FILE COPY

Chemical Waste Management, Inc.
Environmental Remedial Action Division
3003 Butterfield Road
Oak Brook, Illinois 60521
312/571-5460

June 18, 1986

Division of Fiscal Management
New York State Department of Environmental Conservation
50 Wolf Road, Room 619
Albany, New York 12233-0001
Attn: Ms. Barbara Bishop
Contract Unit

Re: NYSDEC RFP "Removal of Liquid and Sludge Hazardous Waste"
Decommission and Removal of 20 Above Ground Storage Tanks
Waite Road Site, Clifton Park, Saratoga County, New York
CWM-ENRAC CONTROL NO. 579-1154

Dear Ms. Bishop:

Chemical Waste Management, Inc. and its Environmental Remedial Action Division (CWM-ENRAC) is pleased to present this technical proposal for the transport and disposal of hazardous waste liquids and sludge from seven above-ground storage tanks, and the decontamination, decommission, transport and delivery to a salvage yard of twenty (20) tanks presently at the Waite Road Site in Clifton Park, New York.

The attached technical proposal, will provide NYSDEC with a safe and environmentally sound program which, assures regulatory compliance in this matter, and offers CWM-ENRAC's unique experiences and expertise with PCB decontamination and disposal, tank decommissioning and site remediation which are essential to the timely and cost efficient completion of this project.

Chemical Waste Management, Inc. is a wholly owned subsidiary of Waste Management, Inc. the worlds largest waste hauling and disposal company. Our financial strength is evidenced by a balance sheet which includes over two billion dollars in assets, and stockholders' equity in excess of one billion dollars. You can be assured that ENRAC has the financial backing to stand behind its work both during and after the completion of this project.

Moreover, all work performed by CWM-ENRAC is protected by appropriate insurance coverages under Chemical Waste Managements Comprehensive and General Liability policies, as well as, an Environmental Impairment Liability policy offering even further protections and assurances to our customers.

Within the attached technical proposal, CWM-ENRAC has outlined its approach to the implementation of this project, along with a critical path schedule for its performance. Also included, are various supplementary data related to Health, Safety, and Chemical sampling protocols.

While the attached Health and Safety Plan affirmatively responds to the substance of the State's RFP, should this contract be awarded to CWM-ENRAC additional work in this area will be accomplished as a standard element of the pre-mobilization referenced within the CPM/Gnatt Charts attached to the Scope of Work herein.

Should you have any questions, or if CWM-ENRAC can be of further assistance, please do not hesitate to call me.

Once again, many thanks for this opportunity, I look forward to discussing this proposal with you in the coming week.

Sincerely yours,

CHEMICAL WASTE MANAGEMENT, INC.

Jonathan D. Stiller
Business Development Manager
ENRAC Services

JDS/jad

cc: Mr. Fred Zillner, Project Development Manager
Mr. Norman N. Nosenchuck, Director, NYSDEC
Mr. Lee Lawrence

ENRAC - NORTHERN REGION

TECHNICAL PROPOSAL
FOR REMEDIAL ACTIVITIES
NYSDEC
WAITE ROAD SITE
SARATOGA COUNTY, NEW YORK

JUNE 18, 1986

DIVISION OF FISCAL MANAGEMENT
NYSDEC
50 WOLF ROAD, ROOM 619
ALBANY, NEW YORK 12233-0001
ATTN: MS. BARBARA BISHOP
CONTRACT UNIT

CWM-ENRAC PROJECT CONTROL NO. 579-1154

CONFIDENTIAL

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Environmental Remedial Action Division
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Business Development Manager
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cc: Mr. Fred Zillner, Project Development Manager
Mr. Norman N. Nosenchuck, Director, NYSDEC
Mr. Lee Lawrence

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1.0 EXECUTIVE SUMMARY

The New York State Department of Environmental Conservation (NYSDEC), through its Division of Solid and Hazardous Waste, has recently ordered the decommission, decontamination and removal of twenty (20) above ground storage tanks, and the remedial disposal of associated hazardous materials from a site formerly known as Albany Waste Oil Corporation/or Tri-County Waste Oil Services Company, on Waite Road (a.k.a. Waite Road Site) in the town of Clifton park in Saratoga County in the State of new York.

In order to complete this project, and in anticipation of both present and future environmental requirements of the Environmental Protection Agency (EPA) and the State of New York, NYSDEC now seeks a qualified hazardous waste contractor to analyze, package, transport and dispose of hazardous waste liquids and sludge from seven above-ground storage tanks, and to decontaminate, decommission, transport and deliver for salvage the twenty (20) tanks presently at the Waite Road Site.

It is our understanding that the implementation of this agenda will require the following remedial measures.

1) Sample and provide chemical analysis on encountered liquid and sludge contents of seven (7) above ground storage tanks, and identify contamination of the remaining thirteen (13) empty tanks;

2) Remove liquid contents from seven (7) above ground storage tanks;

3) Stabilize and fix encountered sludge as required by site conditions at the time of the implementation of the excavation process;

4) Excavate sludge residues from storage tanks;

5) Decontaminate and decommission (through demolition) twenty (20) above ground storage tanks;

6) Load and transport of hazardous waste materials (ie. stabilize sludge, liquid contents, and Rinsate to an appropriately licensed waste disposal facility;

7) Dispose of hazardous waste materials at an appropriately licensed Disposal site;

8) Prepare manifests and manage other administrative details which will insure compliance with Federal, State and local environmental requirements;

9) Load and Transport decontaminated tank parts to a salvage facility;

The participation of CWM-ENRAC is this project will provide NYSDEC with significant benefits which may otherwise not be achieved.

These include:

- Substantial liability protections for activities related to the proposed site closure; including the transportation and disposal of the hazardous wastes.
- Experienced coordination of regulatory matters with Federal and State environmental agencies.
- Single source management of the Excavation, Transport and Disposal of the above referenced waste project.

and;

- An assurance that come from the knowledge that this waste management problem is being corrected by a firm which possesses the strategic resources in personnel, with services which are safe, effective and environmentally responsible.

The following technical proposal details the scope of work, operating plan, work schedule and costs associated with the implementation of these activities.

2.0 SCOPE OF WORK

Preface

Based upon the site detail materials forwarded to CWM-ENRAC by NYSDEC (see Fig. 1 Site Drawing and NYSDEC estimates now incorporated within Exhibit 1, and entitled, Waste Analysis, Handling, Transport and Disposal Costs), our subsequent telephone conversations, the recent attendance by Mr. Fred Zillner, of our staff, at the Pre-Bid conference of June 3rd, and his subsequent visit to the Waite Road Site, CWM-ENRAC has developed a comprehensive operations plan to analyze, package, transport and dispose of hazardous waste liquids and sludge from seven above-ground storage tanks, and to decontaminate, decommission, transport and deliver for salvage the twenty (20) tanks presently at the Waite Road Site.

The attached map shows the various waste disposal, laboratory and operational facilities referenced within this Scope of Work, and delineates the responsibility of each area in response to the mitigation of spills of hazardous materials while in transport.

As a general rule, the on site project manager will coordinate the remedial activities which may be required in such an event, drawing necessary manpower an equipment from the closest project or disposal site herein referenced.

Our proposed approach to this project is outlined as follows:

Mobilization and Site Preparation:

- A CWM-ENRAC Project Manager and field crew will be mobilized to NYSDEC's Waite Road project site. Although the Project Manager will be assigned to the Waite Road project for the duration of the work, his crew size will vary depending upon the tasks required during the course of work. Additional details of project manning are provided in the section of this proposal titled "CWM-ENRAC personnel".

- The following equipment will be mobilized to the Waite Road site, as required, during the course of this project.

  Air Compressor
  2" diameter Pump
  Response Van
  Personnel Van or Pickup Truck
  Personal Protective Equipment - USEPA Level B and Level C equipment as needed.
  Miscellaneous tools
  D4 Cat Bulldozer
  Emergency Equipment Trailer
  Office Trailers
  Decontamination Trailer
  Crew Trailer
  Air Monitoring Equipment

Steam Jenny
Frac Storage Tank
Chemical Pumper Truck
Water Blaster
Cutting Torches and Tools
Crane
Butterworth Sprayhead
Lowboy Trailer

- Emergency response stations will be established near the active work area(s). These stations will be supplied with fire fighting equipment (wet and dry) and emergency first aid supplies (stretchers, showers, first aid kits, etc.).

- Barricades and flagging will be placed so as to keep unauthorized personnel out of the potentially hazardous work area(s).

- The Driveway surrounding the site will be repaired as necessary, and gravel will be laid to reduce dust airborne contaminants.

- A truck decontamination pad consisting of poured concrete will be constructed.

Chemical Analysis of Storage Tank Contents:

- Following the implementation of any necessary steps to assure worker safety, the field technicians will draw representative samples of the contents of tanks A through G.

- This material will be shipped to the CWM Research and Development Center in Riverdale, Illinois where it will undergo a complete chemical analysis process (see Appendix, Sampling and Analysis Protocol).

- Additionally, field technicians will take swab samples of Rinsate during the cleaning of the thirteen (13) empty tanks to determine the disposal disposition of waste water.

Removal of Contents Tanks A Through C:

- Using a centrifugal pump, CWM-ENRAC will remove the liquid contents of the tanks into twenty (20) gallon drums.

- It is anticipated that the centrifugal pump will remove all of the free standing liquids in these tanks, and that any remaining sludge or caked solids will be removed by hand as necessary. The sludge contents will be stabilized as required, and placed in sealed drums.

- In order to avoid further PCB contamination, by the contents of these tanks, each drum will be clearly labelled, and its

contents will be segregated from dissimilar substances and stockpiled for transport to CWM's licensed PCB incineration facility in Chicago, Illinois.

Removal of Contents Tanks D Through G:

- Hazardous materials will be removed from tanks D through G using similar techniques as described above.
- In order to avoid any adverse chemical reactions, each drum will be clearly labeled, and its contents will be segregated from dissimilar substances and stockpiled for transport to a licensed disposal facility.
- The stockpiled drums will be loaded into a enclosed trailer, for transport to a licensed waste disposal facility as determined by the chemical content of each individual drum.

Disposal:

- Depending upon the disposition of the findings of chemical analysis of the sludge, free liquids and rinsate, materials with PCB content will be transport dot CWM's SCA Incineration facility in Chicago, Illinois. Materials without PCB content but deemed to be hazardous will be transported to our Model City Hazardous Waste Disposal Facility in Model City, New York. Decontaminated and decommissioned tank parts will be transported to salvage yard in the Albany/Schenectady, New York area.

Decontamination of Tanks:

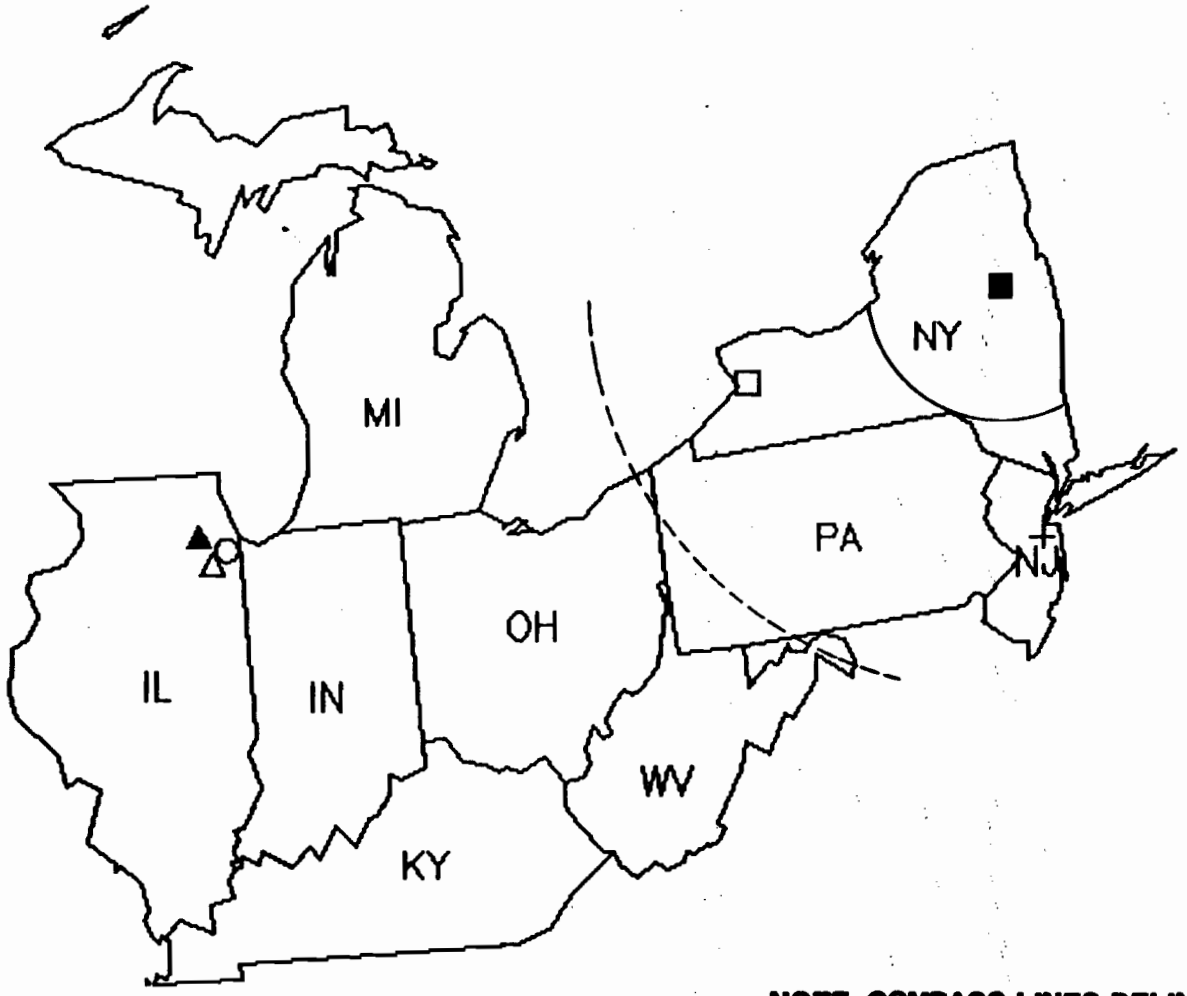
- Using high pressure water techniques and caustic cleaners, field technicians will clean tank surfaces as required.
- Rinsate will be removed by Chemical Pumper truck, to be placed in drums for transport and disposal as per the above referenced criteria.
- Remaining liquids and wet surfaces will be dried using absorbent techniques.
- Absorbent will be removed and placed in drums for transport and disposal with the rinsate materials.

Decommission of Tanks:

Using conventional cutting torches, the field crew will dismember into transportable units the decontaminated tanks.

A crane will be used to place tank parts onto a lowboy trailer for transportation to a scrap yard in the Albany/Schnectedy, New York area.

PROPOSED DISPOSAL SITES
AND SPILL PREVENTION PLAN
NYSDEC WAITE ROAD PROJECT



Legend

- □ CWM LANDFILL /MODEL CITY
- ▲ CWM-ENRAC TECHNICAL CNTR
- △ CWM-ENRAC HEADQUARTERS
- \+ CWM-ENRAC NE OPER. CNTR
- ○ CWM'S SCA INCINRATOR
- ■ CLIFTON PK/WAITE RD SITE

NOTE: COMPASS LINES DELINEATE HALF-WAY POINTS BETWEEN PROJECT AND DISPOSAL SITES.

3.0 PROJECT SCHEDULE

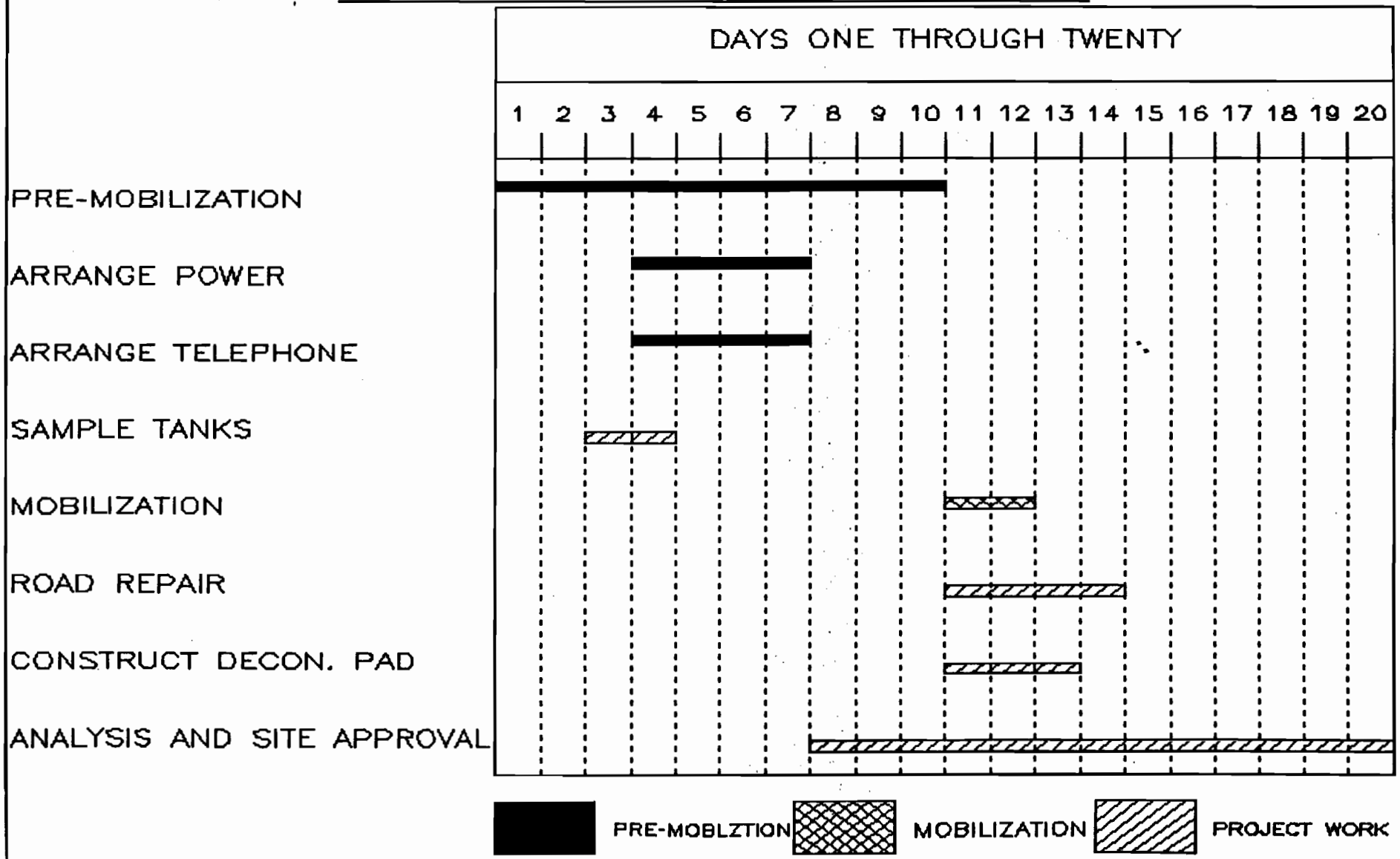
Based upon the operating assumptions set-forth below, we have developed a schedule which contemplates project completion in approximately forty-five (45) days.

ENRAC's proposed project schedule and cost estimate are predicated on the following assumptions:

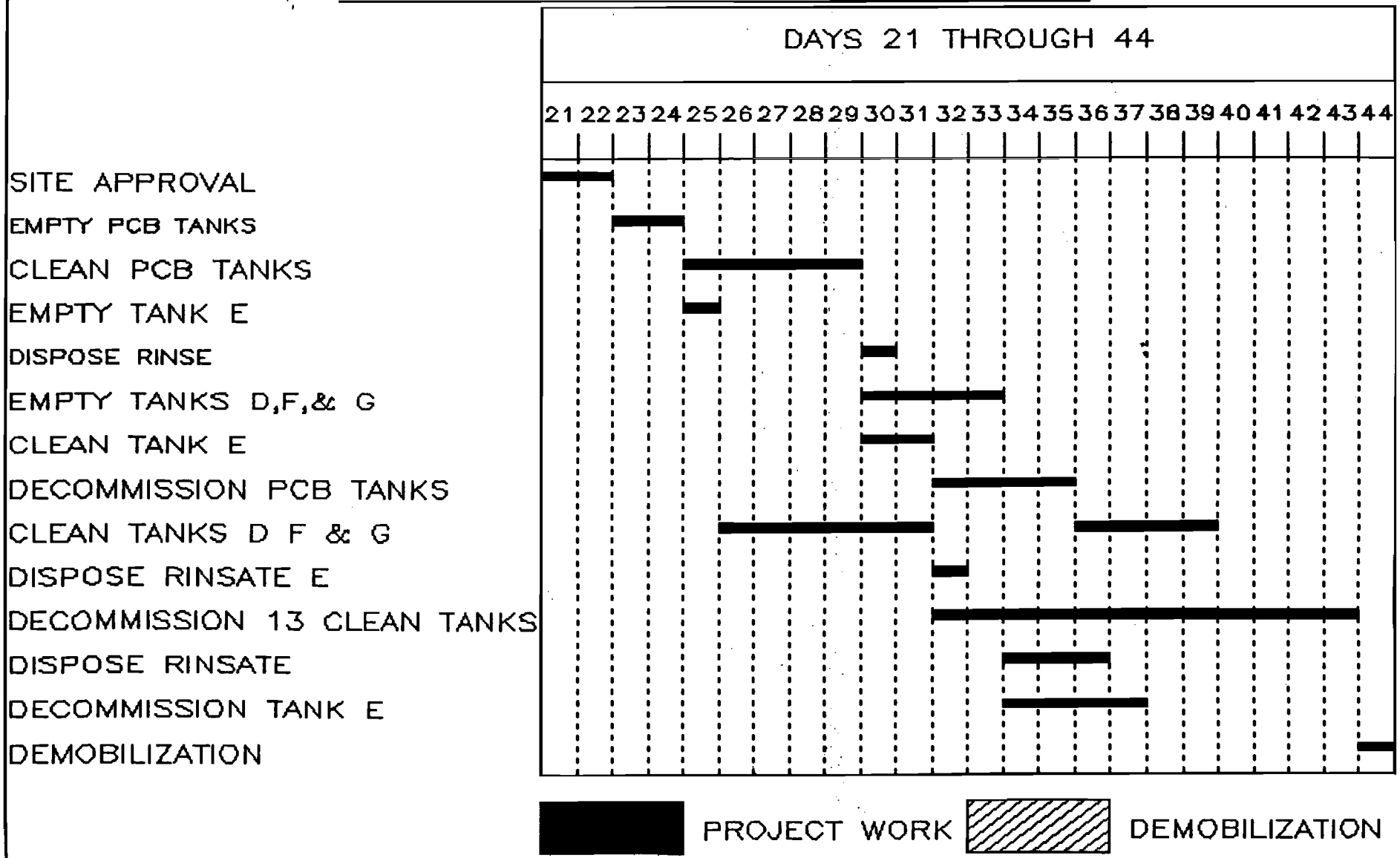
- The surface tanks and surrounding terrain are as indicated by the descriptions provided by NYSDEC, and are included as Figures 1-2 of this proposal.
- No hazardous substance will require disposal, other than by the means described in the Scope of Work.
- Inclement weather will not delay the work.
- Only surface tanks "A" through "C", and possibly the rinsate solutions from the "unlettered" empty tanks (see Fig. #1 Appendix) contain PCB contaminants.

ENRAC's project schedule is depicted on the attached Gnatt Chart, which is attached for your review.

NYSDEC DIV. OF HAZARDOUS WASTE
DECONTAMINATION / DECOMMISSION OF SURFACE TANKS
WAITE RD SITE - CLIFTON PK., NEW YORK
CWM-ENRAC CONTROL NO. 579-1154



NYSDEC DIV. OF HAZARDOUS WASTE
DECONTAMINATION / DECOMMISSION OF SURFACE TANKS
WAITE RD. STIE - CLIFTON PK., NEW YORK
CWM-ENRAC CONTROL NO. 579-1154



4.0 CWM ENRAC PERSONNEL

In order to provide NYSDEC with a precise implementation of the scope of work, referenced above; CWM-ENRAC will provide thoroughly experienced professionals with advanced degrees to manage this project.

Moreover, CWM-ENRAC maintains extensive training and certification programs for its highly trained staff of equipment operators and field technicians to assure the efficient and safe on-site operations.

We anticipate the requirement for a staff consisting of the following professionals for the conduct of the Waite Road Project.

(1) Project Manager
(1) Equipment Operator
(4) Field Technicians
(1) Project Administrator
(1) Safety Administrator
(1) Clerk
(1) Chemist

Project Management

While the responsibilities of the Equipment Operators and the Field Technicians, may be self evident, the responsibilities place on the site Project Manager are significant, and are therefore set forth below for your review.

These responsibilities include:

- Coordinating CWM-ENRAC site operations with an Operations Coordinator based in Riverdale, Illinois. This activity assures NYSDEC of the continuing oversight of CWM-ENRAC's senior management and support activities in providing for effective and efficient project performance in all of its many aspects.

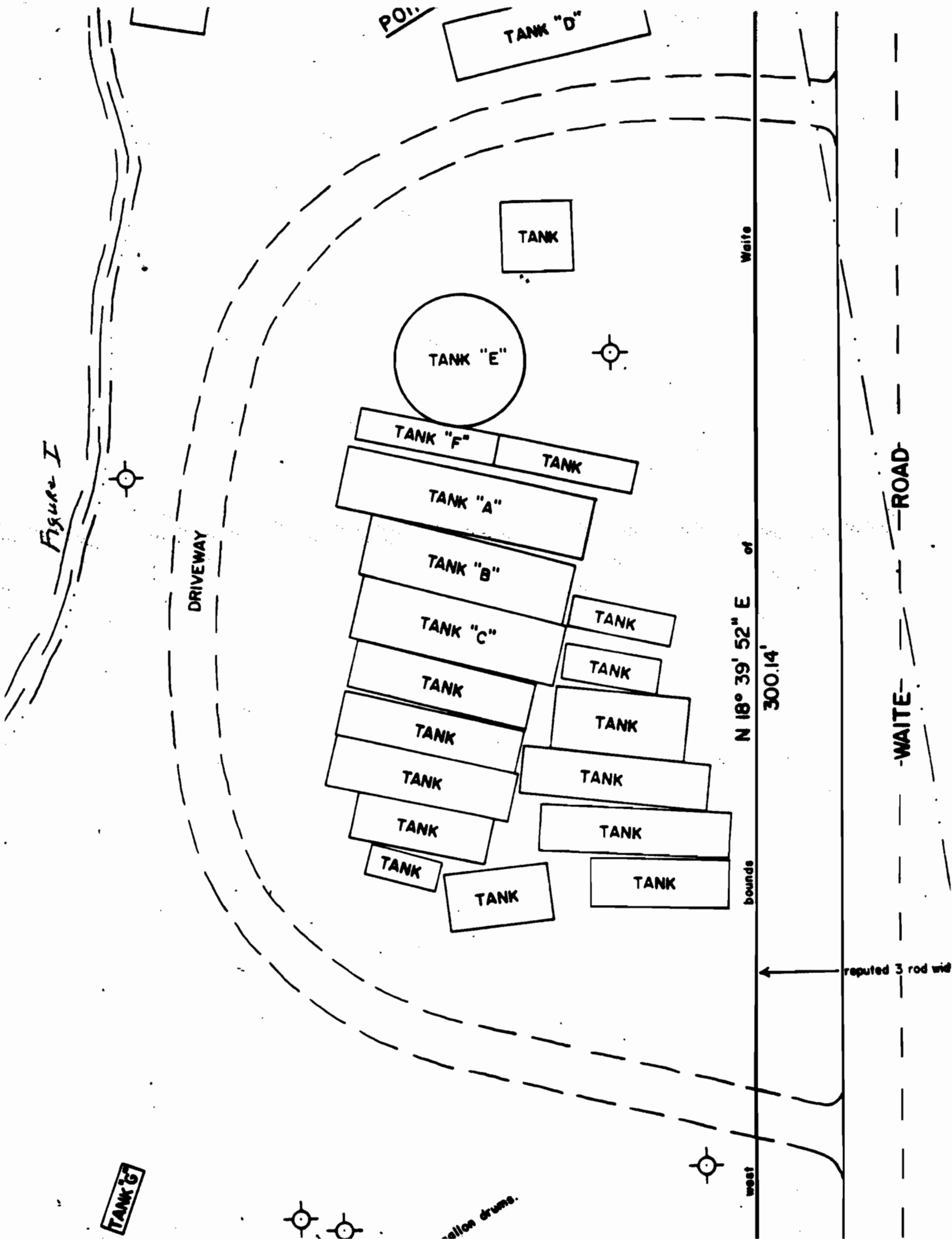
- Coordinating mobilization and demobilization activities of crew and equipment.

- Supervising daily site operations; including coordination and scheduling of transportation units and disposal deliveries.

- Handling all necessary paperwork including transportation manifests, daily time records, etc.; and

- Providing direct interface with NYSDEC representatives.

SITE DRAWINGS


TANK "D"
TANK
TANK "E"
TANK "F"
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TANK "A"
TANK "B"
TANK "C"
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TANK
TANK
TANK
DRIVEWAY
Figure I
Waite
N 18° 39' 52" E
300.14'
of
bounds
-WAITE-
ROAD
reputed 3 rod wid
west
TANK "G"

CONTRACT DOCUMENTS

The parties to the attached contract further agree to be bound by the following, which are hereby made a part of said contract:

I. This contract may not be assigned by the contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or disposed of without the previous consent, in writing, of the State.

II. This contract shall be deemed executory only to the extent of money available to the State for the performance of the terms hereof and no liability on account thereof shall be incurred by the State of New York beyond moneys available for the purpose thereof.

III. The contractor specifically agrees, as required by the provisions of the Labor Law, Section 220-e as amended, that

(a) In hiring of employees for the performance of work under this contract or any subcontract hereunder, or for the manufacture, sale or distribution of materials, equipment or supplies hereunder, no contractor, subcontractor nor any person acting on behalf of such contractor or subcontractor, shall by reason of race, creed, color, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates.

(b) no contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under his contract on account of race, creed, color, sex or national origin.

(c) there may be deducted from the amount payable to the contractor by the State under this contract a penalty of five dollars for each person for each calendar day during which such person was discriminated against or intimidated in violation of the provisions of the contract, and

(d) this contract may be cancelled or terminated by the State or municipality and all moneys due or to become due hereunder may be forfeited for a second or any subsequent violation of the terms or conditions of this section of the contract, and

(e) the aforesaid provisions of this section covering every contract for or on behalf of the state or a municipality for the manufacture, sale or distribution of materials, equipment or supplies shall be limited to operations performed within the territorial limits of the State of New York.

IV. During the performance of this contract, the contractor agrees as follows:

(a) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, age, disability or marital status.

(b) If directed to do so by the Commissioner of Human Rights, the contractor will send to each labor union or representative or workers with which the contractor has or is bound by a collective bargaining or other agreement or understanding, a notice, to be provided by the State Commissioner of Human Rights, advising such labor union or representative of the contractor's agreement under clauses (a) through (g) (hereinafter called "nondiscrimination clauses"). If the contractor was directed to do so by the contracting agency as part of the bid or negotiation of this contract, the contractor shall request such labor union or representative to furnish a written statement that such labor union or representative will not discriminate because of race, creed, color, sex, national origin, age, disability or marital status, and that such labor union or

VI. In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law and the regulations of the Comptroller of the State of New York promulgated thereunder, the contractor agrees, as a material condition of the Contract

A. That neither the contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the provisions of the United States Export Administration Act of 1969, as amended, or the Export Administration Act of 1979, as amended, or the regulations of the United States Department of Commerce promulgated thereunder;

B. That if the contractor or any substantially owned or affiliated person, firm, partnership or corporation has been convicted or subjected to a final determination by the United States Department of Commerce or any other appropriate agency of the United States of a violations of the United States Export Administration Act of 1969, as amended, or the Export Administration Act of 1979, as amended, or the regulations of the United States Department of Commerce promulgated thereunder, the contractor shall notify the Comptroller of such conviction or determination in the manner prescribed by the Comptroller's regulations.

VII. For a period of three years after the termination of this AGREEMENT, the State, DEPARTMENT, and the Comptroller of the State of New York shall have access at such reasonable times and for such reasonable periods as may be mutually agreed upon, to any of the CONTRACTOR'S books, documents, papers and records directly pertinent to the subject matter of this AGREEMENT for the purpose of making audits, examinations, excerpts or transcripts.

VIII. The DEPARTMENT shall have the right to postpone, suspend, abandon or terminate this AGREEMENT, and such actions shall in no event be deemed a breach of contract. The CONTRACTOR may terminate this AGREEMENT upon 30 (thirty) days' notice in writing to the DEPARTMENT. In the event of any termination, postponement, delay, suspension or abandonment, the CONTRACTOR shall deliver to the DEPARTMENT all data and reports pertaining to the study. In any of these events, the DEPARTMENT shall make settlement with the CONTRACTOR upon an equitable basis as determined by the DEPARTMENT, which shall fix the value of the work which was performed by the CONTRACTOR prior to the postponement, suspension, abandonment or termination of this AGREEMENT.

IX. The CONTRACTOR agrees that it will indemnify and save harmless the DEPARTMENT and the STATE OF NEW YORK from and against all losses and all claims, demands, payments, suits, actions, recoveries and judgments of every nature and description brought or recovered against it by reason of any omission or act of the CONTRACTOR, its agents, employees, or subcontractors in the execution of this AGREEMENT.

X. If this AGREEMENT was awarded after solicitation of bids or negotiation of cost, the provisions contained in this paragraph shall be applicable.

(a) By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his knowledge and belief:

1) The prices in this bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;

2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor;

XII. If the maximum contract price herein equals or exceeds $20,000, the affirmative action provisions contained in this paragraph shall be applicable.

As utilized hereinafter, the following definitions shall be applicable:

Minority business enterprise (MBE): A business at least 51 percent of which is owned and controlled by minority male/female members or in the case of publicly-owned business, at least 51 percent of the stock of which is owned and controlled by minority male/female members. The minority ownership must exercise actual day-to-day management.

Minority group members: Black American, Hispanic Americans, Asian Americans, American Indians, American Eskimos, and American Aleuts.

Black (not of hispanic origin) - A person having origins in any of the black racial groups.

Hispanic - A person of Mexican, Puerto Rican, Cuban Central or South American, or other Spanish culture or origin, regardless of race.

Asian or Pacific Islander - A person having origins in any of the original peoples of the Far East, Southeast Asia, Indian subcontinent, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Phillipine Islands, and Samoa.

American Indian or Alaskan Native - A person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition.

Women's Business Enterprise (WBE): A business at least 51 percent of which is owned and controlled by female partner(s), or in the case of a publicly-owned business, at least 51 percent of the stock of which is owned and controlled by female group members. The female ownership must exercise actual day-to-day management.

White: A person with origins in any of the original peoples of Europe, North Africa, or the Middle East who is not of hispanic origin.

NYSDEC/OAA - New York State Department of Environmental Conservation/Office of Affirmative Action.

The Contractor agrees that it will made good faith efforts to subcontract at least ( )% MBE and at least ( ) % WBE of the total value of this contract. Failure to obtain these percentages or demonstrate positive efforts to do so may lead to withholding of payments. Within 15 days of authorization to begin work or signing of the contract, whichever occurs first, the Contractor must submit an MBE/WBE utilization plan with a detailed description of the services to be provided as well as an estimated dollar amount of each subcontract. This MBE/WBE utilization plan shall identify how the contractor proposes to achieve the MBE/WBE goals stated in the Contractor's approved MBE/WBE work plan. The Contractor's proposed utilization plan shall be submitted to the Department's MBE/WBE officer.

The NYSDEC/OAA will review and approve the utilization plan if it clearly delineates methods to achieve the required MBE/WBE goals. Failure to submit and receive NYSDEC/OAA approval of the MBE/WBE utilization plan prior to the first request for payment by the Contractor shall result in the withholding of this payment by the Department. Such withholding of payments shall not relieve the Contractor of any requirements of the contract including the completion of the project. Submission of an approvable plan shall be determined a prerequisite to invocation of the provisions of the "prompt payment" bill (L. 1984 c, 153).

BID BOND

CHUBB

CHUBB GROUP of Insurance Companies

15 Mountain View Road, P.O. Box 1615, Warren, NJ 07061-1615

FEDERAL INSURANCE COMPANY

BID BOND

Bond No. **Amount $** 5% of the Total Bid Amount

Know All Men By These Presents,

That we, ENRAC, A DIVISION OF CHEMICAL WASTE MANAGEMENT, INC.
3001 Butterfield Road
Oak Brook, Illinois 60521

(hereinafter called the Principal),

as Principal, and the FEDERAL INSURANCE COMPANY, Warren, New Jersey, a corporation duly organized under the laws of the State of New Jersey, (hereinafter called the Surety), as Surety, are held and firmly bound unto

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road, Room 619
Albany, New York 12233-0001

(hereinafter called the Obligee),

in the sum of Five-Percent of the Total Bid Amount---------- Dollars ($ 5% of Total Bid-), for the payment of which we, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our seals and dated this 17th day of June, A. D. nineteen hundred and eighty-six.

WHEREAS, the Principal has submitted a bid, dated June 19th, 19 86, for

removal of liquid and sludge hazardous waste.

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a contract with the Obligee in accordance with such bid and give bond with good and sufficient surety for the faithful performance of such contract, or in the event of the failure of the Principal to enter into such contract and give such bond, if the Principal shall pay to the Obligee the difference, not to exceed the penalty hereof, between the amount specified in said bid and the amount for which the Obligee may legally contract with another party to perform the work covered by said bid, if the latter amount be in excess of the former, then this obligation shall be null and void, otherwise to remain in full force and effect.

ENRAC, A DIVISION OF CHEMICAL WASTE MANAGEMENT, INC.
Principal

By: David L. Kelly
David L. Kelly, Assistant Secretary

FEDERAL INSURANCE COMPANY

By: Jill Karls
Jill Karls, Attorney-in-Fact

POWER OF ATTORNEY

Know all Men by these Presents, That the **FEDERAL INSURANCE COMPANY**, 15 Mountain View Road, Warren, New Jersey, a New Jersey Corporation, has constituted and appointed, and does hereby constitute and appoint Donald S. Haufe, Deborah J. Broberg, Janet B. Manning, Charlene M. Barry and Jill Karls of Oakbrook, Illinois----------

each its true and lawful Attorney-in-Fact to execute under such designation in its name and to affix its corporate seal to and deliver for and on its behalf as surety thereon or otherwise, bonds or obligations on behalf of WASTE MANAGEMENT, INC. AND SUBSIDIARIES----------

in connection with bids, proposals or contracts to or with the United States of America, any State or political subdivision thereof or any person, firm or corporation. And the execution of such bond or obligation by such Attorneys-in-Fact in this Company's name and on its behalf as Surety thereon or otherwise, under its corporate seal, in pursuance of the authority hereby conferred shall, upon delivery thereof, be valid and binding upon this Company.

In Witness Whereof, the said **FEDERAL INSURANCE COMPANY** has, pursuant to its By-Laws, caused these presents to be signed by its Assistant Vice-President and Assistant Secretary and its corporate seal to be hereto affixed this 25th day of January 19 85 .

Corporate Seal

FEDERAL INSURANCE COMPANY
By
George McClellan
Assistant Vice-President

Richard D. O'Connor
Assistant Secretary

STATE OF NEW JERSEY
County of Somerset } ss.

On this 25th day of January 19 85 , before me personally came Richard D. O'Connor to me known and by me known to be Assistant Secretary of the **FEDERAL INSURANCE COMPANY**, the corporation described in and which executed the foregoing Power of Attorney, and the said Richard D. O'Connor being by me duly sworn, did depose and say that he is Assistant Secretary of the **FEDERAL INSURANCE COMPANY** and knows the corporate seal thereof, that the seal affixed to the foregoing Power of Attorney is such corporate seal and was thereto affixed by authority of the By-Laws of said Company, and that he signed said Power of Attorney as Assistant Secretary of said Company by like authority; and that he is acquainted with George McClellan and knows him to be the Assistant Vice-President of said Company, and that the signature of said George McClellan subscribed to said Power of Attorney is in the genuine handwriting of said George McClellan and was thereto subscribed by authority of said By Laws and in deponent's presence

Notarial Seal

Acknowledged and Sworn to before me
on the date above written.
Notary Public

CERTIFICATION

ALICE LEONARD
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires June 23, 1988

STATE OF NEW JERSEY
County of Somerset } ss.

I, the undersigned Assistant Secretary of the **FEDERAL INSURANCE COMPANY**, do hereby certify that the following is a true excerpt from the By-Laws of the said Company as adopted by its Board of Directors on March 11, 1953 and most recently amended March 11, 1983 and that this By-Law is in full force and effect

"ARTICLE XVIII

Section 2. All bonds, undertakings, contracts and other instruments other than as above for and on behalf of the Company which it is authorized by law or its charter to execute, may and shall be executed in the name and on behalf of the Company either by the Chairman or the Vice-Chairman or the President or a Vice-President, jointly with the Secretary or an Assistant Secretary, under their respective designations, except that any one or more officers or attorneys-in-fact designated in any resolution of the Board of Directors or the Executive Committee, or in any power of attorney executed as provided for in Section 3 below, may execute any such bond, undertaking or other obligation as provided in such resolution or power of attorney.

Section 3. All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the Vice-Chairman or the President or a Vice President or an Assistant Vice-President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed."

I further certify that said **FEDERAL INSURANCE COMPANY** is duly licensed to transact fidelity and surety business in each of the States of the United States of America, District of Columbia, Puerto Rico, and each of the Provinces of Canada with the exception of Prince Edward Island, and is also duly licensed to become sole surety on bonds, undertakings, etc., permitted or required by law.

I, the undersigned Assistant Secretary of **FEDERAL INSURANCE COMPANY**, do hereby certify that the foregoing Power of Attorney is in full force and effect.

Given under my hand and the seal of said Company at Warren, N.J., this 17th day of June 19 86

Corporate Seal

Assistant Secretary

PRINTED IN U.S.A.

ACKNOWLEDGMENT OF ANNEXED INSTRUMENT

STATE OF Illinois
COUNTY OF DuPage } ss.:

On this 17th day of June 19 86, before me personally came

Jill Karls who, being by me duly sworn, did depose and say that he is an Attorney-in-Fact of the FEDERAL INSURANCE COMPANY, and knows the corporate seal thereof; that the seal affixed to said annexed instrument is such corporate seal, and was thereto affixed by authority of the Power of Attorney of said Company, of which a Certified Copy is hereto attached, and that he signed said Instrument as an Attorney-in-Fact of said Company by like authority.

Acknowledged and Sworn to before me on the date above written

My Commission Expires

9-14-88

Carlleen E. Dalte
(Notary Public)

ENRAC - NORTHERN REGION

TECHNICAL PROPOSAL
FOR REMEDIAL ACTIVITIES
NYSDEC
WAITE ROAD SITE
SARATOGA COUNTY, NEW YORK

JUNE 18, 1986

DIVISION OF FISCAL MANAGEMENT
NYSDEC
50 WOLF ROAD, ROOM 619
ALBANY, NEW YORK 12233-0001
ATTN: MS. BARBARA BISHOP
CONTRACT UNIT

CWM-ENRAC PROJECT CONTROL NO. 579-1154

CONFIDENTIAL

Chemical Waste Management, Inc.
Environmental Remedial Action Division
3003 Butterfield Road
Oak Brook, Illinois 60521
312/571-5460

June 18, 1986

Division of Fiscal Management
New York State Department of Environmental Conservation
50 Wolf Road, Room 619
Albany, New York 12233-0001
Attn: Ms. Barbara Bishop
Contract Unit

Re: NYSDEC RFP "Removal of Liquid and Sludge Hazardous Waste"
Decommission and Removal of 20 Above Ground Storage Tanks
Waite Road Site, Clifton Park, Saratoga County, New York
CWM-ENRAC CONTROL NO. 579-1154

Dear Ms. Bishop:

Chemical Waste Management, Inc. and its Environmental Remedial Action Division (CWM-ENRAC) is pleased to present this technical proposal for the transport and disposal of hazardous waste liquids and sludge from seven above-ground storage tanks, and the decontamination, decommission, transport and delivery to a salvage yard of twenty (20) tanks presently at the Waite Road Site in Clifton Park, New York.

The attached technical proposal, will provide NYSDEC with a safe and environmentally sound program which, assures regulatory compliance in this matter, and offers CWM-ENRAC's unique experiences and expertise with PCB decontamination and disposal, tank decommissioning and site remediation which are essential to the timely and cost efficient completion of this project.

Chemical Waste Management, Inc. is a wholly owned subsidiary of Waste Management, Inc. the worlds largest waste hauling and disposal company. Our financial strength is evidenced by a balance sheet which includes over two billion dollars in assets, and stockholders' equity in excess of one billion dollars. You can be assured that ENRAC has the financial backing to stand behind its work both during and after the completion of this project.

Moreover, all work performed by CWM-ENRAC is protected by appropriate insurance coverages under Chemical Waste Managements Comprehensive and General Liability policies, as well as, an Environmental Impairment Liability policy offering even further protections and assurances to our customers.

Within the attached technical proposal, CWM-ENRAC has outlined its approach to the implementation of this project, along with a critical path schedule for its performance. Also included, are various supplementary data related to Health, Safety, and Chemical sampling protocols.

While the attached Health and Safety Plan affirmatively responds to the substance of the State's RFP, should this contract be awarded to CWM-ENRAC additional work in this area will be accomplished as a standard element of the pre-mobilization referenced within the CPM/Gnatt Charts attached to the Scope of Work herein.

Should you have any questions, or if CWM-ENRAC can be of further assistance, please do not hesitate to call me.

Once again, many thanks for this opportunity, I look forward to discussing this proposal with you in the coming week.

Sincerely yours,

CHEMICAL WASTE MANAGEMENT, INC.

Jonathan D. Stiller
Business Development Manager
ENRAC Services

JDS/jad

cc: Mr. Fred Zillner, Project Development Manager
Mr. Norman N. Nosenchuck, Director, NYSDEC
Mr. Lee Lawrence

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1.0 EXECUTIVE SUMMARY

The New York State Department of Environmental Conservation (NYSDEC), through its Division of Solid and Hazardous Waste, has recently ordered the decommission, decontamination and removal of twenty (20) above ground storage tanks, and the remedial disposal of associated hazardous materials from a site formerly known as Albany Waste Oil Corporation/or Tri-County Waste Oil Services Company, on Waite Road (a.k.a. Waite Road Site) in the town of Clifton park in Saratoga County in the State of new York.

In order to complete this project, and in anticipation of both present and future environmental requirements of the Environmental Protection Agency (EPA) and the State of New York, NYSDEC now seeks a qualified hazardous waste contractor to analyze, package, transport and dispose of hazardous waste liquids and sludge from seven above-ground storage tanks, and to decontaminate, decommission, transport and deliver for salvage the twenty (20) tanks presently at the Waite Road Site.

It is our understanding that the implementation of this agenda will require the following remedial measures.

1) Sample and provide chemical analysis on encountered liquid and sludge contents of seven (7) above ground storage tanks, and identify contamination of the remaining thirteen (13) empty tanks;

2) Remove liquid contents from seven (7) above ground storage tanks;

3) Stabilize and fix encountered sludge as required by site conditions at the time of the implementation of the excavation process;

4) Excavate sludge residues from storage tanks;

5) Decontaminate and decommission (through demolition) twenty (20) above ground storage tanks;

6) Load and transport of hazardous waste materials (ie. stabilize sludge, liquid contents, and Rinsate to an appropriately licensed waste disposal facility;

7) Dispose of hazardous waste materials at an appropriately licensed Disposal site;

8) Prepare manifests and manage other administrative details which will insure compliance with Federal, State and local environmental requirements;

9) Load and Transport decontaminated tank parts to a salvage facility;

The participation of CWM-ENRAC is this project will provide NYSDEC with significant benefits which may otherwise not be achieved.

These include:

- Substantial liability protections for activities related to the proposed site closure; including the transportation and disposal of the hazardous wastes.
- Experienced coordination of regulatory matters with Federal and State environmental agencies.
- Single source management of the Excavation, Transport and Disposal of the above referenced waste project.

and;

- An assurance that come from the knowledge that this waste management problem is being corrected by a firm which possesses the strategic resources in personnel, with services which are safe, effective and environmentally responsible.

The following technical proposal details the scope of work, operating plan, work schedule and costs associated with the implementation of these activities.

2.0 SCOPE OF WORK

Preface

Based upon the site detail materials forwarded to CWM-ENRAC by NYSDEC (see Fig. 1 Site Drawing and NYSDEC estimates now incorporated within Exhibit 1, and entitled, Waste Analysis, Handling, Transport and Disposal Costs), our subsequent telephone conversations, the recent attendance by Mr. Fred Zillner, of our staff, at the Pre-Bid conference of June 3rd, and his subsequent visit to the Waite Road Site, CWM-ENRAC has developed a comprehensive operations plan to analyze, package, transport and dispose of hazardous waste liquids and sludge from seven above-ground storage tanks, and to decontaminate, decommission, transport and deliver for salvage the twenty (20) tanks presently at the Waite Road Site.

The attached map shows the various waste disposal, laboratory and operational facilities referenced within this Scope of Work, and delineates the responsibility of each area in response to the mitigation of spills of hazardous materials while in transport.

As a general rule, the on site project manager will coordinate the remedial activities which may be required in such an event, drawing necessary manpower an equipment from the closest project or disposal site herein referenced.

Our proposed approach to this project is outlined as follows:

Mobilization and Site Preparation:

- A CWM-ENRAC Project Manager and field crew will be mobilized to NYSDEC's Waite Road project site. Although the Project Manager will be assigned to the Waite Road project for the duration of the work, his crew size will vary depending upon the tasks required during the course of work. Additional details of project manning are provided in the section of this proposal titled "CWM-ENRAC personnel".

- The following equipment will be mobilized to the Waite Road site, as required, during the course of this project.

  Air Compressor
  2" diameter Pump
  Response Van
  Personnel Van or Pickup Truck
  Personal Protective Equipment - USEPA Level B and Level C equipment as needed.
  Miscellaneous tools
  D4 Cat Bulldozer
  Emergency Equipment Trailer
  Office Trailers
  Decontamination Trailer
  Crew Trailer
  Air Monitoring Equipment

Steam Jenny
Frac Storage Tank
Chemical Pumper Truck
Water Blaster
Cutting Torches and Tools
Crane
Butterworth Sprayhead
Lowboy Trailer

- Emergency response stations will be established near the active work area(s). These stations will be supplied with fire fighting equipment (wet and dry) and emergency first aid supplies (stretchers, showers, first aid kits, etc.).

- Barricades and flagging will be placed so as to keep unauthorized personnel out of the potentially hazardous work area(s).

- The Driveway surrounding the site will be repaired as necessary, and gravel will be laid to reduce dust airborne contaminants.

- A truck decontamination pad consisting of poured concrete will be constructed.

Chemical Analysis of Storage Tank Contents:

- Following the implementation of any necessary steps to assure worker safety, the field technicians will draw representative samples of the contents of tanks A through G.

- This material will be shipped to the CWM Research and Development Center in Riverdale, Illinois where it will undergo a complete chemical analysis process (see Appendix, Sampling and Analysis Protocol).

- Additionally, field technicians will take swab samples of Rinsate during the cleaning of the thirteen (13) empty tanks to determine the disposal disposition of waste water.

Removal of Contents Tanks A Through C:

- Using a centrifugal pump, CWM-ENRAC will remove the liquid contents of the tanks into twenty (20) gallon drums.

- It is anticipated that the centrifugal pump will remove all of the free standing liquids in these tanks, and that any remaining sludge or caked solids will be removed by hand as necessary. The sludge contents will be stabilized as required, and placed in sealed drums.

- In order to avoid further PCB contamination, by the contents of these tanks, each drum will be clearly labelled, and its

contents will be segregated from dissimilar substances and stockpiled for transport to CWM's licensed PCB incineration facility in Chicago, Illinois.

Removal of Contents Tanks D Through G:

- Hazardous materials will be removed from tanks D through G using similar techniques as described above.
- In order to avoid any adverse chemical reactions, each drum will be clearly labeled, and its contents will be segregated from dissimilar substances and stockpiled for transport to a licensed disposal facility.
- The stockpiled drums will be loaded into a enclosed trailer, for transport to a licensed waste disposal facility as determined by the chemical content of each individual drum.

Disposal:

- Depending upon the disposition of the findings of chemical analysis of the sludge, free liquids and rinsate, materials with PCB content will be transport dot CWM's SCA Incineration facility in Chicago, Illinois. Materials without PCB content but deemed to be hazardous will be transported to our Model City Hazardous Waste Disposal Facility in Model City, New York. Decontaminated and decommissioned tank parts will be transported to salvage yard in the Albany/Schenectady, New York area.

Decontamination of Tanks:

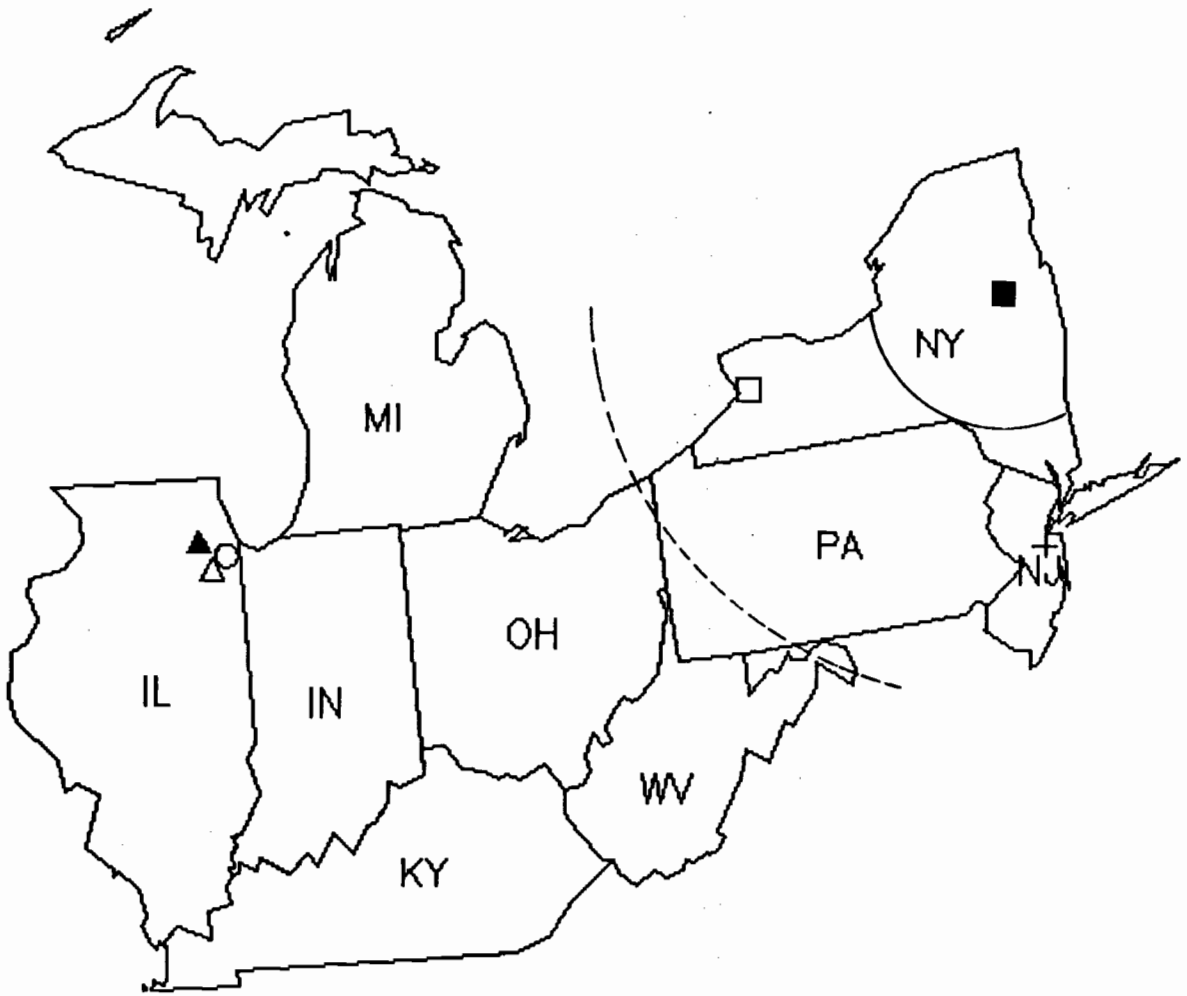
- Using high pressure water techniques and caustic cleaners, field technicians will clean tank surfaces as required.
- Rinsate will be removed by Chemical Pumper truck, to be placed in drums for transport and disposal as per the above referenced criteria.
- Remaining liquids and wet surfaces will be dried using absorbent techniques.
- Absorbent will be removed and placed in drums for transport and disposal with the rinsate materials.

Decommission of Tanks:

Using conventional cutting torches, the field crew will dismember into transportable units the decontaminated tanks.

A crane will be used to place tank parts onto a lowboy trailer for transportation to a scrap yard in the Albany/Schnectedy, New York area.

PROPOSED DISPOSAL SITES
AND SPILL PREVENTION PLAN
NYSDEC WAITE ROAD PROJECT



Legend

- □ CWM LANDFILL /MODEL CITY
- ▲ CWM-ENRAC TECHNICAL CNTR
- △ CWM-ENRAC HEADQUARTERS
- \+ CWM-ENRAC NE OPER. CNTR
- ○ CWM'S SCA INCINRATOR
- ■ CLIFTON PK/WAITE RD SITE

NOTE: COMPASS LINES DELINEATE HALF-WAY POINTS BETWEEN PROJECT AND DISPOSAL SITES.

3.0 PROJECT SCHEDULE

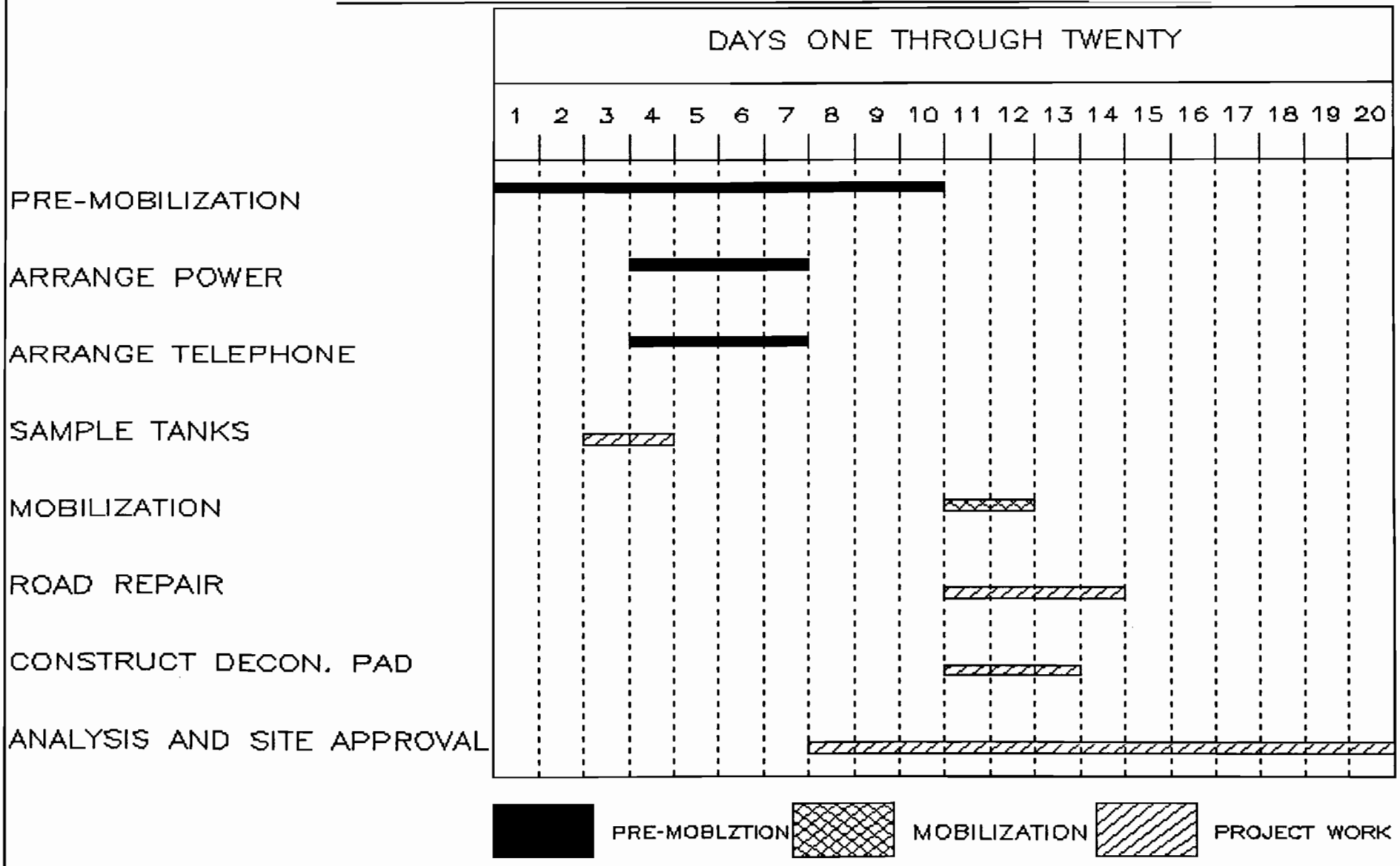
Based upon the operating assumptions set-forth below, we have developed a schedule which contemplates project completion in approximately forty-five (45) days.

ENRAC's proposed project schedule and cost estimate are predicated on the following assumptions:

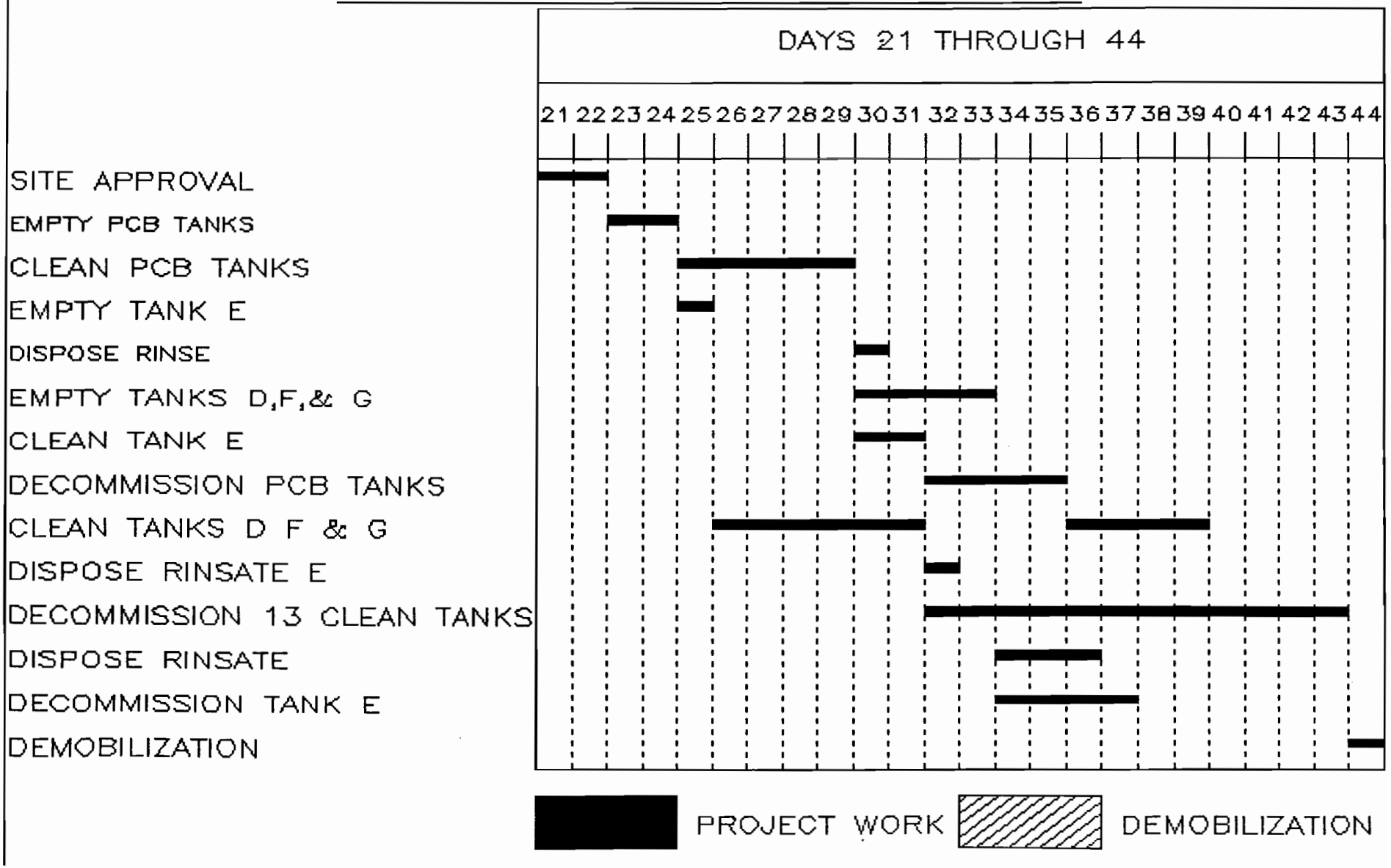
- The surface tanks and surrounding terrain are as indicated by the descriptions provided by NYSDEC, and are included as Figures 1-2 of this proposal.
- No hazardous substance will require disposal, other than by the means described in the Scope of Work.
- Inclement weather will not delay the work.
- Only surface tanks "A" through "C", and possibly the rinsate solutions from the "unlettered" empty tanks (see Fig. #1 Appendix) contain PCB contaminants.

ENRAC's project schedule is depicted on the attached Gnatt Chart, which is attached for your review.

NYSDEC DIV. OF HAZARDOUS WASTE
DECONTAMINATION / DECOMMISSION OF SURFACE TANKS
WAITE RD SITE - CLIFTON PK., NEW YORK
CWM-ENRAC CONTROL NO. 579-1154



NYSDEC DIV. OF HAZARDOUS WASTE
DECONTAMINATION / DECOMMISSION OF SURFACE TANKS
WAITE RD. STIE - CLIFTON PK., NEW YORK
CWM-ENRAC CONTROL NO. 579-1154



4.0 CWM ENRAC PERSONNEL

In order to provide NYSDEC with a precise implementation of the scope of work, referenced above; CWM-ENRAC will provide thoroughly experienced professionals with advanced degrees to manage this project.

Moreover, CWM-ENRAC maintains extensive training and certification programs for its highly trained staff of equipment operators and field technicians to assure the efficient and safe on-site operations.

We anticipate the requirement for a staff consisting of the following professionals for the conduct of the Waite Road Project.

(1) Project Manager
(1) Equipment Operator
(4) Field Technicians
(1) Project Administrator
(1) Safety Administrator
(1) Clerk
(1) Chemist

Project Management

While the responsibilities of the Equipment Operators and the Field Technicians, may be self evident, the responsibilities place on the site Project Manager are significant, and are therefore set forth below for your review.

These responsibilities include:

- Coordinating CWM-ENRAC site operations with an Operations Coordinator based in Riverdale, Illinois. This activity assures NYSDEC of the continuing oversight of CWM-ENRAC's senior management and support activities in providing for effective and efficient project performance in all of its many aspects.

- Coordinating mobilization and demobilization activities of crew and equipment.

- Supervising daily site operations; including coordination and scheduling of transportation units and disposal deliveries.

- Handling all necessary paperwork including transportation manifests, daily time records, etc.; and

- Providing direct interface with NYSDEC representatives.

5.0 QUALIFICATIONS AND EXPERIENCE

An Executive Overview

In the early-1970's, public concern about the effects of industrial pollution on the national health and welfare; prompted the Congress of the United States to enact legislation for the protection of the environment.

With the passage of these laws, Congress created January 7, 1971 is not the mid-seventies Environmental Protection Agency (EPA) to assure both the enforcement of the Environmental Protection Act, and to reduce the impacts of pollution through the development and management of the regulatory process.

In concert with the spirit of this action, many state legislatures enacted environmental laws of their own which, more often than not, proved to be even more stringent than the regulations developed by the Federal EPA.

The result of this process has presented modern industrial managers and corporations with a unique challenge which mandates both a continuing concern about corporate liabilities, which are stipulated within the body of environmental law, along with a need to project, to the American public, a positive image of willing participation in this effort of national proportions.

The Environmental Remedial Action (or ENRAC) Division of Chemical Waste Management, Inc. (CWM) responds to these needs by offering a single source of services to its clients to assure them of safe, effective, cost efficient, and environmentally sound solutions to problems caused by uncontrolled hazardous waste.

These solutions have been specifically designed to markedly reduce the on-going liabilities of industrial firms originating from the manufacture or use of toxic substances by providing a range of services which assure the remediation of these difficulties with the necessary expertise and resources.

Functionally organized to effectively respond to the unique needs of its clients, CWM-ENRAC can provide for these special requirements throughout the United States. To perform these assignments success-fully, CWM-ENRAC fields a team from its highly qualified staff to work with client companies to develop and implement practical solutions to specific site remediation problems.

With diverse educational backgrounds and experiences, CWM-ENRAC offers an uncommon staff, many of whom possess both undergraduate and graduate degrees in such fields as Analytical Chemistry, Chemical, Civil and Environmental Engineering, Biochemistry, Biology, Geology, Health Sciences, as well as Accounting and Business Administration.

Chemical Waste Management, Inc. the nation's largest and most experienced provider of hazardous waste services, along with its ENRAC Division, offers clients an impressive array of resources to effect a comprehensive "cradle to grave" program of hazardous waste site remediation including all aspects of area decontamination, and the transport, treatment, storage and disposal of hazardous wastes. These resources include:

° Operation of 16 corporately owned hazardous waste management facilities strategically placed throughout the United States.

These facilities offer our clients a complete scope of "State of the Art" technologies in environmental protection and chemical waste disposal, from burial in continually monitored and controlled landfills, through incineration and advanced solvent treatment and recovery services.

° A fleet of more than 1,000 vehicles which are exclusively dedicated to the special requirements of chemical waste removal.

This impressive inventory of vehicles is manned by drivers who are specialists in their own right, as their safety records will attest.

This safety record which is "second to none", in the industry, when combined with the CWM-ENRAC total management concept, offers clients the unique opportunity to markedly reduce the risks associated with the movement of hazardous substances.

° A fleet of sophisticated mobile laboratories which are individually equipped to meet the specific needs of each remediation project.

To support these laboratories, CWM-ENRAC maintains one of the most technically sophisticated private laboratories in the nation.

Exclusively devoted to the analysis of hazardous waste materials, CWM's Riverdale, Illinois Technical Center works with ENRAC Project Managers, Field Engineers and Safety Specialists to properly identify chemical waste components to assure our clients of cost efficient services which comply with State and Federal Regulations.

° To facilitate its on-going field operations, CWM-ENRAC also maintains a complete inventory of:

Construction equipment to address the needs of virtually any site remediation project.

A fleet of self contained decontamination trailers, office trailers, and 20,000 gallon Frac storage tanks.

Activated carbon treatment and heavy metal precipitation units for removing benzene, toluene and PCB's from water.

Safety gear and protective clothing, air and ground monitoring equipment, and a complete compliment of specialized tools.

° As a major subsidiary of Waste Management, Inc., the world's largest waste handling company, CWM-ENRAC can offer its clients, the financial security of doing business with a firm which can offer substantial liability protections both during and after the completion of projects.

As the law implies, the many problems posed by hazardous wastes to our world will not go away on their own. They must be met with a unique combination of talents and resources which can accomplish the task at hand with safety, cost efficiency and environmental responsibility.

Our clients recognize that the challenge, imposed by the emerging concern for the environment, requires the sound business judgement to view chemical wastes, and the liabilities associated with them, as responsibilities which are not to be easily put aside. As a direct result of that decision, these firms have markedly reduced this exposure while enjoying an enhancement of their corporate image within the communities in which they operate.

Simply stated, we offer our clients a service, to utilize the vast resources at our disposal to safely manage their particular chemical waste management situation in a manner which will assure them of a solution without any surprises.

SELECTED ENRAC CLIENT FIRMS

AT&T
Allied Chemical
Ashland Oil Company
Benjamin Moore
Caterpillar Tractor
Corning Glass Company
Dana Corporation
FMC
Firestone Tire & Rubber Co
Fram Corporation
General Electric
Mobile Oil
Potomic Electric Power Co.
Prestolite
Rexnard-Thiem Corporation
Union-Carbide
W.R. Grace
Westinghouse Corp.
Whirlpool Corporation
Witco Chemical

References to be provided upon request.

6.0 FEES, TERMS AND CONDITIONS

ENRAC's estimated fee for work described herein is detailed as in the document entitled "Exhibit 1" NYSDEC Proposed Service Costs which is enclosed and is incorporated by reference as a part of this proposal.

Moreover, this work shall be governed by NYSDEC's standard contract for the referenced work, and the required proposal bond (see Appendix). ENRAC will begin this work within 30 days of the return of these, appropriately signed, documents.

The Unit Price contained within Exhibit 1, will be used to prepare all invoices which shall be issued on a Net 30 basis. Daily work sheets, counter signed by a NYSDEC representative will form the basis of ENRAC's billings.

Additionally, included within Exhibit 1 is CWM-ENRAC's "Not to Exceed" price for this work, as required by NYSDEC's Request for Proposal.

EXHIBIT 1

REMOVAL OF LIQUID AND SLUDGE HAZARDOUS WASTE
AT THE WAITE ROAD SITE
WASTE ANALYSIS, HANDLING, TRANSPORT AND DISPOSAL COSTS

ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE NUMERICAL	UNIT PRICE WRITTEN (DOLLARS)	TOTAL
.	PCB Oil:					
	>500 ppm	Gal.	1,200	$ 7.80 gal	Seven & 80/100	$9,365.
	50ppm-500 ppm	Gal.	*1	$ 7.80	Seven & 80/100	7.80
	<50ppm	Gal.	*1	$ 7.80	Seven & 80/100	7.80
2.	PCB Sludge/Solids					
	>500 ppm	Cy.	1.5	$2,760.00 cy	Two Thousand Seven Hundred Sixty	4,140.
	50ppm-500 ppm	Cy.	*1	$2,760.00	Two Thousand Seven Hundred Sixty	2,760.
	< 50 ppm	Cy.	1.5	$2,760.00 cy	Two Thousand Seven Hundred Sixty	4,140.
.	PCB Non-Oil Liquids					
	>500 ppm	Gal.	*1	$ 65.20	Sixty Five and 20/100	65.20
	50ppm-500 ppm	Gal.	*1	$ 65.20	Sixty Five and 20/100	65.20
	<50 ppm	Gal.	*1	$ 65.20	Sixty Five and 20/100	65.20
4.	Chlorinated (>5%) Solvents					
	Liquid	Gal.	3,200	$ 4.83 gal.	Four & 83/100	15,456.
.	Non-Chlorinated (<5%) Solvents					
	Solid	Cy.	*1	493.35 cy.	Four Hundred Ninety Three & 35/100	493.35
	Liquid	Gal.	600	8.97 gal.	Eight & 97/100	5,382.
o.	Aqueous:					
	Hazardous	Gal.	38,600	2.00 gal.	Two and 00/100	77,200.
	Non-Haz.	Gal.	*1	3,35 gal.	Three and 35/100	3.35
7.	Mobilization & Demobilization	Lump	110,262	Lump Sum of One Hundred Ten Thousand Two Hundred Sixty Two		110,262.
.	Decontamination Of 7 Tanks					
	Tanks A-g (Fig. 1)	Lump	138,613	Lump Sum of One Hundred Thirty Eight Thousand Six Hundred Thirteen		138,613.
9.	Decommission of all 20 tanks Tanks (Fig. 1)	Lump	31,450	Lump Sum of Thirty One Thousand Four Hundred Fifty		31,450.
					TOTAL	399,475.90
					NOT TO EXCEED	399,856.00

* These estimated quantities may exist based on site conditions.

+ Unit prices must include all costs for analysis, handling, disposal, transport, overhead and profit, etc.

Item 9 Decommission of the twenty (20) tanks consists of removal, transportation and delivery to a salvage yard. These tanks shall be inspected and approved for removal by the State on-site coordinator. Decontamination, if necessary, for any of the other remaining tanks, excluding tanks A-G, shall be paid on a time and material basis thru a change order. All tanks containing PCB's will be decontaminated as required by 40 CFR 761:43.

The quantities presented were based on field measurements taken between 1983 and 1985. Bidders may wish to verify quantities. Some tanks have tops which are open and quantities within these tanks may vary due to rainfall and evaporation.

WAITE ROAD SITE

DESIGNATED EMERGENCY FACILITY AND SERVICES

ALBANY MEDICAL CENTER

ALBANY, NEW YORK

EMERGENCY AMBULANCE SERVICE

518/463-1234

7.0 HEALTH AND SAFETY

Purpose and Scope

This Health and Safety Program is intended to prescribe the acceptable standard requirements for worker protection on all CWM-ENRAC projects, and is consistent with established CWM-ENRAC policies and procedures, as well as, state and federal OSHA regulations.

While site specific operating conditions are expected to vary, thus requiring modification of this directive, no such variance will be authorized without the prior approval by the ENRAC Health and Safety Department through an appropriate addenda to this plan.

All ENRAC site personnel, site visitors, and subcontractor personnel are subject to the provisions of this directive which is set forth as follows:

Key Personnel and Responsibilities

The following CWM-ENRAC personnel are responsible for the implementation of this directive:

Project Manager:

The site project manager is responsible for the overall compliance of all personnel on the project site with the health and safety objectives of this directive. This includes:

- Field Supervision
- Maintaining contamination control zones
- Enforcement of safe work practices and decontamination procedures
- Ensuring proper use of personal protective equipment and;

- Communicating modified safety requirements to site personnel.

ENRAC Safety Officer:

The ENRAC Safety Officer is responsible for technical field coordination of the health and safety program. Specific site duties will include:

- Establishing site work zones
- Decontamination stations
- Conducting periodic safety inspections
- Establishing emergency egress points, assembly areas, and first-aid stations
- Implementing a site emergency warning/communications system(s)
- Maintaining the local medical surveillance and emergency medical treatment programs
- Conducting site specific employee training and information sessions
- Conducting air monitoring
- Assigning appropriate protection levels for site personnel
- Auditing safety recordkeeping compliance
- Service as technical liaison to regulatory agency personnel on matters related to occupations safety and health.

Medical Surveillance

Examination Requirements

All site personnel, including any subcontractors, shall have successfully completed a preplacement or periodic/update medical examination prior to their assignment to the project. The evaluation shall include, at a minimum:

1. A review of medical, personal, family and occupational histories;

2. Physical examination and clinical evaluation of the employee's ability to: Wear respiratory protective devices and protective apparel, to tolerate strenuous work and heat stress conditions and to work with hazardous materials;

3. Clinical tests:

a. PA chest x-ray

b. Pulmonary function (FEV 1.0) and (FVC)

c. Audiometry (approved booth)

d. CBC with differential, hematocrit

e. Blood chemistry (SMAC 23 test survey)

f. Urinalysis

g. Vision screening; and

4. Any other tests deemed appropriate by the examining physician.

Emergency Medical Treatment

Emergency medical treatment is integrated into the overall emergency contingency plan. The provisions for emergency medical treatment include:

1. Training in first-aid and CPR for key project personnel.

2. Appropriate first-aid and CPR supplies and equipment.

3. Specific written medical emergency decontamination procedures, including written instructions for ambulance crews and hospital personnel as appropriate.

4. Conspicuously posted notices giving the names, phone numbers, addresses, and procedures for contacting the on-call physician, ambulance, medical facility, emergency fire and police services, and poison control hotlines.

5. Appropriate maps and directions to emergency medical facilities.

6. Periodic review with site personnel of the emergency medical treatment procedures.

7. Prompt and accurate reporting of all accidents and incidents consistent with established procedures.

Employee Training and Information

A. Initial Training

1. All project employees must be familiar with an approved orientation and basic safety program before their assignment to the project.

2. This coursework shall be a combination of formal classroom instruction, demonstration, and practical exercises in the following subject areas:

   a. Hazard Awareness: describing the chemical, physical, biological and radiological hazards that may be encountered in the workplace.

   b. Employee Rights and Responsibilities: describing corporate safety operating philosophy, employee information sources, and material safety data sheets.

   c. Safe Work practices: including the purpose for and application of work zones, contamination control and decontamination procedures.

   d. Personal Protective Equipment: including instruction in the selection use, maintenance, and limitations of the equipment; demonstration of proper use; and practice drills.

e. Emergency Preparedness: describing the employee's site specific duties during emergency conditions.

f. Training Evaluation: including a written examination of all material concerns in the training course.

B. Refresher Training

Regular refresher training in basic hazard awareness shall be provided to employees at least annually.

C. Special Training

Many standards promulgated by OSHA explicitly require the employer to train employees in specific health and safety aspects of their jobs. Some OSHA standards require employers to limit certain job assignments to employees who are "certified", "competent", or "qualified", meaning that they have had special previous training. Examples of job assignments that require special training include, but are not limited to:

1. Welding, cutting and other hot work.
2. Confined space entry.
3. Fork lift truck operation.
4. Hazardous materials handling (e.g. - PCB's)
5. First aid and CPR.
6. Fire fighting
7. Compressed gas and compressed air equipment use.

D. Site Safety Officer Training

The minimum requirements for designation as a Site Safety Officer include successful completion of an approved program training and a minimum of two years

work experience in the areas of hazardous chemical handling, transportation and disposal.

E. Employee Notification/Information

The Site Safety Officer shall provide proper employee information and notification including air sampling results and material safety data sheet information to all affected site works.

F. Recordkeeping

The Site Safety Officer or his designee shall maintain appropriate training records on site, accordance with approved requirements.

General Safe Work Practices

A. Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand to mouth transfer and ingestion of material is prohibited in any area where the possibility of contamination exists.

B. Hands must be thoroughly washed upon leaving a contaminated or suspected contaminated area before eating, drinking, or any other activities transpire.

C. Employees shall be required to shower at the end of the work shift whenever decontamination procedures for outer garments are in effect.

D. Legible and understandable precautionary labels shall be prominently affixed to containers of materials, mixtures, scrap, wastes, debris, and contaminated clothing.

E. Contaminated protective equipment shall not be removed from the regulated area until it has been cleaned or properly packaged and labeled for disposal.

F. Removal of materials from protective clothing or equipment by blowing, shaking, or any other means which may disperse materials into the air is prohibited.

G. Portable or fixed emergency shower/eyewash stations shall be strategically located throughout the regulated area.

H. A deluge shower or hose and nozzle shall be available in the Contamination Zone to wash down heavily contaminated personnel before doffing protective clothing.

I. Personnel will be cautioned to inform each other of subjective symptoms of chemical exposure such as headaches, dizziness, nausea and irritation of the respiratory tract, eyes, or skin.

J. No excessive facial hair which interferes with a satisfactory fit of the mask-to-face seal, will be allowed on personnel required to wear respiratory protective equipment.

K. All respiratory protection selection, use, and maintenance shall meet the requirements of 29 CRF 1910.134 and recognized consensus standards (AIHA, ANSI, NIOSH).

L. Adverse climatic conditions, heat and cold, are important considerations in planning and conducting site operations. The effects of ambient temperature can cause physical discomfort, loss of efficiency, personal injury, and increased accident probability. In particular, heat stress due to protective clothing decreasing body ventilation is an important factor. One or more of the following recommendations will help reduce heat stress. Their applicability is dependent on evaluating the climatic conditions specific to the operations.

1. Provide plenty of liquids to replace loss of body fluids. Employees should replace water and salts lost from sweating. Use either a 0.1% salt water solution, more heavily salted foods, or commercial mixes such as Gatorade. The commercial mixes may be preferable for employees on low sodium diets.

2. Establish a work schedule that will provide sufficient rest periods for cooling down. This may require shifts of workers when wearing suits and SCBA.

3. Cooling devices, such as vortex coolers and cool vests, may be worn under suits.

4. Establish work regimes consistent with the ACGIH Guidelines.

5. Provide employee monitoring consistent with the OSHA guidelines.

M. Cold stress control measures will be prescribed and implemented, as necessary.

Personal Protective Equipment

General

Selection of appropriate personal protective equipment will be based on the contaminant type(s), concentration(s), and routes of exposure. Selection of appropriate protection levels will consider all potential exposures to provide adequate worker protection.

The major objectives of the Personal Protective Equipment programs are to select equipment appropriate to and approved for the hazards; to ensure that the devices are introduced to users with a clear and complete explanation of their protection value and method of proper use; and to assign

supervisory responsibility ensuring proper use and continued maintenance of the devices.

Levels of Protection and Equipment Requirements

Appropriate personal protection shall be worn according to pre-determined material exposure levels. The required safety equipment and clothing must be available on-site before work is to begin. Protective equipment and criteria is provided for levels A, B, and C.

1. Level A indicates that the types and concentrations of toxic substances are known to require the highest level of protection to the respiratory tract, skin and eyes. Criteria includes:

   . Atmospheres that are "immediately dangerous to life and health" (IDLH).

   . Oxygen deficient atmospheres.

   . Exposure to unprotected areas of skin is likely.

   NOTE: This level of protection is also required when the specific hazards are unknown.

Level A Equipment

. Open circuit positive pressure SCBA

. Totally encapsulating suits (boots and gloves attached)

. Chemical resistant inner gloves

. Chemically protective boots with steel toe and shank worn over suit boot

. Chemical resistant outer gloves

supervisory responsibility ensuring proper use and continued maintenance of the devices.

Levels of Protection and Equipment Requirements

Appropriate personal protection shall be worn according to pre-determined material exposure levels. The required safety equipment and clothing must be available on-site before work is to begin. Protective equipment and criteria is provided for levels A, B, and C.

1. Level A indicates that the types and concentrations of toxic substances are known to require the highest level of protection to the respiratory tract, skin and eyes. Criteria includes:

   . Atmospheres that are "immediately dangerous to life and health" (IDLH).

   . Oxygen deficient atmospheres.

   . Exposure to unprotected areas of skin is likely.

   NOTE: This level of protection is also required when the specific hazards are unknown.

Level A Equipment

. Open circuit positive pressure SCBA

. Totally encapsulating suits (boots and gloves attached)

. Chemical resistant inner gloves

. Chemically protective boots with steel toe and shank worn over suit boot

. Chemical resistant outer gloves

- Exposure of unprotected parts of the body is unlikely.

Level C Equipment

- Air purifying respiratory (MSHA/NIOSH approved)
- Chemical resistant clothing
- Overalls and long sleeved jacked or coveralls
- Two piece hooded, chemically resistant splash suit
- Chemically protective outer gloves
- Chemically resistant inner gloves
- Fire resistant cloth coveralls
- Hard hat
- Face shield
- Chemically protective outer boots
- Chemically protective inner boots with steel toe and shank
- Two way radio communications or work done on "buddy" system.

Work Zones and Decontamination Procedures
General

The possibility of exposure or translocation of contaminants are reduced or eliminated in a number of ways, including:

1. Setting up security or physical barriers to exclude unnecessary personnel from the general area.
2. Minimizing the number of personnel and equipment on site consistent with effective operations.
3. Establishing work zones within the site.

4. Establishing control points to regulate access to work zones.

5. Conducting operations in a manner to reduce the exposure of personnel and equipment.

6. Minimizing the airborne dispersion of contaminant(s).

7. Implementing appropriate decontamination procedures.

Field Operations Work Areas

Work areas (zones) will be established based on anticipated contamination. Within these zones prescribed operations will occur utilizing appropriate personnel protective equipment.

Movement between areas will be controlled at check points. The planned zones are discussed below:

The Exclusion Area is the innermost area of three concentric rings and is considered contaminated, dirty or "hot". An entry checkpoint will be established at the periphery of the Exclusion Area to control the flow of personnel and equipment between contiguous zones and to ascertain that the procedures established to enter and exit the zones are followed. Subsequent to initial entry and as cleaning proceeds, the boundary will be readjusted based on observations and/or measurements. The boundary will be physically secure and posted.

Contamination Reduction Area

Between the Exclusion Area and the Support Area is the Contamination Reduction Area. The purpose of this zone is to provide an area to prevent or reduce the transfer of contaminants which may have been picked up by personnel or equipment returning from the exclusion area. All personnel and equipment decontamination occurs in this area.

The boundary between the Support Area and the Contamination Reduction Area is the contamination control line. This boundary separates the possibly contaminated area from the clean zone. Entry into the Contamination Area from the Clean Area will be through an access control point. Personnel entering this station will be wearing the prescribed personal protective equipment for working in the Contamination Reduction Area. Exiting the Reduction Area to the Clean area requires the removal of any suspected, or known, contaminated personal protective equipment and compliance with the decontamination procedures. At the boundary between the Contamination Reduction Area and the Exclusion Area is the hot line and access control station. Entrance into the Exclusion Area requires the wearing of the prescribed personal protective equipment.

Support Area

The Support Area is the outermost of the three rings and is considered a non-contaminated or clean area. It contains the Command Post in the field headquarters trailer for field operations and other elements necessary to support site activities. Normal street work clothes are the appropriate apparel within this zone. The support area will also contain parking facilities and a goods receiving area.

Decontamination Procedures

Introduction

As part of the system to prevent or reduce the physical transfer of contaminants by people and/or equipment from on-site, safety procedures will be instituted for decontaminating anything leaving the Exclusion Area and Contamination Reduction Area. These procedures include the decontamination of personnel, protective equipment, monitoring equipment, clean-up equipment, etc. Unless otherwise demonstrated, everything leaving the Exclusion Area should be considered

contaminated and appropriate methods established for decontamination. In general, decontamination at the site consists of rinsing equipment, personnel, etc., with detergent/water solution. If contaminants are known, then a specific detergent and/or solvent can be used to decontaminate. The spent solution contaminated clothing, brushes, sponges, containers, stands, etc., used in the decontamination process will, until shown otherwise, be considered contaminated and must be properly disposed. Disposal will involve placing all contaminated articles in DOT specified drums, affixing proper labels and disposal as a hazardous waste.

Personnel Decontamination

ENRAC will mobilize personnel decontamination trailers (PDT's) to the site as required for personnel decontamination. The PDT is a self-contained unit which contain facilities for showering and changing. Once on-site, the PDT forms the control for the worker access to the exclusion area. In order to enter the exclusion zone, all personnel and visitors will be required to proceed through the PDT to don the appropriate level of personal protection equipment.

At the end of a shift and whenever leaving the exclusion zone, all personnel will be required to remove protective equipment and discard disposable garments and equipment in drums for disposal as hazardous waste. Reusable equipment will be pressure washed and will remain in the contamination reduction zone. All wash water generated from this process will be containerized for proper handling and disposal. All personnel will shower and change into clean clothes before leaving the PDT.

Emergency Contingency Plan

A. At least one qualified person will be designated to serve as Emergency Coordinator. A list of suitable

alternatives designated as substitutes when the primary Emergency Coordinator is unavailable. Duties of the Emergency Coordinator(s) include:

1. Assessing the situation and determining whether an emergency exists which requires activating the plan;

2. Directing all efforts in the area including evacuating personnel and minimizing property loss;

3. Ensuring that outside emergency services such as fire departments, police, ambulance, and hospitals are notified when necessary;

4. Directing the shutdown of site operations when necessary;

5. Notifying regulatory agencies as necessary.

B. A list of key response personnel, including after-hour telephone numbers, for all response groups having responsibility for the site.

C. A list of site conditions which would require implementation of the plan, including, but not limited to:

1. Fire or explosion on site.

2. Serious employee injury.

3. Accumulation of combustible gases or vapors at concentrations greater than background.

4. Oxygen concentration below 19.5%.

5. Unsafe working conditions, such as inclement weather, or hazardous material releases.

D. Specific locations of wind direction indicators placed on site.

E. Specific written procedures to be followed when there is a release of hazardous materials, both on-site and off-site.

F. Specific written procedures for emergency site evacuation including evacuation routes and designated assembly areas, and procedures to account for all employees after evacuation has been completed.

G. Specific written procedures to be followed by employees who remain on-site to perform (or shut down) critical site operations before they evacuate.

H. Rescue and medical duties for those employees who are to perform them.

I. A list of the available emergency equipment, such as SCBA's, first-aid kits, fire extinguishers, emergency showers/eyewashes, etc.; and site diagrams indicating the location of the equipment on site.

K. Specific communication procedures to be followed by all personnel with two-way radios.

L. Procedures for contacting the necessary regulatory agencies.

EMERGENCY RESPONSE PLAN

A. Site Emergency Warning System

Several warning systems may be utilized depending on the worksite conditions or emergency involved:

1. Verbal communications
2. Verbal communications assisted with a bull horn
3. Radio communications
4. Vehicle horns
5. Portable hand-held compressed gas horns

Verbal instructions with or without assistance are used to deal with specific incidents.

Radio communications are used on-site to give instructions and directions. Emergency radio communications are prefixed as such and have priority over operations communications.

Horn signals are used to signify an emergency warning.

One long blast is used on-site to signify emergency evacuation of the immediate work area to a predetermined location upwind, where a head count will be taken and further instructions given.

Repeated short blasts are used on-site or from off-site to signify evacuation of all personnel from the site to the hot line where further instructions will be given after a head count is taken.

B. Emergency Equipment

The following equipment shall be available at the work site:

1. Fire extinguishers - dry chemical
2. First aid kits (including chemical burn kit)
3. Emergency oxygen kit
4. Emergency shower kit (pressurized)
5. P.D.T. (personal decontamination trailer)
6. Non-sparking tool kit
7. Fire Blankets
8. Litters
9. Portable two-way radio equipment
10. Combustible gas and oxygen detector alarm.
11. Organic vapor detection instruments - HNU photoionizer detector or Foxboro Analytical (formerly Century Systems) OVA

12. Inorganic vapor detector tubes and air supply pumps - Draeger and/or MSA
13. Hand-held compressed gas horns
14. Bull horns
15. Appropriate spill cleanup supplies and equipment

C. General Emergency Procedures

In case of an emergency or hazardous situation, the team member that observes this condition shall immediately give the alarm.

1. Upon hearing an alarm, all non-emergency communications will cease and the member giving the alarm will proceed to give the Project Manager all pertinent information.

2. Actions to be taken will be dictated by the emergency.

3. Power equipment will be shut down and operators will stand by for instruction.

4. Injured personnel will be transported to the Personnel Decontamination Trailer (PDT).

5. ENRAC Command Post (CP) will be notified immediately.

6. In case of a fire, explosion or hazard alarm, individuals will proceed immediately to assigned pre-located safe sites.

7. Upon arrival at the safe sites, a complete head count will be given to Project Manager and individuals will stay at the safe site until the area is secured.

D. Personal Injury

If an injury occurs due to an accident or exposure to a hazardous substance, the ENRAC CP will be immediately notified by radio. The Site Safety Officer will be given all appropriate information concerning the nature and cause of the injury so that treatment

preparations can be initiated. The injured person will be transported to the hot line where appropriate first aid and treatment can begin. The Project Manager will be informed and will investigate the cause of the injury and make any necessary changes in the work procedures.

E. Ambient Monitoring Contingencies

When ambient monitoring on the downwind edge of the site indicates higher than background levels of any contaminant, the Safety Officer and Project Manager will immediately determine the cause, make changes to work practices or procedures, and if necessary, make changes in site layout (i.e., change the location of the CP, decon area, or Exclusion Area), warn unprotected personnel to evacuate or don protective equipment, coordinate with local authorities to effect off-site evacuation.

Air Monitoring Plan

The objective of ENRAC air monitoring program is to measure potential volatile emissions into the ambient air surrounding the site. The air monitoring program is designed to assess both real time and time weighted concentrations of volatile pollutants. Monitors will be placed downwind of the work area in order to measure concentrations of pollutants that may be released form the site to surrounding areas. Secondly, vapor concentrations will be measured in the immediate vicinity of each exhumation to ensure that workers are not exposed to harmful levels of airborne contaminants. Finally, to further protect the health and safety of site personnel, organic vapor badges (3M or equivalent) will be placed on all on-site individuals to monitor their exposure to airborne organics. Data from these monitors will be interpreted and analyzed with respect to the above objective.

The above described air monitoring program will be accomplished utilizing standardized OVA and HnU equipment, and while commonly

used and accepted as a reasonable personnel protective monitoring approach, it is a minimal monitoring program. Because air monitoring programs and objective vary widely in both cost and comprehensiveness we have offered the minimal approach as described above.

ENRAC Division

SAFETY PROCEDURE

PROCEDURE NUMBER	PAGE 1 OF 11
0543	
EFFECTIVE DATE	SUPERSEDES
February 25, 1985	N/A

SUBJECT

PCB Control Measures

ISSUED BY

J. Robert Steele

Purpose

To prescribe the health and safety procedures, respiratory protective devices, and protective apparel required for the safe handling of PCBs and PCB-contaminated materials.

II. Scope

This directive applies to all ENRAC operations involved in the handling, processing, transportation and disposal of PCBs and PCB-contaminated materials.

III. References

A. Title 8, California Administrative Code, Section 5218.

B. HESIS, California State Department of Health Services, The Toxicology of PCBs - An Overview for the Clinician, January, 1981.

C. HESIS, California State Department of Health Services, The Toxicology of PCBs - An Overview with Emphasis on Human Health Effects and Occupational Exposures, January, 1981.

D. NIOSH: Criteria for a Recommended Standard - Occupational Exposure to Polychlorinated Biphenyls (PCBs); DHEW No. 81-123, January, 1981.

E. NIOSH/OSHA: Occupational Health Guidelines for Chemical Hazards; Chlorodiphenyl 42% and 54%; DHEW 81-123, January, 1981.

F. Wiley-Interscience; Patty's Industrial Hygiene and Toxicology; volume 2B, Toxicology; John Wiley and Sons, New York, 1981; pp. 3645-3669.

IV. Discussion

Polychlorinated biphenyls, or PCBs, were originally introduced into industry in the early 1930s. PCBs are thermally stable, very resistant to degradation and resistant to oxidation, acids, bases, and other chemical agents. PCBs have been used in a variety of ways because of these remarkable characteristics, for such things as: heat exchange and dielectric fluids in transformers and capacitors, plasticizers in plastics and coatings, hydraulic and lubricating oils, and as ingredients in adhesives, printing inks, paints, flame retardants and extenders for pesticides.

PCBs are actually a family of chemicals with varying number and position of chlorine atoms attached to a biphenyl nucleus. Commercial PCBs consist of variable mixtures of dozens of possible isomers and congeners. Each isomer or congener has different characteristics of absorption, kinetics, metabolism, and

C. PCB Container - means any package, can, bottle, bag, barrel, tank or other device that contains PCBs or PCB articles and whose surface has been in direct contact with PCBs.

D. PCB Item - means any PCB article or PCB container that deliberately or unintentionally contains or has contained PCBs at a concentration greater than 50 ppm.

VI. Procedure

A. Employee Training and Information

1. All employees who are subject to PCB exposures shall complete a formal PCB training program prior to their initial assignment to PCB operations, and at least annually thereafter. The training shall include, as a minimum, the following information:

   a. A description of the types of operations that could result in exposure to PCBs;

   b. the purpose, proper selection, fitting, use and limitations of personal protective equipment required for PCB work;

   c. a thorough explanation of the known and suspected hazards of PCB exposures, including the status of PCB as a suspect carcinogen;

   d. a description of the industrial hygiene monitoring program and medical surveillance program for PCB workers; and

   e. a detailed description of safe work practices and engineering controls for control of PCB exposures.

2. Written first aid procedures and precautionary measures for control of PCB exposures shall be available at each job site for employee review.

3. A properly completed Material Safety Data Sheet, or other acceptable PCB information, shall be available at each PCB job site for employee review. (Exhibit A)

4. Employee training for PCBs must be documented by use of the PCB Employee Training Record, ENRAC Form 543-1 (Exhibit B), or an essentially similar form.

B. Medical Surveillance

1. General

All employees shall complete a pre-hire or periodic/update medical examination consistent with established ENRAC and CWMI medical surveillance program procedures. This examination shall include at least the following:

3. Careful consideration must be given to the additional contribution to the overall exposure level by skin absorption and ingestion of PCBs due to poor work practices and personal hygiene.

D. Personal Protective Equipment

1. General

The selection, use and maintenance of personal protective devices for PCB operations shall comply in all respects to CWM/ENRAC policies and procedures and applicable OSHA regulations. When selecting equipment, careful consideration must be given to the specific nature of the proposed operation. Draining, flushing, and packaging of PCB transformers and other PCB articles, for example, would require more stringent controls than for handling of sealed PCB containers. PCB operations in underground vaults would require protective equipment appropriate for both PCB work and confined space entry. Low level PCB contamination in soil could be safely handled using Level C or D protection, if other safe work practices are followed.

Removal of PCB contamination often requires the use of hexane, freon, kerosene, alkaline detergents, and other solvent or cleaning materials. Selection of appropriate protection levels must consider all potential exposures to provide adequate worker protection. In addition, workers may require other safety equipment for such hazards as confined space work, hot work, elevated work stations, pressurized cleaning systems, etc.

2. Respiratory Protective Devices

a. Respiratory protection as specified in Exhibit C shall be provided and used, based on airborne PCB concentrations.

b. Only properly cleaned and maintained, NIOSH/MSHA approved respirators shall be used.

c. Only employees who are medically qualified to wear respirators shall be assigned to PCB operations.

d. Employees shall be permitted to leave work areas to wash their faces and respirator facepiece as necessary to prevent skin irritation associated with respirator use.

e. When air-purifying respirators are used, employees shall be required to change filter elements at the end of each shift. Filter elements shall also be changed whenever an increase in breathing resistance is detected.

3. Protective Clothing and Equipment

In any PCB operation where employees may be exposed to skin or eye contact, without regard to the use of respirators, the following protective equipment shall be provided:

6. Removal of PCBs from protective clothing or equipment by blowing, shaking, or any other means which disperse PCBs into the air is prohibited.

7. Contaminated equipment and other PCB items shall not be removed from the regulated area until they have been decontaminated.

8. PCB pumping, draining, and storage equipment shall be inspected daily for leaks. When a leak in such equipment is found, it shall be repaired or otherwise corrected immediately.

9. PCBs shall be stored in tightly closed containers in well ventilated areas.

10. Storage areas shall be designed to contain spills completely within surrounding dikes.

11. Process valves and pumps shall be readily accessible and shall not be located in confined or congested areas.

12. Emergency equipment shall be located outside of process and storage areas in readily accessible locations which will remain uncontaminated during emergencies.

13. Whenever flammable or combustible solvents such as hexane or kerosene are used for PCB cleaning, specific procedures for the control of flammable gases and vapors may be necessary. This may include, but is not limited to, the following:

    a. Periodic tests by a qualified person to ensure that concentrations of flammable vapors in the work area do not exceed 10% of the lower explosive limit;

    b. Sufficient numbers of multipurpose fire extinguishers must be strategically located throughout the work area;

    c. Equipment on site must be grounded and bonded, and measures implemented to control other ignition sources;

    d. Specific fire/explosion response procedures must be developed for site use.

14. Strategically located emergency showers and eyewashes shall be available near the work area.

15. All PCB articles, PCB containers, and PCB items must be properly labeled in accordance with 40 CFR 761 (TSCA).

G. Decontamination Program

Each PCB job site, regardless of the scope or nature of the specific operation, must have written decontamination procedures established to

Exhibit A

Occupational Health Guidelines
For Chlorodiphenyl 42% and 54%

Occupational Health Guideline for Chlorodiphenyl (42% Chlorine)*

INTRODUCTION

This guideline is intended as a source of information for employees, employers, physicians, industrial hygienists, and other occupational health professionals who may have a need for such information. It does not attempt to present all data; rather, it presents pertinent information and data in summary form.

SUBSTANCE IDENTIFICATION

- Formula: $C_{12}H_7Cl_5$ (approximately)
- Synonyms: Polychlorinated biphenyl; PCB
- Appearance and odor: Colorless to dark liquid with a mild hydrocarbon odor.

PERMISSIBLE EXPOSURE LIMIT (PEL)

The current OSHA standard for chlorodiphenyl (42% chlorine) is 1 milligram of chlorodiphenyl (42% chlorine) per cubic meter of air (mg/m^3) averaged over an eight-hour work shift. NIOSH has recommended that the permissible exposure limit for polychlorinated biphenyls be reduced to 1.0 microgram per cubic meter of air averaged over a work shift of up to 10 hours per day, 40 hours per week, and that chlorodiphenyl (42% chlorine) be regulated as an occupational carcinogen. The NIOSH Criteria Document for Polychlorinated Biphenyls should be consulted for more detailed information.

HEALTH HAZARD INFORMATION

- **Routes of exposure**

Chlorodiphenyl (42% chlorine) can affect the body if it is inhaled, if it comes in contact with the eyes or skin, or if it is swallowed. It may be absorbed through the skin. Every effort should be made to prevent skin, eye, oral, or inhalation contact with this material.

- **Effects of overexposure**

Chlorodiphenyl (42% chlorine) may cause irritation of the eyes, nose, and throat, and an acne-like skin rash. It may also injure the liver, resulting in such effects as fatigue, dark urine, and yellow jaundice. Repeated skin contact with the liquid may cause skin irritation. The production of liver tumors and adverse reproductive effects has been demonstrated in experimental animals following ingestion of polychlorinated biphenyls. The relevance to humans of some of these studies has not yet been established.

- **Reporting signs and symptoms**

A physician should be contacted if anyone develops any signs or symptoms and suspects that they are caused by exposure to chlorodiphenyl (42% chlorine).

- **Recommended medical surveillance**

The following medical procedures should be made available to each employee who is exposed to chlorodiphenyl (42% chlorine) at potentially hazardous levels:

1. Initial Medical Examination:

—A complete history and physical examination: The purpose is to detect pre-existing conditions that might place the exposed employee at increased risk, and to establish a baseline for future health monitoring. Examination of the liver and skin should be stressed. The skin should be examined for evidence of chronic disorders. Women in the work force should be advised of the potential adverse effects of chlorodiphenyl (42% chlorine) on the unborn child. Those who have borne children and work with chlorodiphenyl (42% chlorine) should be counseled concerning the advisability of nursing their offspring.

—Liver function tests: Chlorodiphenyl (42% chlorine) may cause liver damage. A profile of liver function should be obtained by utilizing a medically acceptable array of biochemical tests.

—Skin disease: Chlorodiphenyl (42% chlorine) is a defatting agent and can cause dermatitis on prolonged exposure. Persons with pre-existing skin disorders may be more susceptible to the effects of this agent.

2. Periodic Medical Examination: The aforementioned medical examinations should be repeated on an annual basis.

These recommendations reflect good industrial hygiene and medical surveillance practices and their implementation will assist in achieving an effective occupational health program. However, they may not be sufficient to achieve compliance with all requirements of OSHA regulations.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service *Centers for Disease Control*
National Institute for Occupational Safety and Health

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

• Clothing contaminated with liquid chlorodiphenyl (42% chlorine) should be placed in closed containers for storage until it can be discarded or until provision is made for the removal of chlorodiphenyl (42% chlorine) from the clothing. If the clothing is to be laundered or otherwise cleaned to remove the chlorodiphenyl (42% chlorine), the person performing the operation should be informed of chlorodiphenyl's (42% chlorine) hazardous properties.

• Non-impervious clothing which becomes contaminated with liquid chlorodiphenyl (42% chlorine) should be removed promptly and not reworn until the chlorodiphenyl (42% chlorine) is removed from the clothing.

• Employees should be provided with and required to use splash-proof safety goggles where liquid chlorodiphenyl (42% chlorine) may contact the eyes.

SANITATION

• Skin that becomes contaminated with liquid chlorodiphenyl (42% chlorine) should be promptly washed or showered with soap or mild detergent and water to remove any chlorodiphenyl (42% chlorine).

• Eating and smoking should not be permitted in areas where liquid chlorodiphenyl (42% chlorine) is handled, processed, or stored.

• Employees who handle liquid chlorodiphenyl (42% chlorine) should wash their hands thoroughly with soap or mild detergent and water before eating, smoking, or using toilet facilities.

• Areas in which exposure to chlorodiphenyl (42% chlorine) may occur should be identified by signs or other appropriate means, and access to these areas should be limited to authorized persons.

COMMON OPERATIONS AND CONTROLS

The following list includes some common operations in which exposure to chlorodiphenyl (42% chlorine) may occur and control methods which may be effective in each case:

Operation	Controls
Use as high-temperature transfer medium in chemical/food processing vessels and drying ovens	General dilution ventilation; local exhaust ventilation; personal protective equipment
Use as a dielectric in manufacture of transformers, capacitors, resistors, and other electrical apparatus	General dilution ventilation; local exhaust ventilation; personal protective equipment
Application and formulation as plasticizer, flame-retardant, and adhesive and weatherizer in spray surface coatings; manufacture and application of impregnants for cloth, paper, fiberboard, wood, and asbestos; manufacture and application of natural and synthetic waxes and polishes; manufacture and application of hot-melt and other adhesives	Process enclosure; general dilution ventilation; local exhaust ventilation; personal protective equipment
Use as non-flammable working fluid in vacuum pumps, hydraulic systems, and expansion systems	General dilution ventilation; local exhaust ventilation
Use during application of high-pressure, temperature, and moisture lubricants	Personal protective equipment
Use in compounding and processing of plastics for flame retardancy	General dilution ventilation; local exhaust ventilation; personal protective equipment
Use in manufacture and application for use as pesticides and fungicides	Personal protective equipment
Use as an intermediate or raw material in further organic synthesis	General dilution ventilation; local exhaust ventilation; personal protective equipment
Use as sealer for gaskets of natural rubber and synthetics	General dilution ventilation; local exhaust ventilation; personal protective equipment
Use as adhesive release on tapes and ink release on carbonless duplicating paper; as a pigment carrier in dyeing polyesters and paper	Personal protective equipment

RESPIRATORY PROTECTION FOR CHLORODIPHENYL (42% CHLORINE)

Condition	Minimum Respiratory Protection* Required Above 1 mg/m³
Vapor Concentration	
10 mg/m³ or less	Any supplied-air respirator with a full facepiece, helmet, or hood. Any self-contained breathing apparatus with a full facepiece.
Greater than 10 mg/m³** or entry and escape from unknown concentrations	Self-contained breathing apparatus with a full facepiece operated in pressure-demand or other positive pressure mode. A combination respirator which includes a Type C supplied-air respirator with a full facepiece operated in pressure-demand or other positive pressure or continuous-flow mode and an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive pressure mode.
Fire Fighting	Self-contained breathing apparatus with a full facepiece operated in pressure-demand or other positive pressure mode.
Escape	Any gas mask providing protection against pesticides. Any escape self-contained breathing apparatus.

*Only NIOSH-approved or MSHA-approved equipment should be used.

**Use of supplied-air suits may be necessary to prevent skin contact while providing respiratory protection from airborne concentrations of chlorodiphenyl (42% chlorine); however, this equipment should be selected, used, and maintained under the immediate supervision of trained personnel. Where supplied-air suits are used above a concentration of 10 mg/m³, an auxiliary self-contained breathing apparatus operated in positive pressure mode should also be worn.

Occupational Health Guideline for Chlorodiphenyl (54% Chlorine)*

INTRODUCTION

This guideline is intended as a source of information for employees, employers, physicians, industrial hygienists, and other occupational health professionals who may have a need for such information. It does not attempt to present all data; rather, it presents pertinent information and data in summary form.

SUBSTANCE IDENTIFICATION

- Formula: $C_{12}H_5Cl_5$ (approximately)
- Synonyms: Polychlorinated biphenyl; PCB
- Appearance and odor: Pale yellow viscous liquid with a mild hydrocarbon odor.

PERMISSIBLE EXPOSURE LIMIT (PEL)

The current OSHA standard for chlorodiphenyl (54% chlorine) is 0.5 milligram of chlorodiphenyl (54% chlorine) per cubic meter of air (mg/m³) averaged over an eight-hour work shift. NIOSH has recommended that the permissible exposure limit for polychlorinated biphenyls be reduced to 1.0 microgram per cubic meter of air averaged over a work shift of up to 10 hours per day, 40 hours per week, and that chlorodiphenyl (54% chlorine) be regulated as an occupational carcinogen. The NIOSH Criteria Document for Polychlorinated Biphenyls should be consulted for more detailed information.

HEALTH HAZARD INFORMATION

- **Routes of exposure**

Chlorodiphenyl (54% chlorine) can affect the body if it is inhaled, if it comes in contact with the eyes or skin, or if it is swallowed. It may be absorbed through the skin. Every effort should be made to prevent skin, eye, oral, or inhalation contact with this material.

- **Effects of overexposure**

Chlorodiphenyl (54% chlorine) may cause irritation of the eyes, nose, and throat, and an acne-like skin rash. It may also injure the liver, resulting in such effects as fatigue, dark urine, and yellow jaundice. Repeated skin contact with the liquid may cause skin irritation.

- **Reporting signs and symptoms**

A physician should be contacted if anyone develops any signs or symptoms and suspects that they are caused by exposure to chlorodiphenyl (54% chlorine). The production of liver tumors and adverse reproductive effects have been demonstrated in experimental animals following ingestion of polychlorinated biphenyls. The relevance to humans of some of these studies has not yet been established.

- **Recommended medical surveillance**

The following medical procedures should be made available to each employee who is exposed to chlorodiphenyl (54% chlorine) at potentially hazardous levels:

1. Initial Medical Examination:

—A complete history and physical examination: The purpose is to detect pre-existing conditions that might place the exposed employee at increased risk, and to establish a baseline for future health monitoring. Examination of the liver and skin should be stressed. Women in the work force should be advised of the potential adverse effects of chlorodiphenyl (54% chlorine) on the unborn child. Those who have borne children and work with chlorodiphenyl (54% chlorine) should be counseled concerning the advisability of nursing their offspring.

—Liver function tests: Chlorodiphenyl (54% chlorine) may cause liver damage. A profile of liver function should be obtained by utilizing a medically acceptable array of biochemical tests.

—Skin disease: Chlorodiphenyl (54% chlorine) is a defatting agent and can cause dermatitis on prolonged exposure. Persons with pre-existing skin disorders may be more susceptible to the effects of this agent.

2. Periodic Medical Examination: The aforementioned medical examinations should be repeated on an annual basis.

These recommendations reflect good industrial hygiene and medical surveillance practices and their implementation will assist in achieving an effective occupational health program. However, they may not be sufficient to achieve compliance with all requirements of OSHA regulations.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service Centers for Disease Control
National Institute for Occupational Safety and Health

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

made for the removal of chlorodiphenyl (54% chlorine) from the clothing. If the clothing is to be laundered or otherwise cleaned to remove the chlorodiphenyl (54% chlorine), the person performing the operation should be informed of chlorodiphenyl's (54% chlorine) hazardous properties.

- Non-impervious clothing which becomes contaminated with liquid chlorodiphenyl (54% chlorine) should be removed promptly and not reworn until the chlorodiphenyl (54% chlorine) is removed from the clothing.
- Employees should be provided with and required to use splash-proof safety goggles where liquid chlorodiphenyl (54% chlorine) may contact the eyes.

SANITATION

- Skin that becomes contaminated with liquid chlorodiphenyl (54% chlorine) should be promptly washed or showered with soap or mild detergent and water to remove any chlorodiphenyl (54% chlorine).
- Eating and smoking should not be permitted in areas where liquid chlorodiphenyl (54% chlorine) is handled, processed, or stored.
- Employees who handle liquid chlorodiphenyl (54% chlorine) should wash their hands thoroughly with soap or mild detergent and water before eating, smoking, or using toilet facilities.
- Areas in which exposure to chlorodiphenyl (54% chlorine) may occur should be identified by signs or other appropriate means, and access to these areas should be limited to authorized persons.

COMMON OPERATIONS AND CONTROLS

The following list includes some common operations in which exposure to chlorodiphenyl (54% chlorine) may occur and control methods which may be effective in each case:

Operation	Controls
Use as high-temperature transfer medium in chemical/food processing vessels and drying ovens	General dilution ventilation; local exhaust ventilation; personal protective equipment
Use as a dielectric in manufacture of transformers, capacitors, resistors, and other electrical apparatus	General dilution ventilation; local exhaust ventilation; personal protective equipment
Application and formulation as plasticizer, flame-retardant, and adhesive and weatherizer in spray surface coatings; manufacture and application of impregnants for cloth, paper, fiberboard, wood, and asbestos; manufacture and application of natural and synthetic waxes and polishes; manufacture and application of hot-melt and other adhesives	Process enclosure; general dilution ventilation; local exhaust ventilation; personal protective equipment
Use as non-flammable working fluid in vacuum pumps, hydraulic systems, and expansion systems	General dilution ventilation; local exhaust ventilation
Use during application of high-pressure, temperature, and moisture lubricants	Personal protective equipment
Use in compounding and processing of plastics for flame retardancy	General dilution ventilation; local exhaust ventilation; personal protective equipment
Use in manufacture and application for use as pesticides and fungicides	Personal protective equipment
Use as an intermediate or raw material in further organic synthesis	General dilution ventilation; local exhaust ventilation; personal protective equipment
Use as sealer for gaskets of natural rubber and synthetics	General dilution ventilation; local exhaust ventilation; personal protective equipment
Use as adhesive release on tapes and ink release on carbonless duplicating paper; as a pigment carrier in dyeing polyesters and paper	Personal protective equipment

* SPECIAL NOTE

The International Agency for Research on Cancer (IARC) has evaluated the data on this chemical and has concluded that it causes cancer. See *IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man*, Volume 7, 1974, and Volume 18, 1978.

RESPIRATORY PROTECTION FOR CHLORODIPHENYL (54% CHLORINE)

Condition	Minimum Respiratory Protection* Required Above 0.5 mg/m³
Vapor Concentration	
5 mg/m³ or less	Any supplied-air respirator with a full facepiece, helmet, or hood. Any self-contained breathing apparatus with a full facepiece.
Greater than 5 mg/m³** or entry and escape from unknown concentrations	Self-contained breathing apparatus with a full facepiece operated in pressure-demand or other positive pressure mode. A combination respirator which includes a Type C supplied-air respirator with a full facepiece operated in pressure-demand or other positive pressure or continuous-flow mode and an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive pressure mode.
Fire Fighting	Self-contained breathing apparatus with a full facepiece operated in pressure-demand or other positive pressure mode.
Escape	Any gas mask providing protection against pesticides. Any escape self-contained breathing apparatus.

*Only NIOSH-approved or MSHA-approved equipment should be used.

**Use of supplied-air suits may be necessary to prevent skin contact while providing respiratory protection from airborne concentrations of chlorodiphenyl (54% chlorine); however, this equipment should be selected, used, and maintained under the immediate supervision of trained personnel. Where supplied-air suits are used above a concentration of 5 mg/m³, an auxiliary self-contained breathing apparatus operated in positive pressure mode should also be worn.

Exhibit B

PCB Employee Training Record

ENRAC Form 543-1

PCBs

POLYCHLORINATED BIPHENYLS

EMPLOYEE TRAINING RECORD

EMPLOYEE NAME: _____ JOB TITLE: _____

(Please Print)

DIVISION: _____ LOCATION: _____

DATE OF TRAINING: _____

READ CAREFULLY AND INITIAL BLOCK

	INITIALS
1. I have been informed about the potential health hazards associated with exposure to this material.	
2. I have received copies of the applicable OSHA regulations and company procedures governing the use of this material.	
3. I have been informed about the types of work that might result in exposure to this material and I have been instructed about the protective measures required to prevent exposure, including measures for emergency conditions.	
4. I have been informed about the monitoring and medical surveillance programs applicable to employee exposure to this material.	

EMPLOYEE SIGNATURE _____

DATE _____

Exhibit C

Respiratory Protection For PCB's

Concentration of Airborne PCBs or Condition of Use	Respirator Type[1]
1. Not greater than the PEL for compounds with no significant vapor pressure.	Air-purifying, with dual organic vapor chemical cartridges and dust, fume, mist prefilters and half or full facepiece[2]; or Any supplied air respirator with full facepiece.
2. Greater than the PEL, firefighting or other emergency response, and any unknown concentration[3].	Supplied air respirators, pressure-demand, with full facepiece and a minimum 5 minute emergency egress bottle; or Self-contained breathing apparatus with full facepiece, operated in pressure-demand mode.

Footnotes:

1. Respirators specified for higher concentrations can be used at lower concentrations.

2. Full facepiece is required if the operation poses a potential hazard of eye contact with PCBs.

3. For work in confined spaces, SCBA or hoseline with egress is required.

8.0 SAMPLING AND ANALYSIS

GENERAL

The sampling and analytical protocols are the backbone of any "clean-up" operation. These protocols are established to identify the safe handling and proper disposal methods of the waste encountered. First, fingerprint analysis is conducted on site to determine compatibility and general RCRA and DOT classification. Second, composited compatible samples are analyzed off-site to obtain more precise data for disposal decision.

SAMPLING PROTOCOL

Chemical Waste Management has had extensive experience in sampling all types of containers of hazardous waste materials including drums, tanks, tank trucks, lagoons, waste piles, etc. Our corporate Waste Analysis Plan contains a detailed section of sampling based on recommendations from EPA document SW-846 as well as our own experience. The following sampling plan for this project is excerpted from our more extensive Waste Analysis Plan.

REPRESENTATIVE SAMPLING

The main objective of any sampling method is to obtain a sample which is representative of the entire entity being sampled. To assure that multiphased and stratified materials are properly classified, methods of sampling non-homogeneous waste streams have been developed. Due to the large number of samples being generated, only bulked materials will be required to have a Certificate of Representative Sampling. Individual drums or containers will be physically inspected in the field, by a chemist, to assure that the sample received in the lab is representative of the corresponding container in the field. An ample volume of sample will be obtained in order to perform fingerprint analysis and retain samples for future use. (See Exhibit 4-A).

CHAIN OF CUSTODY

All samples leaving the work site for further analysis will be accompanied by a chain of custody document. This document will trace the movement of the samples from the site to the analytical facility. This procedure minimizes the unlikely event of tampering. (See Exhibit 4-B).

PHYSICAL OPERATIONS

All containerized materials shall be staged in a manner which facilitates sampling and future retrieval for processing. This is usually done by placing the containers upright in rows, two wide, and 20-25 containers long. A drum containing liquids that is badly deteriorated or is leaking may be overpacked in an overpack drum prior to being sampled. Our technicians are trained to isolate any containers which exhibit bulging, crystallization or have unusual

markings which would suggest danger (i.e explosive, reactive, toxic, etc). The isolated containers will be handled accordingly and opened remotely using a sparkless punch. This procedure minimizes the risk of personnel being unnecessarily exposed to harmful substances. All routinely staged containers will be opened using hand-held sparkless tools.

Tanks will be sampled in a similar manner utilizing sample bombs and/or thiefs.

SAMPLING LIQUIDS USING A GLASS THIEF

1. Remove cover from sample container.
2. Insert glass tubing almost to the bottom of the drum or until a solid layer is encountered. About one foot of tubing should extend above the drum.
3. Allow the waste in the drum to reach its natural level in the tube.
4. Cap the top of the sampling tube, ensuring liquid does not come into contact with the cap (usually the thumb or finger).
5. Carefully remove the capped tube from the drum and insert the uncapped end in the sample container.
6. Release the cap and allow the glass thief to drain completely and fill the sample container.
7. Remove tube from the sample container, and deposit tube in separate drum with other tubes for disposal.
8. Cap the sample container tightly and place pre-labeled sample container in a carrier.
9. Replace the bung.
10. Transport sample to mobile laboratory for analysis.

SAMPLING SOLIDS

Our experience has shown that most granules and semi-solid materials can be sampled using a glass thief. When an adequate sample is not retrieved in this manner, tolls (pick, shovel, pipe, etc.) capable of breaking apart or chipping the waste will be utilized. Most solids are found in open top drums facilitating retrieval. IN the event of a closed top drum contains solids, a sparkless tools will be used to make an opening. Solid residues and/or sludges encountered as tank bottoms will be sampled utilizing a trier and/or coliwasa sampler.

CODING

Containers and sample jars will be marked with the corresponding code and logged in a fingerprint log. This log includes the record of each individual container encountered on-site, the ate, the results and the initials of the chemist performing the analysis.

STORAGE

The samples resulting from fingerprinting and compositing will be stored by date and classification at the central location. These samples will be saved until the materials represented by the samples have been disposed.

COMPOSITE SAMPLES

Composited samples will be sent to the CWM Technical Center (or other designated CWM approved laboratory) in Riverdale, Illinois. Analysis necessary for obtaining the appropriate permits for disposal will be conducted at the Technical Center. Attachment 4-A explains many of the analytical procedures conducted at the Technical Center. Any combination of parameters may be tested in this procedure.

ANALYSIS

The fingerprint analysis may be performed in an on-site mobile laboratory when quantity analyses warrant. Otherwise, analyses will be performed off-site, at the CWM Technical Center in Riverdale, Illinois. commulative analyses will be used for Special Waste Disposal decisions.

WASTE CLASSIFICATION/FINGERPRINT ANALYSIS

Sampling and Analysis will be conducted in a manner which will provide information for proper shipment and disposal. Waste materials will be analyzed on-site (fingerprint) to determine the D.O.T. Hazard Class and the R.C.R.A. Hazardous Waste Characteristics. This information is necessary for properly completing manifests and for selection of a permissible shipping container. Materials will likely fall into the following D.O.T. Hazard Classes:

1. ORM-E
2. Flammable Liquid
3. Corrosive
4. Poison B

Because of the lack of history surrounding wastes and the generating processes at remedial action sites, ENRAC utilizes only the characteristic categories for R.C.R.A. classification. All materials from the Class I area will be characterized in one or more of the following ways:

1. D001 - Ignitables
2. D002 - Corrosives
3. D003 - Reactives
4. Other Waste Classifications

An additional category of PCB contaminated may also apply.

The following is a description of each test protocol for each category.

Ignitables. A waste is an ignitable hazardous waste if it has a flash point below 140 degrees F. All drums will be samples according to our sampling plan. Each sample will be screened by taking an open flame and exposing it to the sample. This flame will be generated using a propane source. If the sample supports combustion, it will be classified as an ignitable.

Corrosives. A waste is classified as a corrosive hazardous waste if it is aqueous and has a pH less than or equal to 2.0 or greater than or equal to 12.5. All drummed wastes will be screened using Tridecator pH paper available from FII-Chem. Any samples that have a pH that is less than 4.0 or greater than 10 will be classified as a corrosive. For those wastes that are solids, a 10% saturated water solution will be used.

Reactives. A waste is classified as a reactive if, upon addition of water, it reacts violently, forms potentially explosive mixtures, or generates toxic fumes, vapors or gases in quantities sufficient to present a danger to human health or the environment. This testing will also include the following.

Cyanides. Quick Cyanide Test (Prussian Blue Test). In a beaker, take approximately 20 ml of sample, add enough caustic (preferable NaOH) to bring the pH to between 12 and 13, add about 5-10 mls of 10% ferrous sulfate solution, stir, add enough concentrated sulfuric acid to bring the pH down to 1.0 or less (be extremely careful). Visually observe the color development and compare against standards. A bright blue color indicates the presence of cyanide. A green color may indicate the presence of cyanide.

If the original material was aqueous, then a blue color (or possibly a green color) will indicate the presence of free cyanide. If the original material was a sludge and the quick cyanide test was positive (blue or green color), then the material should be suction-filtered through #5 What-man filter paper and the filtrate should be analyzed as above. (If the analysis of the filtrate gives a positive test, then the cyanide results should be reported as a complex cyanides).

Sulfides. Quick Sulfide Test. In a beaker, take approximately 20 ml of sample and slowly add enough concentrated sulfuric acid to bring the pH down to 1.0 or less (be extremely careful). IMMEDIATELY after adding the acid, hold a wet strip of lead acetate paper over the beaker while agitating the beaker. If the paper turns brown or silvery-black, this indicates the presence of sulfides in the sample and further testing is required to quantify the amount of sulfide. This test is purely qualitative, as little as two (2) ppm sulfide will give a positive test, but higher amounts of sulfide cannot be measured quantitatively with lead acetate paper. Also, this test makes no distinction between total and dissolved sulfides. If there is no color change, then total sulfides can be reported as less than two (2) ppm.

PCB Analysis (optional)

100:1 dilutions of sample in hexane will be acid washed and run on a packed and/or capillary column in conjunction with a Hewlett Packard gas chromatograph using EPA approved methods. Further dilution, clean-up and extraction techniques may be employed if the first run is non-interpretable.

SALES CODE	
	F94552

WASTE PROFILE SHEET CODE

EXHIBIT 4-A

CERTIFICATION OF REPRESENTATIVE SAMPLE

GENERAL DIRECTIONS: IN ORDER TO DETERMINE WHETHER WE CAN ACCEPT THE SPECIAL WASTE DESCRIBED IN THE ABOVE NUMBERED PROFILE SHEET, WE MUST OBTAIN A REPRESENTATIVE SAMPLE OF THE WASTE. WE WILL ANALYZE THE SAMPLE TO VERIFY THE INFORMATION YOU HAVE PROVIDED US, SO IT IS PARTICULARLY IMPORTANT THAT THE SAMPLE BE TRULY REPRESENTATIVE. IN MOST CIRCUMSTANCES YOU WILL BE OBTAINING THE SAMPLE. HOWEVER, IN THOSE CASES IN WHICH WE OBTAIN THE SAMPLE, WE MUST ASK THAT ONE OF YOUR EMPLOYEES BE PRESENT TO DIRECT THE PARTICULAR SOURCE TO BE SAMPLED AND TO WITNESS THE SAMPLING. IN SUCH CASE, YOUR EMPLOYEE MUST SIGN THIS CERTIFICATION AS A WITNESS.

THIS CERTIFICATION MUST BE RETURNED, WITH THE REPRESENTATIVE WASTE SAMPLE, TO:

_____

_____

_____

_____

THE UNDERSIGNED CERTIFIES THAT HE/SHE OBTAINED A REPRESENTATIVE SAMPLE OF THE WASTE MATERIAL DESCRIBED IN THE "GENERATOR'S WASTE MATERIAL PROFILE SHEET" ABOVE REFERENCED, AND THAT THE FOLLOWING REPRESENTATIONS ARE TRUE AND CORRECT:

1. HOUR AND DATE OF SAMPLING: _____
2. SOURCE FROM WHICH SAMPLE TAKEN: _____
   _____
   _____
3. EQUIPMENT AND SAMPLING METHOD USED: _____
   _____
   _____
   _____
4. AMOUNT OF SAMPLE OBTAINED: _____
5. TYPE OF CONTAINER INTO WHICH SAMPLE WAS PLACED: _____
   _____
6. THE SAMPLING EQUIPMENT USED, AND THE CONTAINER INTO WHICH THE SAMPLE WAS PLACED, WERE THEMSELVES UNCONTAMINATED BEFORE USE.
7. AT THE TIME OF SAMPLING I AFFIXED A LABEL TO THE CONTAINER IN THE FOLLOWING FORM WITH THE FOLLOWING INFORMATION (FILL IN THIS PORTION, INCLUDING YOUR SIGNATURE, JUST AS IT APPEARS ON THE LABEL YOU PREPARED):

GENERATOR: WASTE NAME: SAMPLE HOUR/DATE: PROFILE SHEET CODE: SAMPLER SIGNATURE:

WITNESS VERIFICATION: I WAS PERSONALLY PRESENT DURING THE SAMPLING DESCRIBED; I DIRECTED THE WASTE SOURCE TO BE SAMPLED; AND I VERIFY THE INFORMATION ABOVE NOTED.

WITNESS: _____

SIGNATURE: _____

TITLE: _____

EMPLOYER: _____

DATE: _____

SAMPLER NAME: _____

SIGNATURE: _____

TITLE: _____

EMPLOYER: _____

DATE: _____

ANALYTICAL PROTOCOLS FOR WASTE DISPOSAL ACCEPTANCE

A. pH

This can be done by using either pH paper or a pH meter, depending upon the type of sample to be analyzed. If a pH meter is used, it must be standardized daily with at least two different buffer solutions and then checked with a third buffer solution (different than the other two). If the material is solid, then report the pH of a 10% solution. pH results will be reported to one significant figure.

B. Percent (%) Acidity

This may be done if the pH is less than or equal to 4.0 by titration against standardized NaOH. Percent acidity results will be reported to two significant figures.

C. Percent (%) Alkalinity

Alkalinity may be calculated on samples with pH greater than 10.0 by titration against standardized HCL. Values will be reported to two significant figures.

D. Flash Point

For liquids and semi-liquids, a Pensky-Martens Closed Cup Flash Point Tester is required. Flash point will be reported to the nearest degree Fahrenheit. For semi-solids and solids, the Cleveland Open Cup Flash Point Tester is required. This is a subjective test to determine the safety and fire hazards associated with the waste, as well as DOT shipping requirements.

E. Percent (%) Total Solids

This is done by drying the sample for approximately 24 hours at 105 degrees C. Percent total solids results will be reported to two significant figures.

F. Percent Ash Content

This is done by heating the sample (after percent total solids have been done) for 12 hours at 550 degrees C. Percent ash content results will be reported to two significant figures.

G. % Water

This is done by Dean-Stark distillation.

H. Oil and Grease

This is done gravimetrically after freon extraction.

I. Heavy Metals

The following sample preparation and analytical methods or other similar methods will be utilized for heavy metal analysis as necessary. Representative samples are obtained by various methods, depending upon the physical characteristics of a particular sample. Generally stated, they are as follows:

(1) Liquids

A. Single phase liquids with little or no solids are mixed by hand and a homogenous sample is immediately withdrawn.

B. Liquids containing sediment and/or precipitates are mixed by hand and/or in a high shear mixer (to the analyst's discretion). If the solids will not stay in suspension, the liquid and sediment portions are sampled and combined proportionally.

C. Multiple phased liquids are mixed with a high shear mixer. If the sample emulsifies (homogenizes) a representative sample is taken. If the sample does emulsify, the phases are sampled proportionally and combined for analysis.

(2) Solids

Solids are mixed by hand and/or coned and quartered until a homogenous sample can be withdrawn. Solid samples may be pulverized to uniform easy-to-work with size.

(3) Sludges

Sludges are mixed by hand and/or mixed with a big shear blender until a homeogenous sample can be taken.

NOTE: Heavy metal digestions are performed by four basic methods:

Nitric Acid Digestion

Between 1.0 gm. and 10.0 gm. of raw sample is accurately weighed to two decimal placed into a 125 ml Erlenmeyer Flask, 5.0 ml of concentrated Nitric Acid (HNO_3) and several milliliters of deionized water are added. The flask is covered with a watch glass and heated to boiling. Additional water is added as needed to prevent the sample from evaporating to dryness. Heating is continued until the

digestion is complete; usually this is signalled by the absence of any orange NOx fumes when adding additional nitric acid. When the flash is cool, the sample is transferred and diluted to volume (*typically 100 mls) with deionized water in a volumetric flask, and filtered through #2 Whatman filter paper. The filtrate is then analyzed for heavy metals using an Atomic Absorption spectro-photometer and/or Inductively Coupled Argon Plasma Unit that has been standardized with the appropriate "Acid Blank" and "Acid Standards."

$$\text{Metals are received} = \frac{\text{Final Dilution}}{\text{Original sample size}} \quad \text{X.A.A. or I.C.A.P. reading}$$

Modified Nitric Acid Digestion For Acids

If a material is an aqueous strong acid (greater than or equal to 5%), between 1.0 gm. and 10.0 gm. of the raw sample are accurately weighed, to two decimal places, into a volumetric flask. 5.0 ml of nitric acid are added (to match the acid blank) and the sample is diluted to volume (typically 100 ml) with deionized water. Gravity filter through #2 Whatman filter paper and collect the filtrate.

$$\text{Metals are received} = \frac{\text{Final Dilution}}{\text{Original sample size}} \quad \text{X.A.A. or I.C.A.P. reading}$$

Permanganate Digestion for Mercury

All samples are analyzed for mercury by cold vapor using SW-846 Method 8.57.

Parr Bomb Digestion

Highly organic samples may be digested in a "Parr" acid digestion bomb and then analyzed according to the method.

J. Phenols

The following or other similar methods may be utilized for phenol analysis if necessary for disposal site acceptance:

Direct Photometric Method - Procedure: Standard methods 510A and 510C.

K. Polychlorinated Biphenyls (PCB)

SW 846, Method 8080, or equivalent

L. Pesticides

SW-846, Method 8080, or equivalent

M. Herbicides

SW-846, Method 8150 or its equivalent. Herbicides will be determined only if suspected, or upon special request.

N. Physical Appearance

A concise description of the waste is noted by the analyst including physical state, color, turbidity, viscosity, and texture. Obvious or objectionable odors are noted, without deliberately smelling the sample.

O. Solvents

Common, industrial solvents are analyzed on non-aqueous liquids. The method utilizes a GC equipped with an FID detector. Quantitation is by external standard analysis. Solvents are identified by retention time or by GCMS confirmation.

P. Specific Gravity

As specified in "Standard Methods," 15th Edition, 1980.

Q. Corrosion Test

Quick Corrosion Test on mile steel, aluminum, copper, brass, various stainless steel and other metals can be determined by a corrosion rate meter.

R. Vapor Pressure

Vapor pressure can be measured using a constant temperature bath, vapor pressure bomb and vapor pressure bomb gauge.

S. BTU/lb Analysis

This analysis may be conducted using Bob Calorimetry if the waste is to be evaluated for incineration. Detailed procedure for testing BTU value is supplied along with the equipment by the manufacturer.

REFERENCES

Standard Methods for the Examination of Water and Wastewater, 15th Edition, 1980.

Test Methods of Evaluating Solid Waste (SW-846), Second Edition, July, 1982.

EXHIBIT 4-B

Collector's Sample No. _____

CHAIN OF CUSTODY RECORD

Location of Sampling_____Producer_____Hauler_____Disposal Site

_____Other_____
Sample

Shipper's Name_____

Address_____
Number Street City State Zip

Collector's Name_____Telephone ( )_____
Signature

Date Sampled_____Time Sampled_____Hours_____

Type of Process Producing Waste_____

Field Information_____

_____

_____

Sample Receiver

1._____
Name and Address of Organization Receiving Sample

2._____

3._____

Chain of Possession

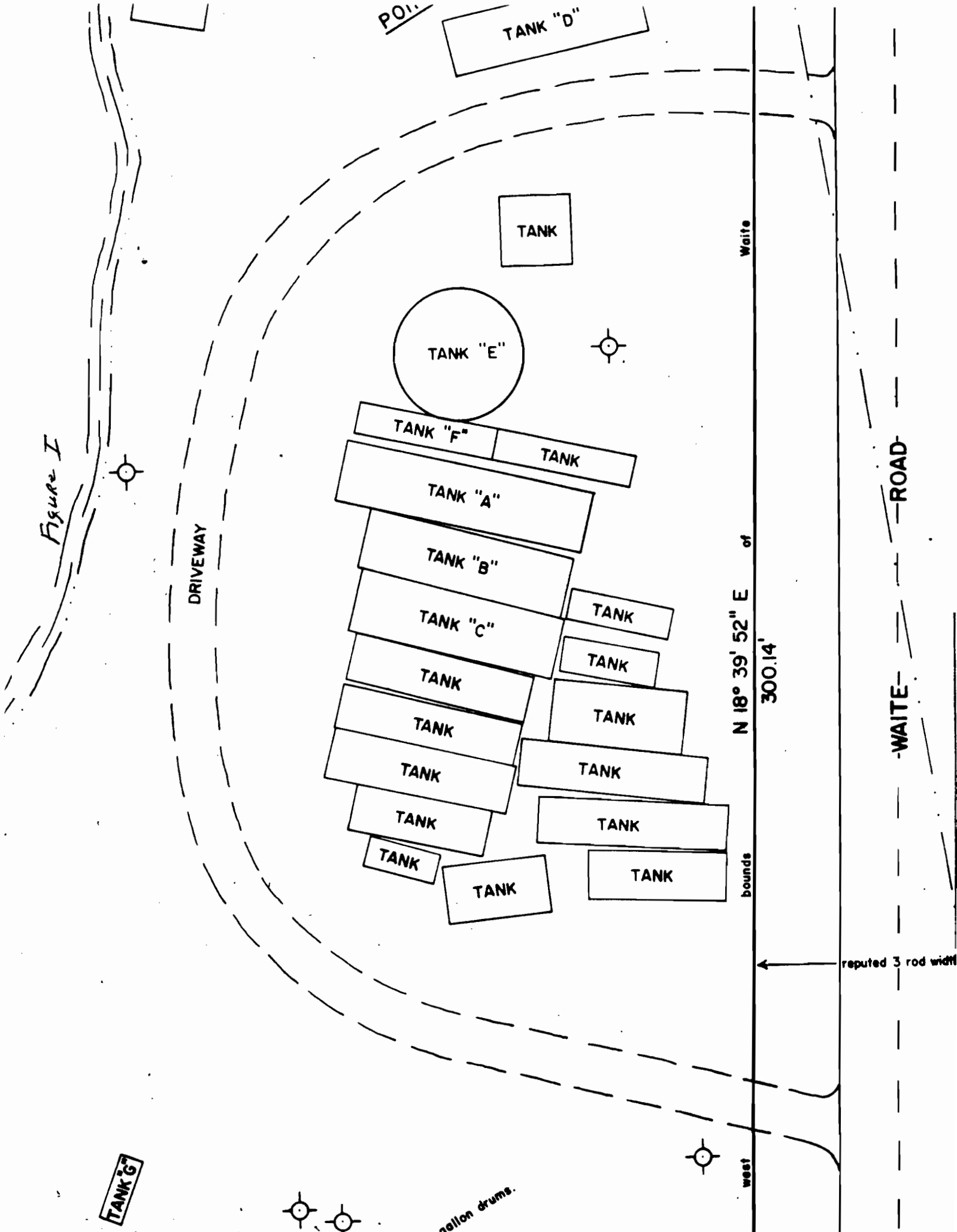
1._____ _____ _____
Signature Title Inclusive Dates

2._____ _____ _____
Signature Title Inclusive Dates

3._____ _____ _____
Signature Title Inclusive Dates

EXAMPLE OF CHAIN OF CUSTODY RECORD

SITE DRAWINGS


TANK "D"
TANK
TANK "E"
TANK "F"
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TANK "A"
TANK "B"
TANK "C"
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Figure I
DRIVEWAY
Waite
of
N 18° 39' 52" E
300.14'
bounds
-WAITE-
ROAD
reputed 3 rod width
west
TANK "G"

CONTRACT DOCUMENTS

The parties to the attached contract further agree to be bound by the following, which are hereby made a part of said contract:

I. This contract may not be assigned by the contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or disposed of without the previous consent, in writing, of the State.

II. This contract shall be deemed executory only to the extent of money available to the State for the performance of the terms hereof and no liability on account thereof shall be incurred by the State of New York beyond moneys available for the purpose thereof.

III. The contractor specifically agrees, as required by the provisions of the Labor Law, Section 220-e as amended, that

(a) In hiring of employees for the performance of work under this contract or any subcontract hereunder, or for the manufacture, sale or distribution of materials, equipment or supplies hereunder, no contractor, subcontractor nor any person acting on behalf of such contractor or subcontractor, shall by reason of race, creed, color, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates.

(b) no contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under his contract on account of race, creed, color, sex or national origin.

(c) there may be deducted from the amount payable to the contractor by the State under this contract a penalty of five dollars for each person for each calendar day during which such person was discriminated against or intimidated in violation of the provisions of the contract, and

(d) this contract may be cancelled or terminated by the State or municipality and all moneys due or to become due hereunder may be forfeited for a second or any subsequent violation of the terms or conditions of this section of the contract, and

(e) the aforesaid provisions of this section covering every contract for or on behalf of the state or a municipality for the manufacture, sale or distribution of materials, equipment or supplies shall be limited to operations performed within the territorial limits of the State of New York.

IV. During the performance of this contract, the contractor agrees as follows:

(a) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, age, disability or marital status.

(b) If directed to do so by the Commissioner of Human Rights, the contractor will send to each labor union or representative or workers with which the contractor has or is bound by a collective bargaining or other agreement or understanding, a notice, to be provided by the State Commissioner of Human Rights, advising such labor union or representative of the contractor's agreement under clauses (a) through (g) (hereinafter called "nondiscrimination clauses"). If the contractor was directed to do so by the contracting agency as part of the bid or negotiation of this contract, the contractor shall request such labor union or representative to furnish a written statement that such labor union or representative will not discriminate because of race, creed, color, sex, national origin, age, disability or marital status, and that such labor union or

VI. In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law and the regulations of the Comptroller of the State of New York promulgated thereunder, the contractor agrees, as a material condition of the Contract

A. That neither the contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the provisions of the United States Export Administration Act of 1969, as amended, or the Export Administration Act of 1979, as amended, or the regulations of the United States Department of Commerce promulgated thereunder;

B. That if the contractor or any substantially owned or affiliated person, firm, partnership or corporation has been convicted or subjected to a final determination by the United States Department of Commerce or any other appropriate agency of the United States of a violations of the United States Export Administration Act of 1969, as amended, or the Export Administration Act of 1979, as amended, or the regulations of the United States Department of Commerce promulgated thereunder, the contractor shall notify the Comptroller of such conviction or determination in the manner prescribed by the Comptroller's regulations.

VII. For a period of three years after the termination of this AGREEMENT, the State, DEPARTMENT, and the Comptroller of the State of New York shall have access at such reasonable times and for such reasonable periods as may be mutually agreed upon, to any of the CONTRACTOR'S books, documents, papers and records directly pertinent to the subject matter of this AGREEMENT for the purpose of making audits, examinations, excerpts or transcripts.

VIII. The DEPARTMENT shall have the right to postpone, suspend, abandon or terminate this AGREEMENT, and such actions shall in no event be deemed a breach of contract. The CONTRACTOR may terminate this AGREEMENT upon 30 (thirty) days' notice in writing to the DEPARTMENT. In the event of any termination, postponement, delay, suspension or abandonment, the CONTRACTOR shall deliver to the DEPARTMENT all data and reports pertaining to the study. In any of these events, the DEPARTMENT shall make settlement with the CONTRACTOR upon an equitable basis as determined by the DEPARTMENT, which shall fix the value of the work which was performed by the CONTRACTOR prior to the postponement, suspension, abandonment or termination of this AGREEMENT.

IX. The CONTRACTOR agrees that it will indemnify and save harmless the DEPARTMENT and the STATE OF NEW YORK from and against all losses and all claims, demands, payments, suits, actions, recoveries and judgments of every nature and description brought or recovered against it by reason of any omission or act of the CONTRACTOR, its agents, employees, or subcontractors in the execution of this AGREEMENT.

X. If this AGREEMENT was awarded after solicitation of bids or negotiation of cost, the provisions contained in this paragraph shall be applicable.

(a) By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his knowledge and belief:

1) The prices in this bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;

2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor;

XII. If the maximum contract price herein equals or exceeds $20,000, the affirmative action provisions contained in this paragraph shall be applicable.

As utilized hereinafter, the following definitions shall be applicable:

Minority business enterprise (MBE): A business at least 51 percent of which is owned and controlled by minority male/female members or in the case of publicly-owned business, at least 51 percent of the stock of which is owned and controlled by minority male/female members. The minority ownership must exercise actual day-to-day management.

Minority group members: Black American, Hispanic Americans, Asian Americans, American Indians, American Eskimos, and American Aleuts.

Black (not of hispanic origin) - A person having origins in any of the black racial groups.

Hispanic - A person of Mexican, Puerto Rican, Cuban Central or South American, or other Spanish culture or origin, regardless of race.

Asian or Pacific Islander - A person having origins in any of the original peoples of the Far East, Southeast Asia, Indian subcontinent, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Phillipine Islands, and Samoa.

American Indian or Alaskan Native - A person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition.

Women's Business Enterprise (WBE): A business at least 51 percent of which is owned and controlled by female partner(s), or in the case of a publicly-owned business, at least 51 percent of the stock of which is owned and controlled by female group members. The female ownership must exercise actual day-to-day management.

White: A person with origins in any of the original peoples of Europe, North Africa, or the Middle East who is not of hispanic origin.

NYSDEC/OAA - New York State Department of Environmental Conservation/Office of Affirmative Action.

The Contractor agrees that it will made good faith efforts to subcontract at least ( )% MBE and at least ( ) % WBE of the total value of this contract. Failure to obtain these percentages or demonstrate positive efforts to do so may lead to withholding of payments. Within 15 days of authorization to begin work or signing of the contract, whichever occurs first, the Contractor must submit an MBE/WBE utilization plan with a detailed description of the services to be provided as well as an estimated dollar amount of each subcontract. This MBE/WBE utilization plan shall identify how the contractor proposes to achieve the MBE/WBE goals stated in the Contractor's approved MBE/WBE work plan. The Contractor's proposed utilization plan shall be submitted to the Department's MBE/WBE officer.

The NYSDEC/OAA will review and approve the utilization plan if it clearly delineates methods to achieve the required MBE/WBE goals. Failure to submit and receive NYSDEC/OAA approval of the MBE/WBE utilization plan prior to the first request for payment by the Contractor shall result in the withholding of this payment by the Department. Such withholding of payments shall not relieve the Contractor of any requirements of the contract including the completion of the project. Submission of an approvable plan shall be determined a prerequisite to invocation of the provisions of the "prompt payment" bill (L. 1984 c, 153).

BID BOND