping information at the end of each sampling day.

Sample container shipment will follow sample handling protocols for low, medium, and high concentration samples of hazardous waste procedures. The addresses of laboratories used in this project are as follows:

Primary Lab - Galson Corporation
6601 Kirkville Road
East Syracuse, New York 13057
(315) 432-0506, Ext. 259 (voice)
(315) 437-0509 (fax)
Attention: Gale Sutton

8 Field Instruments

All field analytical equipment will be calibrated immediately prior to use in the field. The calibration procedures will follow standard manufacturers' instructions to ensure that the equipment is functioning within tolerances established by the manufacturer. A record of the instrument calibration will be maintained in the field notebook by the field team leader.

Addendum to
Work Plan

Former Rochester Gas & Electric Facility
Front Street
Rochester, New York

September 1996

Galson Project No. 964507

Galson Consulting
6601 Kirkville Road
Syracuse, New York 13057

Section 5
Laboratory Analyses

5.1 Soils (Revised)

A maximum of two shallow (overburden) soil samples showing evidence of coal tar, if encountered, will be submitted for RCRA TCLP hazardous waste charactistic (excepting pesticides and herbicides) analyses.

A total of six shallow soil samples will be subject to laboratory analyses of PAHs by USEPA Method 8270 and MAHs (BTEX) by USEPA Method 8240. These six samples shall be selected based upon field evaluated criteria as follows: at least two will be from shallow soil samples presumed to contain coal tar remnants, and at least two shall be from shallow soil samples presumed not to contain coal tar remnants, any remaining samples of the maximum of six will be from either category.

5.2 Groundwaters

(No revisions.)

5.3 QA Samples

(No revisions.)

Section 6
QA Project Plan

Two additional quality assurance samples will be collected as part of the analytical program expanded to include PAHs and MAHs as indicated in Table 2 (Addendum).

Table 2 QA Sample Summary (Addended)

Sample Designation	Sample Criteria	Matrix	Analytical Parameters
QCEQ1	Monitoring well drill rig decontamination evaluation	Water	VOAs, semi-VOAs, RCRA 8 metals, cyanide
QCEQ2	Geoprobe drill rig decontamination evaluation	Water	semi-VOAs
QCEQ3	Tripod drill rig decontamination evaluation	Water	semi-VOAs
QCDUP1	Duplicate shallow soil sample	Soil	RCRA hazardous waste characteristics (except pesticides and herbicides)
QCDUP2	Duplicate groundwater sample	Water	VOAs, semi-VOAs, RCRA 8 metals, cyanide
QCDUP3	Duplicate shallow soil sample	Soil	PAHs, MAHs
QCDUP4	Duplicate shallow soil sample	Soil	PAHs, MAHs
QCTB1	Trip blank evaluating potential VOA contamination	Water	VOAs

Termination of Investigation

Buckingham may determine not to proceed with any element of this Work Plan; provided, however, that Buckingham must leave the Site in at least as environmentally sound a condition as the Site was prior to the commencement of the investigation under this Work Plan. RG&E may also, in its sole discretion, revoke the license of Buckingham's professional consultant to enter and engage in environmental testing at the Site. In either event, Buckingham shall not be considered in breach or violation of this Work Plan or the Agreement between the Department and Volunteers with respect to the Site Investigation Program (the "Voluntary Investigation Agreement"). If Buckingham determines not to complete the investigation set forth in this Work Plan or is prevented from so doing by RG&E's revocation of the license of Buckingham's professional consultant to enter and engage in environmental testing or other activities at the Site, it shall provide prompt written notice of such termination or revocation to the Department, and if necessary, to RG&E, and the remainder of the Work Plan that Buckingham did not perform shall be performed by RG&E.