STATE OF NEW YORK: DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of the
Development and Implementation
of a Remedial Program for Operable Unit 2
of an Inactive Hazardous Waste Disposal
Site, Under Article 27, Title 13,
and Article 71, Title 27 of the
Environmental Conservation Law
of the State of New York by
by

IMC Eastern Corporation (formerly known as
IMC Magnetics Corp.
Respondent.

ORDER
ON
CONSENT
INDEX # 1-W1-0750-00-03

Site Code #130043A

WHEREAS,

1. The New York State Department of Environmental Conservation (the "Department") is responsible for enforcement of Article 27, Title 13 of the Environmental Conservation Law of the State of New York ("ECL"), entitled "Inactive Hazardous Waste Disposal Sites." This Order is issued pursuant to the Department's authority under, inter alia, ECL Article 27, Title 13 and ECL 3-0301.

2. IMC Eastern Corporation, (formerly known as IMC Magnetics Corp.) ("Respondent"), was the lessee of the Site located at 570 Main Street on the corner of Swalm and Main Streets in the New Cassel Industrial Area in Westbury, New York, Nassau County, hereinafter referred to as the "Site". The Department maintains that past operations at the Site have led to on-Site contamination with chlorinated Solvents and heavy metals. A Site map is attached as Exhibit "A" to this Order.

3. The Site is an inactive hazardous waste disposal site, as that term is defined at ECL 27-1301.2, and presents a significant threat to the public health or environment. The Site has been listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State as Site Number 130043A. The Department has classified the Site as a Classification "2" pursuant to ECL 27-1305.4.b.

4. A. Pursuant to ECL 27-1313.3.a, whenever the Commissioner of Environmental Conservation (the "Commissioner") "finds that hazardous wastes at an inactive hazardous waste disposal site constitute a significant threat to the environment, he may order the owner of such site and/or any person responsible for the disposal of hazardous wastes at such site (i) to develop an inactive hazardous waste disposal site remedial program, subject to the approval of the department, at such site, and (ii) to implement such program within reasonable time limits specified in the order."

B. Any person under order pursuant to ECL 27-1313.3.a has a duty imposed by ECL Article 27, Title 13 to carry out the remedial program committed to under order. ECL 71-2705 provides that any person who fails to perform any duty imposed by ECL Article 27, Title 13 shall be liable for civil, administrative and/or criminal sanctions.

C. The Department also has the power, inter alia, to provide for the prevention and abatement of all water, land, and air pollution. See, e.g., ECL 3-0301.1.i.

5. Following a period of public comment, the Department selected a final remedial alternative for Operable Unit-2 ("OU-2") of the Site in a Record of Decision ("ROD") dated March 2000 and signed by Michael J. O'Toole, Jr. on March 30, 2000. The ROD, attached to this Order as Exhibit "B," is incorporated as an enforceable part of this Order.

6. The Department and Respondent agree that the goals of this Order are for Respondent to (i) develop and implement, in accordance with the ROD for OU-2, an inactive hazardous waste disposal site remedial program ("Remedial Program") for OU-2 of the Site that shall include design and implementation, and operation, maintenance and monitoring of the selected remedial alternative; and (ii) reimburse the State's administrative costs. OU-2 consists of groundwater contamination on-Site.

7. Respondent having waived Respondent's right to a hearing herein as provided by law, and having consented to the issuance and entry of this Order, agrees to be bound by its terms. Respondent consents to and agrees not to contest the authority or jurisdiction of the Department to issue or enforce this Order, and agrees not to contest the validity of this Order or its terms.

8. Notwithstanding Respondent's consent to the issuance of this Order and its undertaking of its obligations under this Order, Respondent does not admit or acknowledge any liability, fault or wrongdoing or violation of law, regulation or permit of any kind whatsoever in any way related to the Site. Moreover, Respondent's consent to this Order should not be interpreted as agreeing to or consenting to the Department's assertion or interpretation of law.

NOW, having considered this matter and being duly advised, IT IS ORDERED THAT:

I. Remedial Design Contents

A. Within 30 days of the effective date of this Order Respondent shall submit to the Department a remedial design to implement the remedial alternative for OU-2 of the Site selected by the Department in the ROD (the "Remedial Design"). OU-2 consists of groundwater contamination on-Site. The Remedial Design shall be prepared by and have the signature and seal of a professional engineer who shall certify that the Remedial Design was prepared in accordance with this Order and the ROD.

B. The Remedial Design shall include the following:

1. A detailed description of the remedial objectives and the means by which each element of the selected remedial alternative will be implemented to achieve those objectives, including, but not limited to:

a. the construction and operation of any structures;

b. the collection, destruction, treatment, and/or disposal of hazardous wastes and substances and their constituents and degradation products, and of any soil or other materials contaminated thereby;

c. the collection, destruction, treatment, and/or disposal of contaminated groundwater, leachate, and air;

d. physical security and posting of the Site, as necessary;

e. quality control and quality assurance procedures and protocols to be applied during implementation of the Remedial Construction; and

f. monitoring which integrates needs which are present on-Site and off-Site during implementation of the Department-selected remedial alternative.

2. "Biddable Quality" documents for the Remedial Design including, but not limited to, documents and specifications prepared, signed, and sealed by a professional engineer. These plans shall satisfy all applicable local, state and federal laws, rules and regulations;

3. A time schedule to implement the Remedial Design;

4. The parameters, conditions, procedures, and protocols to determine the effectiveness of the Remedial Design, including a schedule for periodic sampling of groundwater monitoring wells on-Site and off-Site;

5. A description of operation, maintenance, and monitoring activities to be undertaken after the Department has approved construction of the Remedial Design, including the number of years during which such activities will be performed (where appropriate) a specific description of the criteria to be used to decide when an operation of the remedy may be discontinued.

6. Should the results of the pilot test be deemed insufficient by the Department, IMC will submit to the Department for review and approval a revised remedial design/remedial action workplan for implementing another proven groundwater treatment technology such as air sparging. Upon approval of the revised workplan by the Department, IMC will implement the revised workplan;

7. A health and safety plan for the protection of persons at and in the vicinity of the Site during construction and after completion of construction. This plan shall be prepared in accordance with 29 CFR 1910 by a certified health and safety professional; and

8. A citizen participation plan which incorporates appropriate activities outlined in the Department's publication, "Citizen Participation in New York's Hazardous Waste Site Remediation Program: A Guidebook," dated June 1998, and any subsequent revisions thereto, and 6 NYCRR Part 375.

II. Remedial Construction

A. Within such period of time after the Department's approval of the Remedial Design as the Department shall prescribe, Respondent shall commence construction of the Department-approved Remedial Design.

B. Respondent shall implement the Remedial Design in accordance with the Department-approved Remedial Design.

C. During implementation of all construction activities identified in the Remedial Design, Respondent shall have on-Site a full-time representative who is qualified to supervise the work done.

D. Before its acceptance and approval of the engineer's certification that construction was completed in accordance with the approved Remedial Design, the Department may require Respondent to modify the Remedial Design and Construction if the Department determines that such modification is necessary.

E. Within 30 days after completion of the construction activities identified in the Department-approved Remedial Design, Respondent shall submit to the Department a detailed post-remedial operation and maintenance plan ("O&M Plan"); "as-built" drawings and a final engineering report (each including all changes made to the Remedial Design during construction); and a certification that the Remedial Design was implemented and that all construction activities were completed in accordance with the Department-approved Remedial Design and were personally witnessed by him or her or by a person under his or her direct supervision. The O&M Plan, "as built" drawings, final engineering report, and certification must be prepared, signed, and sealed by a professional engineer.

F. Upon the Department's approval of the O&M Plan, Respondent shall implement the O&M Plan in accordance with the requirements of the Department-approved O&M Plan.

G. After receipt of the "as-built" drawings, final engineering report, and certification, the Department shall notify Respondent in writing whether the Department is satisfied that all construction activities have been completed in compliance with the Department-approved

Remedial Design.

H. If the Department concludes that any element of the Department-approved Remedial Program fails to achieve its objectives or otherwise fails to protect human health or the environment, Respondent shall subject to the Dispute Resolution procedures set forth in Paragraph V of this Order, take whatever action the Department determines necessary to achieve those objectives or to ensure that the Remedial Program otherwise protects human health and the environment.

III. Progress Reports

Respondent shall submit to the parties identified in Subparagraph XIV.B in the numbers specified therein copies of written monthly progress reports that:

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

B. include all results of sampling and tests and all other data received or generated by Respondent or Respondent's contractors or agents in the previous month, including quality assurance/quality control information, whether conducted pursuant to this Order or conducted independently by Respondent;

C. identify all work plans, reports, and other deliverables required by this Order that were completed and submitted during the previous month;

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

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

F. include any modifications to any work plans that Respondent has proposed to the Department or that the Department has approved; and

G. describe all activities undertaken in support of the Citizen Participation Plan during the previous month and those to be undertaken in the next month. Respondent shall submit these progress reports to the Department by the tenth day of every month following the effective date of this Order.

Respondent also shall allow the Department to attend, and shall provide the Department

at least seven days advance notice of, any of the following: prebid meetings, job progress meetings, substantial completion meeting and inspection, and final inspection and meeting.

IV. Review of Submittals

A. 1. The Department shall review each of the submittals Respondent makes pursuant to this Order 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 Order and generally accepted technical and scientific principles. The Department shall notify Respondent in writing of its approval or disapproval of the submittal, except for the submittals discussed in Subparagraph I.B.7. All Department-approved submittals shall be incorporated into and become an enforceable part of this Order.

2. a. If the Department disapproves a submittal, it shall so notify Respondent in writing and shall specify the reasons for its disapproval. Within 30 days after receiving written notice that Respondent's submittal has been disapproved, Respondent shall make a revised submittal to the Department that addresses and resolves all of the Department's stated reasons for disapproving the first submittal.

b. After receipt of the revised submittal, the Department shall notify Respondent in writing of its approval or disapproval and if disapproved, the stated reasons therefore. If the Department disapproves the revised submittal, Respondent and the Department shall meet within ten days to make a good faith effort to reach a reasonable resolution of the remaining issues. If the parties are unable to reach such a resolution, Respondent shall be in violation of this Order and the Department may take any action or pursue whatever rights it has pursuant to any provision of statutory or common law unless Respondent invokes the Dispute Resolution procedures set forth in Paragraph V of this Order. If the Department approves the revised submittal, it shall be incorporated into and become an enforceable part of this Order.

B. Respondent shall modify and/or amplify and expand a submittal upon the Department's direction to do so if the Department determines, as a result of reviewing data generated by an activity required under this Order or as a result of reviewing any other data or facts, that further work is necessary.

V. Dispute Resolution

A. This Paragraph sets forth the procedures for disputes arising under Subparagraph II.H, Subparagraph IV.A(2)(b), Subparagraph VI.B and Paragraph VIII of this Order. Nothing in this Order shall be construed to allow the consideration or resolution of any dispute regarding the ROD or any of its provisions.

B. 1. Respondent shall be in violation of this Order and the ECL, if the Department determines that Respondent has failed to comply with requirements of this Order set

forth in Subparagraph II.H, Subparagraph IV.A(2)(b) and Subparagraph VI.B, and unless within ten (10) business days of receipt of the Department's notice of disapproval, Respondent serves on the Department a request for Dispute Resolution by the Division of Environmental Remediation's Assistant Division Director ("ADD"), and a written statement of the issues in dispute, the relevant facts upon which the dispute is based, and factual data, analysis or opinion supporting its position, and all supporting documentation on which Respondent relies (hereinafter called the "Statement of Position"). The Department shall provide its Statement of Position, including supporting documentation no later than ten business (10) days after receipt of Respondent's Statement of Position. Respondent shall have five (5) business days after receipt of the Department's Statement of Position within which to provide the Department a reply to the Department's Statement of Position, and in the event Respondent provides such a reply, the Department shall have five (5) business days after receipt of Respondent's reply to the Department's Statement of Position within which to provide Respondent the Department's reply to Respondent's reply to the Department's Statement of Position. In the event that the periods for exchange of Statements of Position and replies may cause a delay in the work being performed under this Order, the time periods may be shortened upon and in accordance with notice by the Department as agreed to by Respondent.

2. The Department shall maintain an administrative record of any dispute under this Paragraph. The record shall include the Statement of Position of each party served pursuant to the preceding subparagraph, and any relevant information. The record shall be available for review of all parties and the public.

3. The ADD shall issue a final decision resolving the dispute. Respondent shall revise the submittal in accordance with the Department's specific comments, as may be modified by the ADD and except for those which have been withdrawn by the ADD, and shall submit a revised submittal. The period of time within which the submittal must be revised shall be fourteen (14) days after receipt of the ADD's final decision resolving the dispute or as specified by the Department in its notice of disapproval, whichever is later, or another time frame specified by the ADD.

4. After receipt of the revised submittal, the Department shall notify Respondent in writing of its approval or disapproval of the revised submittal. If the revised submittal fails to address the Department's specific comments, as may be modified by the ADD, and the Department disapproves the revised submittal for this reason, Respondent shall be in violation of this Order and the ECL. In review by the ADD of any dispute pursued under this Paragraph, Respondent shall have the burden of proving that there is no rational basis for the Department's decision.

5. The invocation of the procedures stated in this Paragraph shall not extend, postpone or modify Respondent's obligations under this Order with respect to any disputed items, unless and until the Department agrees or a court determines otherwise. The invocation of the procedures stated in this Paragraph shall constitute an election of remedies by Respondent,

and such election of this remedy shall constitute a waiver of any and all other remedies which may otherwise be available to that party regarding the issue in dispute provided, however, that review of the ADD's decision may be had in a proceeding pursuant to Article 78 of the CPLR commenced no later than 30 days after the ADD's decision. The commencement of such a proceeding stated in this paragraph shall not extend, postpone or modify any obligation of the Respondent under this Order, other than those obligations directly subject to judicial review under the Article 78 proceeding.

C. 1. The dispute resolution procedures of this Subparagraph, which pertain to Paragraph VIII (Payment of State Costs), can only be invoked relative to a dispute on the following grounds: (1) the cost documentation contains clerical errors; or (2) the costs are not related to the Department's activities concerning the Site; or (3) the costs are not reasonably related to the project.

2. Respondent shall be in violation of this Order, unless within thirty (30) days following Respondent's receipt of an itemized invoice from the Department, Respondent pays same or requests to meet with the Director of the Division of Environmental Remediation's Bureau of Program Management (the "Director") in order to discuss Respondent's basis for its refusal to pay said itemized invoice, and the Respondent is available to meet within ten (10) business days thereafter. At this meeting, Respondent shall be given an opportunity to present its objections to the payment of said itemized invoice, and the Director shall have the authority to modify and/or withdraw said itemized invoice. If Respondent subsequently fails to pay said itemized invoice in the amount and within the time period for payment determined by the Director, then Respondent shall be in violation of this Order.

3. In the event of a dispute regarding costs, the Respondent shall pay all costs not disputed within 30 days as provided for under Paragraph VIII.

4. The invocation of the formal dispute resolution procedures under this Subparagraph shall not of itself extend, postpone or affect in any way any of Respondent's obligations under this Order. The invocation of the procedures stated in this Subparagraph shall constitute an election of remedies by Respondent, and such election of this remedy shall constitute a waiver of any and all other remedies which may otherwise be available to Respondent regarding the issue in dispute, provided that Respondent's rights granted pursuant to Article 78 of the CPLR are unaffected by the provisions of this Subparagraph.

VI. Penalties

A. 1. Respondent's failure to comply with any term of this Order constitutes a violation of this Order and the ECL.

2. Respondent shall be liable for payment to the Department of the sums set forth below as stipulated penalties for each day or part thereof that Respondent is in violation of

the terms of this Order. All penalties begin to accrue on the first day Respondent is in violation of the terms of this Order and continue to accrue through the final day of correction of any violation. Such sums shall be due and payable within 15 days after receipt of notification from the Department assessing the penalties. If such payment is not received within 15 days after Respondent receives such notification from the Department, interest shall be payable at the annual rate of nine per centum on the overdue amount from the day on which it was due through, and including, date of payment. Penalties shall be paid by certified check or money order, made payable to "New York State Department of Environmental Conservation" and shall be delivered personally or by certified mail, return receipt requested, to the Director, Division of Environmental Enforcement, N.Y.S.D.E.C., 50 Wolf Road, Albany, New York 12233-5500. Payment of the penalties shall not in any way alter Respondent's obligation to complete performance under the terms of this Order.

Stipulated penalties shall be due and payable under Subparagraph VI.A.2 pursuant to the following schedule:

Period of Non-Compliance	Penalty Per Day
First through 15th day	$ 500
16th through 30th day	$ 1000
31st day and thereafter	$ 1500

Stipulated penalties shall be due and payable for failure to submit in the time period or manner required by this Order the progress reports called for in Paragraph III pursuant to the following schedule:

Period of Non-Compliance	Penalty Per Day
First through 15th day	$ 100
16th through 30th day	$ 200
31st day and thereafter	$ 500

B. Respondent shall not suffer any penalty under this Order or be subject to any proceeding or action if it cannot comply with any requirement hereof because of war, riot, or an unforeseeable disaster arising exclusively from natural causes which the exercise of ordinary human prudence could not have prevented. Respondent shall, within five days of when it obtains knowledge of any such condition, notify the Department in writing. Respondent shall include in such notice the measures taken and to be taken by Respondent to prevent or minimize any delays and shall request an appropriate extension or modification of this Order. Failure to give such notice within such five-day period constitutes a waiver of any claim that a delay is not subject to penalties. Respondent shall have the burden of proving that an event is a defense to compliance with this Order pursuant to Subparagraph VI.B. Respondent may submit the issue for Dispute Resolution under Paragraph V if the Department rejects Respondent's assertion that an event is a force majeure event.

VII. Entry upon Site

The Department acknowledges that Respondent does not currently own or occupy the Site. However, Respondent hereby consents to the entry upon the Site or areas in the vicinity of the Site which may be under the control of Respondent by any duly designated employee, consultant, contractor, or agent of the Department or any State agency for purposes of inspection, sampling, and testing and to ensure Respondent's compliance with this Order. During Remedial Construction, Respondent shall permit the Department full access to all records relating to matters addressed by this Order and job meetings. Respondent shall also permit the Department full access to all records containing data and factual information pertaining to the environmental conditions at or in the vicinity of the Site, including, but not limited to, sampling and analytical data, monitoring reports, and hydro geologic, scientific, chemical and engineering data. Respondent shall have no obligation to provide the Department with any records, or portions thereof, that are privileged, pursuant to applicable statute or common law. Respondent acknowledges that raw data and factual information are not privileged.

VIII. Payment of State Costs

(A.) Within 30 days after receipt of an itemized invoice from the Department, Respondent shall pay to the Department a sum of money which shall represent reimbursement for the State's 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 ("State Costs") for work related to the Site to the effective date of this Order, as well as for reviewing and revising submittals made pursuant to this Order, overseeing activities conducted pursuant to this Order, collecting and analyzing samples, and administrative costs associated with this Order. 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.

(B.) Reimbursement by Respondents of State Costs incurred by the New York State Departments of Environmental Conservation and Health after the effective date of this Order as defined in Subparagraph XVI.L of this Order, is capped at Thirty Five Thousand dollars ($35,000) per calendar year. The Department may aggregate its billing of these future State costs for more than one year. The Respondent shall also pay the Department the additional State costs in accordance with any additional activities that may be required by the Department under Subparagraphs II.H or IV.B or such additional work as is the result of modifications requested by the Respondent and approved by the Department. If the Department assists the Respondent in obtaining authorizations under Subparagraph XVI.E, Respondent shall also pay to

the Department the additional State Costs associated therewith.

(C.) 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.

IX. Irrevocable Standby Letter of Credit

A. Within 28 days after completion of the construction activities identified in the Department-approved Remedial Design, Respondent shall submit to the Department an Irrevocable Standby Letter of Credit in the amount of One Hundred Thousand Dollars ($100,000) in favor of the Department to guarantee the performance of Respondent's obligation under this Order to the Department's satisfaction. Respondent shall ensure that such Irrevocable Standby Letter of Credit is in a form acceptable to the Department and remains continuously in effect until such time as the Department notifies Respondent that Respondent's obligations under this Order have been completed to the Department's satisfaction.

B. The wording of this Irrevocable Standby Letter of Credit shall be identical to the wording specified in 6 NYCRR 373-2.8(j)(3).

X. Department Reservation of Rights

A. Except as expressly set forth in this Order, nothing contained in this Order shall be construed as barring, diminishing, adjudicating, or in any way affecting any of the Department's civil, criminal, or administrative rights (including, but not limited to, nor exemplified by the right to recover natural resource damages) or authorities.

B. Nothing contained in this Order shall be construed to prohibit the commissioner or his duly authorized representative from exercising any summary abatement powers.

C. Nothing contained in this Order shall be construed as barring, diminishing, adjudicating or in any way affecting any of the Department's rights, which include, but are not limited to the right to bring any action or proceeding against anyone other than Respondents, and their directors, officers, employees, servants, agents, successors and assigns.

XI. Respondent's Reservation of Rights

A. Nothing contained in this Order shall be construed to be an admission by Respondent that it agrees with the Department that the Department has the rights set above in Paragraph X. Unless expressly stated in this Order to the contrary, this Order shall not be

construed as a waiver by Respondent of any defense it may have to any attempt by the Department to exercise the rights which it purports to reserve in Paragraph X.

B. Except as specifically provided in this Order, nothing contained therein shall be construed as barring, diminishing, adjudicating or in any way affecting any equitable or legal rights, claims, causes of action, demands or defenses whatsoever that Respondent may have against any persons or entities that are not parties to this Order.

XII. Indemnification

Except as may result from gross negligence or wilful misconduct, Respondent agrees to indemnify, save and hold harmless the Department, the State of New York, and their agents, contractors, subcontractors, employees, and representatives from any and all claims or action arising from or on account of acts or omissions of Respondent, its employees, officers, directors, agents, servants, receivers, trustees, successors, assigns, or any other persons acting on behalf of Respondent or under its control, as a result of the fulfillment or attempted fulfillment of the terms and conditions of this Order by Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns.

XIII. Public Notice

A. Within 30 days after the effective date of this Order, Respondent shall file a Declaration of Covenants and Restrictions with the Clerk of the County wherein the Site is located to give all parties who may acquire any interest in the Site notice of this Order.

B. Respondent shall cause to be filed a Declaration of Covenants and Restrictions with the Nassau County Clerk, to run with the land, that:

1. shall restrict the development of the groundwater underlying the Site as a portable or process source without the necessary water quality treatment as is determined by the Nassau County Department of Health, unless the user first obtains permission to do so from the Department, or if at such time the Department shall no longer exist, any New York State department, bureau, or other entity replacing the Department; and

2. shall require that the Site owner and the Site owner's successors and assigns consent to the implementation of institutional controls that Respondent is required to put into place pursuant to this Order and the ROD; and

3. Shall require that the Site owner on behalf of itself and it's successors and assigns, hereby agree not to interfere with the continued operation of the engineering controls that Respondent is required to maintain pursuant to this Order and the ROD; and

4. shall require that the Site owner on behalf of itself and its successors and

assigns, hereby consents to the right of enforcement by the Department, or if at such time the Department shall no longer exist, any New York State department, bureau, or other entity replacing the Department, of the prohibitions and restrictions that this Paragraph XIII requires recorded, and hereby covenants not to contest such right of enforcement.

C. Within 30 days after the effective date of this Order, Respondent shall provide the Department with a copy of such instrument certified by the Nassau County Clerk to be a true and faithful copy of the instrument as recorded in the office of the Nassau County Clerk.

XIV. Communications

A. All written communications required by this Order shall be transmitted by United States Postal Service, by private courier service, or hand delivered as follows:

1. Communication from Respondent shall be sent to:

Alali M. Tamuno, Esq.
New York State Department of Environmental Conservation
Division of Environmental Enforcement
200 White Plains Road-5th Floor
Tarrytown, New York 10591-5805

with copies to:

Chittibabu Vasudevan, Ph.D., P.E.
New York State Department of Environmental Conservation
Division of Environmental Remediation
50 Wolf Road
Albany, New York 12233-7010

Joseph Jones
New York State Department of Environmental Conservation
Division of Environmental Remediation
50 Wolf Road
Albany, New York 12233-7010

G. Anders Carlson, Ph.D.
Director, Bureau of Environmental Exposure Investigation
New York State Department of Health
547 River Street, Room 300
Troy, New York 12180-2216

Ray Cowan, Director

Region 1
New York State Department of Environmental Conservation
N. Loop Road, Bldg.#40
SUNY Campus
Stony Brook, New York 11790-2356

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

John Peltonen Esq.
Faheehan, Phinney, Bass & Green
1000 Elm Street
P.O. Box 3701
Manchester, NH 03105-3701

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

Three copies to:

Joseph Jones
Division of Environmental Remediation.

Two copies to:

G. Anders Carlson, Ph.D.
Director, Bureau of Environmental Exposure Investigation.
New York State Department of Health

One copy to:

Chittibabu Vasudevan, Ph.D., P.E.
Division of Environmental Remediation.

One copy to Ray Cowan,

C. 1. Within 30 days of the Department's approval of any report submitted pursuant to this Order, Respondent shall submit to Director, Division of Environmental Remediation, a computer readable magnetic media copy of the approved report in American Standard Code for Information Interchange (ASCII) format.

2. Within 30 days after its approval of the drawings and submittals described in Subparagraph II.D of this Order, Respondent shall submit one microfilm copy (16 millimeter roll film M type cartridge) of such Department-approved drawings and submittals, as well as all other Department-approved submittals other than the Department-approved RI/FS. Respondent

shall submit same to Chittibabu Vasudevan, Ph.D., P.E.

D. The Department and Respondent reserve the right to designate additional or different addressees for communication or written notice to the other.

XV. Release and Covenant Not to Sue

If, after review, the Department accepts and approves the engineers certification that construction of the Remedial Program was completed in accordance with the approved Remedial Design for OU-2 of the Site, then, unless a supplementary remedial program is required pursuant to Subparagraph I.B.6, and except for the provisions of Paragraph XII of this Order, and except for the future Operation and Maintenance of the Site, reimbursement of Department expenditures at the Site, reimbursement of State Costs for work relating to off-Site groundwater contamination that has migrated from the Site, and any Natural Resource Damage claims, such acceptance shall constitute a release for each and every claim, demand, remedy or action whatsoever against Respondent, its directors, officers, employees, agents, successors and assigns, which the Department has or may have pursuant to Article 27, Title 13 of the ECL relative to or arising from the disposal of hazardous wastes at OU-2 of the Site, provided, however, that the Department specifically reserves all of its rights concerning, and any such release and satisfaction shall not extend to, any investigation or remediation the Department deems necessary due to:

(1) environmental conditions on-Site or off-Site which are related to the disposal of hazardous wastes at the Site and were unknown to the Department at the time of its approval of the Remedial Investigation Report; or

(2) information received, in whole or in part, after the Department's approval of the Remedial Investigation Report, and such unknown environmental conditions or information indicates that the Remedial Program is not protective of human health or the environment. The Department shall notify Respondent of such environmental conditions or information and its basis for determining that the Remedial Program is not protective of human health and the environment; or

(3.) environmental conditions relating to off-Site groundwater contamination that has migrated from the Site, and which are related to the disposal of hazardous wastes at the Site.

This release shall inure only to the benefit of Respondent, its directors, officers, employees, agents, successors and assigns.

Nothing contained herein shall be construed as barring, diminishing, adjudicating or in any way affecting any legal or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against anyone other than Respondent, its directors, officers, employees, agents, successors and assigns.

XVI. Miscellaneous

A. 1. All activities and submittals required by this Order shall address groundwater contamination resulting from the disposal of hazardous wastes at the Site as contained in the ROD.

2. All activities Respondent is required to undertake under this Order are ordinary and necessary expenses for the continued operation of Respondent.

B. Respondent shall retain professional consultants, contractors, laboratories, quality assurance/quality control personnel, and third party data validators acceptable to the Department to perform the technical, engineering, and analytical obligations required by this Order. The responsibility for the performance of the professionals retained by Respondent shall rest solely with Respondent. The firms or individuals selected by Respondent shall be subject to disapproval by the Department pursuant to the following procedure:

1. Respondent shall submit to the Department, in writing no later than 30 days prior to the start of any activities for which the Respondent and such firm(s) or individual(s) will be responsible, the experience, capabilities, and qualifications of the firm(s) or individual(s) selected by Respondent. The Department shall notify the Respondent by telephone within five days of the Respondent's submission of such information and in writing within ten days of the Respondent's submission of such information, of its disapproval of the selected firm or individual or its authorization to proceed with respect to each selected firm or individual.

2. If the State disapproves a firm or individual selected by the Respondent, Respondent shall submit to the Department a list containing the names of the firm(s) or individual(s) that had been considered but not selected by the Respondent, and the experience, capabilities and qualifications of each firm(s) or individual(s) on the list, within 15 days. The Department shall notify the Respondent by telephone within five days of the Respondents submission of such information and in writing within ten days of the Respondent's submission of such information, of the names of any firm(s) or individual(s) that it disapproves and an authorization to proceed with respect to any of the other firm(s) or individual(s). Respondent shall notify the Department of the name of the firm(s) or individual(s) it selects.

3. For those firms and individuals whose experience, capabilities and qualifications have been submitted to the Department by the Respondent prior to the effective date of this Order, the Department shall notify the Respondent by telephone within five days of the effective date and in writing within ten days of the effective date of its disapproval or authorization to proceed with respect to each such firm or individual.

C. The Department and Respondent shall have the right to obtain split samples, duplicate samples, or both, of all substances and materials sampled by each other, and the Department also shall have the right to take its own samples. The Department and the

Respondent each shall make available to the other the results of all sampling and/or tests or other data generated with respect to implementation of this Order and Respondent shall submit these results in the progress reports required by this Order.

D. Respondent shall notify the Department at least 10 working days in advance of any field activities to be conducted pursuant to this Order.

E. Respondent shall use best efforts to obtain all permits, easements, rights-of-way, rights-of-entry, approvals, or authorizations necessary to perform Respondent's obligations under this Order. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration. If any access required to perform this Order is not obtained despite best efforts within 45 days of the effective date of this Order, or within 45 days of the date the Department notifies the Respondent in writing that additional access beyond that previously secured is necessary, Respondent shall promptly notify the Department, and shall include in that notification a summary of the steps Respondent has taken to attempt to obtain access. The Department may, as it deems appropriate, assist Respondent in obtaining access. Respondent shall reimburse the Department, in accordance with the procedures in Paragraph VIII, for all costs incurred by the Department in obtaining access, including, but not limited to, attorneys fees.

F. Respondent and Respondent's successors, and assigns shall be bound by this Order and Respondent shall cause its officers, directors, agents, servants, employees, successors and assign, to comply with the relevant portions hereof in performance of their designated duties. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall in no way alter Respondent's responsibilities under this Order. Respondent's officers, directors, employees, servants, and agents shall be obliged to comply with the relevant provisions of this Order in the performance of their designated duties on behalf of Respondent.

G. Respondent shall provide a copy of this Order to each contractor hired to perform work required by this Order and to each person representing Respondent with respect to the Site and shall condition all contracts entered into in order to carry out the obligations identified in this Order upon performance in conformity with the terms of this Order. Respondent or Respondent's contractors shall provide written notice of this Order to all subcontractors hired to perform any portion of the work required by this Order. Respondent shall nonetheless be responsible for ensuring that Respondent's contractors and subcontractors perform the work in satisfaction of the requirements of this Order.

H. All references to "professional engineer" in this Order are to an individual registered as a professional engineer in accordance with Article 145 of the New York State Education Law. If such individual is a member of a firm, that firm must be authorized to offer professional engineering services in the State of New York in accordance with Article 145 of the New York State Education Law.

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

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

K. 1. The terms of this Order shall constitute the complete and entire Order between Respondent and the Department concerning the Site. No term, condition, understanding, or agreement purporting to modify or vary any term of this Order 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 Respondent of Respondent's obligation to obtain such formal approvals as may be required by this Order.

2. If Respondent desires that any provision of this Order be changed, Respondent shall make timely written application, signed by Respondent, to the Commissioner setting forth reasonable grounds for the relief sought. Copies of such written application shall be delivered or mailed to Alali M. Tamuno Esq. and to Chittibabu Vasudevan, Ph.D., P.E.

L. The effective date of this Order is the date the Commissioner or her designee signs it.

DATED: 4/23/2001

ERIN M. CROTTY
Commissioner
New York State Department
of Environmental Conservation

By: _____
Michael J. O'Toole, Jr.

CONSENT BY RESPONDENT

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

IMC Eastern Corporation (formerly known as IMC Magnetics Corp.)

By: _____
~~XXXXXXXXXXXXXXXXXXXX~~
REINA M. MACDONALD

Title: Secretary and General Counsel

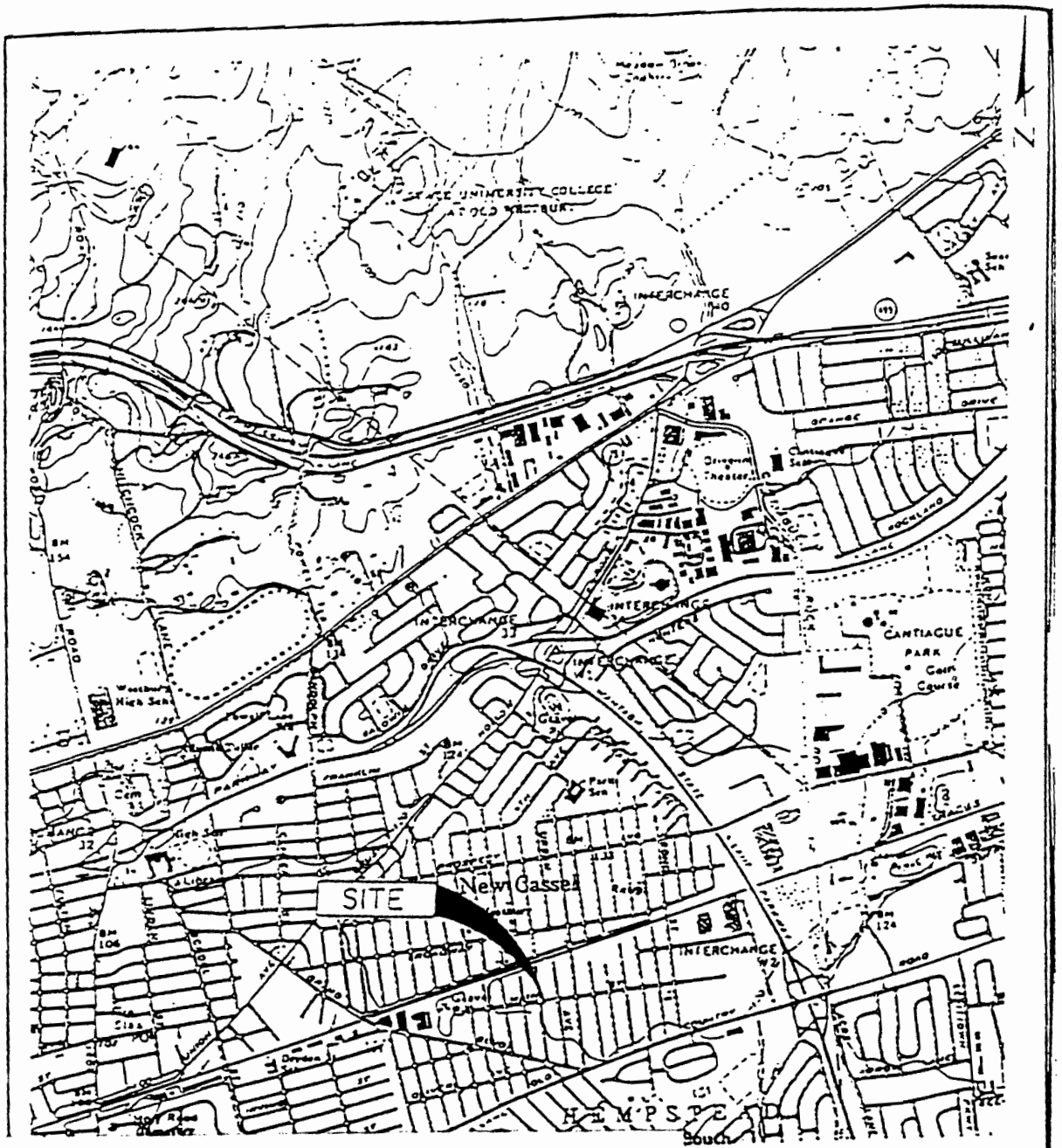
Date: March 30, 2001

STATE OF ~~NEW YORK~~ CALIFORNIA)
) s.s.:
COUNTY OF LOS ANGELES)

On this 30th day of March, 2001, before me personally came REINA M. MACDONALD, to me known, who being duly sworn, did depose and say that she resides in SIMI VALLEY, CALIFORNIA; that she is the SECRETARY AND GENERAL COUNSEL of IMC EASTERN CORPORATION the corporation described in and which executed the foregoing instrument; that he knew the seal of said corporation; that the seal affixed to said instrument was such corporate seal; that it was so affixed by the order of the Board of Directors of said corporation and that he signed his name thereto by like order.

LILIE R. WATTS
Commission # 1192186
Notary Public - California
Los Angeles County
My Comm. Expires Aug 28, 2002

Lilie R. Watts
Notary Public



FORMER INC MAGNETICS CORP. MANUFACTURING FACILITY
FINAL INVESTIGATION REPORT

SITE LOCATION MAP

WESTBURY NEW YORK

EXHIBIT B

Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision

IMC Magnetics Site
Town of North Hempstead, Nassau County
Site Number 1-30-043A
Operable Unit - 02
On-Site Groundwater

March 2000

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* JOHN P. CAHILL, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

IMC Magnetics Inactive Hazardous Waste Disposal Site
Town of North Hempstead, Nassau County, New York
Site No. 1-30-043A
Operable Unit-02: On-Site Groundwater

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the IMC Magnetics Class 2 inactive hazardous waste disposal site which was chosen in accordance with the New York State Environmental Conservation Law. The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the IMC Magnetics inactive hazardous waste disposal site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous waste constituents from this site, if not addressed by implementing the response action selected in this ROD, presents a current or potential significant threat to public health and the environment.

Description of Selected Remedy

Based on the results of the Focused Remedial Investigation/Feasibility Study for the IMC Magnetics site and the criteria identified for evaluation of alternatives, the NYSDEC has selected In-Situ Oxidation to remediate on-site groundwater contamination. The components of the remedy are as follows:

- *A pilot test will be conducted to ensure that the in-situ oxidation (hydrogen peroxide injection) achieves sufficient efficiency to achieve timely remediation. Should the results of the pilot test be deemed insufficient by the Department, another proven groundwater remediation technology will be implemented.*

- *As a part of the pilot study, additional groundwater data will be obtained to better define the scope of the remedy presented in this ROD.*

- *A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Any uncertainties identified during the RI/FS will be resolved,*

- *Installation of three well clusters, each containing six carbon-steel application (injection) wells.*

- *A minimum of two cycles of reagent application, each lasting approximately two weeks. Following the second round of treatment, a round of samples will be collected at all site monitoring wells to evaluate the effectiveness of the remedial technology and identify the need for additional applications.*

- *Semiannual sampling of all existing on-site groundwater monitoring wells would be conducted to monitor the effectiveness of the system for five years. This monitoring will also provide the data necessary to decide if the system reached its objectives and could be deactivated.*

- *Implementation of institutional controls and the recording of deed restrictions to restrict the future use of groundwater at this site.*

- *Off-site (downgradient) groundwater contamination will be addressed as a part of the overall investigation of the groundwater contamination that is migrating from all Class 2 sites in the NCIA.*

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this site as being protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

3/30/2000
Date

Michael J. O'Toole, Jr., Director
Division of Environmental Remediation

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RECORD OF DECISION

IMC Magnetics Site
Operable Unit 02
On-Site Groundwater
Town of North Hempstead
Nassau County, New York
Site No. 1-30-043A
March 2000

SECTION 1: SUMMARY AND PURPOSE OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), has selected this remedy to address the significant threat to human health and/or the environment presented by the presence of hazardous waste at the IMC Magnetics site, which has been designated a Class 2 site by the NYSDEC. A Class 2 site is a site that has been determined to pose a significant threat to human health and/or the environment and action to remediate the site is required.

The IMC Magnetics site is located at 570 Main Street and was occupied by IMC Magnetics from the early 1950s until 1992. Products made during IMC Magnetics' occupation of the site included induction motors, fans and blowers, stepper motors and other rotating machines. Investigations carried out at the site in the early 1990's indicated that unsaturated soils at the site were contaminated with chlorinated hydrocarbons, petroleum hydrocarbons and metals. Subsequent investigations indicated that the soil contamination consisted primarily of volatile organic compounds (VOCs) and was most concentrated near two leaching pools located at the northwestern corner of the property. In July of 1996 IMC Magnetics began to operate a soil vapor extraction (SVE) system at the site as an interim remedial measure. In January 1998 the NYSDEC issued a Record of Decision (ROD) selecting SVE as the final remedy for Operable Unit 01 (soils) at the site.

In addition to the soils contamination, significant groundwater contamination was found at the site. The Focused Groundwater Investigation for the site, carried out from June 1998 to September 1998, showed that groundwater at the site was heavily contaminated with VOCs. Of the chlorinated VOCs detected, tetrachloroethylene (PCE) was found at the highest concentrations: up to 2,680 ppb directly beneath a leaching pool located on the northwest corner of the property. Manufacturing processes at the site have resulted in the on-site disposal of PCE, a hazardous waste, which has migrated from the site and has contributed to the groundwater contamination in the New Cassel

Industrial Area (NCIA). These disposal activities have resulted in the following significant threats to the public health and the environment:

- a significant threat to human health and the environment associated with this site's contravention of groundwater standards in a sole source aquifer.

- a significant threat to human health and the environment associated with this site's contravention of soil cleanup objectives in soils overlying a sole source aquifer

The contaminated groundwater at the IMC Magnetics site, as well as in the entire NCIA, presents a potential route of exposure to humans. The area is served by public water, however, the underlying aquifer is the source of the water supply for the Bowling Green Water District customers. An air stripping treatment system was constructed in 1996 to mitigate the impact of the groundwater contamination on the Bowling Green public water supply wells. The Bowling Green water supply wells are routinely monitored for compliance with New York State drinking water standards. Presently, no site specific contaminants exceeding drinking water standards have been detected in water distributed to the public. Guard wells have been installed south of Old Country Road, in locations downgradient of the NCIA hazardous waste disposal sites and upgradient of the water supply wells as a precautionary measure. Therefore, use of the groundwater in the area is not currently considered to be an exposure pathway of concern.

The Department has been using a three-prong strategy in remediating Class 2 sites in the NCIA. The first action identifies source areas of contamination at each site which will be remediated; the second action fully investigates groundwater contamination at and beneath each site and takes appropriate remedial measures; and the third action is the ongoing effort by the Department to investigate groundwater contamination that is migrating from all Class 2 sites in the NCIA. Upon completion of this groundwater investigation, a proper remedy will be proposed to the public. After public review, a final groundwater remedy will be selected.

The site has been investigated to locate source areas of groundwater contamination and to evaluate the extent of groundwater contamination at the site. The selected remedy addresses the remediation of the on-site groundwater contamination. In order to restore the groundwater at the IMC Magnetics inactive hazardous waste disposal site to predisposal conditions to the extent feasible and authorized by law, but at a minimum to eliminate or mitigate the significant threats to the public health and/or the environment that the hazardous waste disposed at the site has caused, the following remedy is selected:

- *In-Situ Oxidation (Hydrogen Peroxide Injection). A detailed description of the remedy is found in section 8.*

In order to assure that the chosen remedy is effective in improving groundwater quality, on-site groundwater will be monitored for a period of five years.

The selected remedy, discussed in detail in section 8 of this document, is intended to attain the remediation goals in conformity with applicable standards, criteria, and guidance (SCGs).

SECTION 2: SITE LOCATION AND DESCRIPTION

The site is located at 570 Main Street in the NCIA, Town of North Hempstead, Nassau County, New York, and is Site # 1-30-043A in the New York State Registry of Inactive Hazardous Waste Disposal Sites (The Registry). The NCIA is an urban and industrial area, with level topography and is bounded to the north by a residential area and to the south by commercial and institutional establishments located along Old Country Road. Figure 1 shows the location of the NCIA, Figure 2 shows the location of the site within the NCIA, and Figure 3 is a site map showing leach pool, septic tank and SVE system locations. This property is slightly over two acres with one manufacturing building and a paved parking lot covering most of the area. The site has several floor drains, septic tanks and leaching pools, and the building has been connected to the Nassau County sewer system since approximately 1980.

The on-site soil contamination associated with this site has been designated as Operable Unit 01, and the groundwater contamination that would be treated by this remedial action plan is designated as Operable Unit 02. This subdivision of the site into two operable units was done to expedite the remediation of the site. Operable Unit 01 is presently being remediated using Soil Vapor Extraction. An operable unit represents a discrete portion of the remedy for a site which for technical or administrative reasons can be addressed separately to eliminate or mitigate a release, threat of release of exposure pathway resulting from the contamination present at the site. By remediating the on-site groundwater at this site as a separate unit, the removal of the source of the groundwater contamination was expedited and the overall time it will take to remediate the site in its entirety was shortened.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

The site was occupied by IMC Magnetics Inc. from the early 1950's until 1992. The site is currently vacant except for a portion of the southern end of the building which is occupied by Castle Collision, an entity unrelated to IMC. Products made during IMC's occupation of the site included induction motors, fans and blowers, stepper motors and other rotating machines. Soils and groundwater at the site are contaminated with chlorinated hydrocarbons, petroleum hydrocarbons and metals. Investigations carried out in the early 1990's indicated that there were three areas on the site in which there were leaching pools and/or septic tanks. Area 1, which includes two leaching pools and one septic tank, is located at the northeastern corner of the property. Area 2, which includes two leaching pools, is located at the northwestern corner of the property, and Area 3, which includes one septic tank and two leaching pools, is located in the southwestern portion of the property. Additionally, five probable floor drain/penetration locations were identified inside the building. Groundwater contamination at the site is concentrated near and downgradient of Area 2.

3.2: Remedial History

In 1988, the entire NCIA, including this site, was listed in the Registry as a Class 2 site due to the presence of high levels of volatile organic compounds (VOCs) in the groundwater. The Class 2 classification indicates that the site poses a significant threat to the public health and/or the environment and action to remediate the site is required.

In the early 1990's, the septic tanks and leaching pools were exposed and soil samples taken from these structures for laboratory analysis. VOC contamination was observed, particularly in Area 2.

In February of 1995, a Site Investigation Report for the NCIA was completed by Lawler, Matusky and Skelly Engineers under the New York State Superfund program. Based on this report, in March 1995 the entire NCIA was removed from the Registry and seven individual properties, including IMC Magnetics, were listed as Class 2 sites in the Registry. This Site Investigation Report is available for review at the document repositories. There are currently thirteen Class 2 sites within the NCIA.

In October of 1997, IMC Magnetics began to operate a SVE system at the site to remediate soils contamination in Area 2. In January 1998, the NYSDEC issued a ROD selecting SVE as the final remedy for soils at the site. This SVE system is still operating, and has removed over 300 pounds of VOC contamination.

SECTION 4: SITE CONTAMINATION

To evaluate the contamination present at the site and to evaluate alternatives to address the significant threat to human health and the environment posed by the presence of hazardous waste, the PRP, under DEC supervision, conducted a RI/FS.

4.1: Summary of the Remedial Investigation

The purpose of the groundwater Remedial Investigation (RI) was to define the nature and extent of groundwater contamination resulting from previous activities at the site. The groundwater RI was the second investigation to be conducted at the site by the PRP. The first investigation addressed both soil and groundwater contamination at the site, and was the basis for choosing Soil Vapor Extraction as an IRM for soil contamination currently being operated at the site. The report on the first investigation is titled "The Final Investigation Report for the Investigation and Design of the Interim Remedial Measure for the Vadose Zone," and was completed in February 1997. It is referred to hereafter as the IRM report, and is available for review in the document repositories. The groundwater RI focuses exclusively on groundwater contamination at the site, and was conducted between September 1998 and September 1999.

The RI included the following activities:

- *Installation of four groundwater monitoring well clusters in a line extending from the northwest corner of the site to a point near the site's southern property boundary, in the west right -of -way for Swalm Street. Each cluster consists of three wells screened at three different depths. See Figures 3 and 4.*

- *Sampling of the newly installed groundwater monitoring wells for VOC and metals contamination.*

- *Groundwater characterization and microbial studies to determine the site's suitability for natural bio-remediation.*

- *Sampling of drill cuttings for VOC and metals contamination.*

- *Data integration with previously obtained groundwater data.*

To determine whether the groundwater contained contamination at levels of concern, the RI analytical data was compared to environmental Standards, Criteria, and Guidance values (SCGs). Groundwater, surface water and drinking water SCGs identified for the IMC Magnetics site are based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part 5 of NYSDOH Sanitary Code.

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, groundwater at the site requires remediation. These results are summarized below. More complete information can be found in the RI Report.

Chemical concentrations are reported in parts per billion (ppb), or parts per million (ppm). For comparison purposes, where applicable, SCGs are provided for each medium.

4.1.1 Site Geology and Hydrogeology

The Upper Pleistocene deposits of poorly sorted sands and gravel that make up the Upper Glacial Aquifer (UGA) are found from the surface to a depth of approximately 80 ft bgs. The UGA is an unconfined aquifer consisting of poorly sorted sands and gravels. The Magothy consists of finer sands, silt and small amounts of clay.

At the site there are no other hydrogeologic units located between the UGA and the underlying Magothy formation. In general, the upper surface of the Magothy formation is found at least 100 ft bgs. However, based on observations during installation of wells for this investigation, the Magothy is found at significantly shallower depths (60 - 80 ft bgs) in the NCIA than in many other areas of Long Island. The UGA and the Magothy are in direct hydraulic connection; however, clay lenses are often found in the upper Magothy in this area. Depth of water is about 52 ft bgs in the

area of the site and groundwater flows in a southwesterly direction. Both the UGA and Magothy have been designated as sole source aquifers and are protected under state and federal legislation.

4.1.2 Nature of Contamination:

As described in the RI Report, many groundwater samples were collected at the site to characterize the nature and extent of contamination. The main categories of contaminants which exceed their SCGs are volatile organic compounds (VOCs).

The VOCs of concern are: trichloroethylene (TCE); tetrachloroethylene (PCE); benzene; 1,1dichloroethylene (1,1DCE); 1,1 dichloroethane (1,1 DCA); 1,1,1trichloroethane (1,1,1 TCA) and toluene.

4.1.3 Extent of Groundwater Contamination

Table 1 summarizes the extent of contamination for the contaminants of concern in groundwater and compares the data with the SCGs for the site. The following provides a summary of the findings of the investigation.

The IRM investigation carried out for the IMC Magnetics site sampled on-site groundwater utilizing geoprobe and existing monitoring wells. Figure 5 shows groundwater monitoring well locations for the IRM investigation. The highest concentrations of VOCs in groundwater detected during the IRM investigation were found in Area 2, located at the Northwest corner of the property. PCE at this location was detected at 2,680 ppb, at a depth of 60 ft bgs. PCE and TCE were detected in lesser amounts at MW-1, SB-65, MW-3, SB-63, MW-2 and SB-54, where MW indicates a sampled monitoring well, and SB indicates groundwater sampling by geoprobe. The second highest VOC concentrations were at MW-2 (PCE at 899 ppb and TCE at 206 ppb), which is on the northern edge of the site. Based on the soil boring data accumulated during the IRM investigation, it appears that there was a source of groundwater contamination in Area 2, which may have also contributed to the high concentrations observed in MW-2 (see Figure 5). SCGs for these contaminants are 5 ppb. As noted above, the soil contamination in this area is currently being remediated by SVE.

Three existing monitoring wells and several geoprobe locations were also sampled for metals. Barium was detected at concentrations from 47 to 79 ppb at all three wells and chromium was detected at levels from less than 10 ppb to 32 ppb at MW3. The groundwater standards for barium and chromium are 1,000 ppb and 50 ppb respectively. Although the metal concentrations from the geoprobe borings were higher than the monitoring well samples, the metal concentrations from the geoprobe borings are likely not representative of actual dissolved metal concentrations due to the turbidity of samples collected by this method.

During the RI, groundwater samples were taken from the previously installed wells MW-1 and MW-3, and from the four newly installed well clusters MW-4U,M,L, MW-5U,M,L, MW-6U,M,L, and MW-8U,M,L. Each well cluster contains three wells, screened at the water table (U), at about 90

ft bgs (M), and at about 140 ft bgs (L). Analytical results from these sampling events are summarized in Table 1. Detailed analytical reports and documentation of laboratory QA/QC are available in Appendix E of the RI for OU-2.

Chlorinated VOCs were detected in all groundwater monitoring wells. The highest PCE and TCE concentrations were detected in MW-5U (160 ppb and 34 ppb respectively), near Area 2. The highest 1,1,1 TCA concentration was detected at MW-5M (60 ppb). At least one of the typical biodegradation daughter products 1,1 dichloroethene (1,1-DCE), 1,1-dichloroethane (1,1-DCA) and cis-1,2-dichloroethene (cis-1,2-DCE) was detected in all wells except MW-1. Toluene was found in several samples, with the highest concentrations detected in MW-6L and MW-6M (100 ppb and 45 ppb respectively). In general, concentrations of chlorinated VOCs were not sufficiently high to indicate the presence of dense nonaqueous phase liquid (DNAPL). In particular, concentrations of PCE in the MW-5 well cluster (located downgradient and within 80 feet of Area 2) were low given that the PCE concentration at geoprobe boring SB-25, installed in Area 2 during the soils IRM investigation, was 2,680 ppb. This may indicate that concentrations within this plume decrease significantly with distance. VOC concentrations in MW-1 and MW-3 decreased significantly between the May 1996 sampling event and the July 1998 sampling event. Figure 4 shows the vertical distribution of total chlorinated VOCs along Profile A-A', which runs along the western edge of the site (see Figure 5).

Analysis for metals yielded no detectable concentrations above reporting limits for cadmium and mercury. The highest barium and lead concentrations were detected at MW-7U (250 and 90 ppb respectively), located southwest of the building on Swalm Avenue's western right of way. The highest total chromium concentration was detected at MW-4U (223 ppb), located north of the site on Main Street's north right-of-way. The groundwater standards for barium, lead and chromium are 1,000, 50 and 50 ppb respectively. The high metal concentrations found in MW-4U (an upgradient well) suggest that on-site contributions to contamination of groundwater by metals may be minor compared to contributions from off-site sources.

4.2 Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. An exposure pathway is how an individual may come into contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

Pathways which are known to or may exist at the site include:

- Ingestion of contaminated groundwater. Since an active supplemental treatment system is in place that prevents the completion of this exposure pathway, no known completed exposure pathways exist.

The contaminated groundwater at the IMC Magnetics site, as well as in the entire NCIA, presents a potential route of exposure to humans. The area is served by public water, and the underlying aquifer is the source of the water supply for the Bowling Green Water District customers. A supplemental treatment system, air stripping followed by carbon polishing, was constructed in 1996 to mitigate the impact of the groundwater contamination on the Bowling Green public water supply wells. Bowling Green water supply wells are routinely monitored for compliance with New York State drinking water standards. As of today, no site specific contaminants exceeding groundwater or drinking water standards were detected in water distributed to the public. Guard wells have been installed south of Old Country road, downgradient of the contaminated areas in the NCIA, and upgradient of the water supply wells as a precautionary measure. Therefore, use of the groundwater in the area is not currently considered to be an exposure pathway of concern.

- Inhalation and Dermal Contact: Since contamination in the soil is at 8 to 18 ft bgs, the potential for human exposure via inhalation or dermal contact is very unlikely.

4.3 Summary of Environmental Exposure Pathways:

This section summarizes the types of environmental exposures which may be presented by the site. Due to the density of commercial and industrial buildings in the NCIA, there are no significant sources of surface water in close proximity to the site. Virtually every open space in the industrial area has been covered by asphalt, concrete or buildings. Since the industrial area is highly developed, no wildlife habitat exists in or near the site. The nearest surface water sources are several small ponds in and around Eisenhower Memorial Park, approximately two miles southwest of the site across Old Country Road.

However, site-related contamination has entered the groundwater. The contaminated groundwater at the site, as well as in the entire NCIA, presents a potential route of exposure to the environment.

There are no known exposure pathways of concern between the contaminated groundwater and the environment. The potential for plants or animal species being exposed to site-related contaminants is highly unlikely.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRP for the site, documented to date, include:

- IMC Magnetics Inc.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in the State Superfund Program Regulations (6 NYCRR Part 375-1.10). The overall remedial goal is to meet all Standards, Criteria and Guidances (SCGs) and be protective of human health and the environment.

The Department has been using a three-prong strategy in remediating Class 2 sites in the NCIA. First, sources of soil contamination at these sites are removed or remediated; second, groundwater contamination at and beneath each site is fully investigated and appropriate remedial actions are taken; and third, the Department is currently conducting a detailed investigation of groundwater contamination that is migrating from all Class 2 sites in the New Cassel Industrial Area. Upon completion of this groundwater investigation, a proper remedy will be proposed to the public. After public review, a final groundwater remedy will be selected.

At a minimum, the remedy selected should eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The goals selected for this site are:

- *Eliminate, to the extent practicable, contamination in on-site groundwater which may eventually contribute to the contaminant plumes migrating from the NCIA.*
- *Eliminate, to the extent practicable, ingestion of groundwater affected by the site that does not attain NYSDEC Class GA Ambient Water Quality Criteria*
- *Eliminate, to the extent practicable, off-site migration of groundwater that does not attain NYSDEC Class GA Ambient Water Quality Criteria.*

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

Potential remedial alternatives for the IMC Magnetics site were identified, screened and evaluated in the report entitled Focused Groundwater Feasibility Study for the 570 Main Street Facility dated September 1999.

A summary of the detailed analysis follows. As presented below, the time to construct does not include the time required to design the remedy or procure contracts for design and construction. The time to implement is the expected time for the alternative to reach remedial objectives.

7.1: Description of Alternatives

The potential remedies are intended to address the contaminated groundwater at the site. Groundwater contamination at shallow depth (less than 90 ft bgs) is predominant at the site, however, low levels of VOC contamination may be found at depths greater than 90 ft bgs. Downgradient groundwater contamination and deep groundwater contamination will be addressed as a part of the overall investigation of groundwater contamination that is migrating from all Class 2 sites in the NCIA.

Alternative #1: No Action

Present Worth:	*$ 50,000*
Capitol Cost:	*$ 0*
Annual O&M years 1-2	*$3,000*
Annual O&M years 3-30	*$2,300*
Time to construct	*none*
Time to implement	*30 years*

The no action alternative is evaluated as a procedural requirement and as a basis for comparison. It requires continued monitoring only, allowing the site to remain in an unremediated state. This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment. The site would remain as a Class 2 site.

Groundwater use restrictions would be implemented to prevent development of the underlying groundwater as a potable or process water source without the necessary water quality treatments. Semi-annual sampling of three existing groundwater monitoring wells would be carried out for the first two years, and annual sampling conducted for the subsequent 28 years. The monitoring program would be extended or discontinued based on new data received during this period.

Alternative #2 Groundwater Extraction with Air Stripping

Present Worth:	*$ 578,000*
Capital Cost:	*$ 216,000*
Annual O&M	*$ 27,300*
Time to Construct	*6 months*
Time to Implement	*20 years*

This alternative involves extraction of ground water from a pumping well screened in Area 2 and treatment of water using air stripping technology. The extraction well would create hydraulic containment within the source area, allowing intrinsic remediation of VOCs downgradient from Area 2 to occur. Based on physical characteristics of the aquifer determined during the IRM Investigation and Focused Groundwater Investigation, and considering the limited extent of high contaminant concentrations beneath the former leaching pool in Area 2, a single extraction well is expected to

achieve a sufficient radius of capture to contain the source area while pumping at a rate of 20 to 40 gallons per minute.

A packed column or low-profile tray stripper would be capable of treating groundwater extracted by the well. Treated water would be discharged in compliance with a discharge permit.

The system would be expected to operate for a period of twenty years. To confirm the system is achieving remedial objectives, groundwater quality would be monitored at three monitoring wells semiannually for a period of twenty years. The monitoring program would be extended or discontinued based on new data received during this period.

Alternative #3 Groundwater Extraction with Liquid-Phase Carbon Treatment

Present Worth:	*$ 640,000*
Capital Cost:	*$ 216,000*
Annual C&M (years 1-20):	*$ 32,000*
Time to Construct	*6 months*
Time to Implement	*20 years*

This alternative would involve extraction of contaminated groundwater followed by carbon adsorption and discharge of treated water. The extraction well would create hydraulic containment within the source area, allowing intrinsic remediation of VOCs downgradient from Area 2 to occur. The configuration of the system would be similar to that used in Alternative 2, with the only significant difference being the method of treatment of extracted groundwater.

This system would be expected to stay in operation for twenty years. To confirm the system is achieving remedial objectives, groundwater quality would be monitored at three monitoring wells semiannually for a period of twenty years. The monitoring program would be extended or discontinued based on new data received during this period.

Alternative #4 In-Situ Oxidation (hydrogen peroxide injection)

Present Worth:	*$ 394,000*
Capitol Cost	*$ 288,000*
Annual O&M (years 1-5)	*$13,000*
Time to Construct	*6 months*
Time to Implement	*5 years*

This alternative would involve installing carbon steel application wells in the vicinity of the former leaching pool in Area 2, injecting hydrogen peroxide at controlled flows into the source area, and thereby inducing oxidation-reduction reactions that degrade organic contaminants in groundwater and saturated soil. The technology results in the degradation of organic contaminants into carbon dioxide and water. This technology has demonstrated effectiveness on dissolved VOCs.

The radius of effective treatment around an application well is expected to be on the order of 15 to 20 feet in granular soils as found at the site. Well screen lengths would be fifteen feet. In order to achieve sufficient vertical and horizontal coverage of the source area beneath the leaching pool, three well clusters of six application wells each would be installed, with the deepest well extending approximately 90 feet below the water table. Progressively more shallow application wells would be screened at regular intervals above the deepest well such that the shallowest well crosses the water table. One of the well clusters would be positioned directly beneath the leaching pool in Area 2, and the other clusters would be located downgradient of the leaching pool. Pilot testing would be required to ensure that sufficient treatment efficiency and coverage are being attained.

Two cycles of reagent application would take place, with each application occurring over a two week period. Following the second round of treatment, a round of samples would be collected at all site monitoring wells to evaluate effectiveness of the remedial technology and identify the need for additional applications.

Periodic groundwater sampling would be carried out over a five year period to evalute the effectiveness of the treatment. The monitoring period may be extended or discontinued on the basis of data acquired during the monitoring period.

7.2 Evaluation of Remedial Alternatives

The criteria used to compare the potential remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6 NYCRR Part 375). For each of the criteria, a brief description is provided, followed by an evaluation of the alternatives against that criterion. A detailed discussion of the evaluation criteria and comparative analysis is included in the Feasibility Study.

1. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance.

The data for the site shows that SCGs are exceeded for VOCs in on-site soils and groundwater. The remedy selected for this site must remediate the groundwater to Class GA standards, and soils to the cleanup objectives in TAGM #4046-Determination of Soil Cleanup Objectives and Cleanup Levels.

Since no remedial actions are included in Alternative 1, SCGs would not be met and concentrations of groundwater contaminants would remain at unacceptable levels. Achievement of groundwater SCGs could be obtained by Alternatives 2, 3 and 4.

2. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

Alternative 1 offers the least protection to human health and the environment because no active remediation would be undertaken. Alternatives 2, 3, and 4 all provide good overall protection of human health and the environment, with alternative 4 attaining site-specific cleanup levels more quickly than alternatives 2 and 3.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

Alternative 1 offers no short term effectiveness. Alternatives 2, 3 and 4 all offer excellent short term effictiveness.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the controls intended to limit the risk, and 3) the reliability of these controls.

Alternative 1 offers little long term effectiveness. VOCs would be bio-degraded over time, however this may increase the levels of the breakdown compounds in the soil and groundwater. Alternatives 2, 3 and 4 offer excellent long -term effectiveness and permanence.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

Alternative 1 offers no reduction in toxicity, mobility or volume. Alternatives 2 and 3 reduce the toxicity, mobility and volume of contaminated media by removing contaminants from the groundwater. Alternative 4 achieves the same overall effect by destroying the contaminants.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc..

Alternative 1 requires no implementation. Alternatives 2 and 3 are well proven and easily implemented. Alternative 4 is also easily implemented, although less commonly used than alternatives 2 and 3.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where

two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision. The costs for each alternative are presented in Table 2.

The estimated present worth costs range from $50,000 (Alternative 1) to $640,000 (Alternative 3). Alternatives 2 and 4 have estimated present worth costs of $578,000 and $394,000, respectively.

8. Community Acceptance - Concerns of the community regarding the RI/FS reports and the PRAP are evaluated. The "Responsiveness Summary" included in Appendix A presents the public comments received and the Department's responses to the concerns raised.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

The Department has been using a three-prong strategy in remediating Class 2 sites in the NCIA. First, sources of contamination at these sites are removed or remediated; second, groundwater contamination at and beneath each site is fully investigated and appropriate remedial actions are taken; and third, the Department is currently conducting a detailed investigation of groundwater contamination that is migrating from all Class 2 sites in the New Cassel Industrial Area. Upon completion of this groundwater investigation, a remedy will be proposed to the public. After public review, a final groundwater remedy will be selected.

In accordance with this strategy the Department has selected, based on the results of the RI and the FS and the evaluation presented in section 7, Alternative 4: In-Situ Oxidation (hydrogen peroxide injection) as the remedy for the shallow on-site groundwater contamination at the IMC Magnetics site. This alternative requires the installation of application wells in the vicinity of the former leaching pool in Area 2, injecting hydrogen peroxide at controlled flows into the source area, and thereby inducing oxidation-reduction reactions that degrade organic contaminants in groundwater and saturated soil. Pilot testing will be conducted to ensure that the system is operating at sufficient efficiency to achieve timely remediation. Should the results of the pilot test be deemed insufficiently effective by the Department, another proven groundwater remediation technology will be chosen. Alternative 4 provides for effective remediation of groundwater contamination at the site in a timely fashion. Other alternatives are less efficient or more time consuming. Downgradient (off-site) and deeper (below 90 ft bgs) groundwater contamination will be addressed as a part of the overall investigation of the groundwater contamination that is migrating from all Class 2 sites in the NCIA.

This choice of remedial measure is based upon the evaluation of the four (4) alternatives developed for this site. Alternative 1 would not provide protection for human health or the environment. This is considered a threshold criteria, and therefore Alternative 1 was dropped from consideration. Alternative 2, Groundwater Extraction with Air Stripping Treatment met all essential criteria but would take longer and be more costly than Alternative 4. Similarly, Alternative 3, Groundwater Extraction with Liquid-Phase Carbon Treatment was less efficient and be more costly than Alternative 4. Alternative 4, In-Situ Oxidation (hydrogen peroxide injection) would be protective of human health and the environment, provides a permanent solution for on-site groundwater

contamination, provides both short and long term effectiveness, and is the least costly of the alternatives that satisfy all criteria.

The estimated present worth cost to complete the proposed remedy is $344,000 which includes a capitol cost of $288,000. Annual Operation and Maintenance (O&M) costs for the first five years would be $13,000.

The elements of the selected remedy are as follows:

- *A pilot test will be conducted to ensure that the in-situ oxidation (hydrogen peroxide injection) achieves sufficient efficiency to achieve timely remediation. Should the results of the pilot test be deemed insufficient by the Department, another proven groundwater remediation technology will be chosen.*

- *As a part of the pilot study, additional groundwater data will be obtained to better define the scope of the remedy presented in this ROD.*

- *A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Any uncertainties identified during the RI/FS will be resolved,*

- *Installation of three well clusters, each containing six carbon-steel application (injection) wells.*

- *A minimum of two cycles of reagent application, each lasting approximately two weeks. Following the second round of treatment, a round of samples will be collected at all site monitoring wells to evaluate the effectiveness of the remedial technology and identify the need for additional applications.*

- *Semiannual sampling of all existing on-site groundwater monitoring wells will be conducted to monitor the effectiveness of the system for five years. This monitoring will also provide the data necessary to decide if the system reached its objectives and could be deactivated.*

- *Implementation of institutional controls and the recording of deed restrictions to restrict the future use of groundwater at this site.*

- *Off-site (downgradient) groundwater contamination will be addressed as a part of the overall investigation of the groundwater contamination that is migrating from all Class 2 sites in the NCIA.*

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken in an effort to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- Repositories for documents pertaining to the site were established.
- A site mailing list was established which included nearby property owners and residents, local political officials, the New Cassel Environmental Justice Project, local community groups, local media and other interested parties.
- Fact sheets were distributed to an extensive public contact list and conducted public meetings in May 1995, January 1996, May 1996, October 1996, May 1997, December 1997, May 1998, December 1998, May 1999, September 1999 and February 2000.
- Details of the remedial investigation were presented to the public at the September 1999 meeting. The PRAP was presented at the February 3, 2000 public meeting held at the Park Avenue School in Westbury, New York.
- In March 2000 a Responsiveness Summary was prepared and made available to the public, to address the comments received during the public comment period for the PRAP.

Table 1
IMC Magnetics
Site # 1-30-043A
Nature and Extent of Contamination
Sampling Results for Groundwater
Area 2 Geoprobe Sampling, IRM Report
Sampled in May 1996

MEDIA	CLASS	CONTAMINANT OF CONCERN	MAXIMUM OBSERVED CONCENTRATION (ppb)	SCG (ppm)
Groundwater	Volatile Organic Compounds (VOCs)	Trichloroethylene	110	5
		Tetrachloroethene	2680	5

ppb: Parts per Billion
ND: Not Detected
SCG: Standards, Criteria and Guidances

Table 1 Cont.
IMC Magnetics
Site 3 1-30-043A
Nature and Extent of Groundwater Contamination
Upgradient Sampling Results in ppb
Sampled July 1998

Contaminant	Concentration in ppb				SCGs in ppb
	MW-1	MW-4U	MW-4M	MW-4L	
Trichloroethene (TCE)	1	1.2	ND	1.5	5
Tetrachloroethene (PCE)	2.1	2.1	ND	ND	5
1,1,1 Trichloroethane	ND	7.7	11	1.8	5
cis-1,2 Dichloroethene	ND	ND	ND	ND	5
Toluene	ND	ND	1.3	1.2	50
Bromoform	ND	ND	ND	ND	5
1,1 Dichloroethene	ND	1.1	2.3	ND	5
1,1 Dichloroethane	ND	1.2	4.5	2.1	5

Table 1 Cont.
On-Site Sampling Results in ppb.
Sampled in July 1998

Contaminant	Concentration in ppb						SCGs in ppb
	MW-5U	MW-5M	MW-5L	MW-6U	MW-6M	MW-6L	
Trichloroethylene (TCE)	34	10	ND	ND	20	ND	5
Tetrachloroethylene (PCE)	160	21	2.1	51	1.6	ND	5
1,1,1 Trichloroethane	14	60	ND	2.4	5.6	1.3	5
cis-1,2 Dichloroethene	2	ND	ND	2.2	ND	ND	50
Toluene	2	ND	ND	1.9	45	100	5
Bromoform	ND	ND	ND	ND	ND	ND	5
1,1 Dichloroethene	2	18	ND	ND	1.7	ND	5
1,1 Dichloroethane	2.1	12	4.1	1.4	4.2	4.4	5

Table 1 cont.
Downgradient Sampling Results in ppb,
Sampled in July 1998

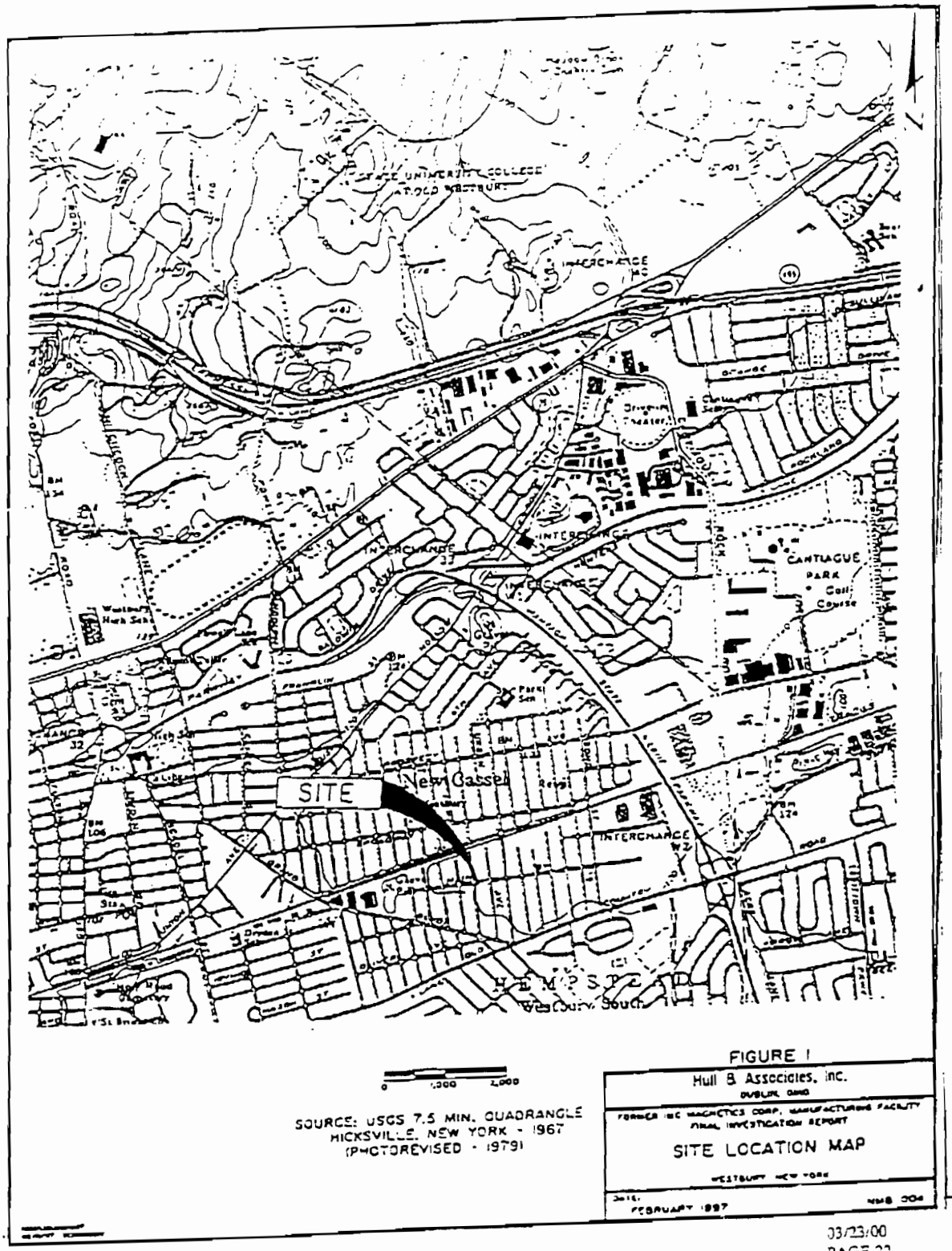
Contaminant	Concentration in ppb				SCGs in ppb
	MW-3	MW-7U	MW-7M	MW-7L	
Trichloroethene (TCE)	ND	3	ND	ND	5
Tetrachloroethene (PCE)	19	19	3.5	ND	5
1,1,1 Trichloroethane	7.6	2.3	ND	4.5	5
cis-1,2-Dichloroethene	7.7	ND	ND	ND	50
Toluene	ND	3.6	6.1	32	5
Bromoform	ND	ND	ND	1.2	5
1,1-Dichloroethene	1.1	ND	ND	1.2	5
1,1-Dichloroethane	1.2	3.3	2.1	2.0	5

Footnotes: MW- 1 Monitoring Well 1
U-upper M-middle L-lower
ppb: parts per billion

ND: Not Detected
SCGs: Standards, Criteria and Guidances

Table 2
DMC Magnetics
Site # 1-30-043A
Remedial Alternative Costs

Remedial Alternative	Capital Cost	Annual O&M	Total Present Worth
Alt. #1 No Action	$0	$2,300 to $3,000	$50,000
Alt. #2 Groundwater Extraction with Air Stripping	$216,000	$27,300	$578,000
Alt. #3 Groundwater Extraction with Liquid-Phase Carbon Treatment	$216,000	$32,000	$640,000
Alt. #4 In-Situ Oxidation (hydrogen peroxide injection	$288,000	$13,000	$394,000


SITE
New Cassel
INTERCHANGE
CANTIAGUE PARK
Golf Course
HEMPSTEAD
Westbury South
0 1,000 2,000
SOURCE: USGS 7.5 MIN. QUADRANGLE
HICKSVILLE, NEW YORK - 1967
(PHOTOREVISED - 1979)
FIGURE 1
Hull & Associates, Inc.
DUBLIN, OHIO
FORMER IMC MAGNETICS CORP. MANUFACTURING FACILITY
FINAL INVESTIGATION REPORT
SITE LOCATION MAP
WESTBURY, NEW YORK
DATE: FEBRUARY 1997
HMB 004

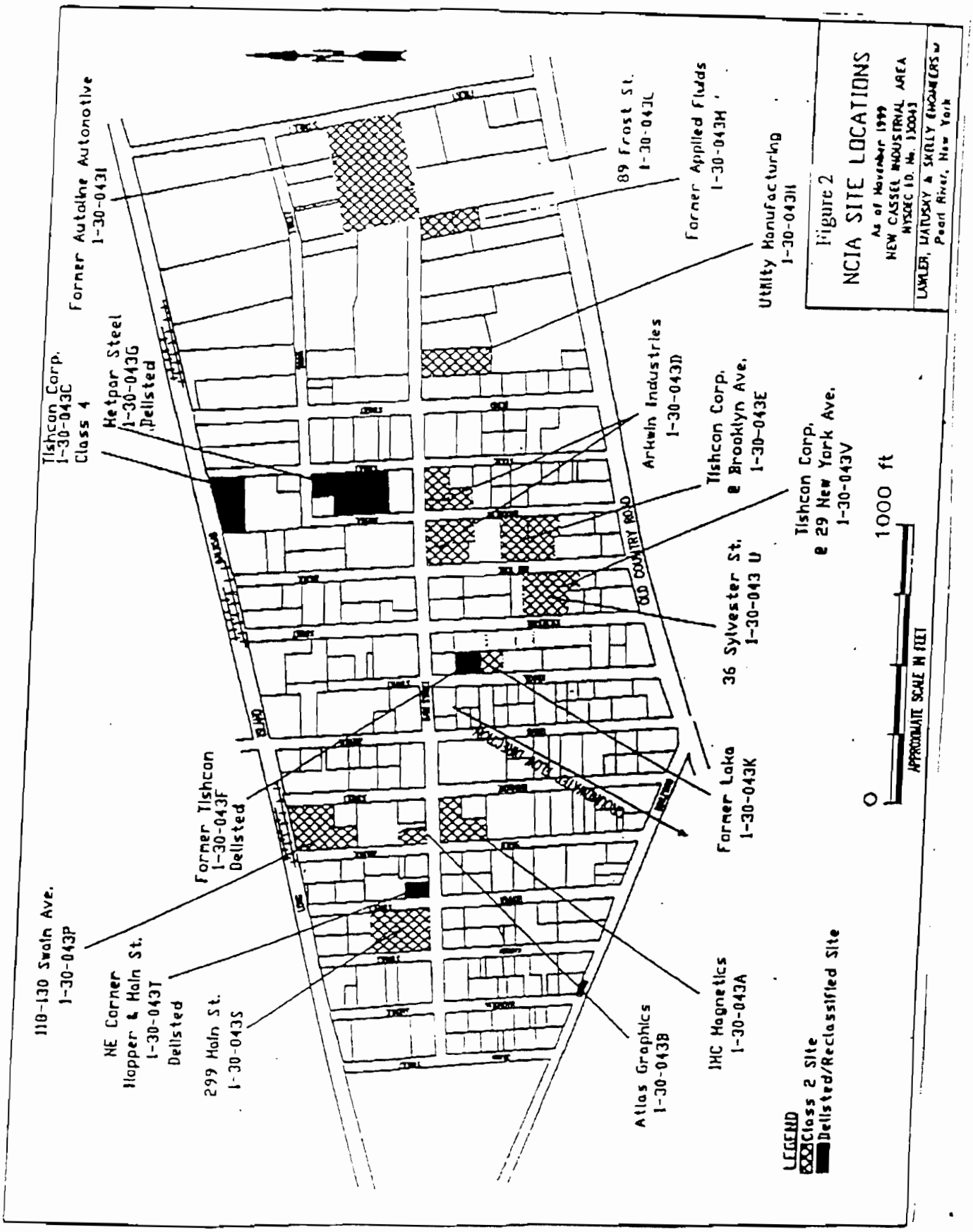


Figure 2
NCIA SITE LOCATIONS
As of November 1999
NEW CASSEL INDUSTRIAL AREA
NYSDEC ID. No. 130043
LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York
Former Autoline Automotive
1-30-043I
89 Frost St.
1-30-043L
Former Applied Fluids
1-30-043H
Utility Manufacturing
1-30-043H
Tishcon Corp.
1-30-043C
Class 4
Hetpar Steel
1-30-043G
Dellsted
Arkwin Industries
1-30-043D
Tishcon Corp.
@ Brooklyn Ave.
1-30-043E
Tishcon Corp.
@ 29 New York Ave.
1-30-043V
36 Sylvester St.
1-30-043 U
OLD COUNTRY ROAD
Former Lake
1-30-043K
Former Tishcon
1-30-043F
Dellsted
110-130 Swain Ave.
1-30-043P
NE Corner
Hopper & Main St.
1-30-043T
Dellsted
299 Main St.
1-30-043S
IMC Magnetics
1-30-043A
Atlas Graphics
1-30-043B
1000 ft
0
APPROXIMATE SCALE IN FEET
LEGEND
Class 2 Site
Dellsted/Reclassified Site

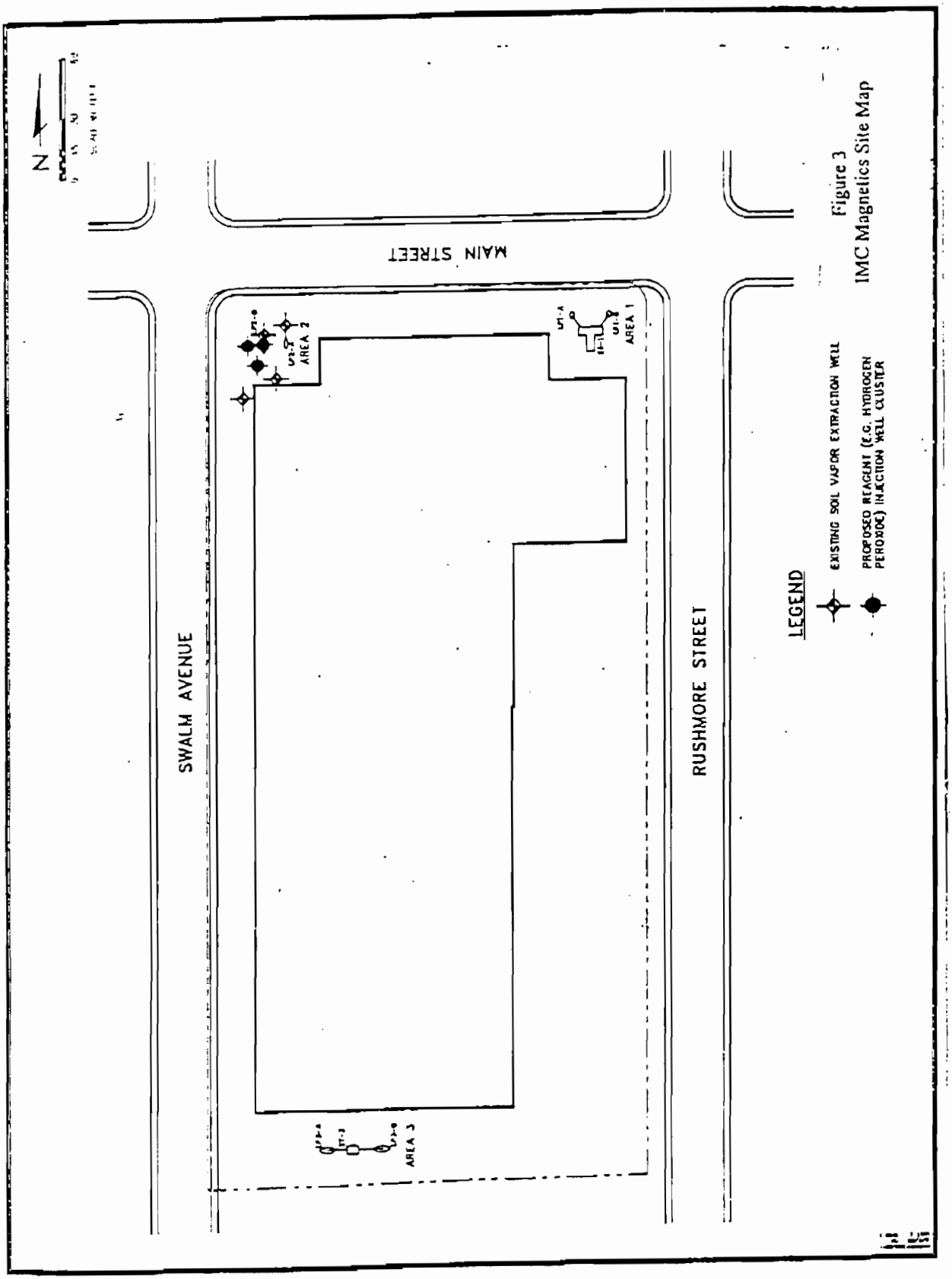


Figure 3
IMC Magnetics Site Map

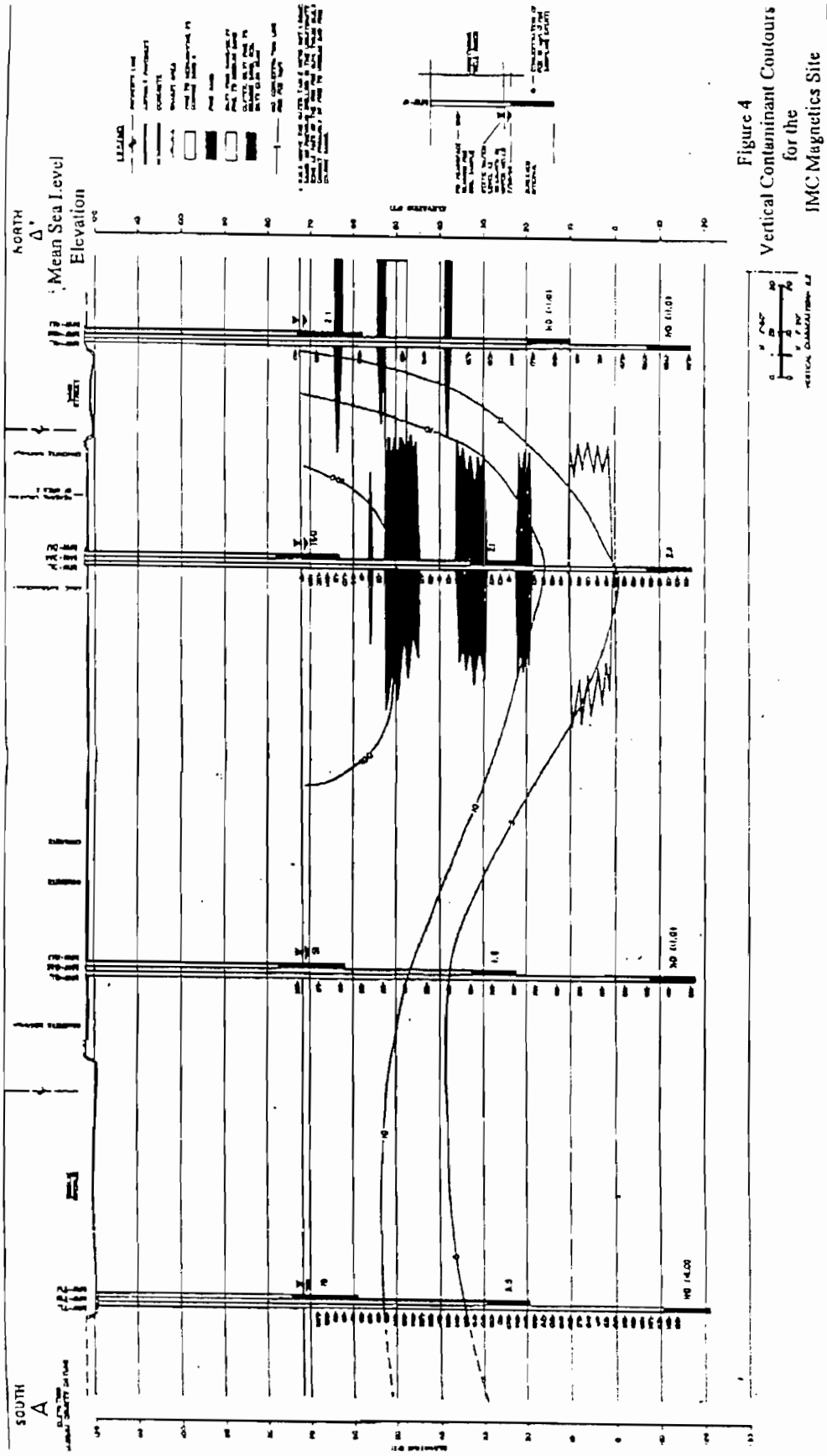


Figure 4
Vertical Contaminant Coutours for the IMC Magnetics Site

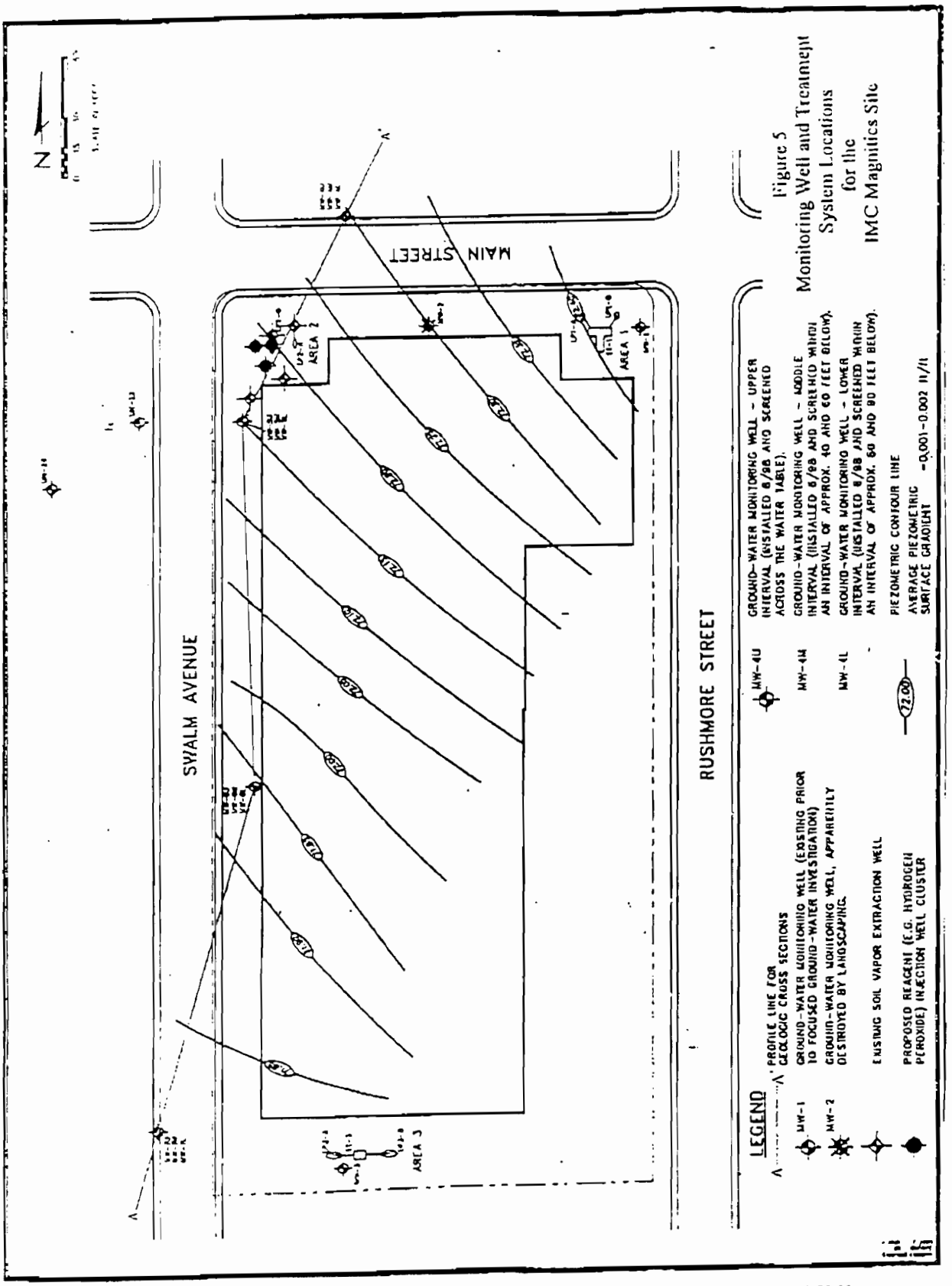


Figure 5
Monitoring Well and Treatment System Locations for the IMC Magnetics Site

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

IMC MAGNETICS
Record of Decision
Town of North Hempstead, Nassau County
Site No. 1-30-043 A
Operable Unit - 02: On-site Groundwater

The Proposed Remedial Action Plan (PRAP) for the IMC Magnetics site, was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repositories on January 6, 2000. This Plan outlined the preferred remedial measure proposed for the remediation of the contaminated groundwater at the IMC Magnetics site. The preferred remedy will utilize In-Situ Oxidation to induce oxidation-reduction reactions to degrade organic contaminants in groundwater.

The release of the PRAP was announced via a notice to the mailing list, informing the public of the PRAP's availability.

A public meeting was scheduled to be held on January 20, 2000; however due to sever winter weather the public meeting was rescheduled and conducted on February 3, 2000 and the original public comment period was extended an additional two week to February 17, 2000. A presentation of the Focused Remedial Investigation/ Feasibility Study (FRI/FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site.

The public comment period for the PRAP ended on February 17, 2000.

This Responsiveness Summary responds to all questions and comments raised at the February 3, 2000 public meeting.

The following are the comments received at the public meeting, with the NYSDEC's responses:

Comment 1: You have stated that groundwater in the New Cassel Industrial Area is contaminated. Is my family drinking contaminated groundwater?

Response 1: You are not drinking contaminated groundwater. The water that is delivered to consumers from the Town of Hempstead Department of Water is drawn from the aquifer at a depth in excess of five hundred feet below the ground surface, much deeper than the level at which the greatest levels of contamination are found (high levels of contamination are detected at depths of fifty to one hundred and twenty feet below ground surface). The groundwater that is pumped from the aquifer is then treated by an air stripper followed by carbon filtration to remove any contaminants. The water is also tested at regular intervals to ensure that the water meets drinking water standards before it is distributed to consumers.

Comment 2. The term "present worth" has been used in the discussion of the costs of remediation. What does this term mean as used in these discussion?

Response 2. Present worth is the total of capital cost and operation and maintenance (O&M) cost in today's dollars. A five percent discount rate is used to calculate cost of future O&M cost in today's dollars. Present worth is used to compare the relative costs of each alternative evaluated in the PRAP.

Comment 3. What is the groundwater standard for 1,1,1-TCA?

Response 3. The groundwater standard for 1,1,1-TCA is five (5) parts per billion (ppb).

Comment 4. Will the proposed remedy remediate the contaminated groundwater south of Old Country Road?

Response 4. The proposed remedy is designed to address contaminated groundwater up to the border of the New Cassel Industrial Area (NCIA) and Old Country Road. The remaining groundwater south of this boundary will be addressed as part of the overall NCIA off-site groundwater. The remedial systems that are already in place will result in improved groundwater quality south of Old Country Road.

Comment 5. Do you have any results from the wells located south of Old Country Road?

Response 5. Results from wells south of Old Country Road are available. They will be presented in a comprehensive Remedial Investigation report in early Spring 2000. Early warning monitoring wells south of Old Country Road and upgradient of the Bowling Green Water supply wells are sampled on a quarterly basis as a precautionary measure. Recent results from the early warning monitoring wells screened at 500 feet below ground surface (approximately the depth at which the Bowling Green supply wells draw their water) show volatile organic contamination to be non-detect. This means the contaminants of concern are at concentrations below the level of detection (<1 ppb), and well below the federal and New York State drinking water standards.

Comment 6: Has the State recovered any money from the PRPs for any of the state superfund moneys spent in the investagation and cleanup of any of the New Cassel Industrial Area sites?

Response 6: The Office of the Attorney General has negotiated a cost recovery settlement with the property owner of the Former LAKA site (Site # 1-30-043K) for $310,000. The consent decree was signed by the United States District's Judge (Eastern New York District) on December 30, 1999. This amount will reimburse the State for money spent on the Preliminary Site Assessment and Remedial Investigation/Feasibility Study (RI/FS). In addition, this money will cover former LAKA's portion of the New Cassel Industrial Area off-site groundwater RI/FS and the supplemental treatment system for the Bowling Green water supply wells.

Comment 7: Does IMC still operate at the site?

Response 7: IMC does not currently either own the property or operate a facility at the site.

Comment 8: Is the Auto Body Shop causing contamination?

Response 8: None of the investigations carried out to date have discovered contamination which could be attributed to the operations of the body shop located in the south end of the site building.

Comment 9: What are the chemical end-products of the hydrogen peroxide injection process proposed for the site?

Response 9: The technology results in the degradation of organic contaminants into carbon dioxide and water.

APPENDIX B

Administrative Record

IMC MAGNETICS
Record of Decision
Town of North Hempstead, Nassau County
Site No. 1-30-043A

1. New York State Superfund Contract, Site Investigation Report, New Cassel Industrial Area Site, Work Assignment No. D002676-2.2, Lawler, Matusky and Skelly Engineers, February, 1995.

2. Comprehensive citizen Participation Plan, New Cassel Industrial Area Site , Site ID: 1-30-043 A-K, New York State Department of Environmental Conservation, November 1995.

3. Order on Consent Index # 1-W1-0750-96-02: In the Matter of the Development and Implementation of an Interim Remedial Measure Program for an Inactive Hazardous Waste Disposal Site, New York State Department of Environmental Conservation, February 1996.

4. New York State Superfund Contract, PSA Report, New Cassel Industrial Area Site, Work Assignment No. D002676-2.2. Lawler Matusky & Skelly Engineers, March 1997.

5. Work Plan for the Investigation and Design of the Interim Remedial Measure for the Vadose Zone at the former IMC Magnetics Corp. Manufacturing Facility, Westbury, New York, Hull & Associates, March 1996.

6. Soil Vapor Extraction System Operations, Maintenance, and Monitoring Plan for the 570 Main Street Property, Westbury, New York, Hull & Associates, November 1996.

7. Final Investigation Report for the Investigation and Design of the Interim Remedial Measure for the Vadose Zone at the 570 Main Street Manufacturing Facility, Westbury, New York, Hull & Associates, Inc., February 1997

8. New York State Superfund Contract, Multisite PSA Task 4 Report, New Cassel Industrial Area Site, Work Assignment D002676-12B-1, Lawler Matusky & Skelly Engineers, March 1997.

9. Order on Consent Index # 1-W1-0750-96-02, In the Matter of the Development and Implementation of a Focused Remedial Investigation/Focused Feasibility Study of Operable Unit 2 of an Inactive Hazardous Waste Disposal Site, New York State Department of Environmental Conservation, April 1998.

10. Focused Groundwater Investigation Report at the 570 Main Street Manufacturing Facility, Westbury, NY, Hull & Associates, September 1998.

11. Focused Groundwater Feasibility Study for the 570 Main Street Manufacturing Facility, Westbury NY, Hull & Associates, September 1999.