H. Croke USEPA

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

THOMAS V. SKINNER, DIRECTOR

217/524-3300

March 5, 2001

CERTIFIED MAIL
7099 3400 0002 1429 2956
7099 3400 0002 1429 2987

Clean Harbors Services, Inc.
Attn: James R. Laubsted
11800 South Stony Island Avenue
Chicago, Illinois 60617

Illinois International Port District
Attn: Anthony G. Ianello
3600 East 95th Street
95th & the Lakefront
Chicago, Illinois 60617-5193

US EPA RECORDS CENTER REGION 5
1000490

Re: 0316000051 -- Cook County
Clean Harbors Services, Inc. (CHSI)
ILD000608471
Part B Log No. 16-M-43
RCRA Part B Permit File

Gentlemen:

This letter is in response to your initial modification request Log 16-M-43 dated November 17, 2000, and additional information received on January 12, 2001 to eliminate the waste prequalification sample and analysis requirement for storage and transfer waste. The Illinois EPA has approved your request to modify the waste analysis plan to use generator's knowledge and generator supplied analysis to determine the acceptability of the waste. All tests previously conducted during the preacceptance analysis must still be conducted during gate control.

This determination is based upon our review of (1) the RCRA Part B issued to CHSI, (2) the regulations (35 Ill. Adm. Code, Subtitle G) and (3) the information contained in your submittal. Operations must be conducted in accordance with the approved RCRA Part B permit originally issued to CHSI and all subsequent modifications to the Part B Permit.

Since no changes in the permit conditions have resulted from this modification, a revised permit has not been issued; only the cover page of the permit reflecting the approval of this modification is being sent to you.

Within 35 days after the notification of a final decision, the permittee may petition the Illinois Pollution Control Board to contest the issuance of the permit. The petition shall include a statement of the reasons supporting a review, including demonstration that any issues raised in the petition, were previously raised during the public comment period. In all other aspects, the petition shall be in accordance with the requirements for permit appeals as set forth in 35 I.A.C. Part 105. Nothing in this paragraph is intended to restrict appeal rights under Section 40(b) of the Environmental Protection Act (35 I.A.C. 705.212(a)).

PRINTED ON RECYCLED PAPER

Work required by this permit, your application or the regulations may also be subject to other laws governing professional services, such as the Illinois Professional Land Surveyor Act of 1989, the Professional Engineering Practice Act of 1989, the Professional Geologist Licensing Act, and the Structural Engineering Licensing Act of 1989. This permit does not relieve anyone from compliance with these laws and the regulations adopted pursuant to these laws. All work that falls within the scope and definitions of these laws must be performed in compliance with them. The Illinois EPA may refer any discovered violation of these laws to the appropriate regulating authority.

Should you have any questions or comments regarding this permit, please contact Mark A. Schollenberger, P.E. of my staff at 217/524-3307.

Sincerely,

Joyce L. Munie, P.E.
Manager, Permit Section
Bureau of Land

JLM:MAS:bjh\963281s.doc

Attachment

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

THOMAS V. SKINNER, DIRECTOR

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE MANAGEMENT RCRA PART B PERMIT

IEPA #0316000051 -- Cook County
USEPA ILD #000608471
Chicago/Clean Harbors Services, Inc.
Permit Log No. B-16-M-43
RCRA -- Part B - Permit File

Issue Date: September 30, 1993
Effective Date: November 4, 1993
Expiration Date: November 4, 2003
Modification Date: September 12, 2000

Illinois International Port District
3600 East 95th Street
95th & the Lakefront
Chicago, Illinois 60617-5193

Clean Harbors Services, Inc.
11800 South Stony Island Avenue
Chicago, Illinois 60617

A Part B Permit is hereby issued pursuant to the Resource Conservation and Recovery Act (RCRA), Illinois Environmental Protection Act, and Title 35 Ill. Adm. Code Parts 702, 703, 705, and 720 through 729 to Clean Harbors Services, Inc. and the Illinois International Port District (herein known as the Permittee(s)) to modify their existing permit to construct, maintain and operate a waste management facility involved in the treatment and storage of hazardous waste. The modification affects the container storage areas (Unit Q and B). The site is located at 11800 South Stony Island Avenue in Chicago, Illinois.

This permit consists of the conditions contained herein (including those in any attachments and appendices) and applicable regulations contained in the Illinois Environmental Protection Act and Title 35 Ill. Adm. Code Parts 702, 703, 705 and 720 through 729 in effect on the effective date of this permit. The Environmental Protection Act ("Act") Ill. Rev. Stat., Ch. 111-1/2, par. 1039 grants the Illinois Environmental Protection Agency the authority to impose conditions on permits which are issued. This permit contains 253 pages including Attachments A through K.

If you have any questions regarding this draft permit, please contact Mark A. Schollenberger, P.E. at 217/524-3300.

Sincerely,

Joyce L. Munie, P.E.
Manager, Permit Section
Bureau of Land

JLM:MAS:bjh\963281s.doc

cc: Harriet Croke, USEPA Region 5

B-16-CA-1

USEPA

JKM
TFF

B.1.1

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
325 WOOD ROAD, PO BOX 327 • BRAINTREE, MA 02184-2402
(617) 849-1800

WRITER'S DIRECT NUMBER
Extension 4182

LAW DEPARTMENT
(617) 849-1800
FAX (617) 356-1375

December 4, 1995

Illinois Environmental Protection Agency
Attn: Edwin C. Bakowski, Manager
Permit Section, Bureau of Land
2200 Churchill Road
Springfield, Illinois 62794-9276

RECEIVED
DEC 06 1995
IEPA-BOL
PERMIT SECTION

Re: 0316000051 - Cook County
Clean Harbors of Chicago, Inc.
ILD000608471
Log No. 16
RCRA Permit

Dear Mr. Bakowski:

Pursuant to the provisions of Sections V.B.2 and V.D of Clean Harbors of Chicago, Inc.'s RCRA Part B Permit, enclosed please find four (4) copies each of the following documents:

- Supplemental RCRA Facility Investigation (RFI) Phase I Work Plan for the former CWM incinerator process area and the area of former monitoring well G-121S; and
- Initial Corrective Measures Program Report for the former CWM incinerator site.

Very truly yours,

Jules B. Selden
Corporate Attorney

B-16

USEPA

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
11800 South Stony Island Avenue • Chicago, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Via Overnight Courier

November 2, 1995

Illinois Environmental Protection Agency
Bureau of Land
Planning and Reporting Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

RECEIVED
NOV 03 1995
IEPA-BOL
PERMIT SECTION

Dear Sir:

Enclosed is documentation submitted as a requirement of the Clean Harbors of Chicago, Inc. RCRA Part B Permit (RCRA Log No. 16-M-2, 0316000051). This is required by a Special Condition, Attachment D, Part F, Number 3 on pages D-9 and D-10.

The Special Condition requires Clean Harbors of Chicago, Inc. to submit documentation that information concerning the facility has been provided to emergency response agencies identified in 35 IAC 724.153(b). The information required is identified in the Special Condition. These documents are enclosed. It should be noted that the information was required by the original permit and satisfied with the February 1, 1994 submittal to the Agency. This information was again supplied to the emergency response agencies to update them on changes at the facility. I confirmed with Mark Schollenberger that information regarding the properties of the wastes managed at the facility was not required because of documentation previously submitted to the Agency that the local fire department did not want this information.

If you have any further questions, please contact me at (312)646-6202.

Sincerely,

James R. Laubsted
Facility Compliance Manager

B-16 M-2

cc: Meyerson
USEPA

JH
WKW

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
325 WOOD ROAD • BRAINTREE, MA 02184
(617) 849-1800

Via Fascimile

October 23, 1995

Mr. Robert Watson, P.E.
Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

RECEIVED
OCT 30 1995
IEPA-BOL
PERMIT SECTION

Re: Clean Harbors of Chicago, Inc.
Log No. B-16-M-2
Review Notes - Building 26

Dear Mr. Watson:

This letter is intended to respond to your October 17, 1995 "Review Notes" for the Ignitable Container Management Building (Unit 26) at the modified Clean Harbors of Chicago, Inc. (CHCI) facility. The response addresses each of your comments in the order in which they appeared in the Review Notes.

Permit Condition I.K.1.a

a. Lab Pack Pouroff Station. Please refer to the three sketches included as Attachment 1. The sketches show: (i) a front view of the cutoff room and (ii) side views of (a) the pack pouroff equipment and (a) the drum pumping equipment. These sketches should aide you in your understanding of the layout of and equipment in this pouroff/drum pumping room.

   Photographs. Please note that color photographs of the new Tank Farm (Unit 16) and Ignitable Container Storage Building (Unit 26) will be taken today and shipped to you via overnight delivery tonight.

b. Storage Capacity Changes. Please note that our previous discussions regarding a storage capacity change was for Building 25, not Building 26. Please note that the changes in Building 25 were made to accommodate a block wall enclosure designed to protect the fire water supply line during cold weather conditions. No such design changes were required for Building 26.

Pallets on Ramps. CHCI notes that the ramps in question on the south side Building 26 are not used for active waste entry into the building. With respect to the storage of waste/pallets on these ramps, CHCI notes that there is no specific container management regulation which prohibits a container from being stored on a ramp. In CHCI's view, the critical factors for container management are: (i) secondary containment; (ii) unobstructed access/aisle spacing; and (iii) drum/pallet stability. With respect to containment, the high point for each ramp is at the south wall and the ramps slope down to the main floor of the building; thus, the ramp structures are fully contained with the general secondary containment structure of the building. With respect to access, containers/pallets on the ramp will be stored within painted floor lines which maintain a minimum aisle space of 4.0 feet between rows of pallets. To address concerns for potential tipping or instability caused by a pallet/drum overlapping the edge of the ramp, CHCI shall retrofit the east sides of both ramps with a metal plate ramp to "smooth out" the transition from the ramp to the main floor. CHCI shall not store waste on the ramps until such devices are in place.

Permit Condition I.K.2

a. CO2 Fire Protection System. The fire protection system (i.e., CO2 deluge system) installed over the the lab pack consolidation station was installed as a localized fire protection measure at the request of the IEPA, not in accordance with an applicable NFPA recommendation or City of Chicago fire code requirements. CHCI notes that NFPA and City of Chicago code requirements are addressed and satisfied by the ceiling mounted foam-water sprinkler system.

Permit Condition II.D.1.a.iv

a. Seals/Connections. The materials of construction for the seals and connection for the pipes and seals in the pumps are provided in the CHCI October 20, 1995 response package for the Tank Farm, as prepared by Hoyer Schlesinger Turner, Inc.

CleanHarbors

If you have any questions regarding this letter, please feel free to contact me at (617) 849-1800, extension 4473.

Sincerely,

Paul A. Ahearn

Paul A. Ahearn
Manager, Regulatory Compliance

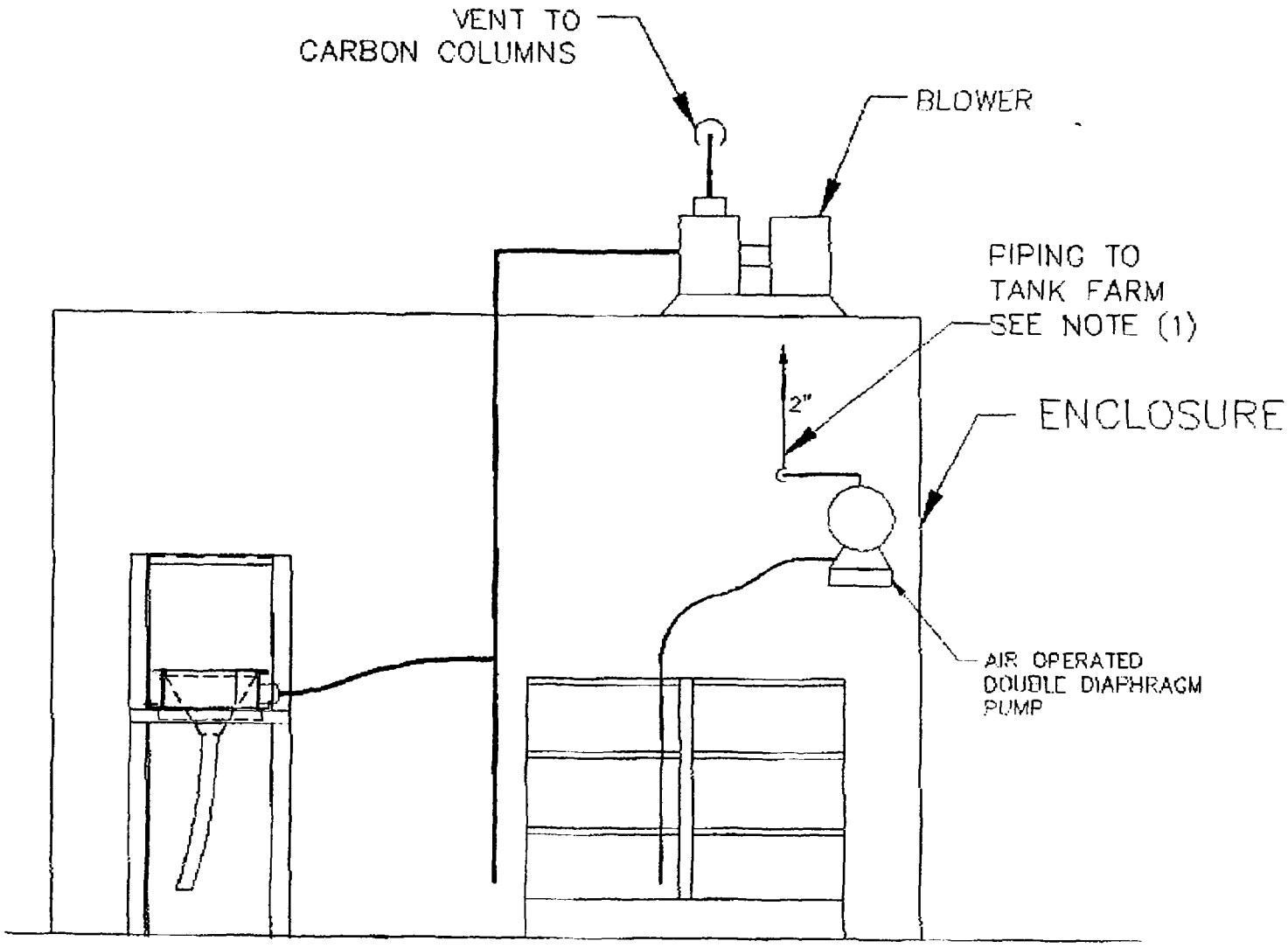
Attachment

cc: Howard Chin, IAG (Certified Mail Z 238 294 637)

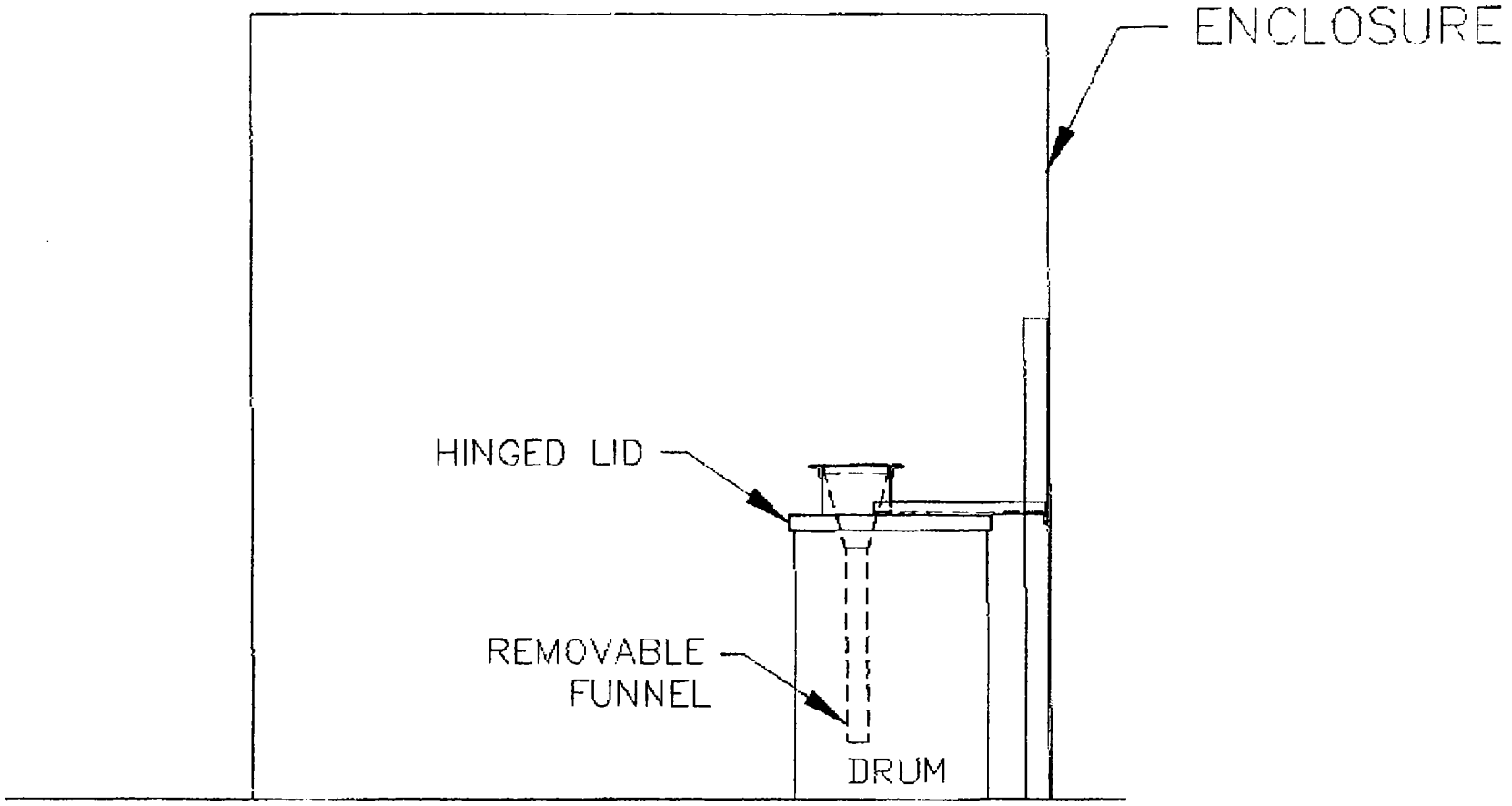
Attachment 1

Cutoff Room Equipment and Layout Sketches

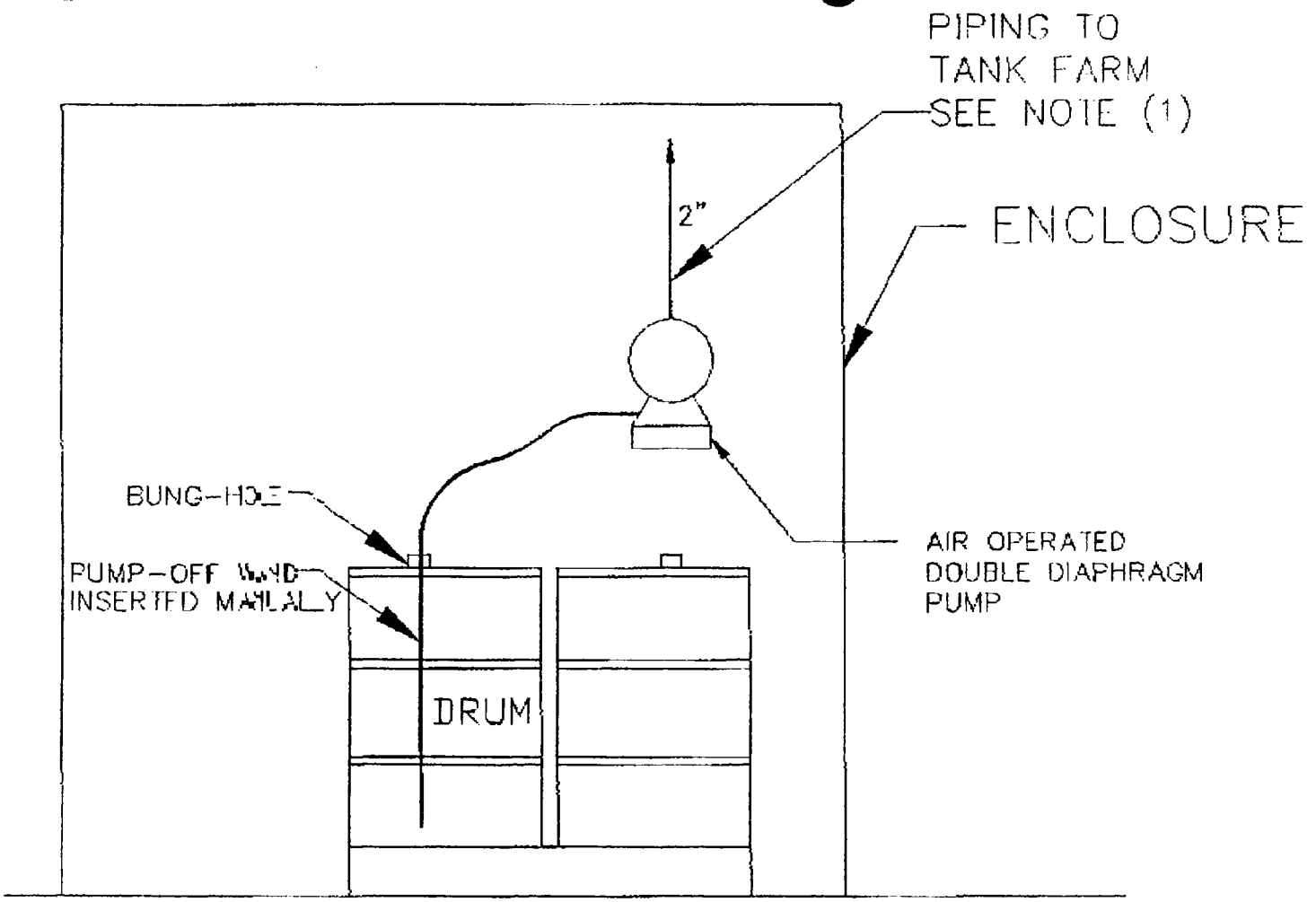
RECEIVED
OCT 30 1995
IEPA-BOL
PERMIT SECTION



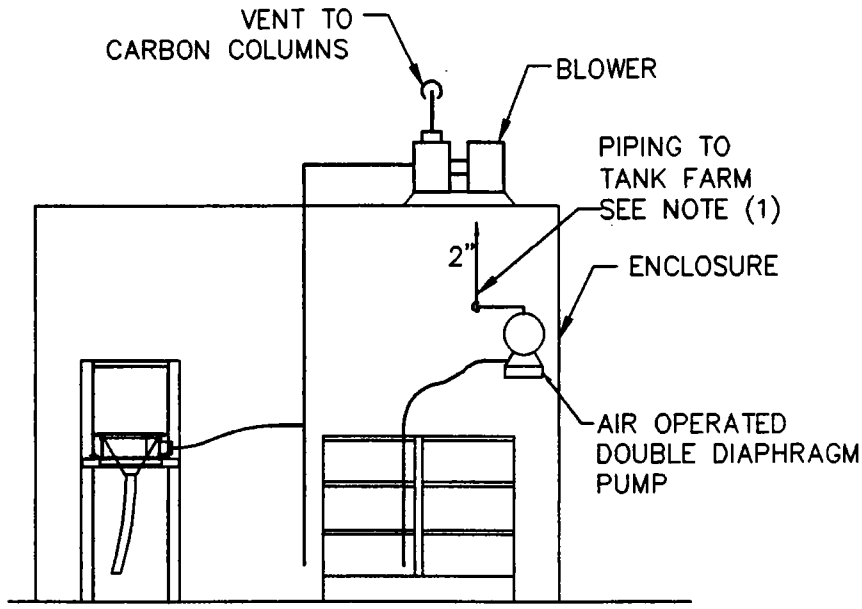
ELEVATION
DRUM PUMPING STATION
AND LABPACK POUR-OFF



SIDE ELEVATION
LABPACK POUR-OFF



SIDE ELEVATION
DRUM PUMPING STATION



ELEVATION

DRUM PUMPING STATION
AND LABPACK POUR-OFF

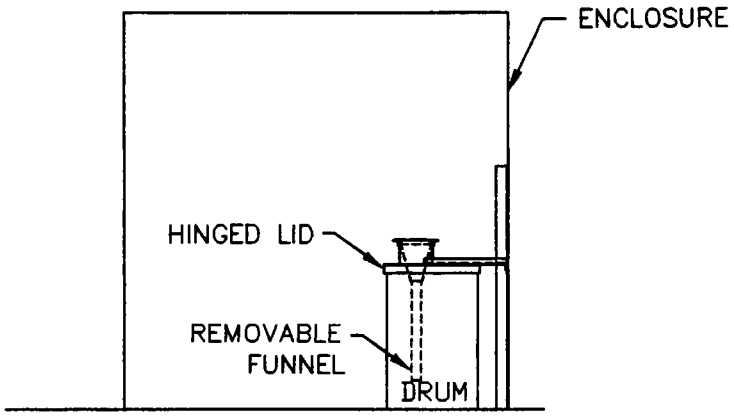
ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
A	PRELIMINARY				

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

SKETCH 1

PROJECT NO.	CH-1121	DWG. NO.	4210-SK-1
SCALE	NONE		



SIDE ELEVATION
LABPACK POUR-OFF

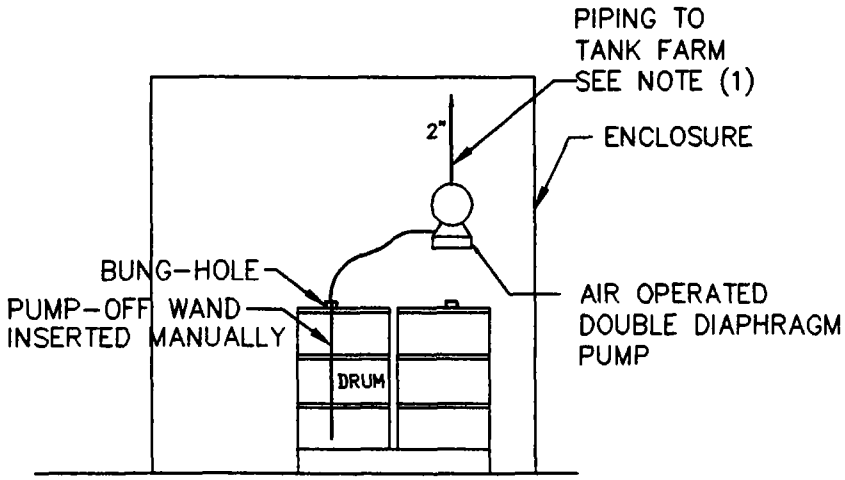
ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
A	PRELIMINARY				

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

SKETCH 2

PROJECT NO.	CH-1121	DWG. NO.	4210-SK-2
SCALE	NONE		



SIDE ELEVATION
DRUM PUMPING STATION

ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
A	PRELIMINARY				

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

SKETCH 3

PROJECT NO.	CH-1121	DWG. NO.	4210-SK-3
SCALE	NONE		

CleanHarbors®
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested - #P580534987

August 17, 1995

RECEIVED
AUG 31 1995
PERMIT SECTION

Illinois Environmental Protection Agency
Bureau of Land
Planning and Reporting Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

Dear Sir:

Enclosed is documentation submitted as a requirement of the Clean Harbors of Chicago, Inc. RCRA Part B Permit (RCRA Log No. 16-M-2, 0316000051). This is required by Special Conditions, Attachment D, Part G, Number 7 on page D-12.

The Special Condition requires Clean Harbors of Chicago, Inc. to submit revised scale drawings of the facility which clearly identify the boundaries of all Satellite & Accumulation areas. If the size, number, location, or operation of a satellite or accumulation area changes, Clean Harbors will revise the drawings. An updated and current scale drawing of all satellite and accumulation areas will be maintained at the facility at all times as part of the facility operating record for inspection by the Agency.

If you have any further questions, please contact me at (312)646-6202.

Sincerely,

James R. Laubsted
Facility Compliance Manager

CLEAN HARBORS, IL

State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

RECEIVED
JUL 07 1995
OFFICE OF RCRA
WASTE MANAGEMENT DIVISION
EPA, REGION V

To All Persons Interested in the Clean Harbors of Chicago, Inc.
Class 3 RCRA Permit Modification Request:

FINAL DECISION NOTICE

The Illinois Environmental Protection Agency provides notice pursuant to 35 Ill. Adm. Code 705.201(c), that a modified final RCRA/HSWA hazardous waste permit was issued to the Clean Harbors facility in Chicago on June 30, 1995.

The applicant may petition the Illinois Pollution Control Board to contest this permit decision pursuant to 35 Ill. Adm. Code 705.212. The deadline to appeal IEPA permit decision is August 4, 1995.

For additional information on the appeal process or to receive a copy of the RCRA/HSWA permit decision or the IEPA response to comments, please contact:

Illinois Environmental Protection Agency
Office of Community Relations
Attn: Mara McGinnis, #33
2200 Churchill Road
P.O. Box 19276
Springfield, Illinois 62794-9276
Phone: 217/782-5562

14. **Waste Analysis Plan:** **CHCI is of the understanding that waste analysis information, including the GWMPS Form information, may be maintained on-site in electronic format.**

Response to comment: The comment has been noted. CHCI's understanding of the condition is correct so long as this information is made available to Agency personnel upon request.

15. **Temporary Authorization to Operate:** **It is CHCI's understanding that the Agency will support the issuance of a Temporary Authorization (TA) to Operate during the normal 35 day waiting period that takes place between the day that a final permit decision is reached and the effective date of the permit. CHCI notes that the request for a TA to operate the modified facility was submitted to the Agency by letter dated April 14, 1995.**

Response to comment: Approval of the TA request is dependent on the submittal and approval of all of the Construction Certification Reports, approval and testing of the fire protection system, etc. required by the permit.

6. **Condition I.B.1.d.iii, Page I-3:** **For sake of consistency, add the following subsection title and renumber each unit entry:**
"e. Existing Units to be Modified - Drums"
"i. Drum Storage Area (Unit 61)"

Response to comment: The condition will remain as it was written. Unlike the fact sheet and the application, the identification of the units in the permit is divided into only two groups; those that are existing, and everything else.

7. **Condition I.B.1.d.iv, Pages I-3 & I-4:** **For sake of consistency, add the following subsection title and renumber unit entries:**
"f. Proposed Units - Drums"
"i. Container Storage Building (Unit 25)"
"ii. Ignitable Container Storage Building (Unit 26)"
"iii. Container Handling Dock (Unit G1)"

Response to comment: The condition will remain as it was written. Unlike the fact sheet and the application, the identification of the units in the permit is divided into only two groups; those that are existing, and everything else.

8. **Condition I.B.1.d.v, Page I-4:** **For Unit 26, change the maximum volume figure from 9,900 to 10,560 gallons.**

Response to comment: The condition has been revised as requested by CHCI.

9. **Condition I.B.1.d, Page I-4:** **For sake of consistency, change the word "Proposed" to "Approved/not yet constructed", and re-letter the subsection from "e" to "g".**

Response to comment: The condition will remain as it was written. Unlike the fact sheet and the application, the identification of the units in the permit is divided into only two groups; those that are existing, and everything else.

14. **Conditions I.L.7.f. through I.L.11, Page I-16:** **These conditions as they appear in the existing CHCI permit have been omitted from the revised draft. CHCI is of the understanding that the missing conditions shall be inserted without any changes from the existing language.**

Response to comment: The conditions will be inserted into the permit without any changes from the existing language.

15. **CHCI's comments did not include a number 15.**

16. **Condition II.B.1.ii, Page II-1:** **For the sake of consistency, the correct volume for Unit 142 is 1270 gallons.**

Response to comment: The condition has been revised as requested by CHCI.

17. **Condition II.B.1.ii, Page II-1:** **For the sake of consistency, the correct volume for Unit 150 is 3770 gallons.**

Response to comment: The condition has been revised as requested by CHCI.

18. **Condition II.B.2, Page II-2:** **Consistent with Comment 12 above, delete the phrase "which has been approved by this Agency through a Supplemental Waste Streams permit"**

Response to comment: Due to procedural changes at the Agency, and the additional special conditions in Attachment A, the special waste stream permit system is no longer in effect at this facility. Therefore, the condition has been deleted as requested by CHCI.

RESPONSE TO THE COMMENTS SUBMITTED BY CLEAN HARBORS, INC. April 13, 1995

ON THE CORRECTIVE ACTION REQUIREMENTS IN THE DRAFT RCRA PERMIT FOR CLEAN HARBORS LOG NO. B-16-M-2

0316000051 -- Cook County
Clean Harbors, Inc.
Log No. B-16-M-2
Admin Record

Reviewer: Jim Moore

State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

HEARING FILE NO.: 219-93
IEPA NO.: 0316000051
ILD NO.: ILD000608471
NOTICE NO.: PB04-93

Date: May 18, 1993

NOTICE OF PUBLIC HEARING

The Illinois Environmental Protection Agency (IEPA) and the United States Environmental Protection Agency (U.S.EPA) hereby jointly give notice of intent to issue a joint Resource Conservation and Recovery Act (RCRA) and Hazardous and Solid Waste Amendments (HSWA) permit to Clean Harbors of Chicago, Inc. on South Stony Island Avenue in Chicago. The facility's mailing address is 11800 South Stony Island Avenue, Chicago, Illinois 60617. Clean Harbors currently stores hazardous wastes and treats inorganic hazardous waste waters and sludges under interim status as provided for in 35 Ill. Admin. Code Section 725.101(b). Proposed activities include an increase in storage capacity, a fuel blending facility and treatment of organic hazardous wastes on the existing site.

Interested citizens are invited to review copies of the permit application, draft permit and related fact sheets at the following location:

Olive Harvey College Library
10001 South Woodlawn Avenue
Chicago, Illinois 60628
312/568-3700

Citizens interested in touring the Clean Harbors facility are invited to contact the public involvement coordinator, Mara McGinnis, at 217/782-5562 to make arrangements.

A public hearing to address the proposed issuance of this joint permit has been scheduled for July 15, 1993 at 7:00 p.m. at Olive Harvey College Theatre. The hearing will be held in accordance with Illinois EPA's "Procedures for Permit and Closure Plan Hearings" (35 Ill. Adm. Code 166) and 35 Ill. Adm. Code Section 705.182, copies of which may be obtained from the Agency Hearing Officer. Requests for special needs interpreters (e.g. sign or Spanish speaking) must be made to the Agency Hearing Officer (listed below) by July 5, 1993. Written comments will be accepted from the public for 45 days before the hearing, at the hearing, and for 30 days after the hearing (if postmarked by midnight August 13, 1993). Comments and interpreter requests should be made to: John Williams, Agency Hearing Officer, 2200 Churchill Road, P.O.Box 19276, Springfield, Illinois 62794-9276. (Phone 217/782-5544).

Printed on Recycled Paper

All comments submitted will become part of the Administrative Record and will be evaluated by IEPA and U.S.EPA in making the final permit decision. The two agencies will respond to comments on the draft permit, specify which provisions, if any, of the final permit may have been changed and indicate whether additional documents have been included in the Administrative Record. Anyone who submits written comments will be notified of the final permit decision. Inquiries about the permit appeal process should be directed to the Public Involvement Coordinator listed below.

The permit application, draft permit, related information and all data submitted by the applicant, as part of the Administrative Record, are now available for public inspection Monday through Friday between 9:00 a.m. and 5:00 p.m. at the following location:

Illinois EPA
Attn: Mara McGinnis, Public Involvement Coordinator, #33
2200 Churchill Road
P.O.Box 19276
Springfield, IL 62794-9276
217/782-5562

Please telephone ahead for an appointment to view the documents.

The IEPA Division of Land Pollution Control is authorized to administer the RCRA program and, as of April 30, 1990, specific provisions of HSWA (amending RCRA) which address corrective actions, waste minimization, mixed wastes and other regulatory functions. HSWA requires facilities seeking a permit to take corrective actions for any past releases of hazardous constituents from the facility. More recent requirements of HSWA (e.g., land disposal restrictions) must be addressed by U.S.EPA. For further clarification of program authority, refer to the March 1, 1990 Federal Register, Vol. 55, No. 41, pg. 7320.

MM:sf/415Y,19-20

3-16-M-2

cc: Maywood USEPA

JHK

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
1200 CROWN COLONY DRIVE, P.O. BOX 9137 • QUINCY, MA 02269-9137
(617) 849-1800

Via Fascimile and Certified Mail/Return Receipt Z 393 813 946

April 13, 1995

Mr. Robert Watson, P.E.
Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

Re: Clean Harbors of Chicago, Inc.
Log No. B-16-M-2
Draft RCRA Part B Permit - Corrective Action Provisions

Dear Mr. Watson:

Clean Harbors of Chicago, Inc. (CHCI) is pleased to submit the attached comments in response to the Corrective Action provisions contained in the draft RCRA Part B permit issued by the Agency on March 17, 1995.

If you have any questions, please feel free to contact me at (617) 849-1800, extension 4473.

Sincerely,

Paul A. Ahearn

Paul A. Ahearn
Manager, Regulatory Compliance

RECEIVED
APR 20 1995
IEPA - BOL
PERMIT SECTION

Enclosure

cc: James Moore, IEPA
Anton Martig, USEPA (Letter Only) Z 393 813 947
Jules Selden, Esq., CHESI
Stephen Pozner, V.P., Compliance and Health & Safety, CHESI

COMMENTS ON THE CORRECTIVE ACTION PROVISIONS OF THE CLEAN HARBORS OF CHICAGO, INC. DRAFT MODIFIED RCRA PART B PERMIT

Section V.A.3 (Page V-1)

- It needs to be made clear that once IEPA issues the modified RCRA Part B Permit to Clean Harbors, the CWM Consent Judgment will, in accordance with its own terms, terminate. All subsequent corrective action on the site will then be pursuant to the provisions set forth in Clean Harbors' permit. For clarity, please insert the words "which were" after the word "SWMUs" at the end of the 2nd line.

- In the 6th line, correct the Civil Action No. to read "87-2411-S".

Section V.B.1 (Page V-2)

- The SWMU's listed in Section V.B.1 should be changed to reflect the specific SWMU numbers and names listed in the Agency's November 28, 1994 letter approving the RFI Phase I Workplan.

Section V.B.2 (Pages V-2 & V-3)

- In the 1st paragraph, at the beginning of the 3rd line, Clean Harbors requests that "within 90 days" be changed to "within 120 days". This is consistent with the language of the RFI Implementation Schedule in Section V of Attachment F and what was allowed for the exisiting Clean Harbors site. Clean Harbors needs this additional time to meet with the Agency prior to commencing workplan preparation in order to clearly determine the scope of the additional investigation.

- Paragraph V.B.2.a at the top of Page V-3 requires the supplemental Phase RFI Workplan to contain general information regarding the Clean Harbors facility. Information regarding the present Clean Harbors facility was contained in the Phase I RFI Workplan previously submitted to and approved by the Agency and is not related to the newly added portion of the facility. The supplemental Phase I RFI Workplan should be limited to the newly added portion of the facility. Please reword this paragraph to read:

  "a. General information regarding the newly added portion of the Clean Harbors facility in Chicago, Illinois."

- The last paragraph of Section V.B.2 states that the Permittee may make reference to previous reports or documents "submitted to the Agency" which contain requested information. Please change the quoted phrase to read "submitted to the U.S. EPA or

the Agency". Clean Harbors should not have to reproduce documents previously prepared by Chemical Waste Management, Inc. Clean Harbors should be able to reference any document previously submitted to either U.S. EPA and/or the IEPA. Upon the Agency's request, Clean Harbors will provide copies of such referenced documents.

Section V.B.3.a (Page V-3)

- Change "DLPC" to "BOL".

Section V.B.3.b (Page V-3)

- Change "DLPC" to "BOL".

Section V.B.4.a (Page V-4)

- End the sentence after "RFI Phase I" on the 3rd line, and delete the word "Workplan".

Section V.B.4.c (Page V-4)

- The term "preliminary objectives" in the 4th line is vague and needs to be reworded for specificity. Neither Clean Harbors nors its consultant are able to determine what the Agency is looking for.

- Paragraphs V.B.4.c.i and ii each use the phrase "these preliminary values" (emphasis added). It is not clear what "values" the Agency is addressing. The previous paragraph refers to "preliminary objectives" (see above comment).

Section V.B.4.d (Page V-4)

- Clean Harbors questions why this information is part of the RFI Phase I Report. This language presupposes that a Phase II RFI will need to be performed. Such a decision will rest with the Agency pursuant to Section V.B.5. A discussion of procedures which will be used in carrying out Phase II of the RFI will be contained in the Phase II RFI Workplan which will be submitted pursuant to Section V.B.6. Therefore, Section V.B.4.d should be deleted, or, in the alternative, change "general dicussion" to "brief general discussion".

Section V.B.11 (Page V-7)

In the 2nd line, change "RFA" to "RFI".

Section V.D (Pages V-11 & V-12)

- Based on the following comments, it is Clean Harbors' opinion that the requirement for an initial corrective action plan (and, hence, the title of this section) may be premature.

- At the top of Page V-12, change Civil Action "87-2411-5" to "87-2411-S".

- In the partial paragraph at the top of Page V-12, the words "sediments, surface water" should be deleted. During the RFI Phase I and RFI Phase II conducted by CWM, there was no credible evidence that contamination of the sediments or surface water of Lake Calumet was attributable to the facility.

- Paragraphs V.D.5, 6 and 7 all address the necessity of corrective action on the newly added portion of the facility. However, at the same time, the Agency is requiring a supplemental RFI Phase I (and, if necessary subsequent phases). The information obtained from the additional investigative activities in the operational portion of the facility could very well impact the discussions required in Paragraphs V.D.5, 6 and 7. The addressing of corrective action in advance of all investigative work is premature, and these requirements should be deleted from the report which the Agency is requiesting.

- In the last paragraph of this section, it is requested that "90 days" be changed to "120 days". Clean Harbors needs this time to address the requirements of Paragraphs V.D.1 through 4 (and at the same time prepare a supplemental Phase I RFI Workplan. Consistent with the previous comment, it is requested that the last sentence of this paragraph be deleted.

Attachment F, Section III.A.4 (Page F-3)

- Change "Section IV" to read "Section V"

Attachment F, Section III.B (Page F-4)

- In the 1st paragraph, change "Section IV" to "Section V".

Attachment F, Section III.D.2.h (Page F-9)

- Change "7 above" to read "g above"

Attachment F, Section III.G (Page F-16)

- This section was erroneously omitted. Section III.G from

B-16-M-2

cc: Maywood
USEPA

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
1200 CROWN COLONY DRIVE, P.O. BOX 9137 • QUINCY, MA 02269-9137
(617) 849-1800

Via Facsimile and
Certified Mail - Return Receipt Requested Z 434 063 220

April 5, 1995

Mr. Robert Watson, P.E.
Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

RE: Clean Harbors of Chicago, Inc.
Draft RCRA Part B Permit

Dear Mr. Watson:

Enclosed is a draft list of comments on the draft RCRA Part B Permit issued by the Agency on March 17, 1995. This list was prepared in advance of our meeting scheduled for Tuesday, April 11, at your offices. The list does not include any comments on the RCRA Facility Investigation/Corrective Action portions of the document. Those comments will be submitted under separate cover.

If you have any questions, please do not hesitate to contact me at (617) 849-1800, extension 4473.

Sincerely,

Paul A. Ahearn/njo

Paul A. Ahearn
Manager, Regulatory Compliance

PAA/njo

enclosure

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Technical Comments

1.	Page I-10, J(7)(a):	Pouroff and consolidation activities already allowed under existing Part B and Operating Permit. Building 26 has specially-designed cutoff room for open container pouring/pumping and Building 25 has operating fume hood for lab pack repacking. Why an issue?
2.	Page I-10, J(7)(b):	What is required for stabilization in Building 25. Refer to previous letter from Paul Ahearn to Rob Watson. Seek guidance on issues.
3.	Page I-10, J(7)(c):	Change "e.g." to "i.e.". CHCI acknowledges no rolloffs, but needs flexibility to accept other DOT "bulk" containers (i.e., greater than 119 gallons) for materials such as paint solids in flex bins.
4.	Page I-11, J(7)(d):	Why not? CHCI has designed the pumping/pouroff room with ventilation and controls to meet NFPA standards and have existing flammable liquid transfer procedures developed and stamped by fire protection specialist.
5.	Page I-11, J(8):	CHCI seeks approval to use "containment pallets" as described in the Application. Operating permit specifically includes the term "other devices" with respect to containment and segregation. RCRA does not limit physical devices to concrete berms/walls.
6.	Page I-11, J(9):	Add the work "bulk" before "trucks". Container trucks loaded in accordance with DOT shipping regulations allow for "incompatibles".
7.	Page I-11, J(10):	See #6, except container shipments.
8.	Page I-12, J(20):	Add "non-RCRA empty" before "tank trucks" since a RCRA-empty truck is exempt from RCRA regulations and could be cleaned out in any designated "generator area". Add Areas J1, J2, T & W as non-RCRA empty truck cleanout areas.
9.	Page I-13, K(1)(d):	The application thickness for Protecto Coat 900 is "30-40 mils", not 3/16 inch.

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Technical Comments (Cont.)

10.	Page I-13, K(1)(d)(vi) & (vii)	Units C&D are existing units which have already been coated in accordance with the existing Part B Permit.
11.	Page II-8, H(6)(a)	Ultrasonic testing should not be restricted to be conducted from "inside" the tanks. CHCI notes that the insulation panels on the tanks are removable in 6-inch square pieces to allow for ultrasonic testing.
12.	Page II-9, H(b)(c):	Internal inspection of the tanks is not necessary unless the ultrasonic testing indicates otherwise.
13.	Page D-3, A(6) & A(8):	See previous J. Laubsted letter to Mark Schollenberger.
14.	Page D-5, A(8)(a):	CHCI already accepts compressed gases typically as "lecture bottles" contained within labpacks. Strike the condition.
15.	Page D-5, A(8)(b):	Define "low level radioactive waste" to allow CHCI to accept scintillation materials which are not regulated for transport or disposal by DOT and the NRC.
16.	Page D-5, (C)(1):	Please provide rationale for inclusion of new language regarding a "revised closure performance standard".
17.	Page D-6, C(2):	CHCI requests to use the same general procedures and cleanup objectives of the IEPA-approved partial closure plan currently in use to close the outdoor storage areas and other CWM units which overlap construction areas and/or are intended for reuse by CHCI.
18.	Page D-7, F(1):	Why has the term "or hazardous constituents" been added to the facility release reporting requirements?
19.	Page D-11, G(4):	As previously agreed to by the Agency, the 6,000 BTU valve and 10% halogen limit was to be lifted once CHCI amended the closure cost estimate to use incineration disposal process for all hazardous waste fuel blending materials. That change has been made and this Condition should be removed in its entirety. Also, Condition A(1) on page D-1 should be edited to remove the states BTU limit.

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Technical Comments (Cont.)

20.	Page D-17 & D-18, Section K	See Jim Laubsted letter.
21.	Page H-1, (1):	CHCI shall provide a revised closure cost estimate which includes an amount-by-amount cost breakdown and which shall replace the schedule currently shown on pages H-1 and H-2.
22.		CHCI seeks general TCLP testing relief for commingled and noncommingled waste (process and non-process related) which is intended for incineration, fuel blending, and organic recovery.
23.		Financial Assurance: a. Units to be used by CHCI b. Surface impoundments c. Units to be closed (e.g. kiln)
24.		Temporary authorization to operate ~ Waive 35 day wait period.

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Clarification

1.		Maintain GWMPS in electronic form
2.	Page I-9, (H)(1)(b):	Clarify language: Containers of waste which exhibit the characteristic of ignitability or reactivity to allow drums which carry and I/R list code due to mixture or derived from rule (e.g. a non-ignitable F003 solvent/dirt mix).
3.	Page I-11, (J)(11):	Clarify that Pegasus drums do not need to be visually inspected prior to crushing
4.	Page I-11, (J)(14):	Bulk trucks would be handled in similar fashion to the description in (J)(15). Remove condition.
5.	Page I-11, (J)(15):	Insert "of 2 or more liquid layers" since separation of D002 liquid-solid mixtures is already an authorized activity.
6.	Page IV-6, (G)(8):	Satellite/accumulation areas can be changed without a Class 1 modification. Too much paperwork.
7.	Page IV-6, (G)(9):	PM Program can be changed without a Class 1 modification. Too much paperwork.
8.	Attachment A:	Waste codes. Note that revised Part A was missing four waste codes which are already approved and which appear on the acceptable code list. See previous Paul Ahearn letter to Rob Watson.
9.	Page D-2, (A)(6):	Clarify that a manifested shipment qualifies as a "recertification" provided that the time lapse is less than 12 mos. between shipments.
10.	Page II-6, D(1)(b):	Clarify that the term "separate" means dedicated to prevent cross-contamination not "segregated" in separate secondary containment systems

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Editorial

1.	Fact Sheet, Page 10 of 15, (xi):	3-compartment reactor total volume is 13K. The reactor is equipped with 1 scrubber.
2.	Fact Sheet, Page 12 of 15, (iv)(A):	Add "... and one air permit for all other air sources".
3.	Page I-2, (B)(1)(d):	In title, change "proposed" to "approved/not yet constructed"
4.	Page I-2, (B)(1)(c):	Add total gallonage (21600 gallons) for consistency.
5.	Page I-3, (B)(1)(d)(ii):	Add total gallonage (1925 gallons) for consistency.
6.	Page I-3, (B)(1)(d)(iii):	Re-title/renumber as "e. Existing Units to be Modified-Drum" "i. Drum Storage Area (Unit 61)"
7.	Page I-3, (B)(1)(d)(iv):	Retitle/renumber as "f. Proposed Units - Drums" "i. CSB (Unit 25)" "ii. ICSB (Unit 26)" "iii. CHD (Unit 61)"
8.	Page I-4, (B)(1)(d)(v):	Change volume from 9,900 to 10,560 gallons
9.	Page I-4, (B)(1)(d):	Retitle/renumber as "g. A/NYC Units - Bulk Solids"
10.	Page I-4, (B)(1)(f):	Renumber as "h"
11.	Page I-5, (B)(1)(f):	Add total truck gallonage (172,800) for consistency
12.		Add new Condition 5 to allow Bulk Solids Storage Pad (Unit B) to handle non-bulk liquid transport vehicles.
13.	Page I-9, (J)(1)(c):	Strike out -- no longer required to get a special waste system permit or generic permit

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Editorial (Cont.)

14.	Page I-10, (J)(4):	Strike "Supplemental Waste Stream Permit and"
15.	Page I-16, (L)(7):	Conditions (L)(7)(f) thru (L)(11) as they appear in the existing CHCI permit have been omitted from the revised draft.
16.	Page II-1, (B)(1)(ii):	Unit 142, correct volume is 1270 gallons
17.	Page II-1, (B)(1)(ii):	Unit 150, correct volume is 3770 gallons
18.	Page II-2, (B)(2):	Delete "..which has been approved by this Agency through a Supplemental Waste Streams permit"
19.	Page II-6, (E)(4):	Delete "...permitted by an IEPA issued special waste permit and be"
20.	Page IV-5, Condition 41:	Change "ESDA" to "EMA"
21.	Page IV-6, Condition A(a):	Change (a) to (9).
22.	Page D-1, (A)(4)(a):	Typo and change "CHCl" to "CHCI"
23.	Section D, all pages:	Pagination block refers to 19 pages, but Section D only contains 18 pages.

CLEAN HARBORS OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE
CHICAGO, IL 60617
EPA ID NO. ILD000608471

COMMENT BY COMMENT RESPONSE
TO TEMPORARY AUTHORIZATION COMMENTS
SEPTEMBER 1, 1994

LIST OF CHANGES
RESPONSE TO COMMENTS ON REQUEST FOR TEMPORARY AUTHORIZATION

I. TAB SECTION

1. CHCI's Comment by Comment Response

2. Pages D-52 and F-9 through F-10, revised 09/01/94.

3. Pages D-52 and F-9 through F-10, 07/151/94 (redlined version).

4. Appendix D-8. Professional Engineer (PE) Certification of the Construction of the Proposed/Modified Container Storage Areas, revised September 1, 1994. (Two letters)

5. Appendix D-12. Professional Engineer (PE) Assessment and Certification of the Design of Proposed/Modified Tank Storage System, revised September 1, 1994.

6. Appendix F-4. Professional Engineer Certification of Foam Fire Protection System Upgrade, revised September 1, 1994.

7. Appendix K-2. RCRA Part B Application Certification by Professional Engineer, revised September 1, 1994.

8. Letter fron Pegasus Consultants to Clean Harbors, dated August 31, 1994.

II. LIST OF REVISED/NEW DRAWINGS

CHCI	Title	Issue
4204B, 2 of 3	Site Plan - Existing, Approved, Modified & Proposed Activities	B
4204C	Drainage and Containment Control	A
4207, 3 of 4	Process Flow, Piping and Instrumentation Diagram - Modified Fuels Blending Operations	F
4207, 4 of 4	Process Flow, Piping and Instrumentation Diagram - Modified Fuels Blending Operations	F
4210, 2 of 3	Proposed Container Management Area Layout - Building 26	B
4210, 3 of 3	Proposed Container Management Area Layout - Building 25	B
4213, 2 of 3	Equipment Layout - Proposed Fuels Blending Operation	F
4215	Modified Ignitable Storage Tank Farm Details	B
4218	Approved Bulk Solids Storage Pad & Proposed Truck Staging Area Details	E
4244	Proposed Truck to Truck Transfer Dock	B
4245	Proposed Container Handling Dock	B

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4246	Proposed Truck Pad	B
4248	Truck Unloading Platform	B
4250	Tank Farm Equipment Layout	A
4251	Proposed Railcar Unloading Area Details	A

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
1200 CROWN COLONY DRIVE, P.O. BOX 9137 • QUINCY, MA 02269-9137
(617) 849-1800

September 1, 1994

Permit Section, RCRA Unit
Division of Land Pollution Control
Illinois Environmental Protection Agency
P.O. Box 19276
Springfield, IL 62794-9276

RE: Clean Harbors of Chicago, Inc.
11800 S. Stony Island Avenue
Chicago, IL 60617
Revised Part B Permit Application

Dear Sir or Madam:

Please refer to: 0316000051 - Cook County
Clean Harbors of Chicago, Inc.
ILD000608471
RCRA Permit Log No. 16
RCRA Permit File

I hereby certify that I, the undersigned am a Professional Engineer, licensed to practice in the State of Illinois.

I certify under penalty of law that the following proposed container management areas (existing structures):

- Building 25 container storage area
- Building 26 container storage area
- Building 43 fuel blending processing building

were designed under my direct supervision and the design incorporates good engineering practices.

The structural design and integrity of the foundations, floors and containment slabs will be reviewed prior to its usage and a supplemental certification will be provided.

Prior to coating, the concrete surfaces will be inspected for cracking and repaired if necessary. Prior to coating, any joints in the concrete floor will be inspected and properly repaired and sealed, if necessary.

All containment areas shall be coated with coating material that is chemically compatible with most of the stored waste materials. The containment areas of Buildings 25 and 26 shall be coated with 3/16-inch thick Protecto-Crete 900 system as manufactured by Dudick, Inc. or equivalent. The containment area of Building 43 shall be coated with 30 mils Protecto-Coat 900 system as manufactured by Dudick, Inc. or equivalent. Technical specifications are listed in Appendix D-10.

Building 26, used for the ignitable container storage, and Building 43, used for processing ignitable containers, shall be modified as necessary to meet NFPA 30 and City of Chicago Building Code.

Respectfully submitted,

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.

Bhupendra Patel

Bhupendra Patel
Licensed Professional Engineer
Illinois No. 062-048690
My license expires on 11/30/94

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
1200 CROWN COLONY DRIVE, P.O. BOX 9137 • QUINCY, MA 02269-9137
(617) 849-1800

September 1, 1994

Permit Section, RCRA Unit
Division of Land Pollution Control
Illinois Environmental Protection Agency
P.O. Box 19276
Springfield, IL 62794-9276

RE: Clean Harbors of Chicago, Inc.
11800 S. Stony Island Avenue
Chicago, IL 60617
Revised Part B Permit Application

Dear Sir or Madam:

Please refer to: 0316000051 - Cook County
Clean Harbors of Chicago, Inc.
ILD000608471
RCRA Permit Log No. 16
RCRA Permit File

I hereby certify that I, the undersigned am a Professional Engineer, licensed to practice in the State of Illinois.

I certify under penalty of law that the following proposed areas:

- Ignitable Bulk Liquids Truck Staging Area (Item 59)
- Rolloff Pad for Fuels Blending (Item 60)
- Container Handling Dock (Item 61)
- Truck Pad at Container Handling Dock (Item 62)
- Proposed Truck Staging Area (at CHCI facility)
- Truck-to-truck Transfer Dock (at CHCI facility)

were designed under my direct supervision and that the design incorporates good engineering practices.

The structural design of all areas listed above is suitable for intended use. Foundations, floors and containment slabs are designed for intended load and will maintain structural integrity without failure. Water stops have been incorporated in the design, wherever necessary.

After moist curing, the concrete surfaces of the floors and curbs of all containment areas shall shall be inspected for cracking and repaired if necessary.

CleanHarbors

All the containment areas shall be coated with a coating material that is chemically compatible with most of the stored waste materials. The Container Handling Dock (Item 61) shall be coated with 3/16-inch Protecto-Crete 900 system as manufactured by Dudick, Inc., or equivalent. All other areas listed above shall coated with Protecto-Coat 900 system as manufactured by Dudick, Inc., or equivalent. Technical specifications are provided in Appendix D-10.

Respectfully submitted,

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.

Bhupendra Patel

Bhupendra Patel
Licensed Professional Engineer
Illinois No. 062-048690
My license expires on 11/30/94

General

1. **CHI states that decontamination of regulated units will be in accordance with IEPA approved closure plans. As of the TA request, the Agency has not received any closure plans for the regulated units at the CWM facility. This was discussed with CHI on 8/12/94. CHI stated that closure plans for the tank farm and any existing outdoor container storage areas that overlap with the proposed construction will be submitted to the Agency.**

   CHCI RESPONSE:
   By letter dated August 24, 1994, CHCI submitted to IEPA and USEPA a proposed decontamination/closure plan for all of the areas or units undergoing construction and/or closure under the proposed Class 3 modification request. The decontamination/closure plan addresses both RCRA and TSCA requirements.

2. **CHI states that all excavated material will be classified per 35 IAC 722.111. The Agency informed CHI on 8-8-94 that it expects all excavated materials to be hazardous wastes. Some exceptions may be possible, but not likely.**

   CHCI RESPONSE:
   Since 8/8/94, CHCI and the Agency have engaged in several discussions with respect to the proper classification of soil and other residuals collected during the decontamination/closure phase of the project. During a 8/24/94 teleconference, the Agency directed CHCI to expand the scope of the mandated preconstruction boring program to include 4 additional samples to be collected from the excavation depth. The samples are to be analyzed for the complete list of 35 IAC 724 Appendix I parameters. The data produced those from those samples shall be used by the Agency, CHCI and CWM to mutually agree on the proper classification of the residual materials.

3. **As of 8-18-94, the Agency has still not received a signed copy of the Part A permit application. CHI was informed that the TA could not be approved without this signed form on 8-9-94.**

   CHCI RESPONSE:
   CHCI acknowledges the comment. As of the the date of this response, CHCI is continuing its negotiations with the Illinois International Port District, the owner of the property on which the facility is located. CHCI shall forward the signed Part A form to the Agency upon receipt from the Port District.

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4. **The secondary containment systems for the staging/storage areas that are not protected from precipitation must be capable of containing the volume of precipitation from a 24 hour, 25 year storm event as well as 10% of the maximum storage volume.**

CHCI RESPONSE:
CHCI notes that all of the designated transportation parking/staging areas are designed with a secondary containment structure which is is deigned to provide a containment volume which is greater greater than 100% of the largest container (i.e., a 30,000-gallon railcar or 7,200-bulk liquid transport vehicle). In addition, for those storage areas (i.e., the truck staging areas) which are not protected from precipitation by mean of a roof, the design includes additional containment volume to control the volume of a 24-hour, 25-year storm event (i.e., 4.7 inches of rain). Secondary containment calculations for all proposed/modified units are shown on the individual design drawings. See for example, CHCI Dwg. 4247 for the containment calculations for the proposed truck staging area.

P.E. Certification

The P.E. certification of the construction of the proposed/modified container storage areas is only for buildings 25 and 26. The P.E. must also certify to the adequacy of the structural designs, containment systems, and the selection of a concrete sealant for the following container management areas. In addition, the P.E. needs to inspect the concrete in all of these areas prior to applying the sealant.

- **Rail Car Unloading Area (#13)**
- **Fuel Blending Building (#43)**
- **Truck Staging Area (#59)**
- **Roll-off Pad for Fuels Blending (#60)**
- **Container Handling Dock (#61)**
- **Truck Pad at Container Handling Dock (#62)**
- **Truck Staging Area at CHI**

Certification Letters - CHCI notes that the P.E. certification for the rail car unloading area (Item 13) was provided by Hoyer-Schlesinger-Turner, (HST) Inc. by letter dated July 21, 1994. A copy of that letter was previously included in Appendix D-8. CHCI notes that Appendix D-8 also includes two other P.E. certification letters (dated 7/15/94) by Mr. Bhupendra Patel of Clean Harbors. Those letters have been revised accordingly to cover all of the container storage areas listed above. The revised letters are dated 9/1/94 and are included with today's package for insertion into Appendix D-8.

Structural Integrity Assessment - As of the date of this submittal, CWM has been unable to locate and supply CHCI with structural design drawings for Buildings 25, 26, and 43. As such, CHCI shall retain a P.E. to perform an in-field survey and assessment of the condition and structural integrity of the floors of inside those buildings. The P.E.'s assessment shall be furnished to the Agency upon completion.

Concrete Inspection to Prior to Sealing - CHCI notes that a pre-coating inspection shall be performed by a P.E. That inspection shall be documented as part of the final PE certification of the new/modified unit prior to use.

1. **Rail Car Unloading Area (#13)**

1&2. Remove existing rail bed and tracks and excavate trench 125'L x 20'W x 6'D.

This will need to be approved in a RCRA/TSCA closure plan.

CHCI RESPONSE:
Refer to CHCI's response to General comment No. 1 above and Section 3.5.1 of the proposed TSCA/RCRA decontamination/ closure plan.

3. Construct secondary containment system, rail bed, roof, and coat the concrete with sealant.

Drawing 4217 shows the secondary containment calculations for the areas, and the details for a roof over the area. The secondary containment volume appears to be adequate to hold the contents of one rail car bulk tanker (30,000 gal.).

All drawings of the secondary containment system and roof design have a Structural P.E. stamp. However, Appendix F-5; Professional Engineer Assessment and Certification of the Design of Rail Car Containment Basin is not provided.

CHCI RESPONSE:
CHCI notes that the rail P.E. certification letter was inadvertently omitted from Appendix F-5 in the application package submitted on July 29, 1994. CHCI notes that the P.E. certification letter intended for Appendix F-5 is the same letter (prepared by HST, Inc.) which appears in Appendix D-8. Additional copies of the rail certification letter are included with today's package for for insertion into Appendix F-5. CHCI regrets the oversight.

The protective coating (Protecto-Coat 900) for the concrete is described in Appendix D-10.

By itself, Drawing 4217, sheets 1 to 3 are not sufficient to fully describe this area. General drawings of the area that show the relative locations of the rail cars, tank trucks containment areas, unloading equipment, drainage in the immediate area, the structural supports, etc. need to be provided in the application (See CWM application Drawing D-22B).

CHCI RESPONSE:

CHCI has prepared a new drawing No. 4251 to show layout, elevation, and cross-sectional details for the tank farm, rail car unloading area, and truck unloading pad. The drawing also shows the canopy and structural supports, and the location and layout of the air pollution control carbon canisters. New drawing No. 4204C shows drainage details in this area and the site in general.

6. **Install fire suppression system and overhead piperack for unloading.**

The TA (and Section F-3 of the Application) do not reference the detailed drawings and specifications for the fire suppression system.

CHCI RESPONSE:
CHCI has revised Section F-3 of the application to list the drawings and technical specification which shall be followed in the construction of the modified fire suppression system. See revised pages F-9 and F-9A which bear the revision date "09/01/94". For the sake of completeness a redlined version of the 07/15/94 page F-9 is also included.

As noted in #3 above the TA, and application, need to include drawings which show the unloading system (piperack, pumps, etc.).

CHCI RESPONSE:
Refer to new drawing No. 4251.

Appendix F-4: Professional Fire Protection Engineer Certification of Foam Fire Protection System Upgrade is not provided. NOTE: the certification provided with the 8-1-94 letter (if CHI is to be placed in this Appendix) is a P.E. certification, not a P.F.P.E. certification.

CHCI RESPONSE:
CHCI notes that its reference to a registered "professional fire protection engineer" is in error since such a discipline does not exist; the correct term is simply "professional engineer". CHCI regrets the error. CHCI further notes that the fire protection drawings and specifications previously submitted to the Agency were, in fact, reviewed and approved by a registered P.E.

8. **Regrade/pave surrounding area for proper water drainage.**

Drawing 4217 does not adequately show how run-on will be prevented from entering the containment system.

CHCI RESPONSE:
The top surface concrete containment basin for the rail unloading area is higher than the surrounding area, which is sloped away from the unit for proper drainage. Refer to the elevations and existing/proposed surface contours shown on the new site drainage plan in Dwg. No. 4204C.

2. **Truck Scale Relocation (#14)**

This is not a RCRA regulated unit. It is included in the application drawings for informational purposes only.

Sampling of the fill under this area should be performed prior to its construction.

CHCI RESPONSE:
CHCI notes that the truck scale area (Unit 14) has been deleted from the IEPA's approved preconstruction soil boring program based on the the fact that the scale is to be moved to a location on the existing Clean Harbors' property and that the is not a RCRA regulated unit. The deletion of this area from the preconstruction boring program was approved by Mr. Eric Minder of IEPA during a August 24, 1994 teleconference.

3. <u>Flammable Storage Tank Farm (#16)</u>

1&2. **Dismantle and decontaminate existing piping and ancillary equipment, remove tanks T-108 and T-111.**

This activity will need to be approved in a RCRA/TSCA closure plan. This was discussed with CHI on 8-12-94.

<u>CHCI RESPONSE:</u>
Refer to CHCI's response to General comment No. 1 above and Sections 3.1 and 3.2 of the proposed TSCA/RCRA decontamination/closure plan.

3. **Relocate remaining tanks as shown on Drawing 4204B sheet 2 of 3.**

The east side of the tank farm in Drawing 4215 should reference the truck unloading dock Drawing 4248.

<u>CHCI RESPONSE:</u>
Comment acknowledged. See revised drawings Nos. 4215 and 4248.

A P.E. certification attesting to the adequacy of the design of the modified storage tanks is provided in Appendix D-12.

A P.E. certification for the secondary containment system is provided in Appendix D-26. The certification states that the structural design of the secondary containment system is suitable for the intended loads and will maintain structural integrity without failure.

The TA should require that a P.E. certify that all relocated tanks are properly installed, and inspected for tightness, etc. prior to be placed in service. (CHI considers them "new tanks".)

7. **Install new piping system and ancillary equipment**

The location of ancillary equipment in and around the tank farm is not provided. Page D-52, location of ancillary equipment in the CWM tank farm: refers to Drawing 4215 sheet 3 of 3. There is only one page of Drawings 4215, the P&ID.

CHCI RESPONSE:

Location of Ancillary Equipment Location - Comment acknowledged; refer to new drawing No. 4251 for the location of ancillary equipment (e.g., pumps, air pollution control equipment, etc.) in the tank farm area.

Drawing No. 4215 - Comment acknowledged; CHCI notes that CHCI Dwg. 4215 is a single sheet, and that the reference on Page D-52 is incorrect. A revised page D-52 (dated 09/01/94), along with a redlined version showing the deleted/revised language, is included in today's package.

Piping - CHCI is unable to provide to detailed pipe layout, routing and elevations at the time of this submittal. However, such details shall be provided to the Agency in the form of P.E.-certified as-built construction drawings to be submitted prior to operation of the tanks farm and ancillary equipment. CHCI notes that with the exception of the vapor phase air pollution control headers, all of the piping in the tank farm, tanker unloading area, and railcar unloading area shall be entirely located inside the various containment structures. Piping leading from the tank farm to Building 26 and 43, shall meet the secondary containment requirements of 40 CFR 264.193(f), specifically, that piping shall be aboveground with welded flanges, joints, and connections which are inspected on a daily basis.

The P.E. certification in Appendix D-12 does not appear to be acceptable for the ancillary equipment. How can the P.E. certify that the ancillary equipment will be installed according to ANSI/ASME B31.3-1987 standards?

The TA should require that a P.E. certify that all ancillary equipment is properly installed, and inspected for tightness, etc. prior to be placed in service.

CHCI RESPONSE:
CHCI acknowledges that the referenced ANSI/ASME standards apply only to the design and installation of piping, not ancillary equipment such as pumps. Accordingly, the P.E. certification letter has been amended to state that ancillary equipment shall be installed in accordance with manufacturer's recommendations and good engineering practices, and that the ancillary equipment shall be inspected by a P.E. prior to being placed into service.

8. **Install electronic level monitoring equipment**

The TA should specify what equipment will be used. This is an important part of the tank system, and there have been industry wide problems in finding a reliable tank level sensor.

CHCI RESPONSE:
Clean Harbors has experience with several level measuring devices, such as, ultrasonic-doppler type, microwave radar, mechanical - float type, magnetic float type, metritape, DP cells, etc. Clean Harbors has also conducted investigations of various available technologies and has tested various types of instruments at CHI facilities.

Based on the experience and investigation, Microwave measurements have been shown to be only marginally effected by changes in temperature, pressure and the presence of dust, foam and vapors or inerting blankets.

In reviewing the proposed Tank Level Measurement applications, the microwave radar technique has been shown to be the most favorable. For the proposed tank farm installation in Chicago, microwave level measurement instrumentation such as CannonBear-1420 from Texas Nuclear Technologies, Inc., a Micropilot FMR 130 from Endress + Hauser or equal shall be utilized. These instruments provide continuous non-contact level measurement. Additional switch points are available for alarm and diagnostics.
The sensors shall be top mounted on a 4" or 6" ANSI 150# flange as determined by the antenna design. The CB-1420 is of split architecture with the microprocessor based electronics located remotely in a NEMA 4X enclosure. The sensor and antenna are enclosed in a heavy duty steel enclosure and are suitable for installation in Class I Division 1 locations. The FMR 130 has a stainless steel antenna, the transmitter is supplied with a sea water resistant aluminum housing and will be suitable for installation in Class I Division 1 locations.

Specifications:

MICROWAVE RADAR CONTINUOUS LEVEL MONITORING INSTRUMENT
SPAN: 1-50 ft. minimum
ACCURACY: ±0.5% distance or 0.5 in which ever is greater
REPEATABILITY: ±0.125 inch

For a similar application, during a two month engineering evaluation of the microwave radar technique conducted at CHCI's sister facility in Braintree, MA, Clean Harbors found that this technique performed acceptably, and the accuracy was found to be within the specified limits. The Braintree facility continues to use the technique.

9. **Install dike wall foam fire suppression system**

The TA (and Section F-3 of the Application) do not reference the detailed drawings and specifications for the fire suppression system.

CHCI RESPONSE:
CHCI has revised Section F-3 of the application to list the drawings and technical specification which shall be followed in the construction of the modified fire suppression system. See revised pages F-9 and F-9A which bear the revision date "09/01/94". For the sake of completeness a redlined version of the 07/15/94 page F-9 is also included.

4. **Container Management Building (#25)**

1. **The drainage around the building is not indicated on Drawing 4210 sheet 3 of 3. Cross-sectional views of the ramps and the approaches into the building need to be indicated on Drawing 4210 sheet 3 of 3.**

CHCI RESPONSE:

Drainage - Comment acknowledged; refer to new drawing No. 4204C.

Cross-Sectional View - Comment acknowledged; refer to Section B-B on revised drawing No. 4210, sheet 3 of 3.

2. **Remove mandoor and ramp, relocate door in building.**

If the secondary containment structure will be modified, the changes should be identified on the drawings (x-section, and plan).

CHCI RESPONSE:
Comment acknowledged; refer to revised drawing No. 4210, sheet 3 of 3.

3. **Re-align bays. Provide floor segregation using angle iron and/or concrete berms.**

These changes must be identified on the drawings (x-section and plan). Details of the modification like those for the tank farm on Drawing 4215 need to be provided.

CHCI RESPONSE:
As shown in the Section A-A details on revised drawing 4215, CHCI shall utilize existing and new concrete berms (not angle iron) to provide segregation between the three storage bays.

CHCI notes that revised drawing No. 4215 also shows a typical arrangement and secondary containment calculations for the storage of up to rolloff containers inside Building 25.

5. **Inspect integrity of floor sealants; repair as necessary.**

The application (page D-24, and Appendix D-8) indicate that the floor will be sealed with Protecto-Coat 900, but the TA does not specify this activity.

CHCI RESPONSE:
CHCI acknowledges the comment and notes that the coating of the Building 25 floor should have been included in the TA request. Further, to clarify, CHCI notes that the floor shall be coated with a minimum 3/16-inch thick coat of Protecto-Crete 900, a trowel-applied coating system suited for heavy duty areas subject to abrasions from fork trucks, rolloffs, and drums coming into contact with the surface of the coating. Protecto-Coat 900 is a roller-applied system designed for lighter duty areas such as the tank farm or truck staging areas.

5. Ignitable Container Management Building (#26)

The drainage around the building is not indicated on Drawing 4210 sheet 2 of 3.

CHCI RESPONSE:
Comment acknowledged; refer to the new site drainage map shown as drawing No. 4204C.

2. **Decontaminate small shredder. Relocate it in building #43 for use with the Pegasus fuel blending system.**

This activity will need to be approved in a TSCA closure plan.

CHCI RESPONSE:
Refer to CHCI's response to General comment No. 1 above and Section 3.3 of the proposed TSCA/RCRA decontamination/ closure plan.

3&9. **Decontaminate and dismantle the conveyor system.**

This activity will need to be approved in a RCRA/TSCA closure plan.

CHCI RESPONSE:
Refer to CHCI's response to General comment No. 1 above and Section 3.3 of the proposed TSCA/RCRA decontamination/ closure plan.

4. **Shorten access ramp.**

Cross-sectional views of the ramps and the approaches into the building need to be indicated on Drawing 4210 sheet 2 of 3.

CHCI RESPONSE:
Comment acknowledged; refer to Section B-B details shown on revised drawing No. 4210, Sheet 2 of 3.

7. **Inspect integrity of floor sealants; repair as necessary.**

The application (page D-25, and Appendix D-8) indicate that the floor will be sealed with Protecto-Coat 900, but the TA does not specify this activity.

CHCI RESPONSE:
CHCI acknowledges the comment and notes that the coating of the Building 26 floor should have been included in the TA request. Further, to clarify, CHCI notes that the floor shall be coated with a minimum 3/16-inch thick coat of Protecto-Crete 900, a trowel-applied coating system suited for heavy duty areas subject to abrasions from fork trucks and drums coming into contact with the surface of the coating. Protecto-Coat 900 is a roller-applied system designed for lighter duty areas such as the tank farm or truck staging areas.

8. **Install drum pumping station and associated piping to the tank farm.**

Drawings that show the layout of equipment in pumping station and all piping need to be provided. The piping to the tank farm needs to be enclosed in secondary containment.

CHCI RESPONSE:
A layout of the proposed drum pumping station inside Building 26 is provided as Section C-C on revised drawing No. 4210, Sheet 2 of 3. CHCI notes that the piping connecting the pumping station to the tank farm shall meet the seocndary containmnet requirements of 40 CFR 264.193(f), that is the piping shall be aboveground with welded flanges, joints, and connection which are inspected on a daily basis.

6. **Fuels Blending Operations (#43)**

2. **Decontaminate floors, walls, etc.**

Containers of hazardous waste were stored in this building. Therefore, this activity will need to be approved in a RCRA/TSCA closure plan.

CHCI RESPONSE:
Refer to CHCI's response to General comment No. 1 above and Section 3.4 of the proposed TSCA/RCRA decontamination/ closure plan.

4. **Inspect integrity of floor sealant; repair as necessary.**

The application (page D-36) indicates that the floor will be sealed with Protecto-Coat 900, but the TA does not specify this activity.

CHCI RESPONSE:
CHCI acknowledges the comment and notes that the coating of the floor using Protecto-Coat 900 should have been included in the TA request.

6. **Install Pegasus system, ancillary equipment, fire suppression, etc.**

The small shredder currently in the Ignitable Container Storage Building (#26) apparently will be added to the previously approved unit. This device is not indicated on the drawings of the Pegasus Unit (Drawing 4235 through 4241).

CHCI RESPONSE:
CHCI notes that a coarse shredder was, in fact, part of the Pegasus system design approved in the November 1993 RCRA Part B, and resubmitted for modification in July 1994. The coarse shredder is identified on Drawing 4237 and 4241 as Item 161-13. CHCI notes that the SSI-brand shredder currently in Building 26 meets the specifications for the fuel blending system as set by the designer of the system, Pegasus Consultants of Niagara Falls, NY. Refer to the correspondence from Pegasus Consultants to CHI dated August 31, 1994.

The TA (and Section F-3 of the Application) do not reference the detailed drawings and specifications for the fire suppression system.

CHCI RESPONSE:
CHCI has revised Section F-3 of the application to list the drawings and technical specification which shall be followed in the construction of the modified fire suppression system. See revised pages F-9 and F-9A which bear the revision date "09/01/94". For the sake of completeness a redlined version of the 07/15/94 page F-9 is also included.

The cross-sectional views and secondary containment calculations for building #43 are not provided on Drawing 4213.

CHCI RESPONSE:
Comment acknowledged; refer to revised drawing No. 4213 for secondary containment cross-sectional views and calculations.

7. Truck Staging Area (#59)

1. **Excavate trench for pad.**

This activity will need to be approved in a RCRA/TSCA closure plan. This was discussed with CHI on 8-12-94.

CHCI RESPONSE:
Refer to CHCI's response to General comment No. 1 above and Section 3.5 of the proposed TSCA/RCRA decontamination/ closure plan.

2. **Build secondary containment pad.**

The secondary containment calculations for this area are not provided on drawing 4247.

CHCI RESPONSE:
Comment acknowledged; refer to revised drawing No. 4247 for secondary containment calculations.

A cross-section of the pad that shows the north/south slope should be included in drawing 4247.

CHCI RESPONSE:
Comment acknowledged; refer to revised drawing No. 4247 for a cross-sectional view of the north/south slope of the pad.

3. **Provide foam fire suppression system**

The TA (and Section F-3 of the Application) do not reference the detailed drawings and specifications for the fire suppression system.

CHCI RESPONSE:
CHCI has revised Section F-3 of the application to list the drawings and technical specification which shall be followed in the construction of the modified fire suppression system. See revised pages F-9 and F-9A which bear the revision date "09/01/94". For the sake of completeness a redlined version of the 07/15/94 page F-9 is also included.

8. Roll-off Pad for fuels Blending (#60)

The connection between buildings 26 and 43 indicated on DWG. 4213 sheet 2 of 3 is not shown on DWG. 4204B, sheet 2 of 3.

1. **Excavate trench for pad**

This activity will need to be approved in a RCRA/TSCA closure plan. This was discussed with CHI on 8-12-94.

CHCI RESPONSE:
Refer to CHCI's response to General comment No. 1 above and Section 3.5 of the proposed TSCA/RCRA decontamination/ closure plan.

2. **Build secondary containment pad**

The secondary containment calculations for this area are not provided on DWG. 4213, sheet 2 of 3.

CHCI RESPONSE:
Comment acknowledged; refer to revised drawing No. 4213, sheet 2 of 3 for secondary containment calculations.

3. **Erect sheet metal canopy roof.**

The application does not contain elevation views that show the canopy roof.

CHCI RESPONSE:
Comment acknowledged; refer to revised drawing No. 4213, sheet 2 of 3 for elevation views of the canopy roof.

4. **Regrade/pave surrounding area for proper drainage.**

The drainage around the building is not indicated on Drawing 4213 sheet 2 of 3.

CHCI RESPONSE:
Comment acknowledged; refer to the new site drainage map shown as drawing No. 4204C.

9. **Container Handling Dock (#61)**

Drawing 4245 does not include a North Arrow.

CHCI RESPONSE:
Comment acknowledged; refer to the revised drawing No. 4245.

3. **Install steel platform dock.**

CHCI RESPONSE:
CHCI notes that the description of the dock as provided in the TA was incorrect. In fact, the proposed dock is a reinforced concrete design, not a fabricated steel platform. CHCI regrets the error and any confusion it may have caused.

The secondary containment calculations for this area are not provided in Drawing 4245.

CHCI RESPONSE:
Comment acknowledged; refer to revised drawing No. 4245 for secondary containment calculations.

The TA refers to a steel platform dock, but Drawing 4245 indicates that the dock will be constructed of reinforced concrete.

CHCI RESPONSE:
CHCI notes that the description of the dock as provided in the TA was incorrect. In fact, the dock will be constructed of reinforced concrete as shown in CHCI Dwg. No. 4245, not a fabricated steel platform as described in the TA. CHCI regrets the error and any confusion it may have caused.

A cross-sectional view of the ramp connecting the dock and building No. 26 needs to be provided.

CHCI RESPONSE:
Comment acknowledged; refer to revised drawing No. 4245 for cross-sectional view of the ramp connecting the dock and building No. 26.

The application (page D-25) indicates that the floor will be sealed with Protecto-Coat 900, but the TA does not specify this activity.

CHCI RESPONSE:
CHCI acknowledges the comment and notes that the coating of the dock floor should have been included in the TA request. Further, to clarify, CHCI notes that the floor shall be coated with a minimum 3/16-inch thick coat of Protecto-Crete 900, a trowel-applied coating system suited for heavy duty areas subject to abrasions from fork trucks and drums coming into contact with the surface of the coating. Protecto-Coat 900 is a roller-applied system designed for lighter duty areas such as the tank farm or truck staging areas.

4. **Erect sheet metal walls.**

The TA calls for installation of sheet metal walls. However, Drawing 4245 specifies concrete block walls.

CHCI RESPONSE:
CHCI notes that the description of the walls as provided in the TA was incorrect. In fact, the walls shall be constructed of concrete blocks as shown in CHCI Dwg. No. 4245, not steel metal as described in the TA. CHCI regrets the error and any confusion it may have caused.

5. **Install foam fire suppression system**

The TA (and Section F-3 of the Application) do not reference the detailed drawings and specifications for the fire suppression system.

CHCI RESPONSE:
CHCI has revised Section F-3 of the application to list the drawing and technical specification which shall be followed in the construction of the modified fire suppression system. See revised pages F-9 and F-9A which bear the revision date "09/01/94". For the sake of completeness a redlined version of the 07/15/94 page F-9 is also included.

10. **Truck Pad at Container Handling Dock (#62)**

1. **Excavate trench for pad.**

This activity will need to be approved in a RCRA/TSCA closure plan. This was discussed with CHI on 8-12-94.

CHCI RESPONSE:
Refer to CHCI's response to General comment No. 1 above and Section 3.5 of the proposed TSCA/RCRA decontamination/ closure plan.

2. **Build secondary containment pad.**

The secondary containment calculations for this area are not provided on Drawing 4246.

CHCI RESPONSE:
Comment acknowledged; refer to revised drawing No. 4246 for secondary containment calculations.

3. **Provide foam fire suppression system.**

The TA (and Section F-3 of the Application) do not reference the detailed drawings and specifications for the fire suppression system.

CHCI RESPONSE:
CHCI has revised Section F-3 of the application to list the drawing and technical specification which shall be followed in the construction of the modified fire suppression system. See revised pages F-9 and F-9A which bear the revision date "09/01/94". For the sake of completeness a redlined version of the 07/15/94 page F-9 is also included.

4. **Regrade/pave surrounding area for proper drainage.**

The drainage around the building is not indicated on Drawing 4246.

CHCI RESPONSE:
Comment acknowledged; refer to the new site drainage map shown as drawing No. 4204C.

11. **Fire Suppression System**

1. **Excavate trenches and install main underground fire suppression foam lines**

The TA only refers to the foam lines and Drawing FP-3. However, Drawing FP-1 indicates that other fire water lines will also need to be installed.

CHCI RESPONSE:
Comment acknowledged; the TA should have been worded to include any new underground lines (foam and water) which are shown on drawing Nos. FP-1, FP-2, and FP-3.

2. **Excavate trenches and install foam-water lines.**

Grinnell Drawing FP-3 does not show the Truck Staging Pad (#59).

CHCI RESPONSE:
Comment acknowledged; drawing shall be corrected as part of a separate response to the Agency's August 28, 1994 fire protection comments by Mr. Chuck March.

12. **Truck Staging Area (CHI facility)**

2. **Build secondary containment pad.**

The secondary containment calculations for this area are not provided on Drawing 4218.

CHCI RESPONSE:
Comment acknowledged; refer to revised drawing No. 4218 for secondary containment calculations.

The tanks in the Ignitable Bulk Liquid Tank Farm shall be provided with nitrogen blanketing to prevent formation and ignition of vapors. In addition, each of the tanks is equipped with a conservation vent to maintain a predetermined pressure within each tank. The breathing losses from each tank shall be vented through the conservation vent, when the combined pressure within the manifolded system exceeds the pre-set pressure, and released into atmosphere after passing through a set of carbon beds to remove any incidental organic vapors. For safety reasons, each tank shall also be fitted with an individual emergency vent and a flame arrestor.

The Pegasus waste process tanks and equipment operates in fully-enclosed, nitrogen-blanketed atmosphere to prevent formation and ignition of vapors. The system is equipped with an emergency carbon dioxide deluge system in case of fire or excessive temperature within the unit. Detailed descriptions of these systems are provided in Appendix D-11.

D-2f(1)(d) Secondary Containment and Leak Detection Requirements for Ancillary Equipment 703.202(g), 724.293(f)

A. RCRA-Regulated Tank System

Piping and ancillary equipment for the authorized/not yet constructed and proposed/modified systems are shown in the drawing referenced in Section D-2 above and repeated here for ease of review:

Tank System	CHCI Dwg. No.
~ Listed Waste Treatment System	4207, Sheet 1 of 4
~ Listed Waste Bulk Storage Tanks	4207, Sheet 2 of 4
~ Pegasus Fuel Blending Processing System	4207, Sh. 3 & 4 of 4
~ Waste Fuel/Ignitable Storage Tanks	4215

As discussed in the secondary containment section for the tanks, all of the tanks are provided with a lined and sealed concrete vault that meets applicable standards. All proposed piping is above ground and, to the extent possible, within the containment areas of the tanks. The portion of the piping that will run between the secondary containments of the tanks, is all welded construction with welded flanged joints. All piping and ancillary equipment are visually inspected for leaks on a daily basis.

The leak detection, collection and removal system for the secondary containment structure of the tanks also serves the same functions for the ancillary equipment and the piping system that is installed within the same secondary containment structure.

The secondary containment structures are designed to withstand the loading of the tank(s) and provide sufficient structural strength for the loading exerted by the ancillary equipment and the piping system.

F-3a(3) Emergency Equipment 724.132(c)

Emergency equipment is inspected as part of the routine daily and monthly facility inspection program (see Figures F-1 and F-2). Fire extinguishers are inspected for proper hanging, easy access, identification from a distance and a full charge. If an extinguisher shows signs of discharge, it is sent out for recharge. The location of all fire extinguishers is shown in CHCI Dwg. No. 4221.

Eyewash/shower stations are tested to insure proper functioning and to remove any debris lying in the water lines. They are also inspected for both access and visibility from a distance. All exits are inspected to ensure that no obstructions exist which might interfere with an emergency evacuation and that all exit lights are lit. Emergency light circuits are tested to see that batteries are at full charge and function properly. The location of all exits, exit lights, eyewash/shower stations, chemical burn stations, eyewash stations and first aid stations are shown in the Contingency Plan. This equipment is inspected as shown in the Figures F-1 and F-2. A description of all spill control equipment, decontamination equipment and fire extinguishers available at this facility is presented in Table G-2 as part of the facility's Contingency Plan.

F-3a(4) Water for Fire Control 724.132(d)

Plant process water along the southern portion of the property (i.e., south of the existing truck scale) is supplied by 2 (two) Myers multistage centrifugal pumps. Each pump has a capacity of 80 gpm at 50 psi. Water lines extend along all walls of the plant and by all of the process vessels and pumps.

As part of the November 1993 Part B permitting process, CHCI retained a private fire consulting firm to evaluate the fire control equipment and procedures in the southern portion of the facility. The evaluation, based on a review of facility drawings and plans contained in this License Application, concluded that the facility design meets National Fire Protection Association standards for the storage and handling of flammable and combustible materials. Documentation of the evaluation and its findings are included in Appendix F-3.

As part of the July 1994 Request for Permit Modification, CHCI assumes operational control of additional hazardous waste management units in the northern portion of the property (i.e., north of the existing truck scale). The northern portion of the property is equipped with an extensive water/foam fire protection system which shall be constructed and operated in accordance with the followings drawings and specifications:

DRAWING NO.	REVISION NO.	REVISION DATE
COVER	REV. 1	7/20/94
FP1	REV. 5	7/12/94
FP2	REV. 4	7/20/94
FP3	REV. 4	7/20/94
FP4	REV. 2	7/20/94
FP5	REV. 2	7/20/94
FP6	REV. 2	7/20/94
FP7	REV. 3	7/20/94
FP8	REV. 3	7/20/94
FP9	REV. 3	7/20/94
FP10	REV. 2	7/20/94
FP11	REV. 1	7/20/94
FP12	REV. 2	7/20/94
FP1-E	REV. 1	7/20/94
FP2-E	REV. 1	7/20/94
FP3-E	REV. 1	7/20/94
FP4-E	REV. 2	7/20/94
FP5-E	REV. 1	7/20/94
FP6-E	REV. 1	7/20/94
FP7-E	REV. 1	7/20/94
FP8-E	REV. 1	7/20/94
FP9-E	REV. 1	7/20/94
FP10-E	REV. 2	7/20/94

SPECIFICATIONS PAGES 1 THROUGH 14, REV. 4, DATED 7/20/94

The fire suppression system drawings and specifications have been reviewed and approved by a certified fire protection engineer. A copy of the certification statement is included in Appendix F-4.

The primary fire protection system includes a 350,000-gallon fire water reserve tank, a 1,500-gallon per minute (GPM) diesel fire pump, and underground 12-inch and 10-inch mains supplying fire hoses, hydrants, monitors, and various sprinkler systems throughout the northern portion of the facility.

pressure drops below a pre-set minimum, or if a power failure occurs. This pump provides the underground fire protection mains with adequate volume of water at 100 psig minimum to supply all of the facility for protection equipment. This pump is test run for a minimum of one hour per week.

From the diesel fire pump and tank, an underground 10-inch diameter fire main encircles the facility in a closed loop providing fire protection from two directions. The loop supplies eight hydrants, eleven monitors, and several sprinkler systems.

The monitors are provided primarily for the bulk storage tank farm, the railcar offloading area, the bulk tanker offloading area, and the bulk tanker staging area, Four of the eleven monitors are equipped with remote-activated foam suppression systems. The tank farm and transportation-related areas are within range of the foam monitors. Monitors are mounted on a swivel base and can be rotated 360°. The nozzles can be raised and lowered to further direct the flow.

Sprinkler systems are provided for existing Building 25, Building 26, Building 43, truck unloading area, control building, laboratory, receiving building, maintenance building, and main office. In addition, the sprinkler system will be extended to the upgraded railcar offloading area and the proposed Container Handling Dock. All sprinkler systems automatically activate in the event of a fire.

F-3b Aisle Space Requirements

In container storage areas, drums will be stacked in rows, 2 drums abreast and 2-high, with a minimum 2-foot aisle space between rows. In the Flammable Storage Bays, the fourth and fifth pallets in each row are separated by a 5-foot wide buffer in compliance with NFPA requirements.

The main aisles in the plant are at least eight feet wide and are kept clear of obstructions at all times. All process vessels, control panels and pumps are accessible from the main aisles.

The aisles are continuously inspected for puddles, debris and other obstructions. Refer to CHCI Dwg. No. 4210 for container storage area layout and aisle spacing details.

The tanks in the Ignitable Bulk Liquid Tank Farm shall be provided with nitrogen blanketing to prevent formation and ignition of vapors. In addition, each of the tanks is equipped with a conservation vent to maintain a predetermined pressure within each tank. The breathing losses from each tank shall be vented through the conservation vent, when the combined pressure within the manifolded system exceeds the pre-set pressure, and released into atmosphere after passing through a set of carbon beds to remove any incidental organic vapors. For safety reasons, each tank shall also be fitted with an individual emergency vent and a flame arrestor.

The Pegasus waste process tanks and equipment operates in fully-enclosed, nitrogen-blanketed atmosphere to prevent formation and ignition of vapors. The system is equipped with an emergency carbon dioxide deluge system in case of fire or excessive temperature within the unit. Detailed descriptions of these systems are provided in Appendix D-11.

D-2f(1)(d) Secondary Containment and Leak Detection Requirements for Ancillary Equipment 703.202(g), 724.293(f)

A. RCRA-Regulated Tank System

Piping and ancillary equipment for the authorized/not yet constructed and proposed/modified systems are shown in the drawing referenced in Section D-2 above and repeated here for ease of review:

Tank System	CHCI Dwg. No.
~ Listed Waste Treatment System	4207, Sheet 1 of 4
~ Listed Waste Bulk Storage Tanks	4207, Sheet 2 of 4
~ Pegasus Fuel Blending Processing System	4207, Sh. 3 & 4 of 4
~ Waste Fuel/Ignitable Storage Tanks	4215~~, Sheet 3 of 3~~

As discussed in the secondary containment section for the tanks, all of the tanks are provided with a lined and sealed concrete vault that meets applicable standards. All proposed piping is above ground and, to the extent possible, within the containment areas of the tanks. The portion of the piping that will run between the secondary containments of the tanks, is all welded construction with welded flanged joints. All piping and ancillary equipment are visually inspected for leaks on a daily basis.

The leak detection, collection and removal system for the secondary containment structure of the tanks also serves the same functions for the ancillary equipment and the piping system that is installed within the same secondary containment structure.

The secondary containment structures are designed to withstand the loading of the tank(s) and provide sufficient structural strength for the loading exerted by the ancillary equipment and the piping system.

F-3a(3) Emergency Equipment 724.132(c)

Emergency equipment is inspected as part of the routine daily and monthly facility inspection program (see Figures F-1 and F-2). Fire extinguishers are inspected for proper hanging, easy access, identification from a distance and a full charge. If an extinguisher shows signs of discharge, it is sent out for recharge. The location of all fire extinguishers is shown in CHCI Dwg. No. 4221.

Eyewash/shower stations are tested to insure proper functioning and to remove any debris lying in the water lines. They are also inspected for both access and visibility from a distance. All exits are inspected to ensure that no obstructions exist which might interfere with an emergency evacuation and that all exit lights are lit. Emergency light circuits are tested to see that batteries are at full charge and function properly. The location of all exits, exit lights, eyewash/shower stations, chemical burn stations, eyewash stations and first aid stations are shown in the Contingency Plan. This equipment is inspected as shown in the Figures F-1 and F-2. A description of all spill control equipment, decontamination equipment and fire extinguishers available at this facility is presented in Table G-2 as part of the facility's Contingency Plan.

F-3a(4) Water for Fire Control 724.132(d)

Plant process water along the southern portion of the property (i.e., south of the existing truck scale) is supplied by 2 (two) Myers multistage centrifugal pumps. Each pump has a capacity of 80 gpm at 50 psi. Water lines extend along all walls of the plant and by all of the process vessels and pumps.

As part of the November 1993 Part B permitting process, CHCI retained a private fire consulting firm to evaluate the fire control equipment and procedures in the southern portion of the facility. The evaluation, based on a review of facility drawings and plans contained in this License Application, concluded that the facility design meets National Fire Protection Association standards for the storage and handling of flammable and combustible materials. Documentation of the evaluation and its findings are included in Appendix F-3.

As part of the July 1994 Request for Permit Modification, CHCI assumes operational control of additional hazardous waste management units in the northern portion of the property (i.e., north of the existing truck scale). The northern portion of the property is equipped with an extensive water/foam fire protection system ~~as described below.~~ WHICH SHALL BE CONSTRUCTED AND OPERATED IN ACCORDANCE WITH THE FOLLOWINGS DRAWINGS AND SPECIFICATIONS:

DRAWING NO.	REVISION NO.	REVISION DATE
COVER	REV. 1	7/20/94
FP1	REV. 5	7/12/94
FP2	REV. 4	7/20/94
FP3	REV. 4	7/20/94
FP4	REV. 2	7/20/94
FP5	REV. 2	7/20/94
FP6	REV. 2	7/20/94
FP7	REV. 3	7/20/94
FP8	REV. 3	7/20/94
FP9	REV. 3	7/20/94
FP10	REV. 2	7/20/94
FP11	REV. 1	7/20/94
FP12	REV. 2	7/20/94
FP1-E	REV. 1	7/20/94
FP2-E	REV. 1	7/20/94
FP3-E	REV. 1	7/20/94
FP4-E	REV. 2	7/20/94
FP5-E	REV. 1	7/20/94
FP6-E	REV. 1	7/20/94
FP7-E	REV. 1	7/20/94
FP8-E	REV. 1	7/20/94
FP9-E	REV. 1	7/20/94
FP10-E	REV. 2	7/20/94

SPECIFICATIONS PAGES 1 THROUGH 14, REV. 4, DATED 7/20/94

The ~~modifications to the existing~~ fire suppression system DRAWINGS AND SPECIFICATIONS have been reviewed and approved by a certified FIRE protection engineer. A copy of the certification statement is included in Appendix F-4.

The primary fire protection system includes a 350,000-gallon fire water reserve tank, a 1,500-gallon per minute (GPM) diesel fire pump, and underground 12-inch and 10-inch mains supplying fire hoses, hydrants, monitors, and various sprinkler systems throughout the northern portion of the facility.

pressure drops below a pre-set minimum, or if a power failure occurs. This pump provides the underground fire protection mains with adequate volume of water at 100 psig minimum to supply all of the facility for protection equipment. This pump is test run for a minimum of one hour per week.

From the diesel fire pump and tank, an underground 10-inch diameter fire main encircles the facility in a closed loop providing fire protection from two directions. The loop supplies eight hydrants, eleven monitors, and several sprinkler systems.

The monitors are provided primarily for the bulk storage tank farm, the railcar offloading area, the bulk tanker offloading area, and the bulk tanker staging area, Four of the eleven monitors are equipped with remote-activated foam suppression systems. The tank farm and transportation-related areas are within range of the foam monitors. Monitors are mounted on a swivel base and can be rotated 360°. The nozzles can be raised and lowered to further direct the flow.

Sprinkler systems are provided for existing Building 25, Building 26, Building 43, truck unloading area, control building, laboratory, receiving building, maintenance building, and main office. In addition, the sprinkler system will be extended to the upgraded railcar offloading area and the proposed Container Handling Dock. ~~The modifications to the existing fire suppression system have been reviewed and approved by a certified protection engineer. A copy of the certification statement is included in Appendix F-4~~. All sprinkler system automatically activate in the event of a fire.

F-3b Aisle Space Requirements

In container storage areas, drums will be stacked in rows, 2 drums abreast and 2-high, with a minimum 2-foot aisle space between rows. In the Flammable Storage Bays, the fourth and fifth pallets in each row are separated by a 5-foot wide buffer in compliance with NFPA requirements.

The main aisles in the plant are at least eight feet wide and are kept clear of obstructions at all times. All process vessels, control panels and pumps are accessible from the main aisles.

The aisles are continuously inspected for puddles, debris and other obstructions. Refer to CHCI Dwg. No. 4210 for container storage area layout and aisle spacing details.

APPENDIX D-8

PROFESSIONAL ENGINEER (PE) CERTIFICATION OF THE CONSTRUCTION OF THE PROPOSED/MODIFIED CONTAINER STORAGE AREAS

APPENDIX D-12

PROFESSIONAL ENGINEER (PE) ASSESSMENT AND CERTIFICATION OF THE DESIGN OF PROPOSED/MODIFIED TANK STORAGE SYSTEM

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
1200 CROWN COLONY DRIVE, P.O. BOX 9137 • QUINCY, MA 02269-9137
(617) 849-1800

September 1, 1994

Permit Section, RCRA Unit
Division of Land Pollution Control
Illinois Environmental Protection Agency
P.O. Box 19276
Springfield, IL 62794-9276

RE: Clean Harbors of Chicago, Inc.
11800 S. Stony Island Avenue
Chicago, IL 60617
Revised Part B Permit Application

Dear Sir or Madam:

Please refer to: 0316000051 - Cook County
Clean Harbors of Chicago, Inc.
ILD000608471
RCRA Permit Log No. 16
RCRA Permit File

I, being a registered professional engineer in the State of Illinois, hereby certify that I have conducted an assessment of design for the modified ignitable bulk liquid storage tanks as they are listed in Table D-5 of Volume I, Part B License Application:

1) I have reviewed the Tank Assessment Report prepared by Alpha Consultants Ltd. dated January, 1990 and concur with their findings that the tanks are structurally sound for their usage of ignitable waste storage. See attached Alpha report for tank assessment. I further certify that all new piping shall be constructed and installed according to ANSI/ASME B31.3-1987, Chemical Plant and Refinery Piping, and shall meet secondary containment requirements per 40 CFR 264.193(f). Other ancillary equipment shall be installed in accordance with the manufacturer's recommendations and/or good engineering practices.

2) The certification for the design of tank foundation, effect of frost heave on foundations, and structural integrity of the secondary containment for the tank is provided by Hoyer-Schlesinger-Turner and included in Appendix D-26.

3) The secondary containment will be provided with 30-40 mils thick vinylester base coating, Protecto-Coat 900 as manufactured by Dudick Inc. or equivalent.

4) All ignitable bulk liquid storage tanks, items 158 & 159 as listed in Table D-5 are installed above ground on concrete foundations. No tank component will be in contact with soil or water.

5) All ignitable bulk liquid storage tanks, items 158 & 159 as listed in Table D-5 are installed above ground on concrete foundations. Tanks will not be subjected to loadings caused by vehicular traffic.

6) The materials of construction for the tanks and ancillary equipment are compatible with the hazardous wastes intended to be stored/processed.

I certify under penalty of law that this document and all attachments were prepared under my direct supervision and in accordance with systems designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Respectfully submitted,

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.

Bhupendra Patel

Bhupendra Patel
Licensed Professional Engineer
Illinois No. 062-048690
My License Expires on 11/30/94

Attachment

APPENDIX F-4

PROFESSIONAL ENGINEER CERTIFICATION OF FOAM FIRE PROTECTION SYSTEM UPGRADE

HOYER-SCHLESINGER-TURNER inc.
ENGINEERS - CONSTRUCTORS
300 west adams street chicago illinois 60606 telephone 263-0556 area code 312

July 21, 1994

Permit Section, RCRA Unit
Division of Land Pollution Control
Illinois Environmental Protection Agency
PO Box 19276
Springfield, Illinois 62794-9276

Re: Clean Harbors of Chicago, Inc.
11800 South Stony Island Avenue
Chicago, Illinois 60617
Revised Part-B Permit Application

Dear Sir or Madam:

Please refer to: 0316000051-Cook County
Clean Harbors of Chicago
ILD000608471
RCRA Permit Log No. 16

I hereby certify that I, the undersigned am a licensed Structural Engineer, licensed to practice in the State of Illinois.

I certify under penalty of law that the proposed Rail Car Unloading Area and Superstructure for Rail Car Unloading area were designed under my direct supervision and the design incorporates good engineering practice.

The structural design is suitable for intended use. Foundations and containment slabs are designed for intended load and will maintain structural integrity without failure.

Containment areas for Rail Car Unloading incorporates into design water stops between slab and walls.

After moist curing, floor and walls of all containment areas will be coated with a monolithic coating material that is chemically compatible with most of the waste materials. After careful consideration of all chemicals and discussion with coating manufacturer representatives, Protecto-Crete 900 manufactured by Dudick, Inc. was selected as most suitable. Technical specifications are listed in Appendix D-10.

Respectfully submitted,

HOYER-SCHLESINGER-TURNER, INC.

Peter J. Bernes

PETER J. BERNES
LICENSED STRUCTURAL ENGINEER
ILLINOIS NO. 3659
MY LICENSE EXPIRES ON 11-30-94

STATE OF ILLINOIS
PETER J.
BERNES
3659
LICENSED STRUCTURAL ENGINEER

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
1200 CROWN COLONY DRIVE, P.O. BOX 9137 • QUINCY, MA 02269-9137
(617) 849-1800

September 1, 1994

Permit Section, RCRA Unit
Division of Land Pollution Control
Illinois Environmental Protection Agency
P.O. Box 19276
Springfield, IL 62794-9276

RE: Clean Harbors of Chicago, Inc.
11800 S. Stony Island Avenue
Chicago, IL 60617
Revised Part B Permit Application

Dear Sir or Madam:

Please refer to: 0316000051 - Cook County
Clean Harbors of Chicago, Inc.
ILD000608471
RCRA Permit Log No. 16
RCRA Permit File

I hereby certify that I, the undersigned am a Professional Engineer, licensed to practice in the State of Illinois in accordance with Ill. Rev. State., par. 5101, Sec. 1 and par. 5119, Sec. 13.1.

I certify under penalty of law that this document and all attachments were prepared under my direct supervision and in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Respectfully submitted,

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.

Bhupendra Patel

Bhupendra Patel
Licensed Professional Engineer
Illinois No. 062-048690
My license expires on 11/30/94

PEGASUS CONSULTANTS
345 THIRD STREET - SUITE 640
NIAGARA FALLS, N.Y. 14303
(716) 285-3856
FAX (716) 285-7579

August 31, 1994

Mr. Paul Whiting
Vice President Engineering
Clean Harbors Environmental Services Inc.
325 Wood Road
Braintree, MA 02184

Subject-Chicago Coarse Shredder

Dear Paul,

Following our conversation this morning I reviewed the drawings that were submitted to the state of Illinois with respect to the Drum Processing/Fuels Blending System that we proposed.
The Coarse Shredder is referred to in the following Drawings;

a) In the drawing numbered 4237 it is identified as the Coarse Shredder and also by Equipment Number as 161-13 .
b) In the drawing numbered 4236 it is referred to as Coarse Shredder.
c) In the drawing numbered 4241 it is identified as the Coarse Shredder also by Equipment Number as 161-13 .

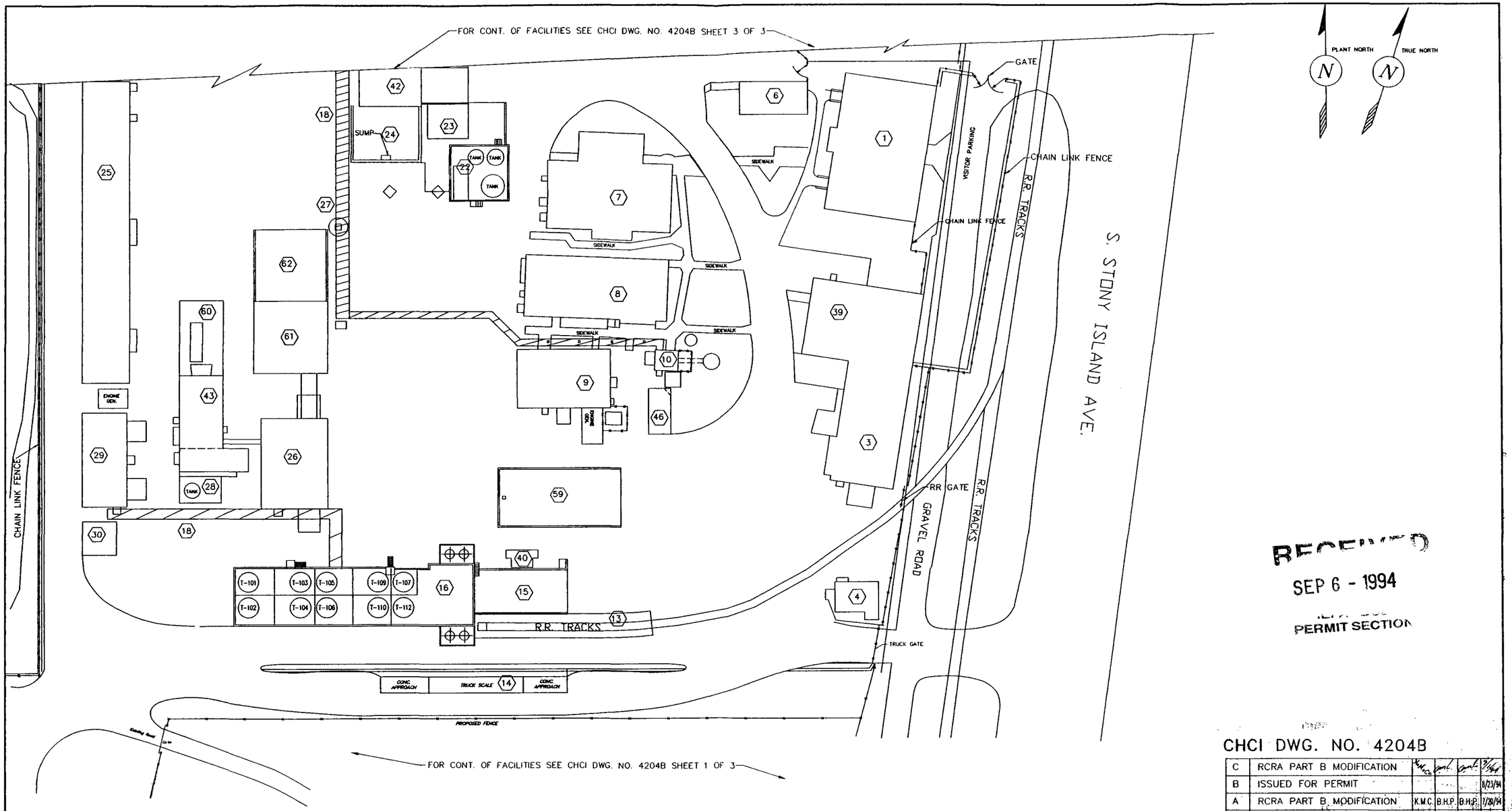
Although the type, model and manufacturer of the Coarse Shredder was not mentioned in our correspondence to you, we have ample documentation and copies of correspondence with the Shredding Systems Inc (SSI) company to show that we were intending to use an SSI Coarse Shredder, and we had concluded that model Number 1600E was the best selection for your needs.
We considered it to be a very beneficial co-incidence during our recent trip to Chicago to discover that there was indeed an SSI shredder model 1600E available on site.
I hope this correspondence helps you to clear up any misunderstandings that may have occurred.

Yours Most Sincerely,

John J Rolfe

John Rolfe, P.E., President

3194140



RECEIVED
SEP 6 - 1994
PERMIT SECTION

LEGEND

1. OFFICE BUILDING
3. MAINTENANCE BUILDING
4. TRANSPORTATION/RECEIVING BUILDING
6. EAST PUMP HOUSE
7. PERSONNEL/TRAINING CENTER
8. LABORATORY BUILDING
9. CONTROL BUILDING
10. MWRDGC LIFT STATION
13. RAIL CAR UNLOADING AREA (SEE CHCI DWG. NO. 4217)
14. TRUCK SCALE
15. TRUCK UNLOADING PLATFORM (SEE CHCI DWG. NO. 4248)
16. FLAMMABLE STORAGE TANK FARM (SEE CHCI DWG. NO. 4215)
18. PIPE RACKS
22. NEUTRALIZING AREA
23. EFFLUENT TREATMENT BUILDING
24. LAMELLA SETTLERS
25. CONTAINER MANAGEMENT BUILDING (SEE CHCI DWG. NO. 4210 SHEET 3 OF 3)
26. IGNITABLE CONTAINER MANAGEMENT BUILDING (SEE CHCI DWG. NO. 4210 SHEET 2 OF 3)
27. STORM WATER LIFT STATION
28. NITROGEN STORAGE AREA
29. UTILITY BUILDING
30. FUEL OIL STORAGE
39. STABILIZATION OPERATION
40. DECONTAMINATION BUILDING
42. FILTER BUILDING
43. FUELS BLENDING OPERATION (APPROVED)(SEE CHCI DWG. NO. 4213 SHEET 2 OF 3)
46. FIRE EQUIPMENT BUILDING
59. TRUCK STAGING AREA (PROPOSED)(SEE CHCI DWG. NO. 4247)
60. ROLL-OFF PAD FOR FUELS BLENDING (APPROVED)(SEE CHCI DWG. NO. 4213 SHEET 2 OF 3)
61. CONTAINER HANDLING DOCK (PROPOSED)(SEE CHCI DWG. NO. [illegible])
62. TRUCK PAD (PROPOSED)(SEE CHCI DWG. NO. 4246)

REDUCED COPY
DO NOT SCALE PRINT

CHCI DWG. NO. 4204B

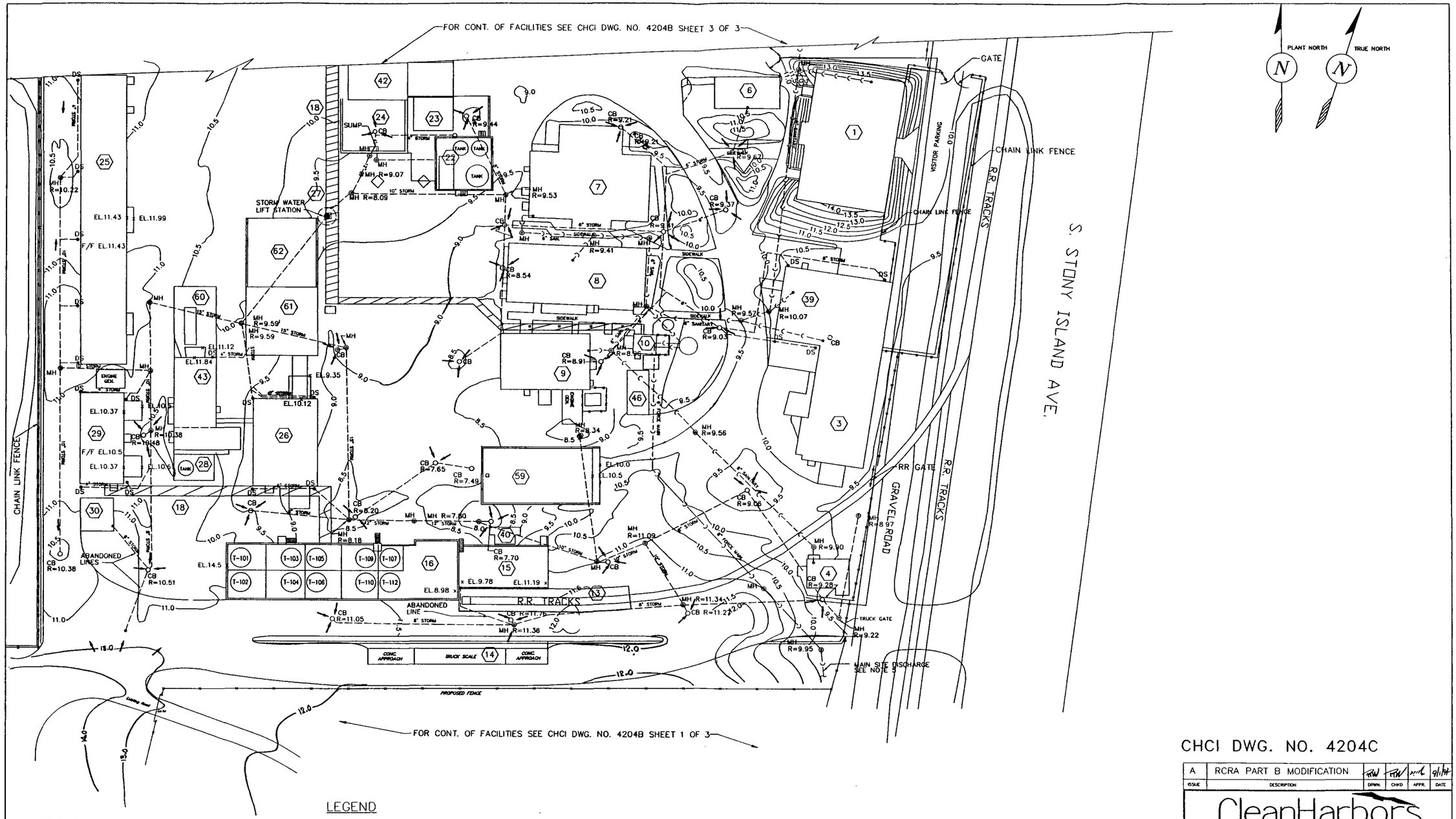
ISSUE	DESCRIPTION	DRAWN.	CHKD.	APPR.	DATE
C	RCRA PART B MODIFICATION	K.M.C.	[illegible]	[illegible]	9/1/94
B	ISSUED FOR PERMIT				8/23/94
A	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	7/20/94

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

TITLE: CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

SITE PLAN - EXISTING, APPROVED, MODIFIED & PROPOSED ACTIVITIES
SHEET 2 OF 3

PROJECT NO. GW-5404
SCALE 1"=30'
DRAWING NO. 2916-C-21



LEGEND

1. OFFICE BUILDING
3. MAINTENANCE BUILDING
4. TRANSPORTATION/RECEIVING BUILDING
6. EAST PUMP HOUSE
7. PERSONNEL/TRAINING CENTER
8. LABORATORY BUILDING
9. CONTROL BUILDING
10. MWRDGC LIFT STATION
13. RAIL CAR UNLOADING AREA (SEE CHCI DWG. NO. 4217)
14. TRUCK SCALE
15. TRUCK UNLOADING PLATFORM (SEE CHCI DWG. NO. 4248)
16. FLAMMABLE STORAGE TANK FARM (SEE CHCI DWG. NO. 4215)
18. PIPE RACKS
22. NEUTRALIZING AREA
23. EFFLUENT TREATMENT BUILDING
24. LAMELLA SETTLERS
25. CONTAINER MANAGEMENT BUILDING (SEE CHCI DWG. NO. 4210 SHEET 3 OF 3)
26. IGNITABLE CONTAINER MANAGEMENT BUILDING (SEE CHCI DWG. NO. 4210 SHEET 2 OF 3)
27. STORM WATER LIFT STATION
28. NITROGEN STORAGE AREA
29. UTILITY BUILDING
30. FUEL OIL STORAGE
39. STABILIZATION OPERATION
40. DECONTAMINATION BUILDING
42. FILTER BUILDING
43. FUELS BLENDING OPERATION (APPROVED)(SEE CHCI DWG. NO. 4213 SHEET 2 OF 3)
46. FIRE EQUIPMENT BUILDING
59. TRUCK STAGING AREA (PROPOSED)(SEE CHCI DWG. NO. 4247)
60. ROLL-OFF PAD FOR FUELS BLENDING (APPROVED)(SEE CHCI DWG. NO. 4213 SHEET 2 OF 3)
61. CONTAINER HANDLING DOCK (PROPOSED)(SEE CHCI DWG. NO. 4245)
62. TRUCK PAD (PROPOSED)(SEE CHCI DWG. NO. 4246)

REDUCED COPY
DO NOT SCALE PRINT

CHCI DWG. NO. 4204C

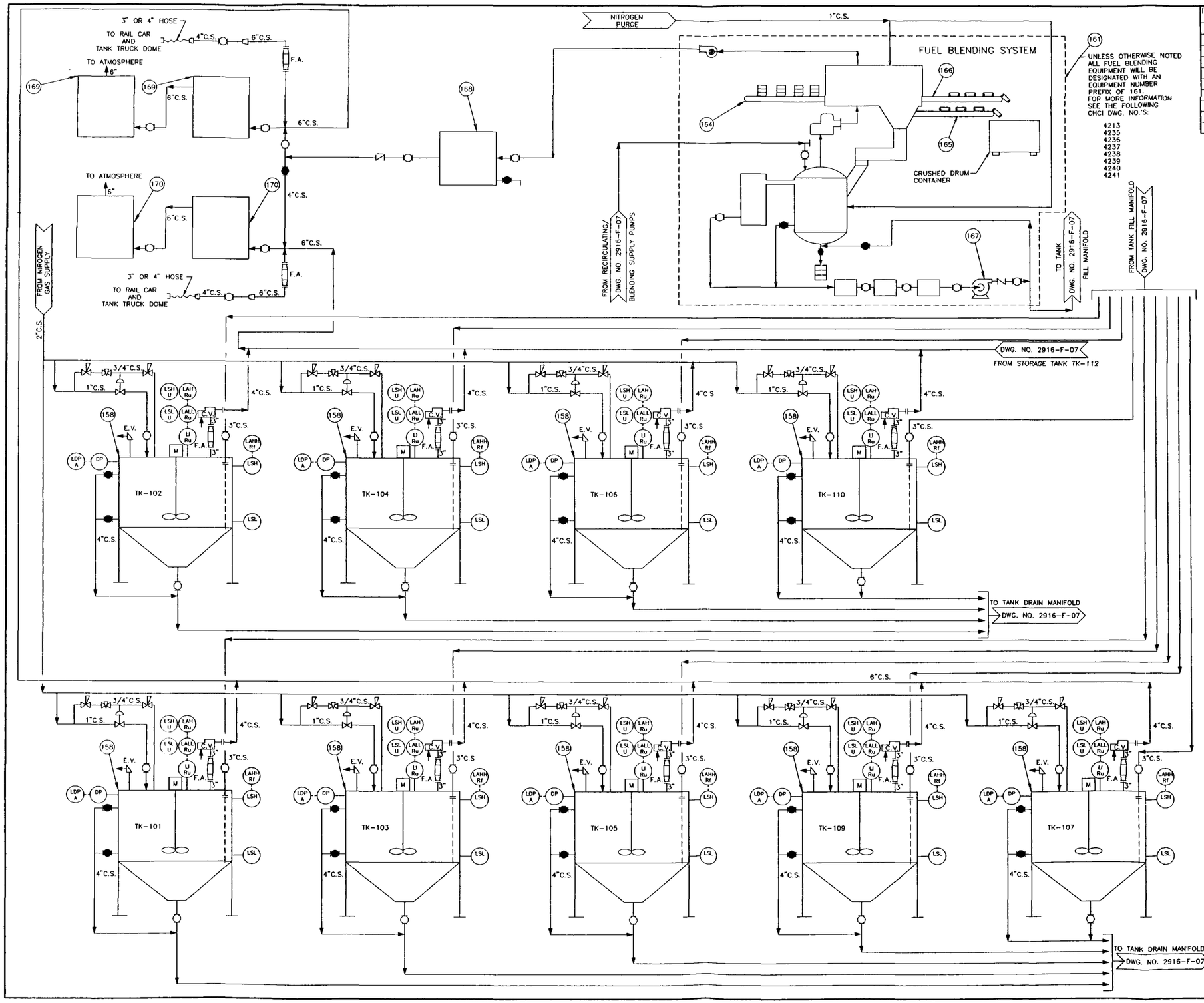
ISSUE	DESCRIPTION	DRWN.	CHKD	APPR.	DATE
A	RCRA PART B MODIFICATION	HW	HW	[illegible]	9/1/94

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

TITLE
CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

DRAINAGE AND CONTAINMENT CONTROL

PROJECT NO GW-5404
SCALE 1" = 30'
DRAWING NO 2916-C-31



ITEM NO.	QTY.	DESCRIPTION
158	9	12,800 GAL. STORAGE TANKS (TK-101 TO TK-110)
160	2	200 GPM TRANSFER PUMPS
161	SET	FUEL BLENDING SYSTEM
164	SET	DRUM FEED CONVEYORS A, B(LIFTING), C AND D
165	1	DEBRIS CONVEYOR H
166	2	DRUM DISCHARGE CONVEYORS F AND G
167	1	30 GPM TRANSFER PUMP
168	1	MIST ELIMINATION
169	1	DUAL CARBON BED SCRUBBER
170	1	DUAL CARBON BED SCRUBBER

LEGEND

- HAND OPERATED ON-OFF VALVE (NORMALLY OPEN)
- HAND OPERATED ON-OFF VALVE (NORMALLY CLOSED)
- SWING CHECK VALVE
- MOTORIZED VALVE WITH LIMIT SWITCHES
- SOLENOID VALVE
- NEEDLE VALVE
- SELF PRESSURE REGULATING VALVE
- M — MIXER
- INDICATES DIRECTION OF FLOW
- AOV — AIR OPERATED VALVE
- A/S — AIR SUPPLY
- C.V. — CONSERVATION VENT (PRESSURE & VACUUM RELIEF)
- E.V. — EMERGENCY VENT FOR PRESSURE RELIEF
- F.A. — FLAME ARRESTER
- C.S. — CARBON STEEL
- DP — DIFFERENTIAL PRESSURE SWITCH
- LDP A — LOW PRESSURE ALARM
- LAH Ru — LEVEL ALARM HIGH – FROM LEVEL INDICATOR
- LAHH Rf — LEVEL ALARM HIGH-HIGH – FROM POINT LEVEL SWITCH
- LALL Ru — LEVEL ALARM LOW-LOW – FROM LEVEL INDICATOR
- LSH U — LEVEL SWITCH HIGH – FROM LEVEL INDICATOR
- LSLL U — LEVEL SWITCH LOW-LOW – FROM LEVEL INDICATOR
- LI Ru — LEVEL INDICATOR – CONTINUOUS
- LS — POINT LEVEL SWITCH – L (LOW LEVEL) – H (HIGH LEVEL)
- CENTRIFUGAL PUMP

NOTES:

1. ALL PIPING IS CARBON STEEL UNLESS OTHERWISE SPECIFIED.
2. HOSE CONNECTIONS ARE MADE WITH QUICK COUPLING WITH A VALVE ON THE RIGID PIPE SIDE.
3. ALL HOSES ARE CHEMICAL RESISTANT REINFORCED RUBBER.
4. FOR CLARITY PIPE REDUCERS, COUPLINGS AND FLANGED CONNECTIONS ARE NOT SHOWN.

CHCI DWG. NO. 4207

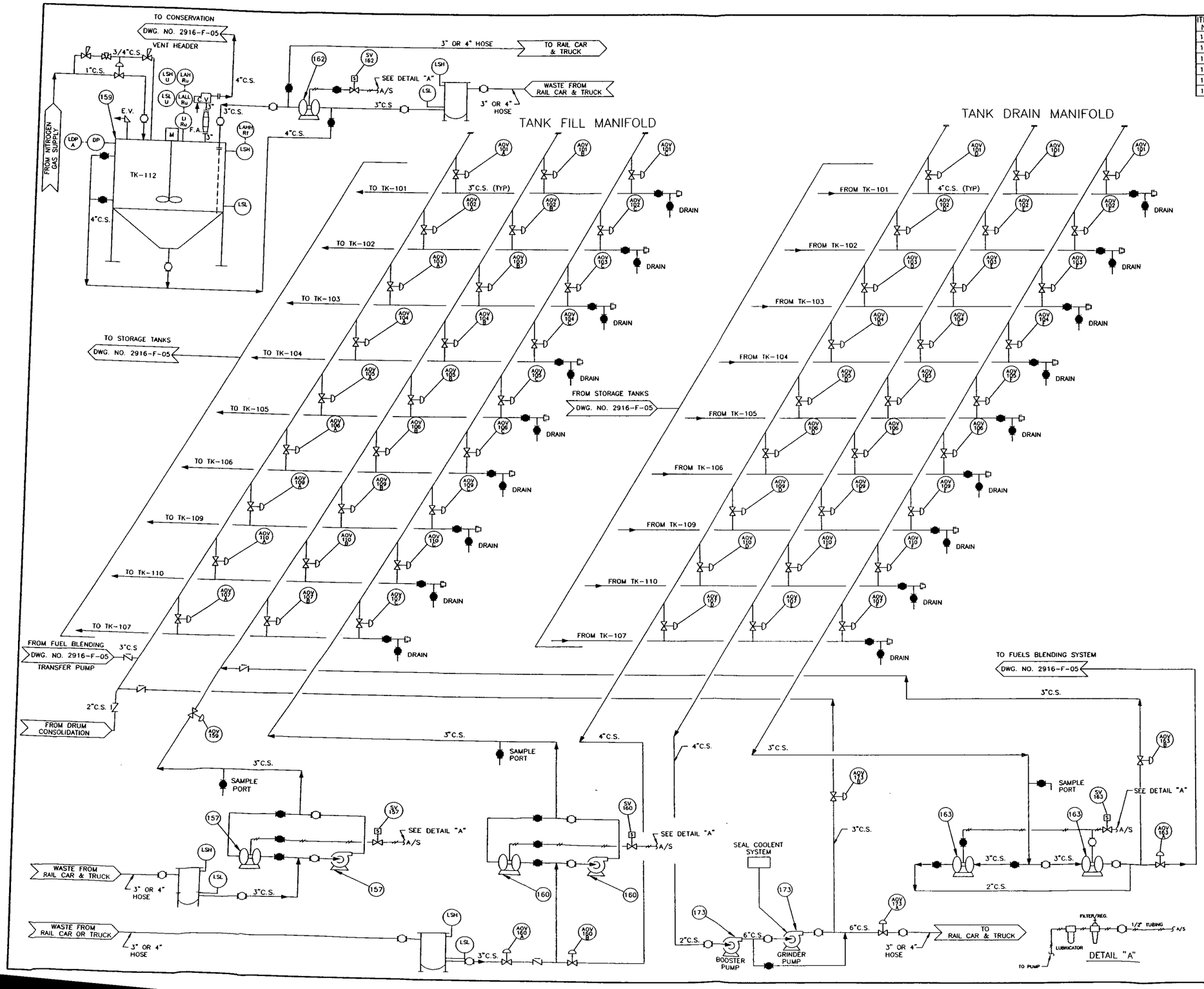
ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
F	RCRA PART B MODIFICATION	[illegible]	[illegible]	[illegible]	9/1/94
E	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	7/20/94
D	RCRA PART B SUBMITTAL UPDATE		M.V.		12/18/92
C	RCRA PART B SUBMITTAL UPDATE	K.M.C.	B.H.P.	B.H.P.	2/14/92
B	RCRA PART B SUBMITTAL UPDATE	K.M.C.	A.M.L.	A.M.L.	2/1/91
A	RCRA PART B SUBMITTAL	K.M.C.	P.W.	P.W.	9/19/90

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

TITLE
CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

PROCESS FLOW, PIPING & INSTRUMENTATION DIAGRAM – MODIFIED FUELS BLENDING OPERATION SHEET 3 OF 4

PROJECT NO. GW-5404
SCALE NONE
DRAWING NO. 2916-F-05



ITEM NO.	QTY.	DESCRIPTION
157	2	300 GPM RECEIVING PUMPS
159	1	20,000 GAL IGNITABLE WASTE STORAGE TANK
160	2	200 GPM TRANSFER PUMP
162	1	150 GPM BLENDED FUEL TRANSFER PUMP
163	1	50 GPM RECIRCULATING/BLENDING SUPPLY PUMPS
173	2	250 GPM LOADING PUMPS

LEGEND

- HAND OPERATED ON-OFF VALVE (NORMALLY OPEN)
- HAND OPERATED ON-OFF VALVE (NORMALLY CLOSED)
- SWING CHECK VALVE
- AIR ACTUATED VALVE
- SOLENOID VALVE
- NEEDLE VALVE
- SELF PRESSURE REGULATING VALVE
- M — MIXER
- INDICATES DIRECTION OF FLOW
- AOV — AIR OPERATED VALVE
- A/S — AIR SUPPLY
- C.V. — CONSERVATION VENT (PRESSURE & VACUUM RELIEF)
- E.V. — EMERGENCY VENT FOR PRESSURE RELIEF
- C.S. — FLAME ARRESTER
- C.S. — CARBON STEEL
- DP — DIFFERENTIAL PRESSURE SWITCH
- LDP A — LOW PRESSURE ALARM
- LAH Ru — LEVEL ALARM HIGH - FROM LEVEL INDICATOR
- LAHH Rf — LEVEL ALARM HIGH-HIGH - FROM POINT LEVEL SWITCH
- LALL Ru — LEVEL ALARM LOW-LOW - FROM LEVEL INDICATOR
- LSH U — LEVEL SWITCH HIGH - FROM LEVEL INDICATOR
- LSLL U — LEVEL SWITCH LOW-LOW - FROM LEVEL INDICATOR
- LI Ru — LEVEL INDICATOR - CONTINUOUS
- LS — POINT LEVEL SWITCH - L (LOW LEVEL) - H (HIGH LEVEL)
- STRAINER BASKET
- AIR OPERATED DOUBLE DIAPHRAGM PUMP
- CENTRIFUGAL PUMP

NOTES:

1. ALL PIPING IS CARBON STEEL UNLESS OTHERWISE SPECIFIED.
2. HOSE CONNECTIONS ARE MADE WITH QUICK COUPLING WITH A VALVE ON THE RIGID PIPE SIDE.
3. ALL HOSES ARE CHEMICAL RESISTANT REINFORCED RUBBER.
4. FOR CLARITY PIPE REDUCERS, COUPLINGS AND FLANGED CONNECTIONS ARE NOT SHOWN.

CHCI DWG. NO. 4207

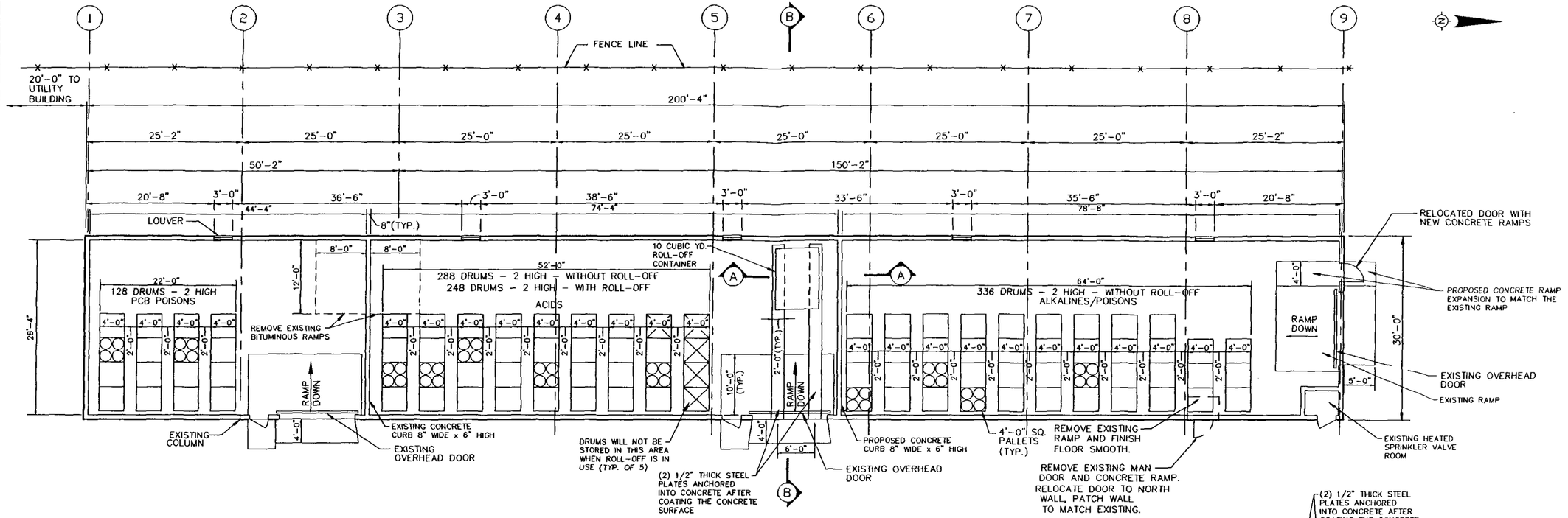
ISSUE	DESCRIPTION	DRWN	CHKD.	APPR	DATE
B	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	7/20/94
A	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	7/20/94

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

TITLE
CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

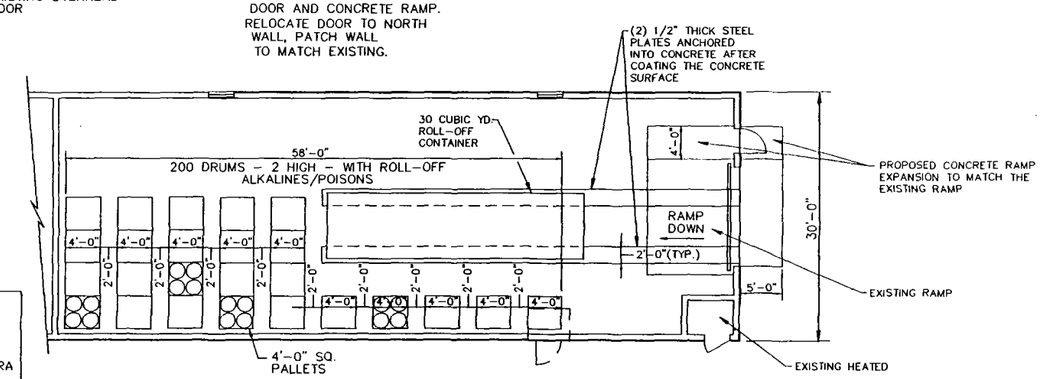
PROCESS FLOW, PIPING & INSTRUMENTATION DIAGRAM - MODIFIED FUELS BLENDING OPERATION SHEET 4 OF 4

PROJECT NO GW-5404
SCALE NONE
DRAWING NO 2916-F-07



PLAN

SCALE 1/8" = 1'-0"



PARTIAL PLAN

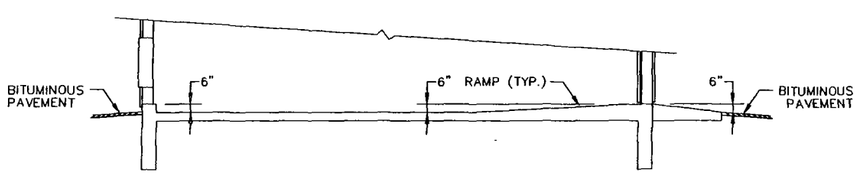
SCALE 1/8" = 1'-0"

DRUM LAYOUT WITH 30 CU. YD. ROLL-OFF

NO. OF DRUMS STORED =	200
VOLUME OF WASTE IN DRUMS =	11,000 gals.
VOLUME OF 30 CU. YD. ROLL-OFF =	6,000 gals.
TOTAL MAXIMUM VOLUME =	17,000 gals.

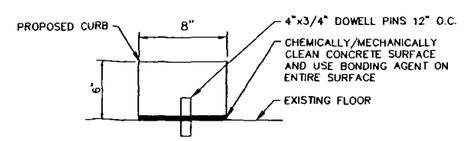
AREA DESCRIPTION	REQ'D. CONTAINMENT PER RCRA			RECTANGULAR VOLUME OF AREA				VOLUME OCCUPIED BY RAMP				TOTAL CAPACITY (GALS.) Vt = A - RA
	D	V	R	W	L	H	A	RW	RL	RH	RA	
	NO. OF DRUMS	TOTAL VOL. OF WASTE IN GALS.	CONT. CAP REQ'D. (D.I.V.) IN GALS.	AREA WIDTH IN FT.	AREA LENGTH IN FT.	CURB HEIGHT IN FT.	CONT. CAP OF AREA (W)(L)(H)7.48	RAMP WIDTH IN FT.	RAMP LENGTH IN FT.	RAMP HEIGHT IN FT.	VOL. OCCUPIED BY RAMP 1/2 (RW)(RL)(RH)7.48	
PCB POISONS	128	7,040	704	44.33	28.33	0.5	4,696 GAL.	18	10	0.5	337 GAL.	4,359
ACIDS	288	15,840	1,584	74.33	28.33	0.5	7,875 GAL.	18	10	0.5	337 GAL.	7,538
ALKALINE/POISONS	336	18,480	1,848	78.66	28.33	0.5	8,334 GAL.	18	10	0.5	337 GAL.	7,997
* ACIDS	248	15,640 **	1,564	74.33	28.33	0.5	7,875 GAL.	18	10	0.5	337 GAL.	7,538
* ALKALINE/POISONS	200	17,000 **	1,700	78.66	28.33	0.5	8,334 GAL.	18	10	0.5	337 GAL.	7,997

* WITH ROLL-OFFS
** INCLUDES ROLL-OFF CAPACITY



SECTION B-B

SCALE 1/4" = 1'-0"



SECTION A-A

SCALE: NONE

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DO NOT SCALE PRINT

CHCI DWG. NO. 4210

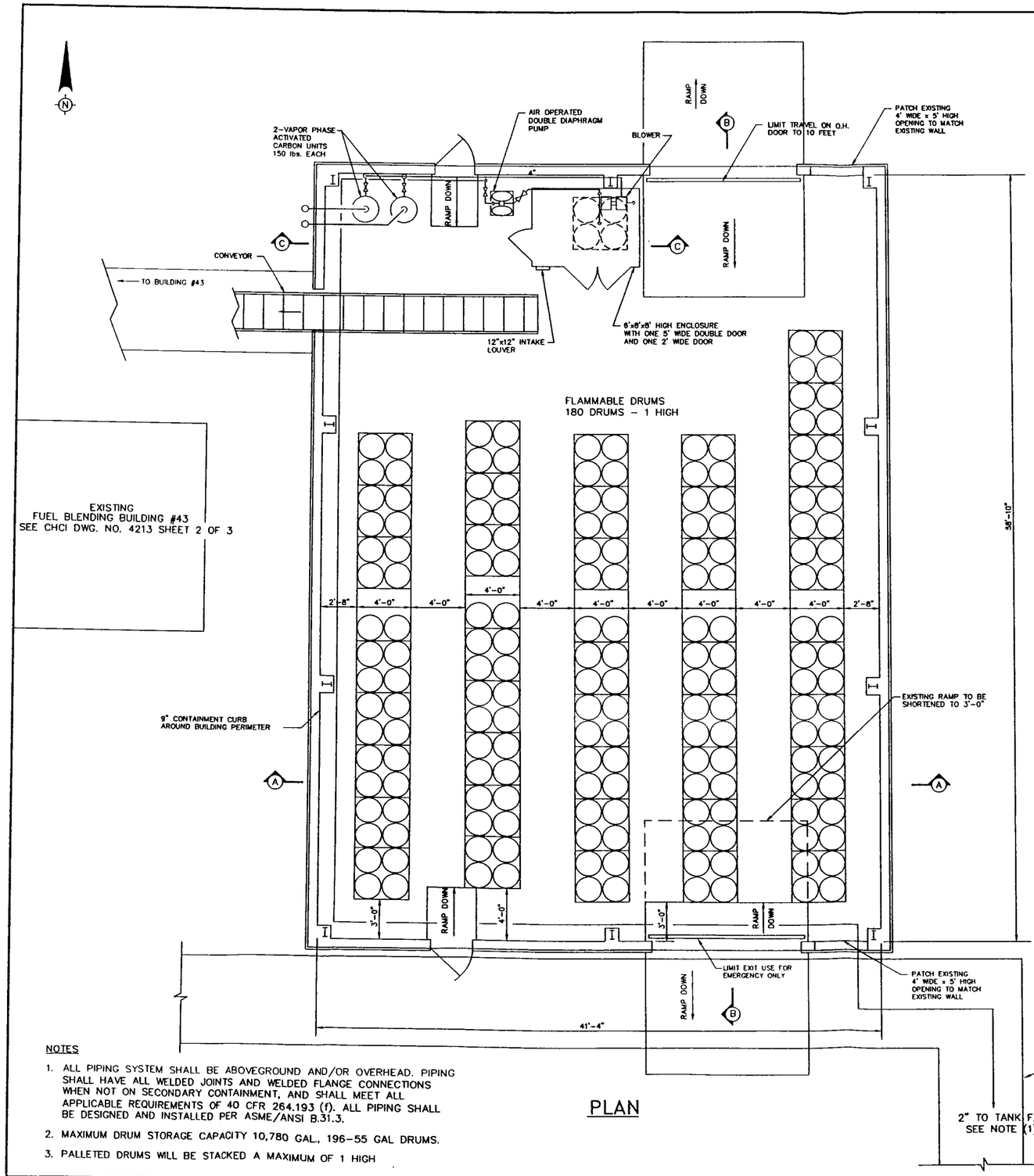
ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
B	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	7/20/94
A	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	7/20/94

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

TITLE
CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

PROPOSED
CONTAINER MANAGEMENT LAYOUT BUILDING #25
SHEET 3 OF 3

PROJECT NO. GW-5404
SCALE AS NOTED
DRAWING NO. 2916-M-19



PLAN

NOTES

1. ALL PIPING SYSTEM SHALL BE ABOVEGROUND AND/OR OVERHEAD. PIPING SHALL HAVE ALL WELDED JOINTS AND WELDED FLANGE CONNECTIONS WHEN NOT ON SECONDARY CONTAINMENT, AND SHALL MEET ALL APPLICABLE REQUIREMENTS OF 40 CFR 264.193 (f). ALL PIPING SHALL BE DESIGNED AND INSTALLED PER ASME/ANSI B.31.3.
2. MAXIMUM DRUM STORAGE CAPACITY 10,780 GAL, 196-55 GAL DRUMS.
3. PALLETED DRUMS WILL BE STACKED A MAXIMUM OF 1 HIGH

SECONDARY CONTAINMENT CALCULATIONS:

REQUIRED CONTAINMENT CAPACITY
10% OF TOTAL VOLUME
= 0.1 x 10,780
= 1,078 GALS.

TOTAL VOLUME OF BUILDING = 41.33' x 58.83' x 0.75' = 1,823.5 cu. ft.

VOLUME OCCUPIED BY RAMPS

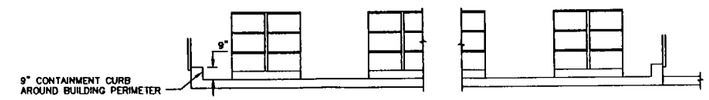
(1) 12'W x 10'L RAMP = 1/2 x 12' x 10' x 0.75' = 45 cu. ft.

(1) 12'W x 3'L RAMP = 1/2 x 12' x 3' x 0.75" = 13.5 cu. ft.

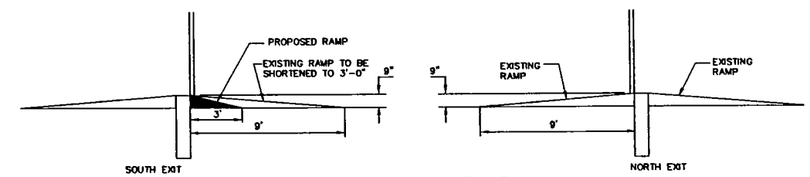
(2) 3.5'W x 4'L RAMPS = 2 x 1/2 x 3.5' x 4' x 0.75' = 10.5 cu. ft.

MISC. ITEMS, ALLOWANCE = 50 cu. ft.

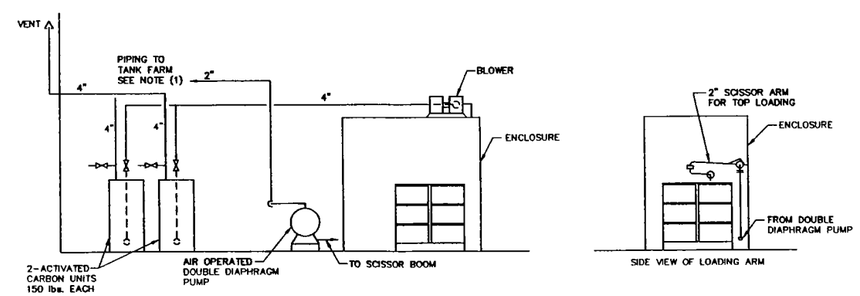
AVAILABLE SECONDARY CONTAINMENT VOLUME = 1,704.5 cu. ft.
= 12,751 GALS.



SECTION A-A



SECTION B-B



SECTION C-C

DRUM PUMPING STATION

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LEGEND:

1 HIGH PALLETED DRUM CONFIGURATION

CHCI DWG. NO. 4210

ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
B	RCRA PART B MODIFICATION	K.M.C.			9/1/94
A	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	1/20/94

CleanHarbors
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TITLE
CLEAN HARBORS OF CHICAGO, INC.
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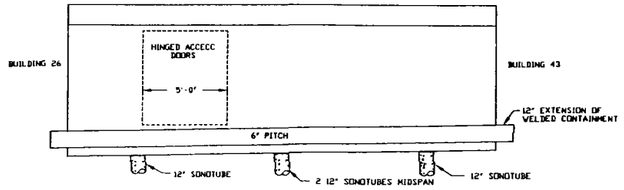
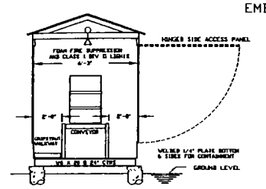
CHICAGO, ILLINOIS 60617

PROPOSED
CONTAINER MANAGEMENT LAYOUT BUILDING #26
SHEET 2 OF 3

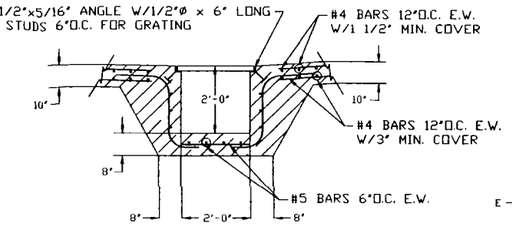
PROJECT NO. GW-5404
SCALE 1/4" = 1'-0"
DRAWING NO. 2916-M-18



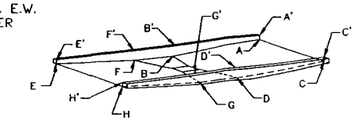
ELEVATION LOOKING SOUTH



SECTION LOOKING EAST



DETAIL NO. 1
SCALE: 1/2" = 1'-0"

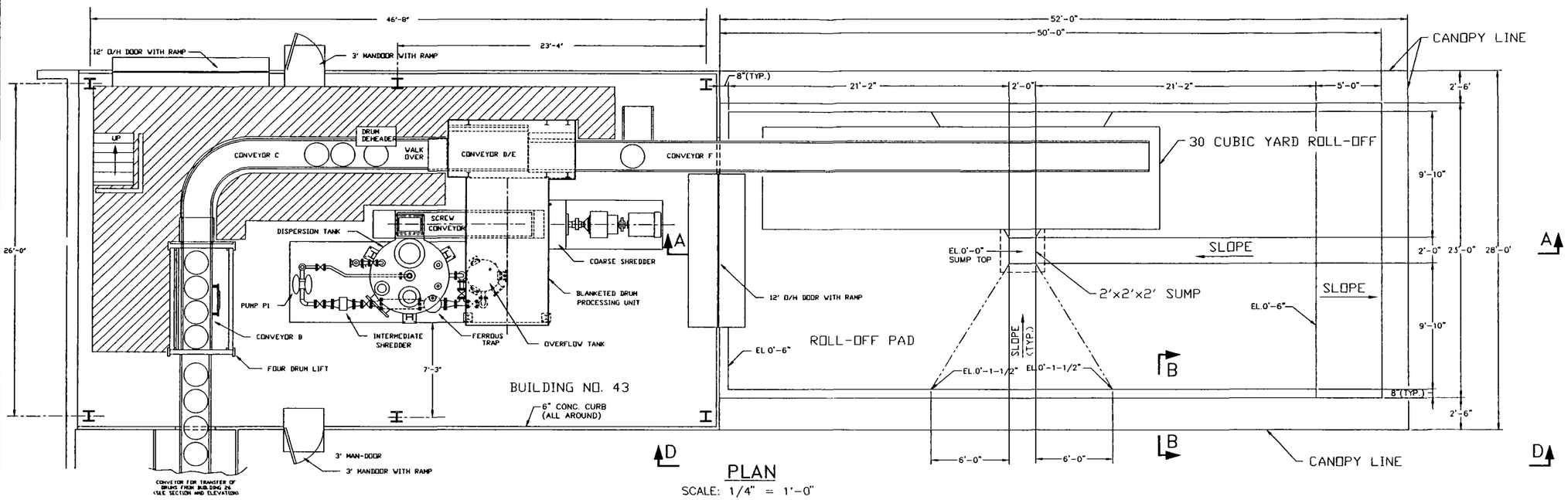


AVAILABLE CONTAINMENT CAPACITY FOR ROLL-OFF PAD

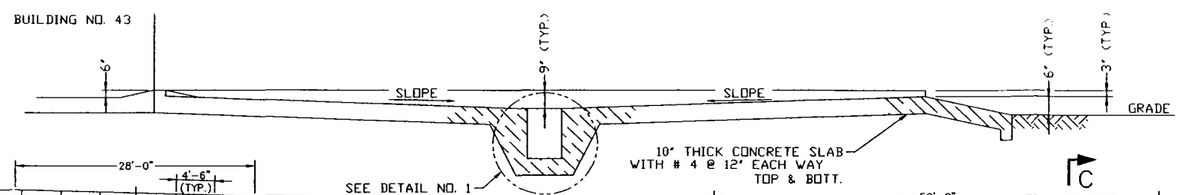
CONTAINMENT CAPACITY OF THE TRIANGULAR PAD SECTIONS
EE'=HH'=AA'=CC'= 3"
FF'=BB'=DD'=GG'= 7 1/2"

MAXIMUM DEPTH OF LIQUID= 4 1/2"
CAPACITY= (2)x1/2x(19'-8")x(15'-2")x4 1/2"/12
= 19.67'x15.17'x0.375'
= 111.9 FT³

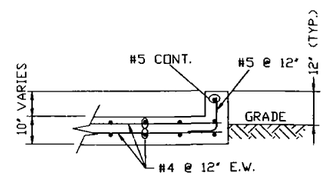
CONTAINMENT CAPACITY OF THE CENTER SECTION
ASSUME MINIMUM UNIFORM DEPTH OF 4 1/2"
= 14'x19.67'x0.375'
= 103.27 FT³
SUMP CAPACITY= 2'x2'x2'= 6FT³
TOTAL CONTAINMENT CAPACITY= 221.17 FT



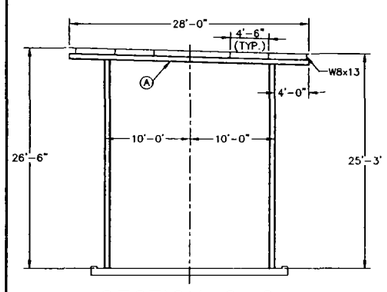
PLAN
SCALE: 1/4" = 1'-0"



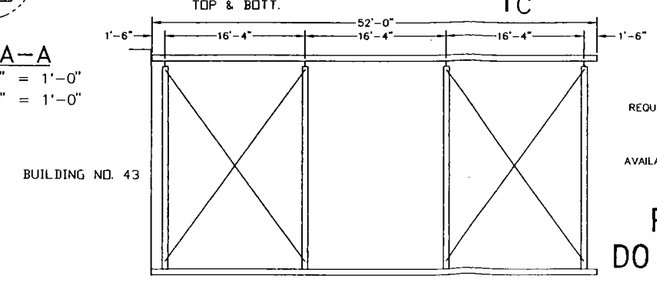
SECTION A-A
SCALE: HORIZ. 1/4" = 1'-0"
VERT. 3/8" = 1'-0"



SECTION B-B
SCALE: 1/2" = 1'-0"



SECTION C-C
SCALE: 1/8" = 1'-0"
TYP. FRAME @ 16'-4" SPACING



SECTION D-D
SCALE: 1/8" = 1'-0"

CONTAINMENT CAPACITY CALCULATIONS FOR BUILDING #43

REQUIRED CONTAINMENT CAPACITY = VOL. OF THE LARGEST TANK
= VOL. OF THE DISPERSION TANK + VOL. OF THE OVERFLOW TANK
= 1,493 + 311 GALS.
= 1,804 GALS.

AVAILABLE CONTAINMENT CAPACITY = 26'x46.67'x0.5'x7.481
= 4,538 GALS.

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CHCI DWG. NO. 4213

ISSUE	DESCRIPTION	DRWN.	CHKD	APPR.	DATE
F	RCRA PART B MODIFICATION	[illegible]	[illegible]	[illegible]	3/1/94
E	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	7-20-94
D	RCRA PART B SUBMITTAL UPDATE	TJR	MV	JIR	12-18-92
C	RCRA PART B SUBMITTAL UPDATE	TJG	JIR	JIR	2-14-92
B	RCRA PART B SUBMITTAL UPDATE	PVS	INS	A.M.L.	2/1/91
A	RCRA PART B SUBMITTAL	K.M.C.	P.W.	P.W.	9/19/90

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

TITLE
CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617
EQUIPMENT LAYOUT – PROPOSED FUELS BLENDING OPERATION
SHEET 2 OF 3

PROJECT NO. E-2916
SCALE AS NOTED
DRAWING NO. 2916-M-07

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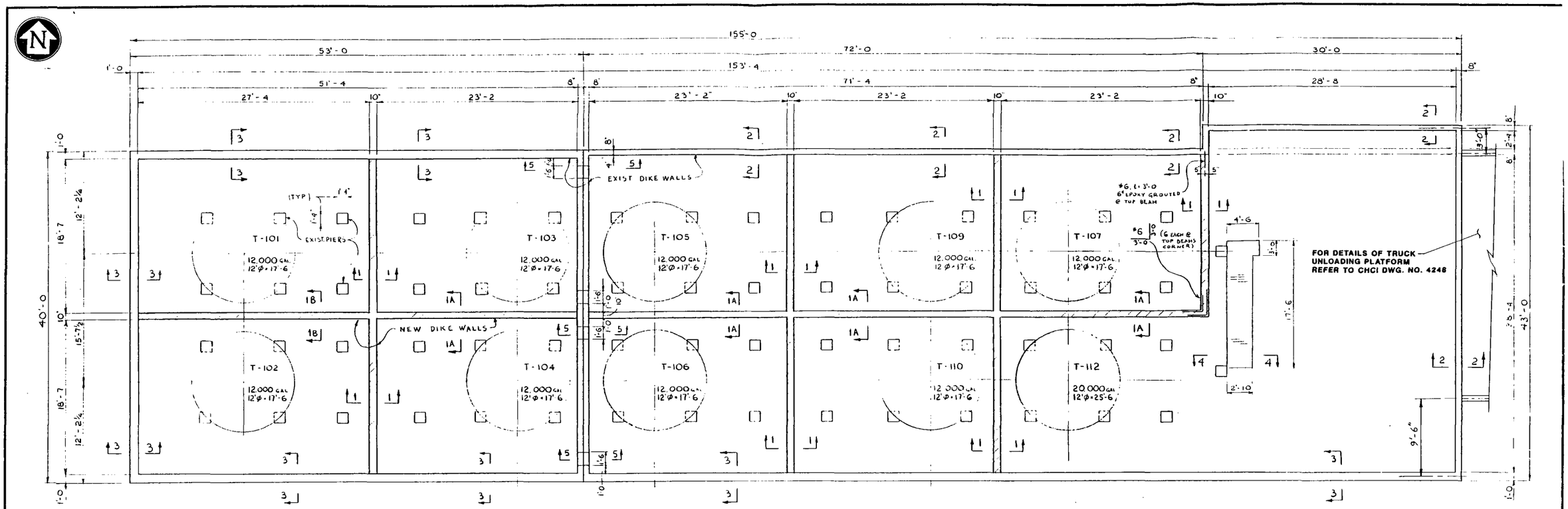
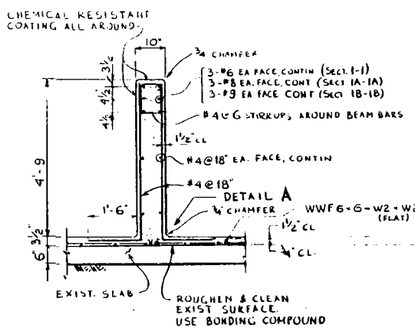
PEGASUS
DATE 94-7-14
94-31A-H01
BY BO



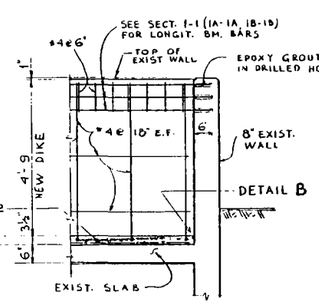
EXISTING TANK FARM PLAN

SCALE 3/16" = 1'-0



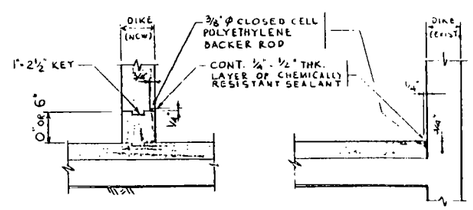
SECTION 1-1, 1A-1A, 1B-1B

½" = 1'-0



SECTION 2-2

½" = 1'-0

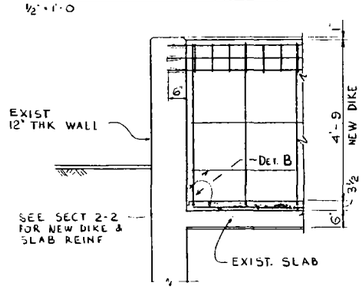


DETAIL A (OPTIONAL)

3/4" = 1'-0"

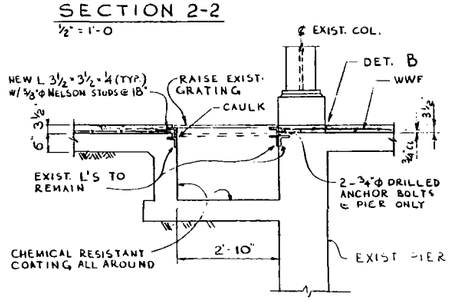
DETAIL B

3/4" = 1'-0"



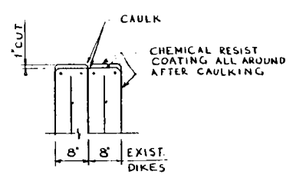
SECTION 3-3

½" = 1'-0



SECTION 4-4

½" = 1'-0



SECTION 5-5

3/4" = 1'-0

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GENERAL NOTES

1. All concrete mixing and placing shall conform to the requirements of ACI 301-89 "Specifications for Structural Concrete for Buildings" and ACI 318-89 "Building Code Requirements for Reinforced Concrete".
2. All concrete shall have the minimum compressive strength @ 28 days f'c = 4000 psi and minimum slump = 4".
3. Concrete shall be air entrained with air content 4% - 6% for exterior exposed concrete.
4. Minimum concrete cover for reinforcement to be 3" for concrete cast against soil and 1-1/2" for concrete exposed to weather.
5. All reinforcing bars shall be Grade 60 billet steel bars conforming to ASTM A615 Specifications and shall be bent and placed in accordance with ACI 318-89 Code.
6. All dimensions to be verified in field.
7. Minimum lap for reinforcing steel to be 30 bar diameters.
8. Metal reinforcing, at the time concrete is placed, to be free from loose, flaky rust, oil or other coatings that will destroy or reduce the bond.
9. All exposed concrete to have a 3/4" chamfer.
10. All floors, walls, piers and sumps inside the tank farm shall be coated using chemical resistant coating system specified by Clean Harbors.
11. Shop drawings shall be submitted for HST approval.

CONTAINMENT CALCULATIONS

For flammable liquids Class I each 12,000 gal tank shall have individual containment

1.25 x 12,000 gal ÷ 7.481 = 2005 cu. ft.

Containment volume = 18.58' x 23.17' x 4.75' = 2045 cu.ft.

Displacement volume = 6 x 1.33³ + 4 x 8.25 sq.in. ÷ 144 x 7' = 15.7 cu.ft.

Available volume = 2045 - 16 = 2029 cu.ft. > 2005 cu.ft. OK

For hazardous liquids all tanks shall have total containment

1.50 x (9 x 12,000 gal + 20,000 gal) ÷ 7.481 = 25,666 cu.ft.

Containment volume = (2 x 18.58' x 27.33' + 7 x 18.58' x 23.17' + 28.67' x 41.33' + 24.0' x 18.67') x 4.75' = 26,895 cu.ft.

Additional pit volume = 17.5' x 2.83' x 2.0' = 99 cu.ft.

Displacement volume (14 x 4 + 6) x 1.33³ + 100 = 246 cu.ft.

Available volume = 26,895 + 99 - 246 = 26,748 cu.ft. > 25,665 cu.ft. OK

RCRA HAZARDOUS WASTE CONTAINMENT REQUIREMENTS

(A) TANK VOLUME = 12,000/7.48 = 1,604.1 cu. ft.
(B) PRECIPITATION ALLOWANCE = 18.58'x(4.7/12)' = 166.6 cu. ft.

TOTAL REQUIRED VOLUME = 1,772.7 cu. ft.
AVAILABLE VOLUME = 2,029 cu. ft.

STATE OF ILLINOIS
PETER J. BERNES
3659
LICENSED STRUCTURAL ENGINEER

Peter J. Bernes
PETER J. BERNES
LICENSED STRUCTURAL ENGINEER
ILLINOIS NO. 3659
MY LICENSE EXPIRES ON 11.30.94

CHCI DWG. NO. 4215

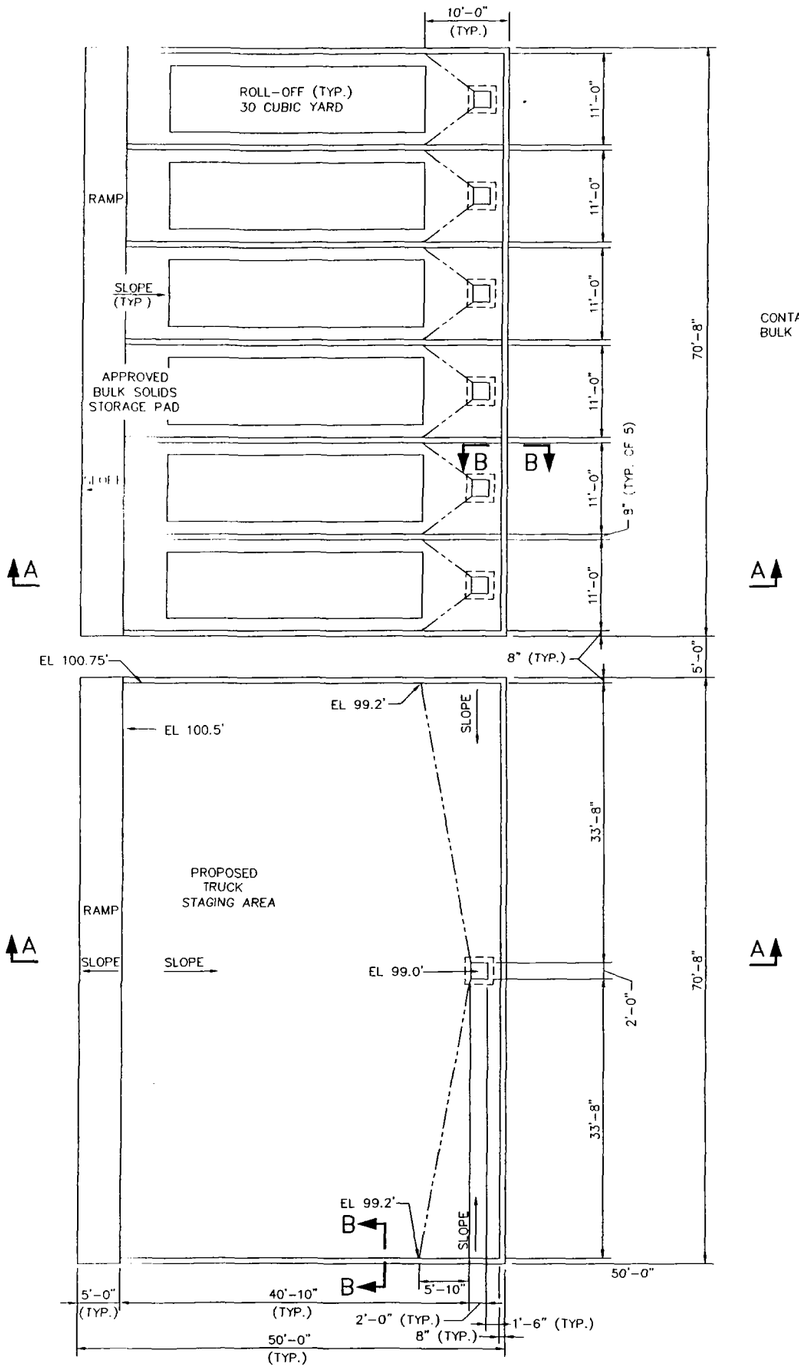
ISSUE	DESCRIPTION	DRWN	CHKD	APPR	DATE
B	RCRA PART B MODIFICATIONS	K.H.C.	[illegible]	[illegible]	9/1/92
A	RCRA PART B MODIFICATIONS	I.N.S.			7/2/92

CleanHarbors
ENVIRONMENTAL ENGINEERING, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

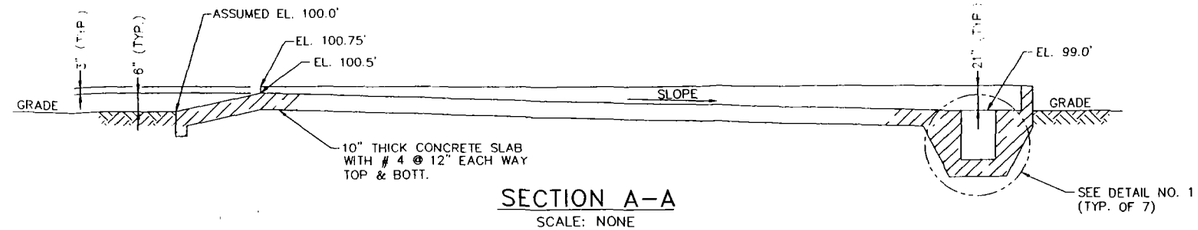
TITLE: CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617
MODIFIED FLAMMABLE STORAGE TANK FARM - DETAILS

PROJECT NO. GW-5404
DRAWING NO. 5404-S-04
SCALE: AS NOTED

HOYER-SCHLESINGER-TURNER, INC.
CONSULTING-ENGINEERS
300 WEST ADAMS STREET CHICAGO, ILLINOIS 60606
PROJECT NO. 17851

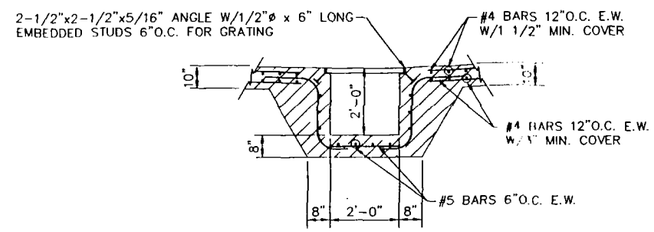


PLAN
SCALE: 1/8" = 1'-0"

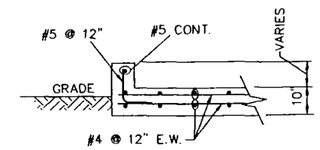


SECTION A-A
SCALE: NONE

CONTAINMENT CAPACITY FOR EACH BAY OF BULK SOLIDS STORAGE PAD IS 2,735 GALS.



DETAIL NO. 1
SCALE: 1/2" = 1'-0"



SECTION B-B
SCALE: 1/2" = 1'-0"

NOTES:

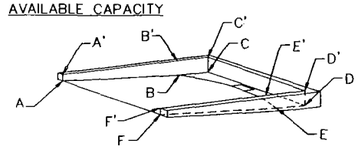
1. ALL CONCRETE AREAS TO BE COVERED WITH BURLAP AND KEPT *CONTINUOUSLY MOIST FOR A MINIMUM* PERIOD OF THREE DAYS IMMEDIATELY AFTER PLACEMENT AND FINISHING. CURING COMPOUNDS ARE NOT TO BE USED. CONCRETE TO BE FINISHED SUCH THAT EXCESS MORTAR IS NOT BROUGHT TO THE SURFACE. NO ADDED CEMENT, WATER IS TO BE USED DURING FINISHING.
2. TOP OF ALL EXPOSED CONCRETE WALL/CURB POURS TO BE FINISHED PERFECTLY LEVEL FOR PROPER ARCHITECTURAL APPEARANCE. CHAMFER ON ALL RE-ENTRANT CORNERS IS REQUIRED.
3. SUMPS TO BE TESTED BY CONTRACTOR WITH WATER AT FULL HEIGHT FOR A PERIOD OF 24 HOURS AND NO LEAKAGE ALLOWED.
4. ALL CONCRETE MIXING AND PLACING SHALL CONFORM TO *THE REQUIREMENT OF ACI 301-89 "SPECIFICATIONS FOR* STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318-89 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
5. ALL CONCRETE FOR CONTAINMENT AREAS INCLUDING CONCRETE FOR SLABS AND DIKES SHALL BE IMPERMEABLE CONCRETE WITH *ABSOLUTE MINIMUM CRACKING DUE TO SHINKAGE. THE MINIMUM* COMPRESSIVE STRENGTH AT 28 DAYS TO BE F'c=4000 psi.

CONTAINMENT CAPACITY CALCULATIONS FOR PROPOSED TRUCK STAGING AREA

REQUIRED CAPACITY

(A) VOLUME OF TANKER TRUCK= MAX OF= 6,000 GALS.
(B) PRECIPITATION ALLOWANCE FOR MAXIMUM RAIN FALL OF 4.7 INCHES
(4.7/12)'x45'x70.67'x7.481 = 9,318 GALS.
TOTAL REQUIRED CAPACITY = 15,318 GALS.

AVAILABLE CAPACITY



AA'= FF'=3", AF=BE=CD= 69.34"
BB'=CC'=DD'=EE'= 18.6', FE=AB=35', BC=ED= 9.33'
(A) VOLUME FOR SLOPED SECTION ABEF
=1/2x69.34'x35'x((18.6"-3")/12)'x7.481
=11,801 GALS.
(B) VOLUME FOR AREA BCDE. ASSUME UNIFORM DEPTH OF 15.6'
=69.34'x9.33'x(15.6/12)'x7.481
=6,291 GALS.
(C) VOLUME OF THE SUMP
=2'x2'x2'x7.48'
=59 GALS
TOTAL AVAILABLE CONTAIMENT CAPACITY = 18,151 GALS

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DO NOT SCALE PRINT

CHCI DWG. NO. 4218

ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
E	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	3/1/94
D	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	7/20/94
C	RCRA PART B SUBMITTAL UPDATE	K.M.C.	P.W.	P.W.	9/19/90
B	RCRA PART B SUBMITTAL UPDATE	ALS	INS	A.M.L.	2/1/91
A	RCRA PART B SUBMITTAL	K.M.C.	P.W.	P.W.	9/19/90

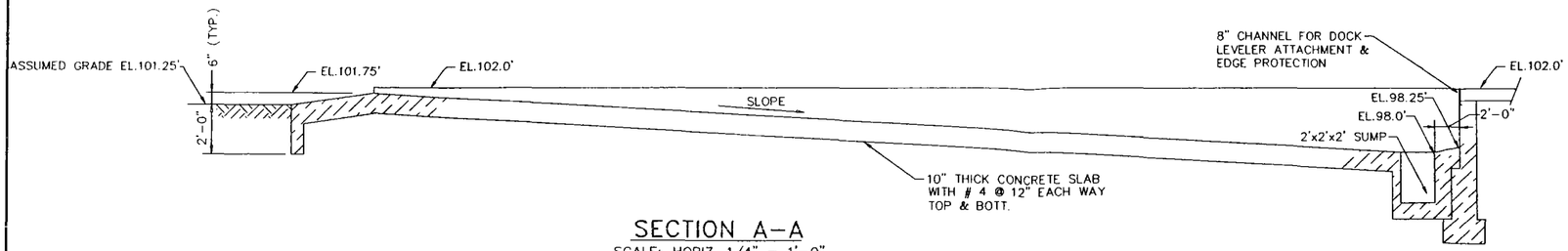
CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

TITLE
CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

APPROVED BULK SOLIDS STORAGE PAD & PROPOSED TRUCK STAGING AREA DETAILS

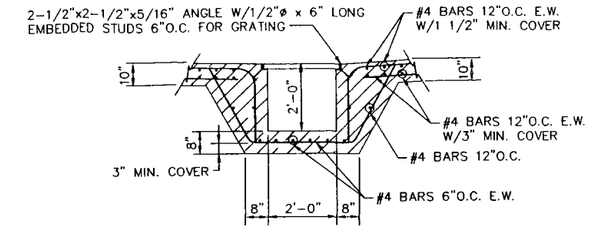
HOYER-SCHLESINGER-TURNER, INC.
CONSULTING-ENGINEERS
300 WEST ADAMS STREET CHICAGO, ILLINOIS 60606
PROJECT NO. 1785

PROJECT NO GW-5404
SCALE AS NOTED
DRAWING NO 2916-S-05



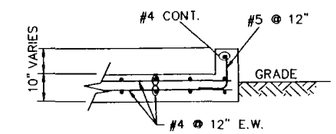
SECTION A–A

SCALE: HORIZ. 1/4" = 1'-0"
VERT. 3/8" = 1'-0"



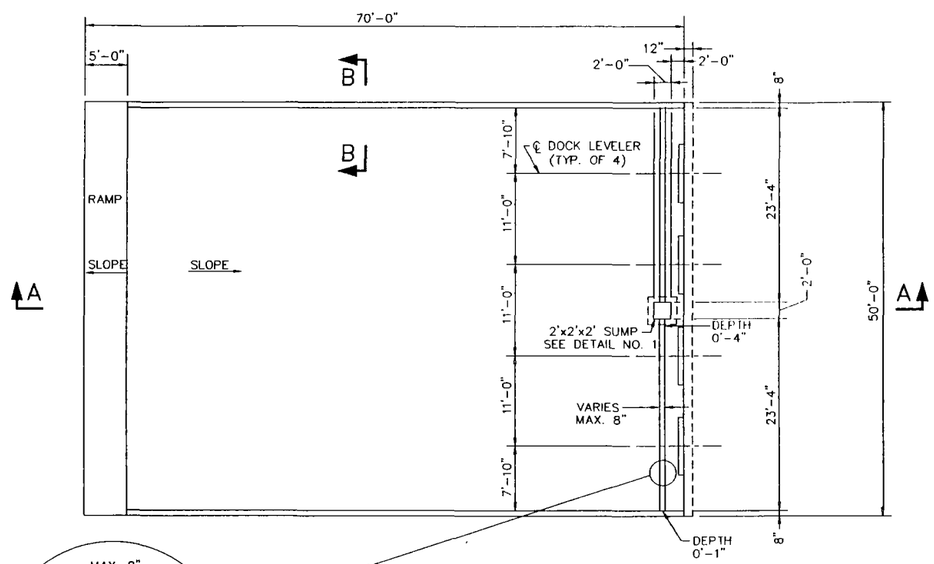
DETAIL NO. 1

SCALE: 1/2" = 1'-0"



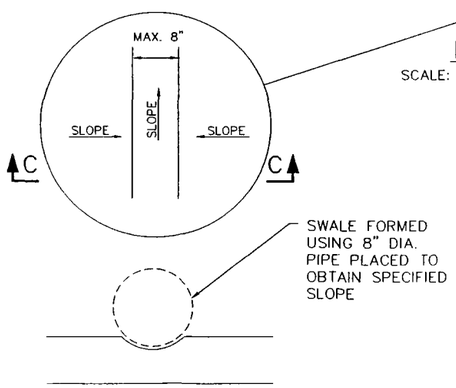
SECTION B–B

SCALE: 1/2" = 1'-0"



PLAN

SCALE: 1/8" = 1'-0"



SECTION C–C

SCALE: N.T.S.

CONTAINMENT CAPACITY CALCULATIONS

REQUIRED CAPACITY
(A) BOX TRUCK– MAX. VOLUME= 6,000 GALS.
(B) PRECIPITATION ALLOWANCE FOR MAX. RAIN FALL OF 4.7"
= 50'x65'x(4.7/12)'x7.481
= 9,523 GALS.
TOTAL REQUIRED CAPACITY= 15,523 GALS

AVAILABLE CAPACITY
(A) VOLUME OF PAD NORTH OF SUMP
= 1/2x63'x48.67'x3.75'x7.481
= 43,009 GALS
(B) VOLUME OF PAD SOUTH OF SUMP
= 2'x48.67'x1/2(3.75 +3.5)'x7.481
= 2,640 GALS
(C) SUMP VOLUME= 2'x2'x2'x7.481= 59 GALS.
TOTAL AVAILABLE CAPACITY= 45,708 GALS.

NOTES:

1. ALL CONCRETE AREAS TO BE COVERED WITH BURLAP AND KEPT CONTINUOUSLY MOIST FOR A MINIMUM PERIOD OF THREE DAYS IMMEDIATELY AFTER PLACEMENT AND FINISHING. CURING COMPOUNDS ARE NOT TO BE USED. CONCRETE TO BE FINISHED SUCH THAT EXCESS MORTAR IS NOT BROUGHT TO THE SURFACE. NO ADDED CEMENT, WATER IS TO BE USED DURING FINISHING.
2. TOP OF ALL EXPOSED CONCRETE WALL/CURB POURS TO BE FINISHED PERFECTLY LEVEL FOR PROPER ARCHITECTURAL APPEARANCE. CHAMFER ON ALL RE-ENTRANT CORNERS IS REQUIRED.
3. SUMPS TO BE TESTED BY CONTRACTOR WITH WATER AT FULL HEIGHT FOR A PERIOD OF 24 HOURS AND NO LEAKAGE ALLOWED.
4. ALL CONCRETE MIXING AND PLACING SHALL CONFORM TO THE REQUIREMENT OF ACI 301–89 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318–89 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
5. ALL CONCRETE FOR CONTAINMENT AREAS INCLUDING CONCRETE FOR SLABS AND DIKES SHALL BE IMPERMEABLE CONCRETE WITH ABSOLUTE MINIMUM CRACKING DUE TO SHINKAGE, THE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS TO BE F'c=4000 psi.

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CHCI DWG. NO. 4244

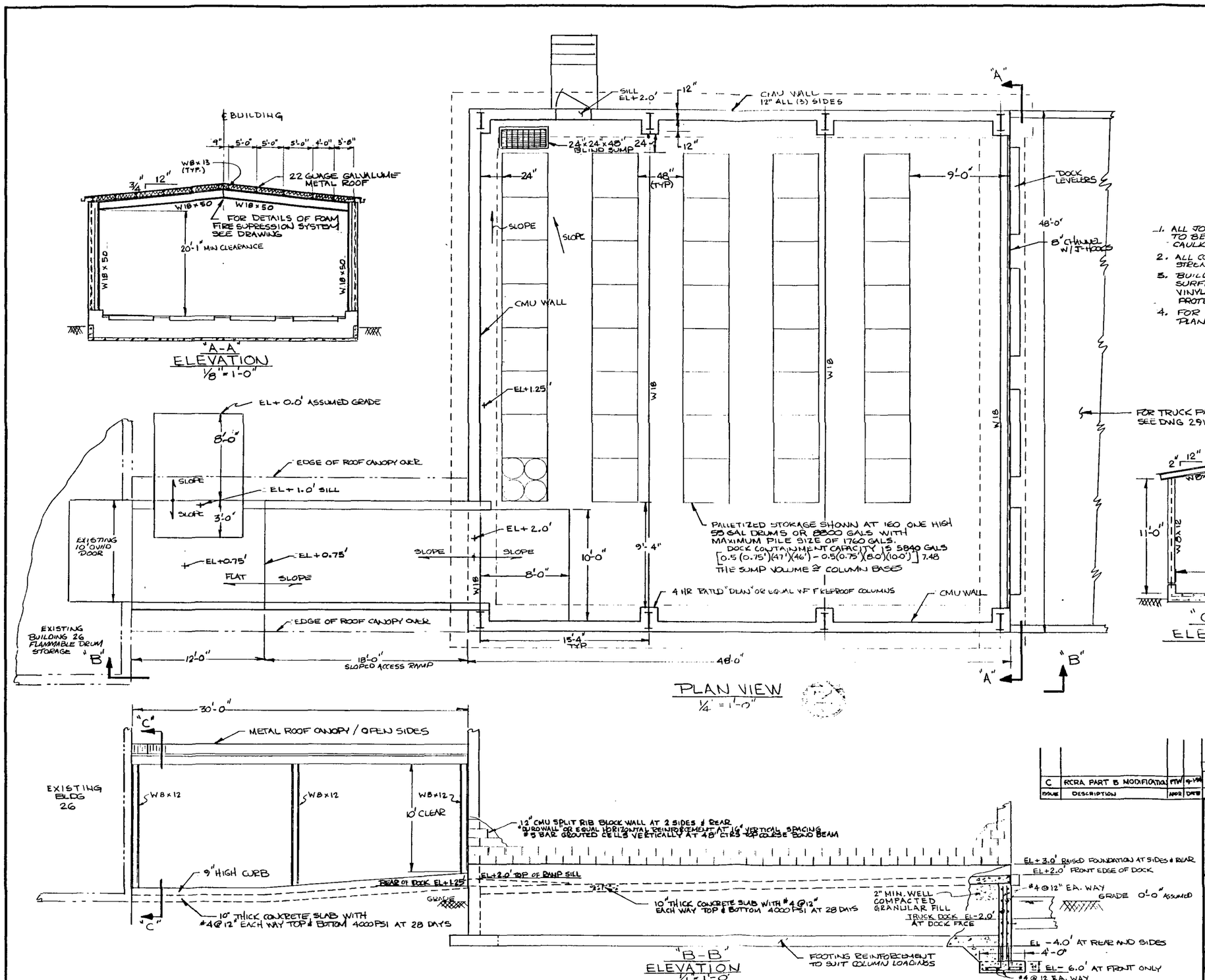
ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
B	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	7/20/94
A	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	7/20/94

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

TITLE
CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

PROPOSED
TRUCK TO TRUCK TRANSFER DOCK

PROJECT NO. GW-5404
SCALE AS NOTED
DRAWING NO 2916-S-11



NOTES:

1. ALL JOINTS BETWEEN FLOORS AND WALLS TO BE CONTINUOSLY WATER STOPPED AND CAULKED.
2. ALL CONCRETE TO HAVE 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
3. BUILDING FLOOR INCLUDING CONTAINMENT SURFACES TO BE COVERED WITH 1/4" THICK VINYL ESTER BASED FLOOR TOPPING SYSTEM PROTECTO-CRETE BY DUDICK INC. OR EQUAL
4. FOR CONTAINMENT CALCULATIONS SEE PLAN VIEW

REDUCED COPY
DO NOT SCALE PRINT

CHCI DWG. NO. 4245

ISSUE	DESCRIPTION	APPR	DATE
C	RCRA PART B MODIFICATION	FTW	9-19-94

ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
B	ISSUED FOR PERMIT	FTW	PB		8-23-94
A	RCRA PART B MODIFICATION	FTW	FTW	FTW	7/20/94

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
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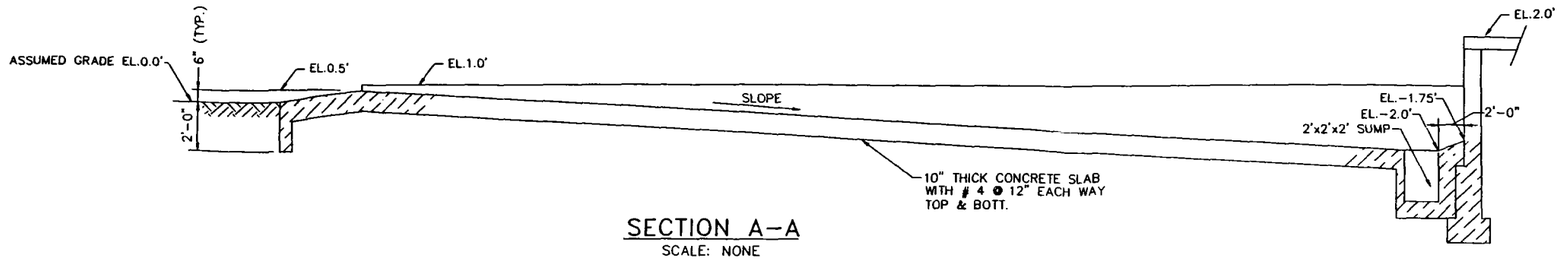
Telephone (617) 849-1200/1800

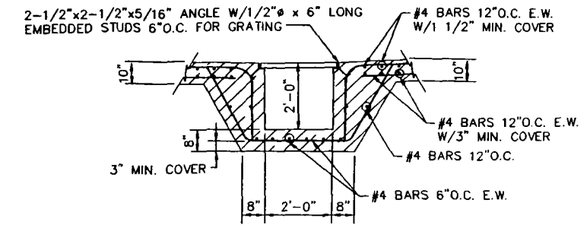
TITLE
CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

PROPOSED
CONTAINER HANDLING DOCK

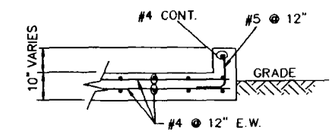
PROJECT NO. GW-5404
SCALE AS NOTED
DRAWING NO. 2916-S-12



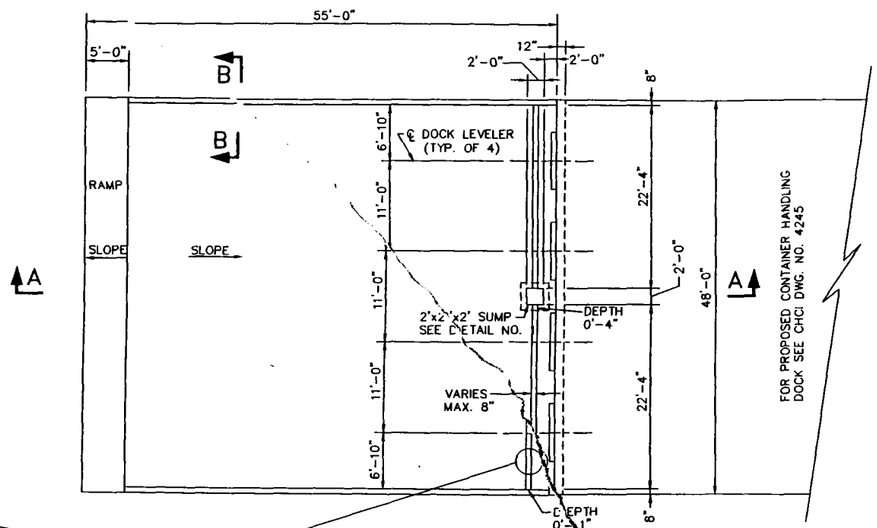
SECTION A–A
SCALE: NONE



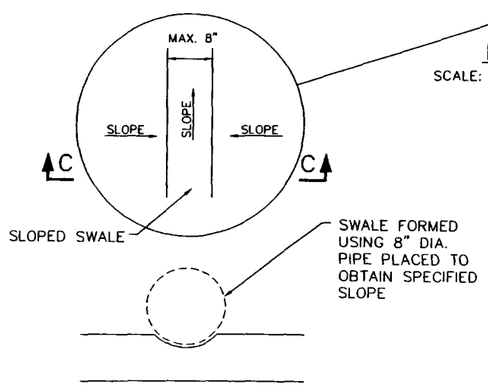
DETAIL NO. 1
SCALE: 1/2" = 1'-0"



SECTION B–B
SCALE: 1/2" = 1'-0"



PLAN
SCALE: 1/8" = 1'-0"



SECTION C–C
SCALE: N.T.S.

CONTAINMENT CAPACITY CALCULATIONS

REQUIRED CAPACITY

(A) BOX TRUCK– CONTAINING 80 DRUMS @ 55 GALS. EACH
= 4,400 GALS.
MAXIMUM CAPACITY OF 6,000 GALS.

(B) PRECIPITATION ALLOWANCE FOR MAX. RAIN FALL OF 4.7"
(REF. U.S. DEPT OF COMMERCE, TECHNICAL PAPER #40)
= 50'x48'x(4.7/12)'x7.481
= 7,032 GALS.

TOTAL REQUIRED CAPACITY= 13,032 GALS.

AVAILABLE CAPACITY

(A) VOLUME OF PAD NORTH OF SUMP
= 1/2x48'x46.67'x2.5'x7.481
= 40,948 GALS

(B) VOLUME OF PAD SOUTH OF SUMP
= 2'x46.67'x1/2(2.5 +2.25)'x7.481
= 1,658 GALS

(C) SUMP VOLUME= 2'x2'x2'x7.481= 59 GALS.

TOTAL AVAILABLE CAPACITY= 22,665 GALS.

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NOTES:

1. ALL CONCRETE AREAS TO BE COVERED WITH BURLAP AND KEPT CONTINUOUSLY MOIST FOR A MINIMUM PERIOD OF THREE DAYS IMMEDIATELY AFTER PLACEMENT AND FINISHING. CURING COMPOUNDS ARE NOT TO BE USED. CONCRETE TO BE FINISHED SUCH THAT EXCESS MORTAR IS NOT BROUGHT TO THE SURFACE. NO ADDED CEMENT, WATER IS TO BE USED DURING FINISHING.
2. TOP OF ALL EXPOSED CONCRETE WALL/CURB POURS TO BE FINISHED PERFECTLY LEVEL FOR PROPER ARCHITECTURAL APPEARANCE. CHAMFER ON ALL RE-ENTRANT CORNERS IS REQUIRED.
3. SUMPS TO BE TESTED BY CONTRACTOR WITH WATER AT FULL HEIGHT FOR A PERIOD OF 24 HOURS AND NO LEAKAGE ALLOWED.
4. ALL CONCRETE MIXING AND PLACING SHALL CONFORM TO THE REQUIREMENT OF ACI 301-89 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318-89 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
5. ALL CONCRETE FOR CONTAINMENT AREAS INCLUDING CONCRETE FOR SLABS AND DIKES SHALL BE IMPERMEABLE CONCRETE WITH ABSOLUTE MINIMUM CRACKING DUE TO SHINKAGE. THE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS TO BE F'c=4000 psi.

CHCI DWG. NO. 4246

ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
C	RCRA PART B MODIFICATION	K.M.C.	[illegible]	[illegible]	3/1/94
B	ISSUED FOR PERMIT		P.B.		8/23/94
A	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	7/20/94

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
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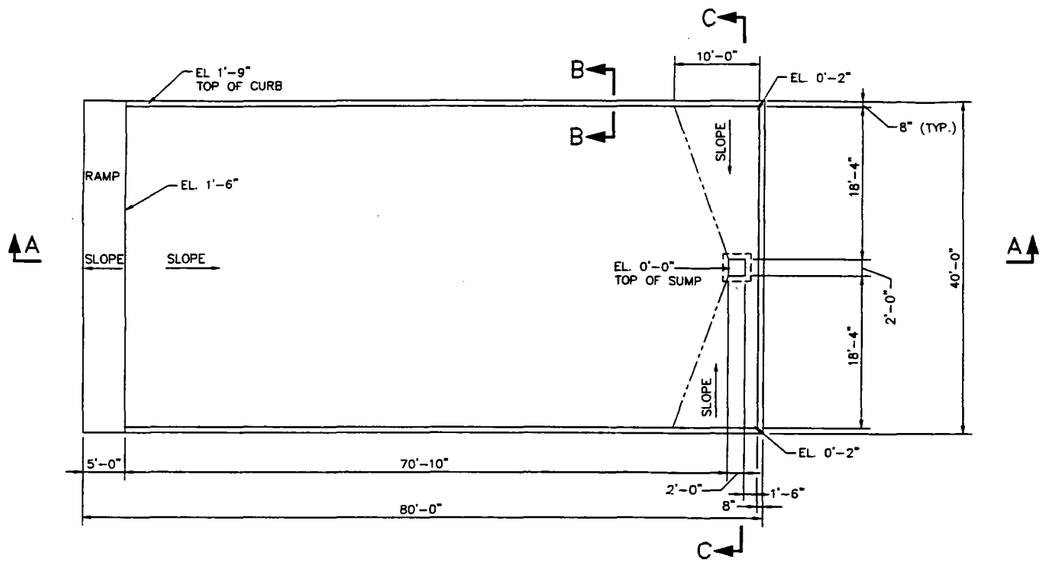
Telephone (617) 849-1200/1800

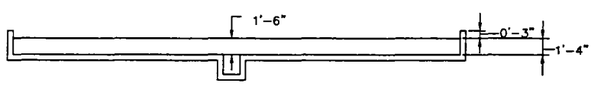
TITLE
CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

PROPOSED TRUCK PAD

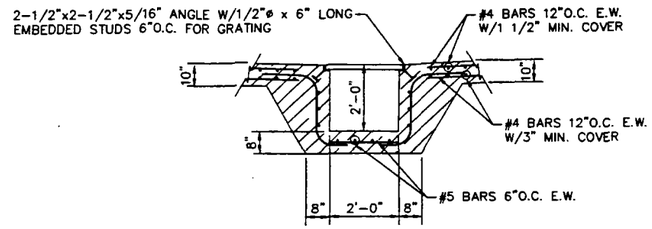
PROJECT NO. E,W-5404
SCALE AS NOTED
DRAWING NO. 2916-S-13



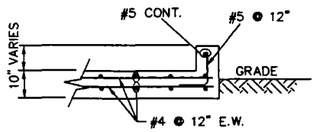
PLAN
SCALE: 1/8" = 1'-0"



SECTION C-C
SCALE: NONE



DETAIL NO. 1
SCALE: 1/2" = 1'-0"



SECTION B-B
SCALE: 1/2" = 1'-0"

CONTAINMENT CALCULATIONS

CONTAINMENT CAPACITY REQUIRED

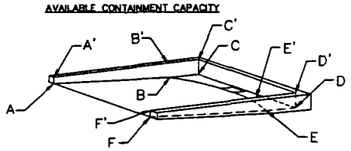
(A) MAXIMUM VOLUME OF TANKER TRUCK = 6,000 GALS.

(B) VOLUME REQUIRED TO CONTAIN MAXIMUM PRECIPITATION FROM 24HR, 25 YR. STORM EVENT (4.7")*
= 75'x40'x4.7/12x7.481
= 8,790 GALS.

TOTAL CAPACITY REQUIRED 14,790 GALS

* REF.: U.S. DEPARTMENT OF COMMERCE TECHNICAL PAPER #40 RAINFALL FREQUENCY ATLAS OF U.S.A.

AVAILABLE CONTAINMENT CAPACITY



(A) VOLUME FOR AREA ABEF WHERE
BB'=EE'= 1'-7" AND AA'=FF'= 0'-3"
= 40'-(1'-4")x(80'-(10'-8"))x1/2x(1'-4")x7.481
= 38.67'x69.33'x0.665x7.481
= 13,337.5 GALS.

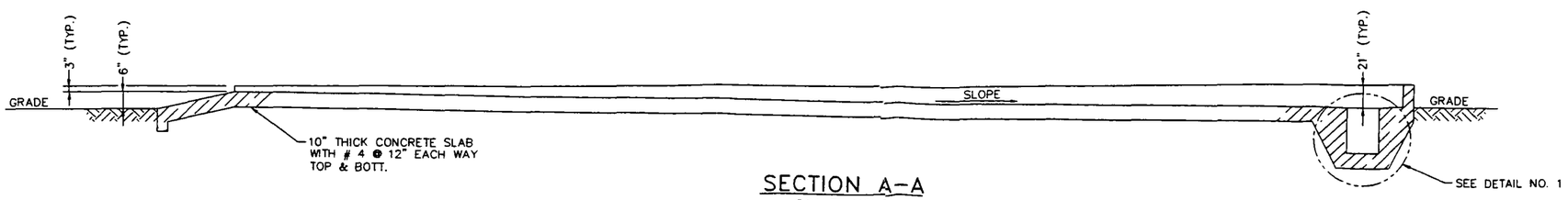
(B) VOLUME OF AREA BCDE-B'C'D'E'
ASSUME AREA BCDE WITH A UNIFORM DEPTH OF 1'-4"
(MINIMUM DEPTH, DEPTH VARIES FROM 1'-4" TO 1'-6")
= 38.67'x10'x1.33'x7.481
= 3,847.5 GALS.

TOTAL AVAILABLE CONTAINMENT CAPACITY= 17,185 GALS.

NOTES:

1. ALL CONCRETE AREAS TO BE COVERED WITH BURLAP AND KEPT CONTINUOUSLY MOIST FOR A MINIMUM PERIOD OF THREE DAYS IMMEDIATELY AFTER PLACEMENT AND FINISHING. CURING COMPOUNDS ARE NOT TO BE USED. CONCRETE TO BE FINISHED SUCH THAT EXCESS MORTAR IS NOT BROUGHT TO THE SURFACE. NO ADDED CEMENT, WATER IS TO BE USED DURING FINISHING.
2. TOP OF ALL EXPOSED CONCRETE WALL/CURB POURS TO BE FINISHED PERFECTLY LEVEL FOR PROPER ARCHITECTURAL APPEARANCE. CHAMFER ON ALL RE-ENTRANT CORNERS IS REQUIRED.
3. SUMPS TO BE TESTED BY CONTRACTOR WITH WATER AT FULL HEIGHT FOR A PERIOD OF 24 HOURS AND NO LEAKAGE ALLOWED.
4. ALL CONCRETE MIXING AND PLACING SHALL CONFORM TO THE REQUIREMENT OF ACI 301-89 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318-89 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
5. ALL CONCRETE FOR CONTAINMENT AREAS INCLUDING CONCRETE FOR SLABS AND DIKES SHALL BE IMPERMEABLE CONCRETE WITH ABSOLUTE MINIMUM CRACKING DUE TO SHINKAGE. THE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS TO BE F'c=4000 psi.

CHCI DWG. NO. 4247



SECTION A-A
SCALE: NONE

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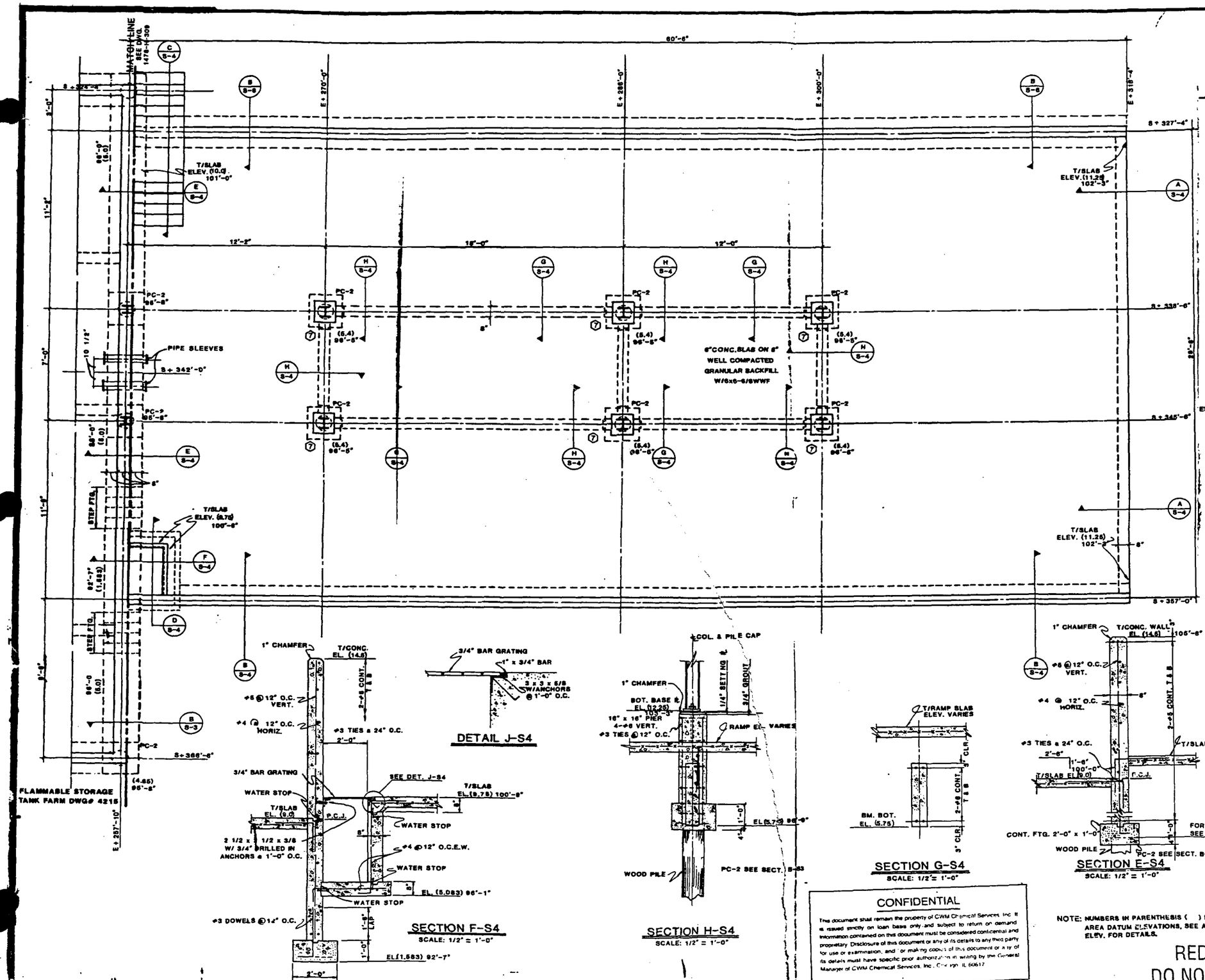
ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
B	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	7/20/94
A	RCRA PART B MODIFICATION	K.M.C.	B.H.P.	B.H.P.	7/20/94

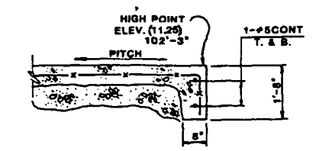
CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

TITLE
CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

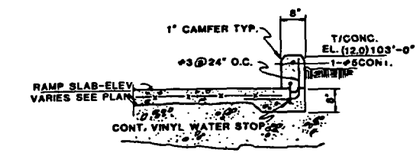
PROPOSED
TRUCK STAGING AREA DETAILS

PROJECT NO. GW-5404
SCALE AS NOTED
DRAWING NO. 2916-S-14

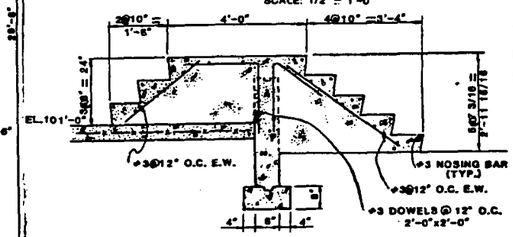




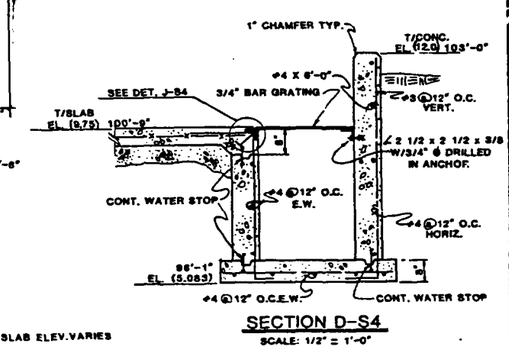
SECTION A-S4
SCALE: 1/2" = 1'-0"



SECTION B-S4
SCALE: 1/2" = 1'-0"



SECTION C-S4
SCALE: 1/2" = 1'-0"



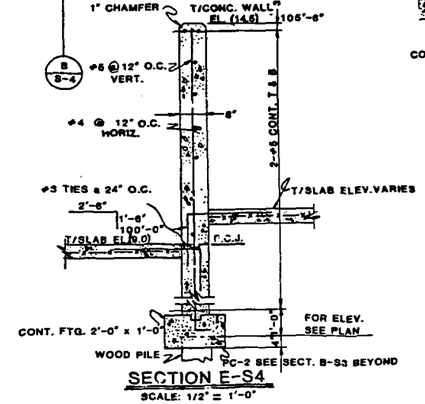
SECTION D-S4
SCALE: 1/2" = 1'-0"

DETAIL J-S4

SECTION F-S4
SCALE: 1/2" = 1'-0"

SECTION H-S4
SCALE: 1/2" = 1'-0"

SECTION G-S4
SCALE: 1/2" = 1'-0"



SECTION E-S4
SCALE: 1/2" = 1'-0"

NOTE:
ELEV. 100'-0" IS EQUIVALENT TO 9.0 CHICAGO AREA DATUM LINE

NOTE: NUMBERS IN PARENTHESIS ( ) INDICATES BOT. OF FOOTING AT CHICAGO AREA DATUM ELEVATIONS, SEE APPROPRIATE SECTION OR ELEV. FOR DETAILS.

CONFIDENTIAL

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CERTIFIED FOR ASSEMBLY

CHCI DWG. NO. 4248

WAS 5 SHT. DWG. # 1478-H-310

REV	DATE	DESCRIPTION
2	6/13/95	ADDED DIMENSION
1	8/11/93	GAI Rev. 5-0115

DRAWN BY: DATE 12/12/92
DESIGNED BY: DATE 12/12/92

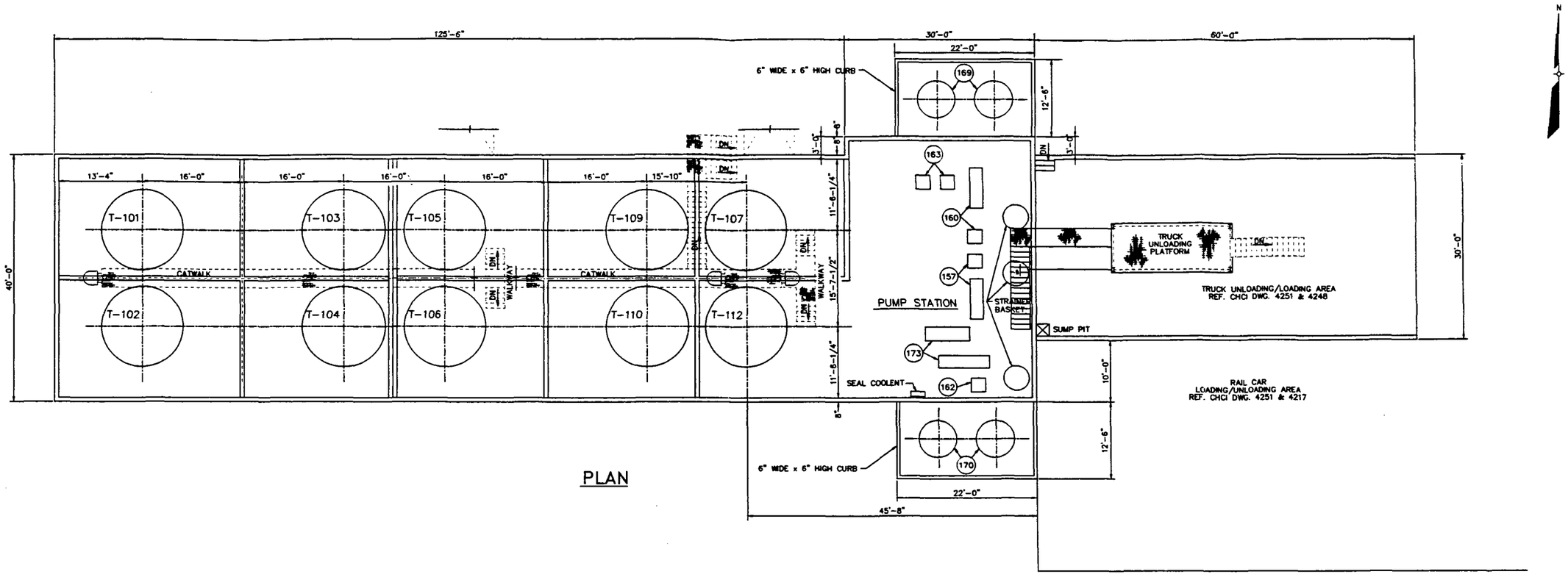
CWM CHEMICAL SERVICES CO.
11700 SO. STONY ISLAND AVE.
CHICAGO ILLINOIS

STRAUBING, RUBIN & KENES, INC.
CONSULTING ENGINEERS
ORLAND PARK ILLINOIS

PROJECT: BUILDING "C"
CHICAGO INCINERATOR
TRUCK UNLOADING PLATFORM

DRAWING NO. 1-F-0C2

SCALE: 3/8" = 1'-0"



PLAN

NOTES:

1. ALL PIPING SHALL BE DESIGNED AND INSTALLED PER ASME/ANSI B.31.3
2. ALL PIPING SYSTEM SHALL MEET SECONDARY CONTAINMENT REQUIREMENTS PER 40 CFR 264.193(f)
3. ALL PIPING SHALL BE WITHIN THE SECONDARY CONTAINMENT AREAS OF TANKFARM, TRUCK UNLOADING PAD, & RAIL CONTAINMENT WITH THE EXCEPTION OF PIPING TO AND FROM BLDG. 43 AND 26 AND TO THE VAPOR PHASE CARBON

REDUCED COPY
DO NOT SCALE PRINT

CHCI DWG. NO. 4250

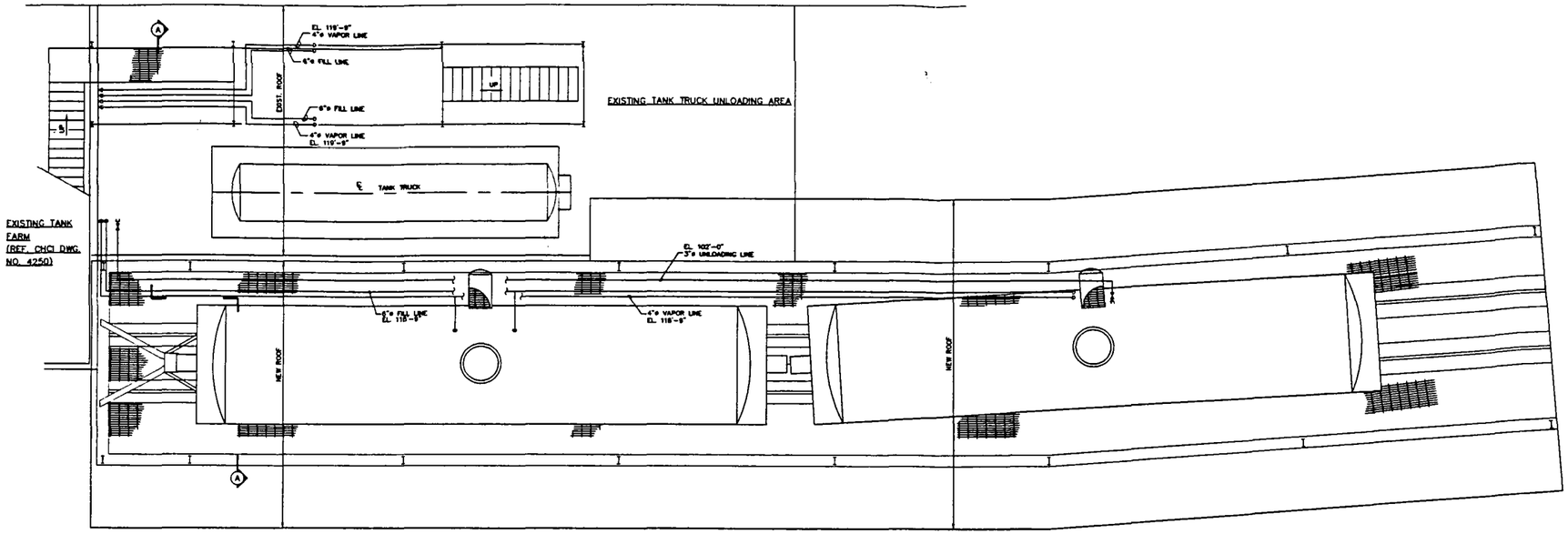
ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
A	RCRA PART B MODIFICATION				9/1/94

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

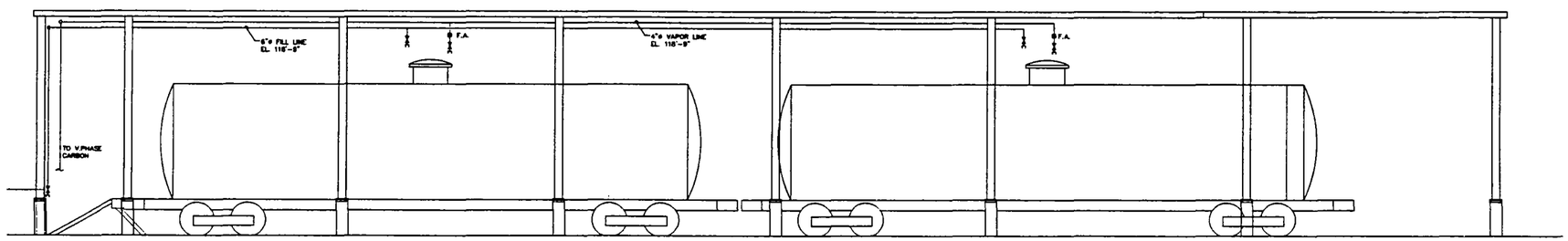
TITLE
CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617

TANK FARM/EQUIPMENT LAYOUT

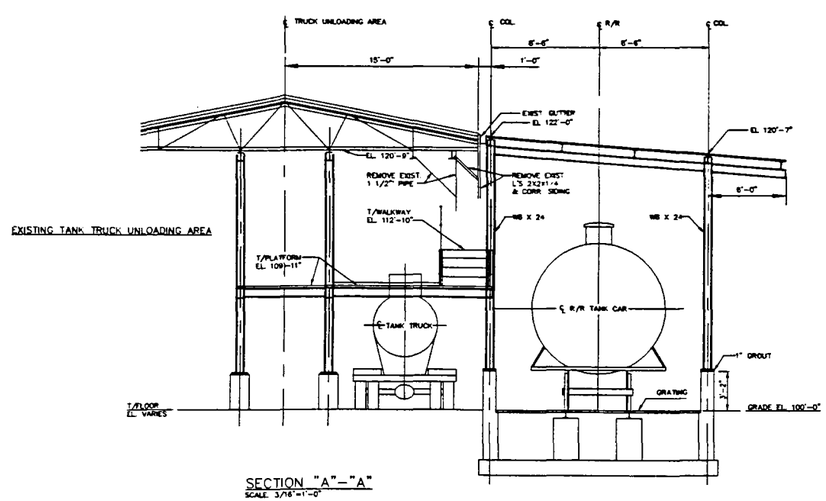
PROJECT NO. GW-5404
SCALE 1/8"=1'-0"
DRAWING NO. 2916-M-20



PLAN
SCALE: 3/16" = 1'-0"



ELEVATION "B"
SCALE: 3/16" = 1'-0"



SECTION "A"–"A"
SCALE: 3/16" = 1'-0"

NOTES:
1. PIPING SHOWN IS SCHEMATIC
2. PIPING SHALL BE DESIGNED AND INSTALLED PER ASME/ANSI B31.3
3. PIPING SYSTEM SHALL MEET SECONDARY CONTAINMENT REQUIREMENTS PER 40 CFR 264.193(f)

REDUCED COPY
DO NOT SCALE PRINT

CHCI DWG. NO. 4251

ISSUE	DESCRIPTION	DRWN.	CHKD	APPR.	DATE
A	RCRA PART B MODIFICATIONS	[illegible]	[illegible]	[illegible]	9/1/94

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 Wood Road
Braintree, Massachusetts 02184
Telephone (617) 849-1200/1800

TITLE
CLEAN HARBORS OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, ILLINOIS 60617
PROPOSED
RAIL CAR UNLOADING AREA DETAILS

PROJECT NO. GW-5404
SCALE 3/16" = 1'-0"
DRAWING NO. 2916-M-21

State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

USEPA

April 26, 1995

Mr. Paul A. Ahearn
Manager, Regulatory Compliance
Clean Harbors Environmental Services, Inc.
1200 Crown Colony Drive
P.O. Box 9137
Quincy, MA 02269-9137

0316000051 -- Cook County
Clean Harbors, Inc.
Log No. B-16-M-2
RCRA Permit File

Dear Mr. Ahearn:

During the April 21, 1995 visit of the Clean Harbors facility, you expressed concern about the time required by our consultant, C. March & Associates, to review the Fire Suppression System. To address this concern, the Agency spoke with Chuck March regarding his review.

If Gage-Babcock & Associates submits a response to his comments by April 28, 1995, he will complete his review by May 5, 1995. However, if the response to comments is submitted after April 28, 1995, the completion date for this review may change. The Agency will fax the comments to CHCI once we receive them.

If you have any questions regarding this letter, please feel free to call Rob Watson, P.E. at 217-524-3265.

Sincerely,

Harry A. Chappel, P.E.
Hazardous Waste Branch Manager
Permit Section, Bureau of Land

HAC:WRW

cc: Matt Dunn, IAG
George Hamper, USEPA, Region V
Tony Martig, USEPA, Region V (SP-14J)
Chuck March

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USEPA

State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director
2200 Churchill Road, Springfield, IL 62794-9276
217-524-3300

April 28, 1995

Mr. Brian Kaplan
RCRA Permitting
USEPA, Region IV
345 Courtland Street
Atlanta, GA 30365

RE: 0316000051 -- Cook County
Clean Harbors of Chicago, Inc.
Log No. B-16-M-2
RCRA Permit File

Dear Mr. Kaplan:

This letter is a follow up to a telephone call Rob Watson had with you on April 25, 1995 regarding the various studies which were conducted at the CWM Chicago Incinerator. Specifically, the Hazard and Operability Study [HAZOP] which was conducted at the CWM Chicago Incinerator.

The purpose of the HAZOP was to improve the design and operation of the CWM Chicago Incinerator facility. Part of the HAZOP Report is a table of recommendations for modifying the existing facility design, construction, maintenance, and/or operating procedures. I have enclosed a copy of the cover letter, table of contents, and the recommendations from the Final HAZOP Report dated November 23, 1993.

A draft RCRA permit for the Clean Harbors of Chicago, Inc. (CHCI) facility to incorporate the CWM facility was issued on March 17, 1995. A condition of the RCRA permit requires CHCI to submit a closure plan for the incinerator following issuance of the final permit.

If you have any questions regarding this letter, please feel free to call Rob Watson, P.E. at 217-524-3265.

Sincerely,

Harry A. Chappel, P.E.
Hazardous Waste Branch Manager
Permit Section, Bureau of Land

HAC:WRW TID

ENCLOSURE

cc: Matt Dunn, IAG
George Hamper, USEPA, Region V
Tony Martig, USEPA, Region V (SP-14J)

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CleanHarbors®
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail #Z781273978

February 24, 1995

RECEIVED
MAR - 1 1995
IEPA - BOL
PERMIT SECTION

Mr. Mark Schollenberger, P.E.
Environmental Protection Engineer
Illinois Environmental Protection Agency
Division of Land Pollution Control
2200 Churchill Road
P.O. Box 19276
Springfield, IL 62794-9276

Dear Mr. Schollenberger:

Clean Harbors of Chicago, Inc. (Clean Harbors) is commenting on the draft permit modifications faxed on February 16, 1995 and phone discussions concerning waste acceptance and analysis requirements. These changes are included in the Operating Permit and Part B Permit.

The cover letter indicates no multi-stop permits were authorized in the permit. The operating permit authorizes one multi-stop permit.

For the Operating Permit 1980-36-OP:

Page 1, paragraph 1

for the storage (transfer station) and treatment (pretreatment) of **hazardous and** non-hazardous wastes

For Condition 1.a.:

Wastewaters to be treated are limited in constituent concentration for TCLP organic wastes by treatability study only. The Part B waste analysis plan boundary conditions for pretreatment of TCLP organic wastes using chemical oxidation (Table C-3) and pretreatment by other methods (Table C-5) do not apply to RCRA exempt units. These wastestreams must meet the Discharge Authorization approved by the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC). Clean Harbors is submitting a new Waste Analysis Plan for RCRA exempt units as requested by the Agency.

Clean Harbors

For Condition 7:

A fourth 500,000 gallon storage tank for stormwater is is located in the tankfarm. This tank is listed in the permit modification dated December 2, 1994 and needs to be added to this condition.

For Condition 10:

The statement "(including wastes received under generic wastestream Permit #000053)" should be deleted.

For Condition 12:

The statement "to the Agency in the form of an attachment to the special waste stream permit application(s) submitted to the Agency for review and approval" should be deleted. Clean Harbors also wishes to clarify that wastes containing solvents of a quantity sufficient to render the waste ignitable could use phase separation to remove the aqueous layer. The aqueous layer could be treated at the facility as long as this layer was not ignitable.

For Condition 13 and 14:

The statement "supplemental waste stream permit and" should be deleted from each.

For Condition 32.h.(iv):

The sentence should be deleted.

For Condition 37.a.:

The statement "using Waste Stream Permit 000285 for authorization" should be deleted.

For Condition 41:

The first sentence requires compliance with procedures described in Condition #39. This should be Condition 40.

For Condition 42:

The sentence "A copy of the rebuttals shall be submitted with the renewal application for generic permits" should be deleted.

Attachment A (Multi-Stop Generator Certification)

For 3.b.:

The statement "and authorization numbers for those wastes are listed below, (small quantity generators without such authorization numbers must identify themselves as such)" and the Special Waste Stream Authorization Number column should be deleted.

General:

Clean Harbors has applied for a special waste stream authorization for treated effluent from the CES System at the Clean Harbors of Baltimore, Inc. facility. This effluent is generated from organic contaminated wastewaters extracted at critical pressure by carbon dioxide. The treated effluent can carry any of the hazardous waste codes (more than 150) from the original wastestreams. Clean Harbors requests an additional condition be added to allow acceptance of this wastestream without being limited to the specific waste codes identified in the Part B for treatment.

For the Part B (RCRA Log No. 16):

For Page D-3, 6.

This condition requires a Special Waste Preacceptance Form and annual generator certification. For new wastestreams, the Special Waste Preacceptance Form must completed for approval (with analysis performed within the last 12 month time period) and the generator certification completed annually thereafter. The wastestream must be reanalyzed at least every five years.

For existing wastestreams the generator certification must be completed annually from the date of approval. The wastestream must be reanalyzed at least every five years from the date of approval.

If a generator does not complete the annual certification by the anniversary date of approval, the waste can not be accepted at the facility. If at some later date within the five year period from approval, the generator completes the certification, the waste can be accepted at the facility without completing a new preacceptance analysis.

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In the seventh sentence, the generator's certification is listed as attachment #3. It is attachment #2.

For Page D-5, 6.e.:

Clean Harbors requests the additional exception be added from the Special Waste Stream Application "Used oil which is destined for recycling need only provide analyses for flashpoint, total organic halogen or total chloride, bottom sediment and water, and totals for arsenic, cadmium, chromium, lead and reactive sulfide.

Lab packs are considered to be unused or discarded commercial chemical products which would not require analyses.

For Page D-5, 7.:

For noncommingled hazardous wastes from manufacturing processes (where the generator has sufficient knowledge), Clean Harbors should be able to accept the certification identified in Attachment #3 for wastes accepted for treatment **and storage**. Clean Harbors will be requesting to allow certification of TCLP organic parameters for wastes received for fuel blending or storage destined for incineration or the Clean Extraction System in Baltimore.

For Page D-16, K.2.:

The word treatment includes wastewater treatment, stabilization, and fuel blending as approved in the Part B permit.

For Attachment 1, Special Waste Preacceptance Form

Not all constituents need analysis or certification depending on the wastestream (e.g. penetrometer test, PCBs, EOX/TOX (nonhazardous)).

For Attachment 2, Annual Generator Certification

Below the signature the words "Facility Operator" should be replaced with "Generator's Signature"

General

The Waste Analysis Plan indicates a Generator Waste Material Profile Sheet (Figure C-1) will be completed. Variations of this form with the same information are acceptable.

CleanHarbors®

If you have any questions concerning Clean Harbors comments, please contact me at (312)646-6202.

Sincerely,

James R. Laubsted
Facility Compliance Manager

B-16

USEPA

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
1200 CROWN COLONY DRIVE, P.O. BOX 9137 • QUINCY, MA 02269-9137
(617) 849-1800

WRITER'S DIRECT NUMBER
Extension 4182

LAW DEPARTMENT
(617) 849-1800
FAX (617) 786-9716

August 25, 1994

Illinois Environmental Protection Agency
Attn: Douglas Clay, Hazardous Waste Branch Manager
Permit Section
Division of Land Pollution Control -- #24
Bureau of Land
2200 Churchill Road
Springfield, Illinois 62794

Re: 0316000051 - Cook County
Clean Harbors of Chicago, Inc.
ILD000608471
Log No. B-16
RCRA Permit

RECEIVED
AUG 28 1995
IEPA - BOL
PERMIT SECTION

Dear Mr. Clay:

This correspondence documents certain August 24, 1994 telephone conversations by myself and David Trainor of Dames & Moore with Eric Minder of your staff. The subject of the conversations was Clean Harbors' Pre-Construction Soil Boring Program which was proposed in Clean Harbors' letter dated August 12, 1994 and conditionally approved by IEPA's letter dated August 16, 1994.

The issues discussed with, and the agreements made by Mr. Minder are as follows:

- Upon being advised that the new location of the truck scale (Area 14) is on Clean Harbors' existing property and not on the Chemical Waste Management site, that the scale is not a RCRA regulated unit, and that the structure is portable, Mr. Minder agreed that Area 14 could be deleted from the Pre-Construction Soil Boring Program.

- For RFI purposes, the Agency has required that Clean Harbors analyze the soil samples for the full suite of parameters contained in 35 IAC 724, Appendix I. However, Paragraph 3 of the Agency's August 16th letter makes reference to TCLP analyses. Mr. Minder confirmed that such reference is erroneous with respect to analyses for RFI purposes and can be ignored.

- Subsequent to the proposal and approval of the Pre-Construction Soil Boring Program, the Agency, in a conversation with Clean Harbors, directed that four (4) additional samples be taken from each area within the depth of excavated soil. Such samples are to be analyzed for purposes of waste characterization in connection with disposal of the soil. Mr. Minder agreed that where the location of a soil sample taken for analyses for RFI purposes coincides with the location of a soil sample required to be taken and analyzed for waste characterization/disposal purposes, a single sample could be taken and analyzed for both purposes.

If you have any questions, please do not hesitate to contact either Paul Ahearn or myself at (617) 849-1800, extensions 4473 or 4182, respectively.

Very truly yours,

Jules B. Selden
Attorney

cc: Paul Whiting
Stephen Pozner
Jonathan Black
Paul Ahearn
David Trainor - Dames & Moore

M. McGinnis

INTER OFFICE MEMORANDUM

Metropolitan Water Reclamation District of Greater Chicago

DEPARTMENT: RESEARCH AND DEVELOPMENT DATE: November 5, 1993

TO: Cecil Lue-Hing, Director
Research and Development

FROM: Louis Kollias

RECEIVED JAN 06 1994
WMD RCRA
RECORD CENTER

ILD 000 608471

SUBJECT: Illinois Environmental Protection Agency (IEPA) Final Decision Notice--Issuance of Joint Resource Conservation and Recovery Act (RCRA) and Hazardous and Solid Waste Amendments (HSWA) Permit to Clean Harbors of Chicago, Inc.

Reference is made to your assignment of November 2, 1993 regarding the above subject.

On September 30, 1993, pursuant to 35 Ill. Adm. Code 725.201(c), the subject permit was issued to Clean Harbors of Chicago, Inc., a hazardous waste treatment facility located at 11800 South Stony Island Avenue, Chicago. New operations and equipment are proposed by the facility and regulated by the subject permit. They include:

1. A new bulk tank storage system and treatment operation for "listed" hazardous waste liquids and solids;

2. A new bulk tank storage system and fuel blending operation to produce and store organic-based hazardous waste fuels which will be shipped off-site for energy recovery as a supplemental fuel;

3. An expanded container storage area;

4. An expanded lab pack storage, repack, and consolidation operation;

5. A new storage area for bulk storage of hazardous and non-hazardous wastes in roll-off containers;

6. A new storage area for temporary storage of medical waste;

7. A new drum crushing and compacting system; and

8. A new rail car transfer operation.

NOV 10 1993
PERMIT SECTION

cc: Maywood USEPA

Lets Discuss

CleanHarbors
OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, IL 60617
(312) 646-6202

Juana,
Here is the set of comments which you had mentioned (regarding the filterpress on the mezzanine). I've attached the page 6ZZ. That is the pt. A page which lists the additional waste codes.

Certified Mail - Return Receipt Requested #P082654539

August 12, 1993

Mr. Mark Schollenberger, P.E.
Environmental Protection Engineer
Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
2200 Churchill Road
P.O. Box 19276
Springfield, IL 62794-9276

RECEIVED
AUG 16 1993
EPA - BOL
PERMIT SECTION

Dear Mr. Schollenberger:

Clean Harbors of Chicago, Inc. ("CHCI") is submitting additional comments to the RCRA Part B Draft Permit issued by the Agency on May 24, 1993.

CHCI intends to permanently mount the mobile plate and frame filter press on a mezzanine. The filter press will then function similar to the permanently mounted filter press in present operation. The facility has already received approval for this change from the Agency's Air Division.

CHCI also intends to add a lamella clarifier in parallel to the secondary clarifier of the Centralized Wastewater Treatment System. Permit Modifications have been submitted to the Agency's Water and Air Divisions.

I commented at the Part B Public Hearing that CHCI would submit the amount paid to lease the site from the Illinois Port Authority. The amount for 1993 is $169,000.

During our telephone conversation of August 9th I confirmed several points. It was decided that a comment about using the TCLP Certification Form when applicable in place of TCLP analysis to the Waste Analysis Plan was unnecessary. It was also determined that trailers of non-hazardous treatment residue from the Centralized Wastewater Treatment system awaiting completion of TCLP analysis would be governed as generator waste under 90 days.

PART III - U.S. ENVIRONMENTAL PROTECTION AGENCY PERMIT

Condition III.A [Page 9 of 10]

Please make the following changes for consistency with 40 CFR 261.24.

a. Change "Acids and Alkalies" to "Toxicity Characteristic Metals".

b. Change "D0011" to "D011".

c. Change "Organic wastes, halogenated and non-halogenated solvents" to "Toxicity Characteristic Organics".

d. Change "D012 through D043" to "D018 through D043".

e. Change "Waste poisons, pesticides" to "Toxicity Characteristic Pesticides".

Hazardous Waste Codes Acceptable for Storage and Transfer

Attachment A, Section B. Hazardous Wastes From Non-Specific Sources [Page 88]

The Agency has included hazardous wastes codes F037 and F038 to the list of hazardous wastes authorized for storage and transfer. CHCI notes that these codes were inadvertently omitted from the most-recent RCRA Part A form. A new Part A form is included with this submittal

Attachment A, Section C. Hazardous Wastes From Specific Sources [Page 95]

CHCI has identified ten (10) hazardous waste codes which were inadvertently omitted from previous submittals. CHCI requests that the following waste codes be added the list of codes which are approved for storage and transfer: K141, K142, K143, K144, K145, K147, K148, K149, K150, K151.

Attachment A, Section D. Discarded Commercial Chemicals, Off-Specification Species, Container Residues, and Spill Residues Thereof

a. Page 95 - For the sake of consistency with other lists of codes, please add the section letter "D" prior to the title.

b. Page 96 - Please add waste codes number "P041" [diethyl-p-nitrophenyl phosphate] to the appropriate position in the column of hazardous waste code numbers.

c. Page 97 - Delete hazardous waste code P107. This code no longer appears in 40 CFR Part 261 or 35 IAC Part 721.

Attachment A, Section E. Commercial Chemical Products, Manufacturing Chemical Intermediates, or Off-Specification Commercial Chemical Products

a. Page 98 - For the sake of consistency with other lists of codes, please add the section letter "E" prior to the title.

cc: Maywood
USEPA

DMC
MAS

B-16

HOYER-SCHLESINGER-TURNER inc.
ENGINEERS - CONSTRUCTORS
300 west adams street chicago illinois 60606 telephone 263-0556 area code 312

May 14, 1993

Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
PO Box 19276
Springfield, Illinois 62794-9276

RECEIVED
MAY 17 1993
IEPA - BOL
PERMIT SECTION

Re: Clean Harbors of Chicago, Inc.
Response to Deficiencies - RCRA Part B License Application

Gentlemen:

This letter shall serve as a clarification to certification submitted on March 15, 1993 as Response to Deficiencies - RCRA Part B License Application.

The Certification by Professional Engineer (see Appendix K-2) does include certificate of existing Inorganic Lab-Pack Pouring Station - Item No. 30.

Inorganic Lab-Pack Pouring Station is positioned over 3 compartments Reactor vessel - Item No. 3. The station consists of Work Bench, Emptying Station, Rinsing Station and Empty Bottle chute. Installation is L-shaped and exhaust hood is arranged above. All chutes are constructed from 3/16" stainless steel. Neoprene flexible duct connects Empty Bottle chute with collecting drum.

Vapors are exhausted through exhaust hood. Total exhaust is 3000 CFM. Average slot velocity is 630 fpm if balancing damper is fully open. Duct velocity is in the range of 1400 fpm to 1650 fpm, satisfactory to carry vapors away. See attached calculations Sheet 1 of 2.

The floor of Process Building No. 1 is the containment for spills in Inorganic Lab-Pack Pouring Station. Containment volume is approximately 10,000 gallons. Maximum volume of stored liquids for this operation is 400 gallons. That is much less than containment volume available. See attached calculations Sheet 2 of 2.

Please feel free to contact me at 312/263-0556 if you have any questions.

Sincerely,

HOYER-SCHLESINGER-TURNER, INC.

Marie Vanagas

Marie Vanagas, PE

MARIE VANAGAS
62-40801
REGISTERED
PROFESSIONAL
ENGINEER
OF
ILLINOIS

cc: Paul A. Ahearn
James R. Laubsted

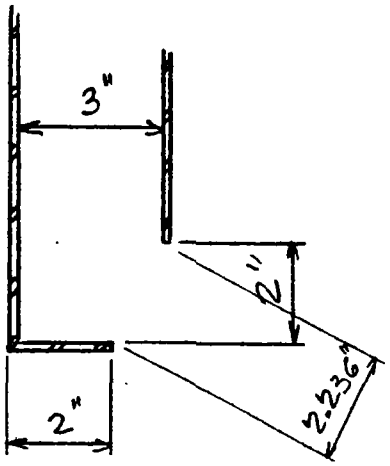
MV/ar

HOYER-SCHLESINGER-TURNER, INC.

SHEET 1 OF 2
PROJECT NO. 1785
DATE 5-13-93
BY M.V.

PROJECT CLEAN HARBORS

SUBJECT Item #30 - INORGANIC LAB-PACK POURING STATION



SLOTS AREA:

(6) SLOTS @ 2.236 x 29.25" L = 392.4 in²
= 2.73 ft²

(4) SLOTS @ 2.236 x 32.625" L = 291.8 in²
= 2.026 ft²

TOTAL = 4.76 ft²

EXHAUST FAN:
NEW YORK BLOWER MODEL GPA-180 ⇒ 3000 CFM @ 3/4" at 1000 RPM

Velocity thru Slots:

SLOTS FULLY OPEN: $\frac{3000}{4.76} = 630$ ft/min

SLOTS HALF CLOSED WITH DAMPER: $\frac{3000 \times 2}{4.76} = 1260$ ft/min

DUCT 14"φ, TWO CONNECTIONS @ 1500 CFM = 1400 ft/min
18"φ & 3000 CFM ⇒ 1650 ft/min

HOYER-SCHLESINGER-TURNER, INC.

SHEET 2 OF 2
PROJECT NO. 1785
DATE 5-13-93
BY MV

PROJECT CLEAN HARBORS

SUBJECT PROCESS BUILDING #1 - CONTAINMENT VOLUME

BUILDING SIZE : $78' \times 101' = 7878\ ft^2$

Height of curb = 4" => $2626\ ft^3 \times 50\% =$

$= 1313.0\ ft^3 = 9{,}820$ gal

SAY 10,000 gal

50% is taken on account of miscellaneous volume taking conc. pads, tanks, curbs etc. 4" Min. rised sill at all doors. No slope toward trench or floor drain is taken into consideration.

Lab-Pack storage is on two pallets. Each pallet can accommodate 4 barrels at 50 gal/max.

Total = $2 \times 4 \times 50 = 400$ gal << 10,000 gal of containment volume

CleanHarbors
ENVIRONMENTAL SERVICES COMPANIES

1200 CROWN COLONY DRIVE
P.O. BOX 9137
QUINCY, MA 02269
(617) 849-1800

RECEIVED
AUG 06 1993
OFFICE OF RCRA
WASTE MANAGEMENT DIV
EPA, REGION V

Via Overnight Delivery

August 5, 1993

Mr. Mark A. Scholenberger, P.E.
Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

Re: Clean Harbors of Chicago, Inc.
Response to Deficiencies - RCRA Part B License Application

Dear Mr. Schollenberger:

Clean Harbors of Chicago, Inc. (CHCI) has prepared and is please to submit the enclosed 1-volume document entitled "Comments to Hazardous Waste Management RCRA Part B Permit" issued to CHCI by the Agency on May 24, 1993.

Please note that we discussed, CHCI will be submitting to you a revised RCRA Part A form under separate cover.

Please feel free to contact me at (617)849-1800, extension 4473, if you have any questions.

Sincerely,

Paul A. Ahearn

Paul A. Ahearn
Manager, Regulatory Compliance

Attachment

cc: Mara McGinnis - IEPA Community Relations
George Hamper - USEPA Region V
Joseph McNally - CHCI
Stephen Pozner - CHI

CLEAN HARBORS OF CHICAGO, INC.

COMMENTS TO
DRAFT HAZARDOUS WASTE MANAGEMENT
RCRA PART B PERMIT

Submitted to:

Division of Land Pollution Control
Illinois Environmental Protection Agency

by

Clean Harbors of Chicago, Inc.
11800 South Stony Island Avenue
Chicago, IL 60617
EPA ID No. ILD000608471

August 5, 1993

Response to Deficiencies
Revised Part B Permit Application

I. BACKGROUND INFORMATION

Facility Name:	Clean Harbors of Chicago, Inc.
Owner/Operator Name:	Clean Harbors of Chicago, Inc.
Facility Address:	11800 South Stony Island Avenue Chicago, IL 60617
EPA ID No.:	ILD000608471

Clean Harbors of Chicago, Inc. (CHCI) is an existing hazardous waste storage and treatment facility located at 11800 South Stony Island Avenue in Chicago, Illinois. The facility currently operates under RCRA Interim Status and under Hazardous Waste Facility Operating Permits issued by the Illinois Environmental Protection Agency (IEPA) Division of Land Pollution Control.

On February 4, 1991, CHCI submitted a Revised Part B Permit Application ("the Application") to IEPA. The Application was subsequently revised on June 10, 1991; February 14, 1992; December 23, 1993; and March 16, 1993. This document has been prepared in response to the Draft Hazardous Waste Management RCRA Part B issued by IEPA on May 24, 1993.

II. COMMENT-BY-COMMENT RESPONSE

For the sake of completeness and ease of review, CHCI has provided for each comment: 1) a reference to the license condition being commented on; and 2) the page number on which the condition appears in the draft license. The comments are divided in three parts:

Part I - Fact Sheet (Page 2)
Part II - Hazardous Waste Management RCRA Part B permit (Page 4)
Part III - U.S. Environmental Protection Agency Permit (Page 31)

PART I - FACT SHEET

General [Page 1]

For consistency, please correct all references to the Permittee's legal name by adding the term ", Inc." after "Clean Harbors of Chicago".

Section II.A [Page 2]

Please correct an editorial error by adding the word "and" at the end of line item vii and deleting the word "and" from the end of line item viii.

Section III.A [Page 3]

The capacity for each container storage bay is described in terms of the maximum number of 55-gallon drums. Since containers other than 55-gallon drums are allowed in the storage bays, please express the capacity of each unit in terms of overall waste gallonage. For example, please change the phrase "552 55 gallon drums" to "30,360 gallons (552 55 gallon drum equivalents)".

Section III.A [Page 3]

The Draft License notes that "a total of 8 55 gallon drums" may be stored on the mezzanine level of Chamber 3 of the reactor for lab pack treatment. CHCI notes that these drums will be added to the facility's RCRA Part A form, and that associated closure costs will be added to the facility cost estimate and financial assurance.

Section III.B [Page 4]

There are, in fact, five (5) proposed areas for nonhazardous container storage. Please delete the word "and" at the end of line item iii), change the "iv)" to "v)", and add a new line item which reads;

iv) One (1) 30-cubic yard rolloff container in the proposed fuel blending area for empty and crushed drums; and

Section III.C [Page 4]

The Agency has removed from RCRA hazardous waste permitting requirements the tanks and ancillary equipment that make up the existing wastewater treatment system. It is CHCI understanding that in doing so, these units will, upon issuance of the permit, no longer be subject to 35 IAC Part 724, including but limited to:

- Inspections [§724.115]
- Closure and Post-Closure [§724 Subpart G]
- Tank Systems [§724 Subpart J]

Since these units will be considered exempt from RCRA, the sections of CHCI's Part B Application which describe daily or annual inspections, closure cost estimate and financial requirements, secondary containment upgrade requirements, or any other management/operating standard related to these units no longer apply.

With respect to the facility's Closure Plan and Cost Estimate, CHCI shall delete the costs of closure for the existing wastewater treatment system (approximately $1.24 million dollars after adjustment for inflation -- see Section 5.11 in Appendix I-1) upon issuance of the Part B License.

Section III.C [Pages 4 through 6]

For the sake of consistency, the capacity of each tank should reflect the design capacity, not the operating capacity. Please change the following:

Tank Storage - Hazardous

i) change "6,000" to "7,000"
vi) change "effluent collection tank" to "secondary clarifier"
vii) change "180,000" to "188,500"
xi) change the phrase "(3) reactor vessels" to "one 3-compartment reactor vessel"
xiv) change "10,000" to "10,400"

Proposed RCRA Tanks - Listed Waste Treatment and Storage

vi) change "3,770" to "1,270"

PART II - HAZARDOUS WASTE MANAGEMENT RCRA PART B PERMIT

TITLE BLOCK [PAGE 2]

For consistency, please correct the Permittee's legal name by adding the term ", Inc." after "Clean Harbors of Chicago".

DESCRIPTION OF THE FACILITY [PAGE 4]

Neither CHCI nor its predecessor company (Chem Clear, Inc.) were involved in onsite land disposal activities. Please change the phrase "Pre-RCRA" to "Pre-1980". Also, the referenced land disposal activities occurred on other parts of the property and were not connected in any way with the current activities conducted by CHCI. Please insert the clause "conducted on other portions of the property prior to the Permittee's construction and operation operation of the the current facility" between the words "activities" and "included".

WASTE MANAGEMENT ACTIVITIES

Section A. [Pages 4 and 5]

The capacity for each container storage bay is described in terms of the maximum number of 55-gallon drums. Since containers other than 55-gallon drums are allowed in the storage bays, please express the capacity of each unit in terms of overall waste gallonage. For example, please change the phrase "552 55 gallon drums" to "30,360 gallons (552 55 gallon drum equivalents)".

Section C. [Page 6]

The Agency has removed from RCRA hazardous waste permitting requirements the tanks and ancillary equipment that make up the existing wastewater treatment system. It is CHCI understanding that in doing so, these units will, upon issuance of the permit, no longer be subject to 35 IAC Part 724, including but not limited to:

- Inspections [§724.115]
- Closure and Post-Closure [§724 Subpart G]
- Tank Systems [§724 Subpart J]

Since these units will be considered exempt from RCRA, the sections of CHCI's RCRA Part B Application which describe daily or annual inspections, closure cost estimate and financial requirements, secondary containment upgrade requirements, or any other management/operating standard related to these units no longer apply.

With respect to the facility's Closure Plan and Cost Estimate, CHCI shall delete the costs of closure for the existing wastewater treatment system (approximately $1.24 million dollars after adjustment for inflation -- see Section 5.11 in Appendix I-1) upon issuance of the Part B License.

Section C [Pages 6 through 8]

For the sake of consistency, the capacity of each tank should reflect the design capacity, not the operating capacity. Please change the following:

Tank Storage - Hazardous

- i) change "6,000" to "7,000"
- vi) change "effluent collection tank" to "secondary clarifier"
- vii) change "180,000" to "188,500"
- xi) change the phrase "(3) reactor vessels" to "one 3-compartment reactor vessel"
- xiv) change "10,000" to "10,400"

Proposed RCRA Tanks - Listed Waste Treatment and Storage

- vi) change "3,770" to "1,270"

SECTION I: CONTAINER STORAGE

Condition I.B.1.a [Page 10]

Please insert the phrase "The Inside Storage Area" prior to "(Within Processing Building No. 2").

Condition I.C.2 [Page 12]

Please delete. Unless the container is leaking or has leaked, no record is required by the regulations.

Condition I.C.3 [Page 12]

Please change item number "3" to "2" (Section C.2 deleted). Also, in Sentence 2, change the word "placarded" to "labeled", and insert the phrase "prior to shipment" at the end of the sentence. Per 49 CFR 172 and 35 IAC 722 Subpart C, DOT markings and labels are a pre-transport requirement, not a RCRA storage requirement.

Condition I.C.4 [Page 12]

Please change item number "4" to "3" (Section C.2 deleted). As noted in the Comment to Section C.3, the DOT marking and labeling requirements of 49 CFR 172 and 35 IAC 722 Subpart C are pre-transport requirements, not RCRA storage requirements.

Condition I.E.3 [Page 13]

With respect to the requirement for 2 foot aisle spaces, CHCI notes that aisles in the inside container storage area are at least two feet wide, but that there are railings between the bays bays. Between the alkaline and organic bay the measurements are as follows: organic drums to railing, 18 inches; railing to alkaline drums, 12 inches. CHCI wishes to confirm that the railings between bays do not count as walls and the two foot aisle is be counted between the drums.

Condition I.E.4.b [Page 13]

Please change to the term "Containers" to "55-gallon containers" to clarify that pallets are required between each layer of 55-gallon drums, but that for smaller size containers such as a 5-gallon pails, pallets will only be used when necessary to provide stability to the stacked containers. For example, 5-gallon pails can be readily and safely stacked 2-high on a pallet; if third layer of pails is added, a pallet would be placed on top of the second layer, or, alternatively, the three layers would be shrink-wrapped together. A pallet would not be required when stacking a 5-gallon pail on top of a 55-gallon drum.

Condition I.E.4.c [Page 13]

Please change to "55 gallon drums may be stacked 2-high with a pallet under each drum. Smaller containers may be stacked so long as the height of the stack does not not exceed the height of two 55 gallon drums, each on pallets (i.e., 84 inches high).

Condition I.E.4.d [Page 13]

Please change to "55 gallon drums may not be stacked in the flammable storage areas. Smaller containers may be stacked so long as the height of the stack does not not exceed the height of one 55 gallon drum on a pallet. (i.e., 42 inches).

Condition I.E.6.a [Page 13]

Per NFPA 30, Section 4-5.7.12, the minimum aisle space between piles of flammable liquids is four (4) feet. Please change "five foot aisle" to "four foot aisle".

Condition I.E.6.a.v [Page 14]

For consistency, please change "do not contain D001 wastes." to "one or more containers of waste having a flash point above 140°F."

Condition I.F [Page 14]

In Sentence 1, omit the word "weekly". The actual inspection schedule in Attachment B includes daily, monthly, and annual requirements only.

Condition I.F.3 [Page 14]

In Sentence 2, please change the word "Ill." to "all".

Condition I.F.4 [Page 15]

In Sentence 1, omit the word "weekly".

Condition I.J.5 [Page 17]

Please change the phrase "in authorization" to "an authorization".

Condition I.L.1 [Page 18]

Per 35 IAC 724.212(d), the period of time for prior notification of closure is 45 days for non-land disposal based facilities. Please change "180 days" to "45 days".

Condition I.L.2 [Page 18]

Please correct an editorial error by changing the phrase "underlying soil or sampling in" to "underlying soil. Sampling in".

SECTION II: TANK SYSTEMS

Condition II.A [Page 21]

Please correct the reference to the Permittee's legal name by adding the term ", Inc." after "Clean Harbors of Chicago".

Condition II.B.1 [Page 21]

For Tank Number 150, the Backwash Collection Tank, please correct the capacity of the tank from "3,770 gallons" to 1,270 gallons".

Condition II.C.3 [Page 22]

In Sentence 1, for clarification purposes, please change the phrase "the surface coating" to "each secondary containment coating system".

Condition II.H.4 [Page 26]

Please change the phrase "within the same operating shift" to "within 24 hours". CHCI notes that 35 IAC 724.296(b)(2) provides up to 24 hours to remove any spills or leaks from a tank secondary containment unit. CHCI shall endeavor to remove all accumulated hazardous waste from a containment structure immediately upon discovery, or as soon as is practicable given weather and operating conditions.

Conditions II.H.6.c and II.H.6.d [Page 27]

CHCI notes that the tank inspection requirements of 36 IAC 724 Subpart J do not require any annual tank inspections of any kind to be conducted for new hazardous waste storage tanks that are equipped with proper secondary containmnet features. Please delete these conditions in their entirety.

Condition II.I.1 [Page 28]

Please modify the phrase "in the tank system or secondary containment system" to "in an unenclosed tank system or unenclosed secondary containment system". This is consistent with USEPA's interpretation that the term "into the environment" does not include spills or releases that occur within a contained structure such as a process building (see 54 FR 22526).

Condition II.I.2 [Page 28]

Please modify the phrase "from the tank system or secondary containment system" to "from an unenclosed tank system or unenclosed secondary containment system". This is consistent with USEPA's interpretation that the term "into the environment" does not include spills or releases that occur within a contained structure such as a process building (see 54 FR 22526).

Condition II.L [Page 29]

In Sentence 1, CHCI is unsure of the meaning of the term "discharge confined structures". For clarification, please change to "containment structures".

Condition II.L.1 [Page 29]

Per 35 IAC 724.212(d), the period of time for prior notification of closure is 45 days for non-land disposal based facilities. Please change "180 days" to "45 days".

SECTION III: REPORTING AND NOTIFICATION REQUIREMENTS

Condition III.I.L(1) [Page 33]

Consistent with comments made previously, please change the due date for Conditions L(1) [prior notification of closure] from "180 days" to "45 days".

Condition III.II.1(1) [Page 34]

Consistent with comments made previously, please change the due date for Conditions L(1) [prior notification of closure] from "180 days" to "45 days".

Condition III.V.41 [Page 36]

The due date for Condition 41, "Implementation of Contingency Plan" is missing. Please add the phrase "As needed".

Condition III.V.50 [Page 37]

Consistent with comments made previously, please change the due date for Condition 50 [prior notification of closure] from "180 days" to "45 days".

Condition III.D.C(1) [Page 37]

Consistent with comments made previously, please change the due date for Condition C(1) [prior notification of closure] from "180 days" to "45 days". Also, please capitalize the word "submit".

SECTION IV: CORRECTIVE ACTION

Condition IV.A [Page 39]

Please correct an editorial error by changing "Ill. Adm. Code 724.201" to "35 Ill. Adm. Code 724.201".

Condition IV.A.1 [Page 39]

The phrase "from any solid waste management unit (SWMU) at its Chicago facility" is very broad, does not precisely define the Permittee's obligations, and is inconsistent with the specific SWMUs identified and referenced further on in Section IV and Attachment F. Section IV and Attachment F, Section III only require investigation of the SWMUs listed in Condition IV.B.1 and any newly-identified SWMUs which require assessment pursuant to Condition IV.F.

Please reword the phrase to read "from any solid waste management unit (SWMU) at its Chicago facility listed in Condition IV.B.1 or newly-identified pursuant to Condition IV.F".

Condition IV.B.2.c [Page 41]

The phrase "to the soil and/or air" is inconsistent with the requirements of Conditions IV.B.2.b and IV.B.1. Condition IV.B.2.c refers to SWMUs characterized pursuant to Condition IV.B.2.b which, in turn, refers to the SWMUs listed in Condition IV.B.1. Condition IV.B.1 only requires evaluation of releases to soil.

Please delete the words "and/or air".

Condition IV.B.5.b [Page 42]

The use of the term "any environmental media of concern" in Item "(1)" is overly broad. The Phase I RFI Report will only be addressing the specific media of concern directed in Condition IV.B.1. Please change the aforementioned phrase to "the media of concern".

Based upon its review of the Phase I RFI Report, with respect to further investigation, the Agency determination is whether a Phase II RFI is required. The determination whether a Phase III RFI is required will, in turn, be based upon the Phase II RFI Report and is addressed further on in Section IV (i.e., Condition IV.B.9). Please delete the phrase "and, if necessary, Phase III of the RFA" at the end of Condition IV.B.5.b. (See next comment also.)

Condition IV.B.5.c.4 [Page 43]

According to this Condition, the Agency's final letter will "Indicate whether the facility must perform a Phase II and/or a Phase III RFI Investigation for those SWMUs requiring further investigation".

The word "facility" should be changed to "Permittee".

It is questioned how, at this stage of the process in advance of a Phase II RFI Investigation, the Agency can determine whether a Phase III RFI Investigation is required. The determination of whether a Phase III RFI Investigation is required will be based upon the Agency's review of the RFI Phase II report and is addressed in Condition IV.B.9.

Please delete the words "and/or a Phase III" from condition IV.B.5.c.4.

Condition IV.B.6 [Page 43]

The SWMUs addressed in Condition IV.B.6 are those listed in Condition IV.B.1. Condition IV.B.1 only requires evaluation of releases to soil.

Please delete the words "and/or air" from the second sentence of condition IV.B.6.

Condition IV.B.9.a [Page 44]

The reference to "Appendix D" in the last sentence should be changed to "Appendix F".

Condition IV.B.13.e [Page 47]

The Agency action should be subject to the appeal provisions of both Section 39(a) and 40(a) of the Act, as is provided in other appeal provisions of Permit Section IV. Please add "and Section 40(a)" after "Section 39(a)".

Condition IV.D.1 [Page 48]

There appears to be a typographical error under "Due Date" with respect to the first item. The words "RFI Phase I" should go with the word "Workplan" under "Facility Submission". Please reword this to read as follows:

Facility Submission	Due Date
Initial Cost Estimate (with RFI Phase I Workplan)	120 days after the effective date of this permit

Condition IV.F.1 [Page 49]

The phrase "newly-identified SWMU(s)" needs to be clarified. Is the Agency referring to

- o SWMUs not identified in the RCRA Facility Assessment; or
- o SWMUs not identified in the RCRA Facility Assessment and which need investigation; or
- o SWMUs not listed in Condition IV.B.1 which are discovered to need investigation?

SECTION V: STANDARD CONDITIONS

Condition V.2 [Page 52]

Please correct the typographical error in the regulatory citation by adding the word "Code" after the word "Adm.".

Condition V.3 [Page 52]

Please correct the typographical error in the regulatory citation by adding the word "Code" after the word "Adm.".

Condition V.13.b [Page 54]

Please strike Sentence 3 regarding the maintenance of groundwater monitoring well data. The facility is not a land disposal facility subject to groundwater monitoring requirements.

Condition V.50 [Page 61]

In keeping with 35 IAC 724.21.(d)(1) and consistent with comments made previously, please change the due date for prior notification of closure from "60 days" to "45 days".

Condition V.60 [Page 63]

In the case of waste storage and transfer activities, CHCI relies on the testing/knowledge supplied the generator of the waste on the inbound Land Disposal Restriction (LDR) notification/ certification documentation. In the case of treatment waste, actual analytical testing is only required if CHCI intends to "certify" that the treated waste meets the applicable LDR treatment standard(s). Please add the phrase "for which the Permittee is first to certify that the constituent concentration is below the treatment standard".

Condition V.61.1 [Page 63]

For hazardous waste storage tanks, 35 IAC 728.150(a)(2)(B) provides a Permittee with the option to maintain certain waste identification information as part of the operating record of the facility, in lieu of actually marking each tank. Please modify the storage tank requirement to read: "(2) each tank is clearly marked to identify its contents, the quantity of each hazardous waste received, and the date of each period of accumulation begins. In lieu of marking each tank with the required information, the Permittee may maintain such information as part of the operating record of the facility. (35 Ill. Adm. Code 728.150)".

Condition V.63 [Page 63]

CHCI wishes to clarify the term "days", when used in the sense of "daily" inspections, means each day that the facility is conducting actual hazardous waste handling operations, not calendar days. In other words, no inspections are required to be conducted on weekends or holidays (or other scheduled shutdown periods) unless actual waste handling activities are being conducted.

ATTACHMENT A - WASTES WHICH CAN BE ACCEPTED AND HAZARDOUS WASTE IDENTIFICATION NUMBERS

Hazardous Waste Codes Acceptable for Stabilization/Fixation

Attachment A, Section A. Characteristically Hazardous Wastes

a. Page 73 - For the sake of consistency with other lists of codes, please add the section title "A. Characteristically Hazardous Wastes" prior to the list of authorized D-codes.

b. Pages 73 and 74 - To date, CHCI has been unable to provide the Agency with analytical data to prove the feasibility of stabilization of certain waste codes proposed for stabilization/ fixation and listed in Table C-8 of the Waste Analysis Plan. CHCI requests that, instead of excluding such codes from the Part B License, the Agency conditionally approve the codes and include them in the License with a provision that treatment cannot commence until such time that CHCI has submitted and the Agency has approved in writing the treatment of the code(s). This approach would provide CHCI with the flexibility to continue its testing of new stabilization/fixation agent recipes, and allow demonstrated treatment methods to be instituted at the facility without having to trigger formal Part B permit modification procedures. The waste codes at issue include:

D002, D003, D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043.

Attachment A, Section C. Hazardous Waste From Non-Specific Sources [Page 73/74]

CHCI objects to the proposed limitation on hazardous waste codes F006-F012 and F019. The Land Disposal Restrictions (LDR) in 40 CFR 268 do not require wastes with a concentration-based standard to be treated using Best Demonstrated Available Technology (BDAT) methodology. In fact, the LDR allows waste with a concentration-based standard to be treated by any method so long as the treated waste achieves compliance with the concentration standard without impermissible dilution having occurred. Since all of the the LDR treatment standards for codes F006-F012 and F019 appear in 40 CFR 268.41 Table CCWE and 286.43 Table CCW, no specific method of treatment is required. Please strike the footnote and all references to it.

Hazardous Waste Codes Acceptable for Storage and Transfer

Attachment A, Section B. Hazardous Wastes From Non-Specific Sources [Page 88]

The Agency has included hazardous wastes codes F037 and F038 to the list of hazardous wastes authorized for storage and transfer. CHCI notes that these codes were inadvertently omitted from the most-recent RCRA Part A form. A new Part A form is included with this submittal

Attachment A, Section C. Hazardous Wastes From Specific Sources [Page 95]

CHCI has identified ten (10) hazardous waste codes which were inadvertently omitted from previous submittals. CHCI requests that the following waste codes be added the list of codes which are approved for storage and transfer: K141, K142, K143, K144, K145, K147, K148, K149, K150, K151.

Attachment A, Section D. Discarded Commercial Chemicals, Off-Specification Species, Container Residues, and Spill Residues Thereof

a. Page 95 - For the sake of consistency with other lists of codes, please add the section letter "D" prior to the title.

b. Page 96 - Please add waste codes number "P041" [diethyl-p-nitrophenyl phosphate] to the appropriate position in the column of hazardous waste code numbers.

c. Page 97 - Delete hazardous waste code P107. This code no longer appears in 40 CFR Part 261 or 35 IAC Part 721.

Attachment A, Section E. Commercial Chemical Products, Manufacturing Chemical Intermediates, or Off-Specification Commercial Chemical Products

a. Page 98 - For the sake of consistency with other lists of codes, please add the section letter "E" prior to the title.

ATTACHMENT B - INSPECTION SCHEDULE

Attachment B, Table II: General Inspection Schedule [Page 106]

a. For the item concerning "Fire Extinguishers", please change the frequency of inspection from daily to monthly for all inspection elements other than maintaining proper access. This change is in keeping with OSHA (see 29 CFR 1910.157(e)) and NFPA inspection requirements/recommendations.

b. Please delete the item concerning "Fire Department Pull Stations". The facility is not equipped with such devices, nor are any planned for installation.

c. CHCI notes that the following documents included as part of CHCI's RCRA Part B License Application will be modified as necessary upon final license issuance to conform to the information contained in Attachment B, Tables I-IV, of the Draft Licensee:

Table F-1: Inspection Schedule
Table F-2: General Facility Inspection - Key Inspection Elements
Table F-3: Unit-Specific Inspection - Key Inspection Elements
Figure F-1: Daily Inspection Report
Figure F-2: Daily Container Inspection Report
Figure F-3: Daily Tank Inspection Report
Figure F-4: Daily Safety and Emergency Equipment Inspection Report

ATTACHMENT D - SPECIAL CONDITIONS

Attachment D, Condition A.1 [Page 114]

CHCI reserves the right to dedicate one or more storage tanks for blended fuels containing a heating value of less than 5,000 BTU/lb. Certificate of compliance would then be provided only for those facilities to which CHCI actually ships any hazardous waste fuel that is derived from a less than 5,000 BTU/lb. source.

Attachment D, Condition A.2.a

To clarify, manifest discrepancies which are reconciled by contacting the generator are noted in the discrepancy section (Item No. 19) of the manifest. No additional record is made or required. The manifests are maintained as part of the operating record.

Attachment D, Condition A.3 [Page 114]

Please change the phrase "total chlorine is" to "total halogens are" for consistency with 40 CFR 279.11 (formerly 40 CFR 266.40) and 35 IAC 726.140.

Attachment D, Condition A.4 [Page 114]

In sentence 1, please change the phrase "Before any wastes" to "Before any waste other than lab packs or wastes with no free liquids" to clarify that compatibility test is not required for solids or lab pack.

Attachment D, Condition A.4.a [Page 114]

Please strike the phrase "in a seven day period". CHCI believes that the requirement to create a new composite sample every seventh day is excessive, and serves to create unnecessary worker exposure situations and a higher likelihood for spills or releases. If the facility has reason to believe that the the composite sample is no longer representative, a storage bay may be resampled to produce a new composite sample.

Attachment D, Condition A.4.b [Page 115]

Please change the phrase "with a composite sample of the tanks within the containment system" to "with a sample of the waste in the tank". CHCI questions the need for removing material from units that are not involved in actually receiving the waste. In Clean Harbors operating experience, it is highly unlikely that more than one tank would rupture or be overfilled at any one time so as to allow potentially incompatible material to become mixed. Again, CHCI believes that is a case if excessive sampling which may create unnecessary worker exposure situations and increase the likelihood for spills or releases.

In addition, for wastewater treatment storage activities, CHCI proposes that the compatibility test mixing ratio be modified to 10% incoming waste mixed with a 90% existing inventory. This ratio is warranted due to the large capacity of the tanks.

Attachment D, Condition A.5 [Page 115]

Please add the following sentence to the end of Paragraph 2. "Full vertical depth samples are not required in cases of hardened solids or extremely viscous liquids." to account for the fact that certain materials are capable of being sampled using normal manual sampling devices.

Attachment D, Condition C.1 [Page 116]

Consistent with previous comment, please change the due date for submittal of the Closure Plan from "180 days" to "45 days".

Attachment D, Condition E.2 [Page 116]

Please delete Condition E.2 in its entirety. The specific secondary containment design requirements in 40 CFR Parts 260-280 and 35 IAC Parts 700-749 pertain only to those areas that are used for the storage of hazardous wastes. As noted in previous submittals, with the exception of the bulk rolloff storage area for solids, none of the existing or proposed loading/offloading areas is or will used for storage hazardous wastes. CHCI objects to the Agency proposal to impose storage unit design requirements (e.g., impermeable coating on exposed surface areas) on units or structures that are used for the temporary staging of hazardous waste (as opposed to storage or treatment). In our opinion, the proposed requirement is arbitrary and, considering the heavy truck traffic that such areas encounters, technically unwarranted since a thin surface coating provides minimal additional protection than is already afforded by a properly designed and constructed smooth concrete surface that that is kept free of cracks and gaps.

Attachment D, Condition F.1 [Page 117]

Please modify Sentence 3 to read "This includes spills of hazardous waste which exceed one (1) pound within the containment system." to clarify exactly which spills/releases are or are not reportable to the Agency.

Attachment D, Condition F.2 [Page 117]

The air modeling information that forms the basis for reporting is based on pure substances, not actual CHCI hazardous waste stream data. As such, please add the following statement to the end of Paragraph 1: "Reporting 'trigger' levels for spills/ releases of mixtures or solutions of hazardous wastes may be based on the actual concentration(s) of the constituent(s) present in the hazardous wastes, and not on the total quantity amount of hazardous waste spilled/released, when constituent concentration information is available." The use of concentration data is consistent with the "reportable quantity" (RQ) reporting procedures found in US DOT regulation in 49 CFR Part 171 and USEPA CERCLA regulations in 40 CFR Part 300.

Attachment D, Condition F.3 [Page 118]

Given the extensive documentation compilation effort required by the Agency's proposal, CHCI requests that the due date be extended by additional 30 days. Please change the phrase "Within 60 days" to "Within 90 days" [See also next comment].

Attachment D, Condition F.3.f [Page 119]

Clean Harbors ardently supports and actively participates in educating private and public emergency response agencies as to the hazards associated with the activities conducted at all of its eleven (11) waste management facilities in the United States. In particular, CHCI has for many years, conducted annual open house events to provide, police, fire, hospitals, and other agencies involved in its contingency planning measures with an opportunity to meet with plant management, review the processes conducted at the plant, discuss the nature and hazards posed by the materials handled at the facility, and develop response procedures in the event of a spill, leak, injury, fire or other type of event. However, CHCI is of the opinion that scope of the materials required to be compiled and distributed under the terms of Condition F.3.f is too broad, and to a great extent, simply unavailable. CHCI notes that there are no reference books available for the physical/chemical properties of hazardous wastes. Reference books and information guides such material safety data sheets (MSDS's) are normally available for uncontaminated, unused chemicals typically encountered in lab packs; however, the vast majority of the wastes handled at CHCI

are process-related wastes whose characteristics vary from generator to generator. IDLH values and TLV's simply do not exist for each process waste stream. Perhaps the most reliable source of information is the generator waste profile sheet (and supplemental information,if any) provided by a generator to prequalify its waste for acceptance at the facility. However, CHCI has over 30,000 approved profiles on file and we question whether or not the emergency response agencies would want hard copies of the information, or the responsibility of maintaining it in a useful and up-to-date fashion. CHCI proposes to continue to work with the response agencies on an individual basis to suit their particular needs and concerns, and will consider offering specialized training, and/or providing commercially available reference documents upon request.

Attachment D, Condition F.4 [Page 119]

In keeping with our response to Condition F.3, CHCI requests that the time frame for securing the necessary arrangements be extended by 30 days. Please change the phrase "Within 60 days" to "Within 90 days".

Attachment D, Condition G.3 [Page 120]

CHCI objects to this Condition on the basis that the Bulk Solids Storage Area meets the 35 IAC 725.275(b) design criteria and operation as required by 35 IAC 725.275(d) for the storage of containers holding non-liquid F020-F023, F026, and F027. Please delete this Condition in its entirety.

Attachment D, Condition G.4 [Page 120]

CHCI objects to this Condition on the basis that tightly closed waterproof tarps are maintained over each rolloff, thus minimizing the infiltration of precipitation of water into the rolloff.

Attachment D, Condition G.7 [Page 121]

Please change "a minimum value of 6,000 BTU/lb. and a maximum halogen content of 10%" to "a minimum value of 5,000 BTU/lb." CHCI notes that the USEPA's long-standing Sham Recycling Policy [see 48 FR 11157] has, since 1983, set the the minimum heat value for a hazardous waste fuel (HWF) at 5,000 BTU/lb. CHCI also notes that while the effect of the Burning of Hazardous Waste in Boilers and Industrial Furnaces (BIF) Rule's emission limitations may be to place certain halogen limitations on as-burned HWF, the BIF rule itself does not impose any restriction on HWF fuel processors/blenders. As we have noted in previous responses, the limiting factor with respect to minimum BTU value and halogen content is, and in our opinion should continue to be, set by the specific permit conditions imposed at the the end-user facility (i.e., the cement kiln), not at the intermediate fuel blending facility. Any such limitation would impose an undue hardship on CHCI that, to our knowledge, is not shared by other HWF blenders in Illinois or other states.

Attachment D, Condition H.1 [Page 121]

The use of the term "stabilization facility" may be misleading and somewhat confusing. As noted in our March 15, 1993 submittal, fixation/stabilization activities are proposed for rolloffs or other containers staged in: Building No. 3; the Bulk Solids Storage Pad; container loading/unloading areas; Building No. 2; and in the Bulk Unloading Pad adjacent to the sump area.

Attachment D, Condition H.2 [Page 121]

As noted previously, the Land Disposal Restrictions (LDR) in 40 CFR 268 do not require wastes with a concentration-based standard to be treated using Best Demonstrated Available Technology (BDAT) methodology. In fact, the LDR allows waste with a concentration-based standard to be treated by any method so long as the treated waste achieves compliance with the concentration standard without impermissible dilution having occurred. Since all of the the LDR treatment standards for codes F006-F012 and F019 appear in 40 CFR 268.41 Table CCWE and 286.43 Table CCW, no specific method of treatment is required. Please delete this Condition in its entirety.

Attachment D, Condition H.3 [Page 121]

Please delete Sentence 1 regarding specific respiratory protection equipment to be worn by personnel inside Building No. 3 since the levels of protection required by OSHA may be more or less stringent than that required by that provision depending upon the actual material being processed. All activities in Building No. 3 and elsewhere at the facility are conducted in accordance with OSHA standards and Clean Harbors Corporate Health & Safety Program. The selection of respiratory protection and other personnel protection equipment is properly conducted on a case-by-case basis which takes into consideration the unique chemical/physical characteristics of the specific waste being handled.

Attachment D, Condition H.4.d [Page 122]

Condition H.4.d appears twice in the text. Please delete the second entry.

Attachment D, Condition H.5 [Page 122]

As discussed previously, the use of the term "stabilization building" may be confusing. Please change to read "stabilization area".

Attachment D, Condition H.6 [Page 122]

Please change the term "at the end of each eight hour operating shift" to "at the end of the stabilization processing activity". From an operational standpoint, it is highly inefficient to halt the stabilization process and initiate cleanup activities (i.e., wash washing) before the job is actually complete. CHCI is sensitive to the Agency's concern that the stabilization processing areas be kept as clean and well-maintained as possible, and will strive to maintain the areas in proper operating condition at all times. In our opinion, there is no additional threat or adverse impact to human health and the environment by not conducting a cleanup prior to a shift change.

Attachment D, Condition H.8.a [Page 123]

Please change "The treated waste shall not be sent for landfill disposal" to "The treated waste shall not be placed into a land disposal unit". CHCI must be allowed a certain degree of flexibility (to ship treatment residuals to offsite facilities) in the event that: 1) the CHCI stabilization/fixation recipe proves to be unsuccessful; and/or 2) additional treatment methods not conducted by CHCI are needed prior to the waste being deemed suitable for placement in an offsite land disposal unit. In the event of an unsuccessful or partially-successful treatment, CHCI shall ship the treatment residuals to an offsite treatment or disposal facility and, in accordance with LDR requirements, provide to the receiving facility a "certification" for all treatment standards that have been achieved, and/or a "notification" for all constituents which do not meet applicable LDR treatment standards.

Attachment D, Condition H.8.c [Page 123]

Please delete the term "waste pile" since CHCI is not seeking authorization to manage hazardous wastes in such a unit. All stabilized waste will be managed tanks or container only.

Attachment D, Condition H.8.e.iii.1 [Page 124]

Please delete in its entirety [see comment to Condition H.8.c].

Attachment D, Condition H.9 [Page 124]

Please delete in its entirety. The penetrometer test is one that should be conducted at the receiving land disposal facility prior to placement of the waste in the actual land disposal unit, not at the site of generation or at an intermediate treatment facility such as CHCI.

Attachment D, Chemical Oxidation [Page 124]

a. For consistency with other section of the License, please add letter "I" to the section title.

b. Pages 124 and 125 - To date, CHCI has been unable to provide the Agency with analytical data to prove the feasibility of treating certain waste codes proposed for chemical oxidation in Table C-3 of the Waste Analysis Plan. CHCI requests that, instead of excluding such codes from the Part B License, the Agency conditionally approve the codes and include them in the License with a provision that treatment cannot commence until such time that CHCI has submitted and the Agency has approved in writing the treatment of the code(s). This approach would provide CHCI with the flexibility to continue its testing of chemical oxidation treatment schemes, and allow demonstrated treatment methods to be instituted at the facility without having to trigger formal Part B permit modification procedures. The waste codes at issue include:

D019, D021, D022, D023, D024, D025, D026, D027, D036, D037, D038, D041, D042, D043.

Attachment D, Carbon Adsorption [Page 125]

a. For consistency with other section of the License, please add letter "J" to the section title.

b. Please delete the phrase "or the applicable LDR standard". The LDR treatment standards do not apply to wastewaters discharged to a publicly owned treatment works (POTW) unless those levels are adopted by the POTW as part of their pretreatment discharge parameters. CHCI shall continue to operate in compliance with all applicable MWRDGC discharge conditions.

ATTACHMENT F - REQUIRED SCOPE OF WORK FOR A RCRA FACILITY INVESTIGATION

Attachment F, Condition II.2 [Page 129]

The determination being addressed in this this section is that based on the Agency's review of the Phase I RFI Report. This report will only address the media of concern designated in Condition IV.B.1 of the Permit (i.e., soil).

Please delete the words "or air" in the three (3) places it appears in Section II.2.

Attachment F, Condition II.3 [Pages 129-130]

This section references the need for RFI Phase III being based on data from RFI "Phase I or II". According to the Permit conditions, data from RFI Phase I is used to determine the need for a Phase II RFI. The need for a Phase III RFI is determined from the data in the RFI Phase II Report.

Please change "Phase I or II" to "Phase II".

Attachment F, Condition III.D.1.a.(6) [Page 135]

For consistency with the Permit conditions, it should be clarified that the reference to SW-846 is to the "Third Edition".

Attachment F, Condition III.D.1.b [Pages 135-136]

Please delete this section. The basis for this deletion is as follows:

- There is no "Waste Liquid Burning Process" or any burning process at the Clean Harbors of Chicago, Inc. facility; and

- There is no area designated as the "Waste Solvent Storage Area". Waste solvents are stored in containers within specially designed container storage areas. According to Permit Condition IV.B.1, the media of concern for which investigation is required is soil.

Attachment F, Condition III.D.2.(11) [Page 137]

For consistency with the Permit conditions, it should be clarified that the reference to SW-846 is to the "Third Edition".

Attachment F, Condition III.D.4.d.(5) [Page 142]

For consistency with the Permit conditions, it should be clarified that the reference to SW-846 is to the "Third Edition".

Attachment F, Condition III.E [Page 143]

For consistency with the Permit conditions, it should be clarified that the reference to SW-846 is to the "Third Edition".

Attachment F, Condition III.G [Page 144]

This section needs to be clarified to address the formal process and submittals which the Agency requires. The Facility Action Schedule and the RFI Implementation Schedule in Attachment F, Section V (see comment below), refer to an "Interim Measures Plan" and an "Interim Measures Report", neither of which are addressed in Section III.G.

Attachment F, Condition V [Pages 146 & 147]

This section has two schedules, a Facility Action Schedule and an RFI Implementation Schedule, both of which contain essentially the same information (but, as noted below, are inconsistent). It is suggested that these be combined into one schedule. Specific comments relating to these schedules are as follows:

Facility Action Schedule:

This schedule refers to "Periodic Progress Reports" with a due date "To be specified in workplans". This is inconsistent with the first paragraph of Section V and the RFI Implementation Schedule, both of which refer to quarterly progress reports. This item should be changed to read as follows:

Facility Action	Due Date
Quarterly Progress Reports	Must be received by Agency's DLPC no later than: January 15 April 15 July 15 October 15 of each year

The last item of this schedule refers to an "Interim Measures Plan" which must be submitted within 45 days from the date interim measures are determined to be necessary. The RFI Implementation Schedule refers to an "Interim Measures Report" to be submitted 30 days from the date interim measures were determined by the Agency to be necessary. What has to be submitted when? Attachment F, Section III.G does not address this, but should (see comment above on Section III.G).

RFI Implementation Schedule

The due date for submittal of the RFI Phase I Workplan is in error. It should be 120 days, not 90 days.

The due date for submittal of the RFI Phase II Workplan is in error. It should be 90 days, not 60 days.

It is suggested that the dates for the quarterly progress reports be listed in chronological order (i.e., list January first).

As stated above, the last item of this schedule refers to an "Interim Measures Report" to be submitted 30 days from the date interim measures were determined by the Agency to be necessary. The Facility Action Schedule refers to an "Interim Measures Plan" which must be submitted within 45 days from the date interim measures are determined to be necessary. What has to be submitted when? Attachment F, Section III.G does not address this, but should (see comment above on Section III.G).

Condition III.A [Page 9 of 10]

Please make the following changes for consistency with 40 CFR 261.24.

a. Change "Acids and Alkalies" to "Toxicity Characteristic Metals".

b. Change "D0011" to "D011".

c. Change "Organic wastes, halogenated and non-halogenated solvents" to "Toxicity Characteristic Organics".

d. Change "D012 through D043" to "D018 through D043".

e. Change "Waste poisons, pesticides" to "Toxicity Characteristic Pesticides".

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
HRP-8J

MAY 04 1993

Lawrence Eastep, Manager
Permits Section
Division of Land Pollution Control
Illinois Environmental Protection Agency
2200 Churchill Road
Post Office Box 19276
Springfield, Illinois 62706

Re: Clean Harbors of Chicago, Inc.
ILD000608471

Dear Mr. Eastep:

Copies of the draft Federal Permit for Clean Harbors of Chicago, Incorporated; the Statement of Basis; and the Index to the Administrative Record for the draft Federal permit are enclosed. All documents in the Administrative Record for the draft Federal permit should also be included in the Administrative Record for the draft State permit and available for the public to view at your Springfield office.

If you need copies of any of the documents identified in the index, or have any other questions, please contact Juana Rojo, at (312) 886-0990, before the start of the comment period.

Sincerely,

George J. Hamper

George J. Hamper, Chief
Illinois Section
RCRA Permitting Branch

Enclosures

Printed on Recycled Paper

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
1200 CROWN COLONY DRIVE, P.O. BOX 9137 • QUINCY, MA 02269-9137
(617) 849-1800

Via Fascimile

April 6, 1993

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APR - 6 1993
RCRA PERMITTING BRANCH
OR/WMD
EPA, REGION V

Mr. George Hampers, Chief
Illinois Section
RCRA Permitting Branch
US Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604

Re: Clean Harbors of Chicago, Inc.
Subpart X Submittal

Dear Mr. Hampers

This letter is to confirm my conversation on this date with Juana Rojo of your staff regarding Clean Harbors of Chicago, Inc.'s (CHNI's) response to your letter dated February 8, 1993. Per my conversation, the submittal date for the response has been extended until April 15, 1993

CHCI has requested certain technical information on the proposed aerosol can compaction system from the manufacturer of the unit, Aervoe-Pacific Company, Inc. This information includes more detailed design information and VOC/propellant recovery rates. CHCI expects to receive the requested information within the next few days, and will submit its response soon thereafter.

CHCI appreciates the Agency consideration in this matter. If you have any questions, please feel free to contact me at (617)849-1800, extension 4473.

Sincerely,

Paul A. Ahearn

Paul A. Ahearn
Manager, Regulatory Compliance

21

USEPA

CleanHarbors
ENVIRONMENTAL SERVICES COMPANIES
1200 CROWN COLONY DRIVE
P.O. BOX 9137
QUINCY, MA 02269
(617) 849-1800

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Via Overnight Delivery

April 15, 1993

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PERMIT SECTION

Mr. Mark Schollenberger, P.E.
Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

Re: Clean Harbors of Chicago, Inc.
RCRA Part B License Application
Waste Compactor Clarification

Dear Mr. Schollenberger:

As a follow-up to your telephone conversation with Mr. James Laubsted on this date, Clean Harbors of Chicago, Inc. (CHCI), enclosed please find revised Pages C-5A and D-5 of the CHCI's RCRA Part B License Application. These pages have been revised to reflect the fact that the existing waste compactor unit does, in fact, process hazardous and nonhazardous wastes that contain free liquids. Four sets of corrected pages are included for your records.

CHCI regrets the error and any confusion it may have caused. If you have any questions, please contact me at (617) 849-1800, extension 4473.

Sincerely,

Paul A. Ahearn

Paul A. Ahearn
Manager, Regulatory Compliance

cc: James Laubsted - CHCI

Attachments

acting of Hazardous Wastes

tilizes a mobile waste compactor unit at the facility. ctor is operated in each of the various storage bays and ssing areas to compact hazardous and non-hazardous solids such as contaminated Tyvek suits, rags, filters, paint cans, bottles, and other debris. Wastes containing free liquids are not processed through the compaction unit.

Any material that is or contains a hazardous waste that is authorized for storage and transfer is subject to compacting prior to shipment. The list of storage and transfer waste codes is presented in Table C-9.

C-1(viii) Treatment of D002 Liquid/Solid Mixtures

CHCI proposes to "treat" certain storage and transfer wastes bearing EPA Waste Code D002. CHCI notes that by IEPA and USEPA definition, only liquids with a pH of less than 2 or greater than 12.5 are considered to be D002. Once all free liquid have been removed, the remaining solids no longer meet the definition of D002. This "treatment" operation is necessary because many land disposal facilities will not accept solids which are coded as D002 waste.

Specifically, for containers (e.g., drums) of D002 wastes which are accepted for "storage and transfer" and which contain both liquids and solids, CHCI shall "treat" the waste by removing separable liquids layers from the solid portion of the waste. CHCI intends to remove all free liquids from a container using portable pumps.

A representative sample of the the "treated" waste (i.e., the remaining solid portion) will be tested usign the Paint Filter Test, or equivalent method, to confirm the absence of free liquids. The solid portion would remain in the original container and retain all waste codes used to describe the original liquid/solid mixture except D002.

The liquid portion that is separated from the solids will be placed into another container or tank, or fed directly into the inorganic treatment system. The liquid would retain all waste codes used to describe the original liquid/solid mixture, including D002.

Any liquid/solid mixture of hazardous waste that is authorized for storage and transfer and carries hazardous waste code D002 is a candidate for this treatment operation. The list of storage and transfer waste codes is presented in Table C-9.

x D-14. Clean Harbors of Chicago, Inc., Equipment Layout - Proposed Drum Crushing and Compacting Operation, CHCI Dwg. No. 4212 (Issue B).

F. Proposed Rail Car Transfer Operation

CHCI proposes to construct a 1,000-foot long rail spur from South Stony Island Avenue to conduct waste transfer and shipping activities. All rail car activity is to be conducted under the 10-day "transfer facility" exemption for wastes in transit, as provided in 35 IAC 723.112. All rail cars accepted at the facility shall be emptied of waste within 10 operating days of arrival. All outgoing rail cars shall leave the facility within 10 days of the date that waste was first transferred into the rail car. The rail spur leading from the main tracks alongside South Stony Island Avenue will, once inside the fence line of the facility, split into two separate tracks: Track #1 will be approximately 900 feet long and used for staging and for active waste material loading and unloading; Track #2 will be 300 feet long and used for rail car staging purposes only. Track #1 includes two separate rail car loading/unloading areas, each underlain with steel drip pans which drain via pipeline to liquid collection basins. The location of the rail spur into the facility is shown in CHCI Dwg. No 4202 in Appendix B-5. Design details, including secondary containment features, for the rail car loading/unloading area are shown in:

Appendix D-15. Clean Harbors of Chicago, Inc., Proposed Rail Car Containment Area Details, CHCI Dwg. No. 4217 (Issue B).

G. Mobile Waste Compactor

CHCI utilizes a mobile waste compactor unit at the facility. The compactor is staged in the Outdoor Container Staging Area and processes hazardous and non-hazardous wastes in containers. The types of materials handled in the unit include, but are not limited to, personnel protective equipment (Tyvek suits, gloves, boots, etc.), rags, oil filters, paint cans, bottles, paper and other debris. The unit is equipped with a liquid removal system which removes liquids that separate out of the solid materials during the compaction process. Manufacturer's literature describing the unit, its operating procedures, and safety features is presented in Appendix D-52.

H. Proposed Treatment of D002 Liquid/Solid Mixtures

CHCI proposes to "treat" certain storage and transfer wastes bearing EPA Waste Code D002. Specifically, for containers (e.g. drums) of D002 wastes which are accepted for "storage and transfer" (See Table C-9) and which contain both liquids and solids, CHCI shall "treat" the waste by separating the solids from the liquids.

B-16

cc: Mouwen
USER

Dwk
IPRS

ILD 000 608 471

CleanHarbors
ENVIRONMENTAL SERVICES COMPANIES
1200 CROWN COLONY DRIVE
P.O. BOX 9137
QUINCY, MA 02269
(617) 849-1800

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PERMIT SECTION

Via Overnight Delivery

April 7, 1993

Mr. Mark Schollenberger, P.E.
Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

Re: Clean Harbors of Chicago, Inc.
Response to Deficiencies - RCRA Part B License Application

Dear Mr. Schollenberger:

Clean Harbors of Chicago, Inc. (CHCI) is pleased to submit the following information in response to issues raised during your March 30, 1990 telephone conversation with James Laubsted of our staff.

1. Lab Pack Decontamination (Existing System) - Individual lab pack containers of wastes which are identified as suitable for onsite treatment (e.g., acids, bases, and certain non-organic wastes) are placed into a gondola box which is moved to a pour off station located at the top of the inorganic treatment reactor vessel of the existing wastewater treatment. The pouroff station equipment includes (1) a sink/drain system which feeds the poured-off wastes into the reactor vessel and (2) duct work to ventilate the lab pack work area in accordance with OSHA 29 CFR 1910.1000.

   In Section I-1d(2) [see Page I-4], CHCI describes the general closure procedures for tank systems and associated equipment. CHCI believes that the pouroff equipment described above fits the general definition of the term "associated equipment" and intends to decontaminate the pouroff station equipment in similar fashion (i.e., water/detergent, brushing, etc.) to that of a pipeline or pump. The closure cost estimate for the existing wastewater system is presented in Section 5.11 of Appendix I-1. This includes a category for "associated equipment" rather than individual components.

In CHCI's opinion, the cost of decontaminating the pouroff equipment is incidental when compared to the cost of closure for the wastewater treatment system, or the facility as a whole. In addition, the 5% Contingency Factor that is added to the overall closure cost estimate provides additional assurance. For these reasons, CHCI has not added the lab pack pouroff equipment as a separate line item.

2. Professional Engineering (PE) Certification - At your request, Hoyer Schlesinger Turner (HST) has prepared correspondence dated March 29, 1993 to clarify that the PE certification dated March 15, 1993 does, in fact, address the proposed sand filter (Item 149), carbon adsorption unit (Item 152) and overflow tank (Item 161-22). Four (4) copies of the letter are attached for inclusion in the Application.

3. Carbon Adsorption System Organic Limitations - CHCI previously submitted manufacturer's literature (see Appendix C-4) which includes a list of the organic compounds that are amenable to carbon adsorption. The literature also includes a method for calculating the approximate quantity of carbon that is necessary to effectively remove the organic constituent(s) to be treated. Predetermined boundary limits are of little value because the actual performance of the carbon adsorption system is influenced by factors such as constituent concentrations, interference (or lack of) from other contaminants, temperature, and the specific type of carbon in use. In practical terms, the limiting factors will be the quantity of carbon necessary to treat the wastewater to meet the facility's discharge limitations, and the cost for purchasing and disposing of the carbon media. These factors are evaluated on a case by case basis.

4. RCRA Part A Application - The signature date for the facility's original RCRA Part A Application as submitted by CHCI's predecessor, Chem-Clear Inc., is November 2, 1980. A copy of the first and signatory pages of the original form are included for letter is attached for your records.

5. Sewer Discharge Organic Limitations - CHCI discharges its treated effluent to the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) in accordance with terms and conditions of the MWRDGC's "User Charge Ordinance". A copy of the Ordinance is included as an attachment.

Also, in response to Comment No. G-4 of the November 4, 1991 Notice of Deficiency, CHCI is pleased to submit one (1) original and three (3) copies of the report entitled "Application of a Screening Technique to Determine Recommended Amounts of Hazardous Waste Which May Trigger Notification of Local Emergency Officials". The Report was prepared on CHCI's behalf by Carlson Environmental, Inc. and should be inserted into Appendix G-6. Please note that separate screening analyses were conducted for distances of 25 meters and 100 meters.

In previous conversations, CHCI expressed its concern over the use of 25-meter distance as the screening parameter because the nearest property line is 25 meters in the direction of Slip No. 4 of Lake Calumet, but well over 100 meters in all other directions. CHCI is concerned that any requirement to notify neighboring industries (all of whom are located well over 100 meters from the waste storage areas) or public response agencies of an exceedance of the 25-meter "trigger level" could lead to unnecessary and unwarranted concerns regarding the safety of the CHCI's activities, as well as the possible waste of public emergency response resources. Although CHCI was unable to identify any information or regulation which prohibits public access to Slip No. 4, it maintains that the evaluation using the 100-meter distance is more appropriate given the heavily industrial nature of the area and the fact that Slip No. 4 is not used or normally considered to be a recreational-type area.

If the Agency holds that the 25-meter data must be used, CHCI proposes to utilize the trigger levels as an internal action threshold only. If the 25-meter trigger level is exceeded, CHCI would immediately initiate cleanup activities and would have facility personnel make observations to see if are people swimming in, boating on, fishing in, or otherwise using Slip No. 4. If such indications are present, CHCI would immediately initiate the proper notification procedures. If no indications are present, CHCI would only initiate notification activities if the 100-meter trigger volume is exceeded.

With this submittal, CHCI believes that it has adequately addressed all of the Agency's comments to date, and looks forward to the issuance of the draft License in the very near future. If you have any questions on this or previous submittals, please do not hesitate to contact me directly at (617) 849-1800, extension 4473.

Sincerely,

Paul A. Ahearn

Paul A. Ahearn
Manager, Regulatory Compliance

cc: Stephen Pozner - CHI
James Laubsted - CHCI

Attachments

CleanHarbors
OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, IL 60617
(312) 646-6202

CERTIFIED MAIL - RETURN RECEIPT REQUESTED - ARTICLE #P 377 858 597

November 14, 1991

Permit Section
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
Division of Air Pollution Control
P.O. Box 19276
Springfield, Illinois 6274-9276

Dear Sir:

Clean Harbors of Chicago, Inc. ("Clean Harbors") is submitting a permit application for a compactor at the facility. Presently, Clean Harbors manually compacts wastes inside containers with a tamper tool. Wastes that are typically compacted include contaminated personnel protective equipment (e.g. tyvek suits, boots, gloves, etc.), filters, small containers, rags, and other solid debris.

Clean Harbors has decided to upgrade this operation by replacing the manual compaction procedure with a semi-automatic compacting device manufactured by Compaction Technologies (see enclosed literature).

Clean Harbors believes that the compaction operation is not considered "treatment" pursuant to Illinois EPA Hazardous Waste Rules, Section 720.110.

Wastes that are compacted will be identical to the waste prior to compaction, as far as the physical, biological, and the chemical composition of the waste. The waste is not neutralized, nor is energy or material resources recovered, nor is the waste rendered non-hazardous or less hazardous, nor is it rendered safer to transport, store or dispose of, nor make it more amenable for recovery, nor more amenable for storage or reduce in volume.

The "act" of compaction does <u>not</u> reduce the volume of waste, it only allows more wastes to go into a container. As an example; Clean Harbors has two (2) containers full of contaminated tyvek suits, each drum weighs 200 pounds. The two (2) drum contents are compacted into one (1) drum. The compacted waste still weighs 400 pounds.

CleanHarbors

The unit is a Compacting Technologies International CTI Pro 8560. The compactor is a movable unit which will be operated in the appropriate containment bay of the drum storage areas where the material being processed is compatible. The compaction system meets NEMA 7 Class 1, Division 1 electrical standards and meets NFPA Guidelines for hazardous atmospheres. A nitrogen purge is included to inert the system during compaction. The system also has an electronic temperature control probe and connecting dry chemical extinguisher system in case of fire. The system also includes an activated carbon adsorber for emissions during compaction. The compactor includes a drum crusher attachment which will be used to crush RCRA empty drums.

To operate the unit, a drum is placed into the barrel containment chamber which completely surrounds the drum. The unit is closed and a special pump removes liquids which are pumped to a separate container. A hydraulic ram compacts material in the drum without distorting the drum. A "quick chute", described in the literature, in utilized to load additional material without opening the chamber door. Upon completion of compaction, the drum is removed and readied for shipment off-site.

The containers crushed with the crushing attachment will be RCRA empty. The type of containers include 55 gallon and smaller drums, pails, cans, and bottles. The materials of construction include steel, plastic, and glass.

When switching from hazardous waste to non-hazardous waste, the unit will be decontaminated by removal of any waste material and a triple rinse. The rinse material would be an aqueous acid solution, aqueous alkaline solution, or organic solution that will depend on the waste material last compacted. The solution must be an appropriate decon material for the waste, and it must be compatible. Wipe tests will be performed to insure decontamination. All decon material will be handled as a hazardous waste.

The nitrogen purge system on the compactor will be used whenever materials which could volatilize are being compacted. It is estimated that the unit will be operated 50 hours per week on average, with approximately 50% of the material requiring the nitrogen purge system. Because the system uses N_2 , no NOX emissions are expected during the nitrogen purge.

To prevent an odor problem during operation, the unit is equipped with an activated carbon adsorber. Clean Harbors does not intend to compact materials which are odorous. The nitrogen inerting will also control odors.

CleanHarbors

The nitrogen purge system will inert the chamber during compaction. This procedure should prevent explosions or fires in the compactor. No aerosol cans will be compacted in the unit.

To prevent volatile organic emissions from the compactor, a carbon adsorption system is used. A diagram of the system and manufacturer's data of carbon adsorption capacities for many organics are included.

The following hazardous and non-hazardous materials would be compacted in the unit: debris (mixtures of soil, wood, dirt, rocks, cardboard, PPE, absorbent materials), off-specification products, personnel protection equipment (suits, boots, gloves, garments), pharmaceuticals, filters, cartridges, absorbent socks/pillows, RCRA empty containers (bottles, jars, cans), lab vials, rags, etc. These materials could be hazardous waste.

Information on the compactor is included as an attachment. If you have any further questions on this permit application, please contact me at 312/646-6202.

Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

Enclosure

JRL/mk

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62794-9276

APPLICATION FOR PERMIT (A)	FOR AGENCY USE ONLY
[X] CONSTRUCT [X] OPERATE	I.D. NO.
NAME OF EQUIPMENT TO BE CONSTRUCTED OR OPERATED COMPACTOR (B)	PERMIT NO.
	DATE

1a. NAME OF OWNER: Clean Harbors of Chicago, INC.		2a. NAME OF OPERATOR: Clean Harbors of Chicago, INC.	
1b. STREET ADDRESS OF OWNER: 11800 S. Stony Island Avenue		2b. STREET ADDRESS OF OPERATOR: 11800 S. Stony Island Avenue	
1c. CITY OF OWNER: Chicago		2c. CITY OF OPERATOR: Chicago	
1d. STATE OF OWNER: Illinois	1e. ZIP CODE: 60617	2d. STATE OF OPERATOR: Illinois	2e. ZIP CODE: 60617

3a. NAME OF CORPORATE DIVISION OR PLANT: Clean Harbors of Chicago, INC.		3b. STREET ADDRESS OF EMISSION SOURCE: 11800 S. Stony Island Avenue		
3c. CITY OF EMISSION SOURCE: Chicago	3d. LOCATED WITHIN CITY LIMITS: [X] YES [ ] NO	3e. TOWNSHIP:	3f. COUNTY: COOK	3g. ZIP CODE: 60617

4. ALL CORRESPONDENCE TO: (TITLE AND/OR NAME OF INDIVIDUAL) James R. Laubsted	5. TELEPHONE NUMBER FOR AGENCY TO CALL: (312) 646-6202
6. ADDRESS FOR CORRESPONDENCE: (CHECK ONLY ONE) [ ] OWNER [ ] OPERATOR [X] EMISSION SOURCE	7. YOUR DESIGNATION FOR THIS APPLICATION: (C) COMPACTOR

8. THE UNDERSIGNED HEREBY MAKES APPLICATION FOR A PERMIT AND CERTIFIES THAT THE STATEMENTS CONTAINED HEREIN ARE TRUE AND CORRECT, AND FURTHER CERTIFIES THAT ALL PREVIOUSLY SUBMITTED INFORMATION REFERENCED IN THIS APPLICATION REMAINS TRUE, CORRECT AND CURRENT. BY AFFIXING HIS SIGNATURE HERETO HE FURTHER CERTIFIES THAT HE IS AUTHORIZED TO EXECUTE THIS APPLICATION.

AUTHORIZED SIGNATURE(S): (D)

BY [signature] 11/14/91	BY [signature] 11/14/91
SIGNATURE / DATE	SIGNATURE / DATE
Joseph McNally	James R. Laubsted
TYPED OR PRINTED NAME OF SIGNER	TYPED OR PRINTED NAME OF SIGNER
VICE-PRESIDENT	Compliance Manager
TITLE OF SIGNER	TITLE OF SIGNER

(A) THIS FORM IS TO PROVIDE THE AGENCY WITH GENERAL INFORMATION ABOUT THE EQUIPMENT TO BE CONSTRUCTED OR OPERATED. THIS FORM MAY BE USED TO REQUEST A CONSTRUCTION PERMIT, AN OPERATING PERMIT, A CONSTRUCTION OR OPERATING PERMIT.

(B) ENTER THE GENERIC NAME OF THE EQUIPMENT TO BE CONSTRUCTED OR OPERATED: THIS NAME WILL APPEAR ON THE PERMIT WHICH MAY BE ISSUED PURSUANT TO THIS APPLICATION. THIS FORM MUST BE ACCOMPANIED BY OTHER APPLICABLE FORMS AND INFORMATION.

(C) PROVIDE A DESIGNATION IN ITEM 7 ABOVE WHICH YOU WOULD LIKE THE AGENCY TO USE FOR IDENTIFICATION OF YOUR EQUIPMENT. YOUR DESIGNATION WILL BE REFERENCED IN CORRESPONDENCE FROM THIS AGENCY RELATIVE TO THIS APPLICATION. YOUR DESIGNATION MUST NOT EXCEED TEN (10) CHARACTERS.

(D) THIS APPLICATION MUST BE SIGNED IN ACCORDANCE WITH 35 ILL. ADM. CODE 201.154 OR 201.159 WHICH STATES: "ALL APPLICATIONS AND SUPPLEMENTS THERETO SHALL BE SIGNED BY THE OWNER AND OPERATOR OF THE EMISSION SOURCE OR AIR POLLUTION CONTROL EQUIPMENT, OR THEIR AUTHORIZED AGENT, AND SHALL BE ACCOMPANIED BY EVIDENCE OF AUTHORITY TO SIGN THE APPLICATION."

IF THE OWNER OR OPERATOR IS A CORPORATION, SUCH CORPORATION MUST HAVE ON FILE WITH THE AGENCY A CERTIFIED COPY OF A RESOLUTION OF THE CORPORATION'S BOARD OF DIRECTORS AUTHORIZING THE PERSONS SIGNING THIS APPLICATION TO CAUSE OR ALLOW THE CONSTRUCTION OR OPERATION OF THE EQUIPMENT TO BE COVERED BY THE PERMIT.

9. DOES THIS APPLICATION CONTAIN A PLOT PLAN/MAP:

[ ] YES [X] NO

IF A PLOT PLAN/MAP HAS PREVIOUSLY BEEN SUBMITTED, SPECIFY:

AGENCY I.D. NUMBER 0 3 1 6 0 0 B TE APPLICATION NUMBER 8 3 1 2 0 0 1 7

IS THE APPROXIMATE SIZE OF APPLICANT'S PREMISES LESS THAN 1 ACRE?

[ ] YES [X] NO: SPECIFY 26 ACRES

10. DOES THIS APPLICATION CONTAIN A PROCESS FLOW DIAGRAM(S) THAT ACCURATELY AND CLEARLY REPRESENTS CURRENT PRACTICE.

[X] YES [ ] NO

11a. WAS ANY EQUIPMENT, COVERED THIS APPLICATION, OWNED OR CONTRACTED FOR, BY THE APPLICANT PRIOR TO APRIL 14, 1972:

[ ] YES [X] NO

IF "YES" ATTACH AN ADDITIONAL SHEET, EXHIBIT A, THAT:

(a) LISTS OR DESCRIBES THE EQUIPMENT

(b) STATES WHETHER THE EQUIPMENT WAS IN COMPLIANCE WITH THE RULES AND REGULATIONS GOVERNING THE CONTROL OF AIR POLLUTION PRIOR TO APRIL 4, 1972

11b. HAS ANY EQUIPMENT, COVERED BY THIS APPLICATION, NOT PREVIOUSLY RECEIVED AN OPERATING PERMIT:

[ ] YES [X] NO

IF "YES", ATTACH AN ADDITIONAL SHEET, EXHIBIT B, THAT:

(a) LISTS OR DESCRIBES THE EQUIPMENT

(b) STATES WHETHER THE EQUIPMENT

(i) IS ORIGINAL OR ADDITIONAL EQUIPMENT

(ii) REPLACES EXISTING EQUIPMENT, OR

(iii) MODIFIES EXISTING EQUIPMENT

(c) PROVIDES THE ANTICIPATED OR ACTUAL DATES OF THE COMMENCEMENT OF CONSTRUCTION AND THE START-UP OF THE EQUIPMENT

12. IF THIS APPLICATION INCORPORATES BY REFERENCE A PREVIOUSLY GRANTED PERMIT(S), HAS FORM APC-210, "DATA AND INFORMATION—INCORPORATION BY REFERENCE" BEEN COMPLETED.

APPLICATION FOR OPERATING PERMIT ONLY

13. DOES THE STARTUP OF AN EMISSION SOURCE COVERED BY THIS APPLICATION PRODUCE AIR CONTAMINANT EMISSION IN EXCESS OF APPLICABLE STANDARDS:

[ ] YES [X] NO

IF "YES," HAS FORM APC-203, "OPERATION DURING STARTUP" BEEN COMPLETED FOR THIS SOURCE.

[ ] YES [ ] NO

14. DOES THIS APPLICATION REQUEST PERMISSION TO OPREATE AN EMISSION SOURCE DURING MALFUNCTIONS OR BREAKDOWNS:

[ ] YES [X] NO

IF "YES," HAS FORM APC-204, "OPERATION DURING MALFUNCTION AND BREAKDOWN" BEEN COMPLETED FOR THIS SOURCE

[ ] YES [ ] NO

15. IS AN EMISSION SOURCE COVERED BY THIS APPLICATION SUBJECT TO A FUTURE COMPLIANCE DATE:

[ ] YES [X] NO

IF "YES," HAS FORM APC-202, "COMPLIANCE PROGRAM & PROJECT COMPLETION SCHEDULE," BEEN COMPLETED FOR THIS SOURCE:

[ ] YES [ ] NO

16. DOES THE FACILITY COVERED BY THIS APPLICATION REQUIRE AN EPISODE ACTION PLAN (REFER TO GUIDELINES FOR EPISODE ACTION PLANS):

[ ] YES [X] NO

17. LIST AND IDENTIFY ALL FORMS, EXHIBITS, AND OTHER INFORMATION SUBMITTED AS PART OF THIS APPLICATION. INCLUDE THE PAGE NUMBERS OF EACH ITEM (ATTACH ADDITIONAL SHEETS IF NECESSARY):

TOTAL NUMBER OF PAGES _____

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

*DATA AND INFORMATION PROCESS EMISSION SOURCE	

*THIS INFORMATION FORM IS TO BE COMPLETED FOR AN EMISSION SOURCE OTHER THAN A FUEL COMBUSTION EMISSION SOURCE OR AN INCINERATOR. A FUEL COMBUSTION EMISSION SOURCE IS A FURNACE, BOILER, OR SIMILAR EQUIPMENT USED PRIMARILY FOR PRODUCING HEAT OR POWER BY INDIRECT HEAT TRANSFER. AN INCINERATOR IS AN APPARATUS IN WHICH REFUSE IS BURNED.

1. NAME OF PLANT OWNER: Clean Harbors of Chicago, INC.	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER): Clean Harbors of Chicago, INC.
3. STREET ADDRESS OF EMISSION SOURCE: 11800 S. Stony Island Avenue	4. CITY OF EMISSION SOURCE: Chicago

GENERAL INFORMATION

5. NAME OF PROCESS: Compaction of Containers	6. NAME OF EMISSION SOURCE EQUIPMENT: Compactor	
7. EMISSION SOURCE EQUIPMENT MANUFACTURER: Compacting Technologies International	8. MODEL NUMBER: 8560	9. SERIAL NUMBER:
10. FLOW DIAGRAM DESIGNATION(S) OF EMISSION SOURCE: Compactor		
11. IDENTITY(S) OF ANY SIMILAR SOURCE(S) AT THE PLANT OR PREMISES NOT COVERED BY THE FORM (IF THE SOURCE IS COVERED BY ANOTHER APPLICATION, IDENTIFY THE APPLICATION):		
12. AVERAGE OPERATING TIME OF EMISSION SOURCE: 10 HRS/DAY 5 DAYS/WK 50 WKS/YR	13. MAXIMUM OPERATING TIME OF EMISSION SOURCE: 24 HRS/DAY 7 DAYS/WK 52 WKS/YR	
14. PERCENT OF ANNUAL THROUGHPUT: DEC-FEB 25 % MAR-MAY 25 % JUN-AUG 25 % SEPT-NOV 25 %		

INSTRUCTIONS

1. COMPLETE THE ABOVE IDENTIFICATION AND GENERAL INFORMATION SECTION.
2. COMPLETE THE RAW MATERIAL, PRODUCT, WASTE MATERIAL, AND FUEL USAGE SECTIONS FOR THE PARTICULAR SOURCE EQUIPMENT. COMPOSITIONS OF MATERIALS MUST BE SUFFICIENTLY DETAILED TO ALLOW DETERMINATION OF THE NATURE AND QUANTITY OF POTENTIAL EMISSIONS. IN PARTICULAR, THE COMPOSITION OF PAINTS, INKS, ETC., AND ANY SOLVENTS MUST BE FULLY DETAILED.
3. EMISSION AND EXHAUST POINT INFORMATION MUST BE COMPLETED, UNLESS EMISSIONS ARE EXHAUSTED THROUGH AIR POLLUTION CONTROL EQUIPMENT.
4. OPERATING TIME AND CERTAIN OTHER ITEMS REQUIRE BOTH AVERAGE AND MAXIMUM VALUES.
5. FOR GENERAL INFORMATION REFER TO "GENERAL INSTRUCTIONS FOR PERMIT APPLICATIONS," APC-201.

DEFINITIONS

AVERAGE - THE VALUE THAT SUMMARIZES OR REPRESENTS THE GENERAL CONDITION OF THE EMISSION SOURCE, OR THE GENERAL STATE OF PRODUCTION OF THE EMISSION SOURCE. SPECIFICALLY:
- AVERAGE OPERATING TIME - ACTUAL TOTAL HOURS OF OPERATION FOR THE PRECEDING TWELVE MONTH PERIOD.
- AVERAGE RATE - ACTUAL TOTAL QUANTITY OF "MATERIAL" FOR THE PRECEDING TWELVE MONTH PERIOD, DIVIDED BY THE AVERAGE OPERATING TIME.
- AVERAGE OPERATION - OPERATION TYPICAL OF THE PRECEDING TWELVE MONTH PERIOD, AS REPRESENTED BY AVERAGE OPERATING TIME AND AVERAGE RATES.

MAXIMUM - THE GREATEST VALUE ATTAINABLE OR ATTAINED FROM THE EMISSION SOURCE, OR THE PERIOD OF GREATEST OR UTMOST PRODUCTION OF THE EMISSION SOURCE. SPECIFICALLY:
- MAXIMUM OPERATING TIME - GREATEST EXPECTED TOTAL HOURS OF OPERATIONS FOR ANY TWELVE MONTH PERIOD.
- MAXIMUM RATE - GREATEST QUANTITY OF "MATERIAL" EXPECTED PER ANY ONE HOUR OF OPERATION.
- MAXIMUM OPERATION - GREATEST EXPECTED OPERATION, AS REPRESENTED BY MAXIMUM OPERATING TIME AND MAXIMUM RATES.

*EMISSION INFORMATION
51. NUMBER OF IDENTICAL SOURCES (DESCRIBE AS REQUIRED): ONE

AVERAGE OPERATION			
CONTAMINANT	CONCENTRATION OR EMISSION RATE PER IDENTICAL SOURCE		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE
PARTICULATE MATTER	52a. GR/SCF	b. LB/HR	c.
CARBON MONOXIDE	53a. PPM (VOL)	b. LB/HR	c.
NITROGEN OXIDES	54a. PPM (VOL)	b. LB/HR	c.
ORGANIC MATERIAL	55a. PPM (VOL)	b. LB/HR	c.
SULFUR DIOXIDE	56a. PPM (VOL)	b. LB/HR	c.
**OTHER (SPECIFY)	57a. PPM (VOL)	b. LB/HR	c.

MAXIMUM OPERATION			
CONTAMINANT	CONCENTRATION OR EMISSION RATE PER IDENTICAL SOURCE		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE
PARTICULATE MATTER	58a. GR/SCF	b. LB/HR	c.
CARBON MONOXIDE	59a. PPM (VOL)	b. LB/HR	c.
NITROGEN OXIDES	60a. PPM (VOL)	b. LB/HR	c.
ORGANIC MATERIAL	61a. PPM (VOL)	b. LB/HR	c.
SULFUR DIOXIDE	62a. PPM (VOL)	b. LB/HR	c.
**OTHER (SPECIFY)	63a. PPM (VOL)	b. LB/HR	c.

*ITEMS 52 THROUGH 63 NEED NOT BE COMPLETED IF EMISSIONS ARE EXHAUSTED THROUGH AIR POLLUTION CONTROL EQUIPMENT.
***"OTHER" CONTAMINANT SHOULD BE USED FOR AN AIR CONTAMINANT NOT SPECIFICALLY NAMED ABOVE. POSSIBLE OTHER CONTAMINANTS ARE ASBESTOS, BERYLLIUM, MERCURY, VINYL CHLORIDE, LEAD, ETC.

***EXHAUST POINT INFORMATION	
64. FLOW DIAGRAM DESIGNATION(S) OF EXHAUST POINT: COMPACTOR	
65. DESCRIPTION OF EXHAUST POINT (LOCATION IN RELATION TO BUILDINGS, DIRECTION, HOODING, ETC.):	
66. EXIT HEIGHT ABOVE GRADE:	67. EXIT DIAMETER:
68. GREATEST HEIGHT OF NEARBY BUILDINGS: FT	69. EXIT DISTANCE FROM NEAREST PLANT BOUNDARY: FT
AVERAGE OPERATION	MAXIMUM OPERATION
70. EXIT GAS TEMPERATURE: °F	72. EXIT GAS TEMPERATURE: °F
71. GAS FLOW RATE THROUGH EACH EXIT: ACFM	73. GAS FLOW RATE THROUGH EACH EACH EXIT: ACFM

***THIS SECTION SHOULD NOT BE COMPLETED IF EMISSIONS ARE EXHAUSTED THROUGH AIR POLLUTION CONTROL EQUIPMENT.

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

This agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111½, Section 1039. Disclosure of this information is required under that section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

*DATA AND INFORMATION AIR POLLUTION CONTROL EQUIPMENT	

*THIS INFORMATION FORM IS FOR AN INDIVIDUAL UNIT OF AIR POLLUTION CONTROL EQUIPMENT OR AN AIR POLLUTION CONTROL SYSTEM.

1. NAME OF OWNER: **CLEAN HARBORS OF CHICAGO, INC.**	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):
3. STREET ADDRESS OF CONTROL EQUIPMENT: **11800 S. Stony Island Avenue**	4. CITY OF CONTROL EQUIPMENT: **CHICAGO**
5. NAME OF CONTROL EQUIPMENT OR CONTROL SYSTEM: **CARBON ADSORPTION SYSTEM (FOR COMPACTOR)**	

INSTRUCTIONS

1. COMPLETE THE ABOVE IDENTIFICATION.
2. COMPLETE THE APPROPRIATE SECTION FOR THE UNIT OF CONTROL EQUIPMENT, OR THE APPROPRIATE SECTIONS FOR THE CONTROL SYSTEM. BE CERTAIN THAT THE ARRANGEMENT OF VARIOUS UNITS IN A CONTROL SYSTEM IS MADE CLEAR IN THE PROCESS FLOW DIAGRAM.
3. COMPLETE PAGE 6 OF THIS FORM, EMISSION INFORMATION AND EXHAUST POINT INFORMATION.
4. EFFICIENCY VALUES SHOULD BE SUPPORTED WITH A DETAILED EXPLANATION OF THE METHOD OF CALCULATION, THE MANNER OF ESTIMATION, OR THE SOURCE OF INFORMATION. REFERENCE TO THIS FORM ANY RELEVANT INFORMATION OR EXPLANATION INCLUDED IN THIS PERMIT APPLICATION.
5. EFFICIENCY VALUES AND CERTAIN OTHER ITEMS OF INFORMATION ARE TO BE GIVEN FOR AVERAGE AND MAXIMUM OPERATION OF THE SOURCE EQUIPMENT. FOR EXAMPLE, "MAXIMUM EFFICIENCY" IS THE EFFICIENCY OF THE CONTROL EQUIPMENT WHEN THE SOURCE IS AT MAXIMUM OPERATION, AND "AVERAGE FLOW RATE" IS THE FLOW RATE INTO THE CONTROL EQUIPMENT WHEN THE SOURCE IS AT AVERAGE OPERATION.
6. FOR GENERAL INFORMATION REFER TO "GENERAL INSTRUCTIONS FOR PERMIT APPLICATIONS", APC-201.

DEFINITIONS

AVERAGE - THE VALUE THAT SUMMARIZES OR REPRESENTS THE GENERAL CONDITION OF THE EMISSION SOURCE OR THE GENERAL STATE OF PRODUCTION OF THE EMISSION SOURCE. SPECIFICALLY:
AVERAGE OPERATION - OPERATION TYPICAL OF THE PRECEDING TWELVE MONTH PERIOD, AS REPRESENTED BY AVERAGE OPERATING TIME AND AVERAGE RATES.

MAXIMUM - THE GREATEST VALUE ATTAINABLE OR ATTAINED FROM THE EMISSION SOURCE, OR THE PERIOD OF GREATEST OR UTMOST PRODUCTION OF THE EMISSION SOURCE. SPECIFICALLY:
MAXIMUM OPERATION - THE GREATEST EXPECTED OPERATION, AS REPRESENTED BY MAXIMUM OPERATING TIME AND MAXIMUM RATES.

ADSORPTION UNIT

1. FLOW DIAGRAM DESIGNATION(S) OF ADSORPTION UNIT:
   CARBON ADSORPTION

2. MANUFACTURER: CARB TROL

3. MODEL NAME AND NUMBER: 61B75

4. ADSORBENT:
   [XX] ACTIVATED CHARCOAL: TYPE _____ [ ] OTHER: SPECIFY _____

5. ADSORBATE(S):
   VOLATILE ORGANIC COMPOUNDS

6. NUMBER OF BEDS PER UNIT: ONE

7. WEIGHT OF ADSORBENT PER BED: 200 LB

8. DIMENSIONS OF BED:
   THICKNESS 43 IN, SURFACE AREA 1032 SQUARE IN

9. INLET GAS TEMPERATURE: AMBIENT °F

10. PRESSURE DROP ACROSS UNIT: INCH H_2O GAUGE

11. TYPE OF REGENERATION:
    [XX] REPLACEMENT [ ] STEAM [ ] OTHER: SPECIFY _____

12. METHOD OF REGENERATION:
    [ ] ALTERNATE USE OF _____ ENTIRE UNITS [ ] ALTERNATE USE OF _____ BEDS IN A SINGLE UNIT
    [ ] SOURCE SHUT DOWN [ ] OTHER: DESCRIBE

AVERAGE OPERATION OF SOURCE	MAXIMUM OPERATION OF SOURCE
13. TIME ON LINE BEFORE REGENERATION: * MIN/BED	15. TIME ON LINE BEFORE REGENERATION: * MIN/BED
14. EFFICIENCY OF ADSORBER (SEE INSTRUCTION 4): See Summary of Carbon Adsorption %	16. EFFICIENCY OF ADSORBER (SEE INSTRUCTION 4): Capacities %

*** DEPENDENT ON USE OF SYSTEM. SYSTEM WILL BE CHECKED FOR VOC'S**

AFTERBURNER

1. FLOW DIAGRAM DESIGNATION(S) OF AFTERBURNER:

2. MANUFACTURER:

3. MODEL NAME AND NUMBER:

4. COMBUSTION CHAMBER DIMENSIONS:
   LENGTH _____ IN, CROSS-SECTIONAL AREA _____ SQUARE IN.

5. INLET GAS TEMPERATURE: °F

6. OPERATING TEMPERATURE OF COMBUSTION CHAMBER: °F

7. FUEL:
   [ ] GAS [ ] OIL: SULFUR _____ WT%

8. BURNERS PER AFTERBURNER:
   @ BTU HR EACH

9. CATALYST USED:
   [ ] NO [ ] YES: DESCRIBE CATALYST _____

10. HEAT EXCHANGER USED:
    [ ] NO [ ] YES: DESCRIBE HEAT EXCHANGER _____

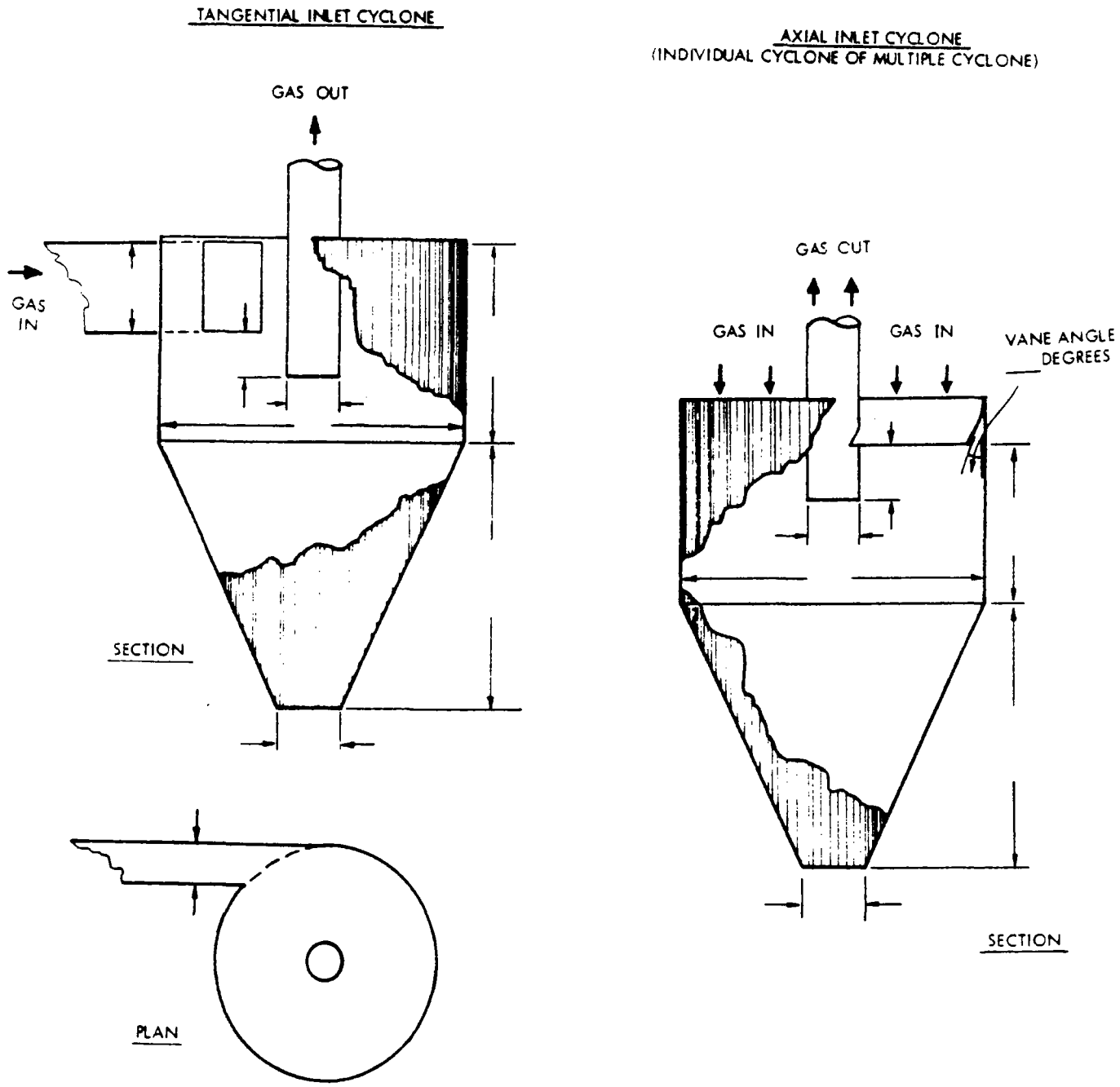
AVERAGE OPERATION OF SOURCE	MAXIMUM OPERATION OF SOURCE
11. GAS FLOW RATE: SCFM	13. GAS FLOW RATE: SCFM
12. EFFICIENCY OF AFTERBURNER (SEE INSTRUCTION 4): %	14. EFFICIENCY OF AFTERBURNER (SEE INSTRUCTION 4): %

CYCLONE

1. FLOW DIAGRAM DESIGNATION(S) OF CYCLONE:

2. MANUFACTURER:	3. MODEL:
4. TYPE OF CYCLONE: ☐ SIMPLE ☐ MULTIPLE	5. NUMBER OF CYCLONES IN EACH MULTIPLE CYCLONE

6. DIMENSION THE APPROPRIATE SKETCH (IN INCHES) OR PROVIDE A DRAWING WITH EQUIVALENT INFORMATION:



AVERAGE OPERATION OF SOURCE	MAXIMUM OPERATION OF SOURCE
7. GAS FLOW RATE: SCFM	9. GAS FLOW RATE: SCFM
8. EFFICIENCY OF CYCLONE (SEE INSTRUCTION 4): %	10. EFFICIENCY OF CYCLONE (SEE INSTRUCTION 4): %

CONDENSER

1. FLOW DIAGRAM DESIGNATION(S) OF CONDENSER:

2. MANUFACTURER:

3. MODEL NAME AND NUMBER:

4. HEAT EXCHANGE AREA: FT^2

AVERAGE OPERATION OF SOURCE	MAXIMUM OPERATION OF SOURCE
5. COOLANT FLOW RATE PER CONDENSER: WATER _____ GPM AIR _____ SCFM OTHER TYPE _____, FLOW RATE _____	10. COOLANT FLOW RATE PER CONDENSER: WATER _____ GPM AIR _____ SCFM OTHER TYPE _____, FLOW RATE _____
6. GAS FLOW RATE: SCFM	11. GAS FLOW RATE: SCFM
7. COOLANT TEMPERATURE: INLET ___ °F OUTLET ___ °F; 8. GAS TEMPERATURE: INLET ___ °F OUTLET ___ °F	12. COOLANT TEMPERATURE: INLET ___ °F OUTLET ___ °F; 13. GAS TEMPERATURE: INLET ___ °F OUTLET ___ °F
9. EFFICIENCY OF CONDENSER (SEE INSTRUCTION 4): %	14. EFFICIENCY OF CONDENSER (SEE INSTRUCTION 4): %

*ELECTRICAL PRECIPITATOR

1. FLOW DIAGRAM DESIGNATION OF ELECTRICAL PRECIPITATOR:

2. MANUFACTURER:

3. MODEL NAME AND NUMBER:

4. COLLECTING ELECTRODE AREA PER CONTROL DEVICE: FT^2

AVERAGE OPERATION OF SOURCE	MAXIMUM OPERATION OF SOURCE
5. GAS FLOW RATE: SCFM	7. GAS FLOW RATE: SCFM
6. EFFICIENCY OF ELECTRICAL PRECIPITATOR (SEE INSTRUCTION 4): %	8. EFFICIENCY OF ELECTRICAL PRECIPITATOR (SEE INSTRUCTION 4): %

SUBMIT THE MANUFACTURER'S SPECIFICATIONS FOR THE ELECTRICAL PRECIPITATOR. REFERENCE THE INFORMATION TO THIS FORM.

*ELECTRICAL PRECIPITATORS VARY GREATLY IN THEIR DESIGN AND IN THEIR COMPLEXITY. THE ITEMS IN THIS SECTION PROVIDE A MINIMUM AMOUNT OF INFORMATION. THE APPLICANT MUST, HOWEVER, SUBMIT WITH THIS APPLICATION THE MANUFACTURER'S SPECIFICATIONS, INCLUDING ANY DRAWINGS, TECHNICAL DOCUMENTS, ETC. IF THE INFORMATION PROVIDED BY THE MANUFACTURER'S SPECIFICATIONS IS INSUFFICIENT FOR FULL AND ACCURATE ANALYSIS, THE AGENCY WILL REQUEST SPECIFIC ADDITIONAL INFORMATION.

FILTER UNIT

1. FLOW DIAGRAM DESIGNATION(S) OF FILTER UNIT:

2. MANUFACTURER:

3. MODEL NAME AND NUMBER:

4. FILTERING MATERIAL:

5. FILTERING AREA:

6. CLEANING METHOD:
☐ SHAKER ☐ REVERSE AIR ☐ PULSE AIR ☐ PULSE JET ☐ OTHER: SPECIFY _____

7. GAS COOLING METHOD: ☐ DUCTWORK: LENGTH _____ FT., DIAM _____ IN.
☐ BLEED-IN AIR ☐ WATER SPRAY ☐ OTHER: SPECIFY

AVERAGE OPERATION OF SOURCE	MAXIMUM OPERATION OF SOURCE
8. GAS FLOW RATE (FROM SOURCE): SCFM	12. GAS FLOW RATE (FROM SOURCE): SCFM
9. GAS COOLING FLOW RATE: BLEED-IN AIR _____ SCFM, WATER SPRAY _____ GPM	13. GAS COOLING FLOW RATE: BLEED-IN AIR _____ SCFM, WATER SPRAY _____ GPM
10. INLET GAS CONDITION: TEMPERATURE _____ °F DEWPOINT _____ °F	14. INLET GAS CONDITION: TEMPERATURE _____ °F DEWPOINT _____ °F
11. EFFICIENCY OF FILTER UNIT (SEE INSTRUCTION 4): %	15. EFFICIENCY OF FILTER UNIT (SEE INSTRUCTION 4): %

SCRUBBER

1. FLOW DIAGRAM DESIGNATION(S) OF SCRUBBER:

2. MANUFACTURER:

3. MODEL NAME AND NUMBER:

4. TYPE OF SCRUBBER:

☐ HIGH ENERGY: GAS STREAM PRESSURE DROP _____ INCH H_2O

☐ PACKED: PACKING TYPE _____, PACKING SIZE _____, PACKED HEIGHT _____ IN.

☐ SPRAY: NUMBER OF NOZZLES _____, NOZZLE PRESSURE _____ PSIG

☐ OTHER: SPECIFY _____ ATTACH DESCRIPTION AND SKETCH WITH DIMENSIONS

5. TYPE OF FLOW:

☐ COCURRENT ☐ COUNTERCURRENT ☐ CROSSFLOW

6. SCRUBBER GEOMETRY:

LENGTH IN DIRECTION OF GAS FLOW _____ IN., CROSS-SECTIONAL AREA _____ SQUARE IN.

7. CHEMICAL COMPOSITION OF SCRUBBANT:

AVERAGE OPERATION OF SOURCE	MAXIMUM OPERATION OF SOURCE
8. SCRUBBANT FLOW RATE: GPM	12. SCRUBBANT FLOW RATE: GPM
9. GAS FLOW RATE: SCFM	13. GAS FLOW RATE: SCFM
10. INLET GAS TEMPERATURE: °F	14. INLET GAS TEMPERATURE: °F
11. EFFICIENCY OF SCRUBBER (SEE INSTRUCTION 4): _____ % PARTICULATE _____ % GASEOUS	15. EFFICIENCY OF SCRUBBER (SEE INSTRUCTION 4): _____ % PARTICULATE _____ % GASEOUS

OTHER TYPE OF CONTROL EQUIPMENT

1. FLOW DIAGRAM DESIGNATION(S) OF "OTHER TYPE" OF CONTROL EQUIPMENT:

2. GENERIC NAME OF "OTHER" EQUIPMENT:

3. MANUFACTURER:

4. MODEL NAME AND NUMBER:

5. DESCRIPTION AND SKETCH, WITH DIMENSIONS AND FLOW RATES, OF "OTHER" EQUIPMENT:

AVERAGE OPERATION OF SOURCE	MAXIMUM OPERATION OF SOURCE
6. FLOW RATES: _____ GPM _____ SCFM	8. FLOW RATES: _____ GPM _____ SCFM
7. EFFICIENCY OF "OTHER" EQUIPMENT (SEE INSTRUCTION 4): %	9. EFFICIENCY OF "OTHER" EQUIPMENT (SEE INSTRUCTION 4): %

EMISSION INFORMATION

1. NUMBER OF IDENTICAL CONTROL UNITS OR CONTROL SYSTEMS (DESCRIBE AS REQUIRED):

AVERAGE OPERATION OF SOURCE

CONTAMINANT	CONCENTRATION OR EMISSION RATE PER IDENTICAL CONTROL UNIT OR CONTROL SYSTEM		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE
PARTICULATE MATTER	2a. GR/SCF	b. LB/HR	c.
CARBON MONOXIDE	3a. PPM (VOL)	b. LB/HR	c.
NITROGEN OXIDES	4a. PPM (VOL)	b. LB/HR	c.
ORGANIC MATERIAL	5a. * PPM (VOL)	b. LB/HR	c. SUMMARY OF CARBON ADSORPTION
SULFUR DIOXIDE	6a. PPM (VOL)	b. LB/HR	c.
OTHER (SPECIFY)	7a. PPM (VOL)	b. LB/HR	c.

MAXIMUM OPERATION OF SOURCE

CONTAMINANT	CONCENTRATION OR EMISSION RATE PER IDENTICAL CONTROL UNIT OR CONTROL SYSTEM		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE
PARTICULATE MATTER	8a. GR/SCF	b. LB/HR	c.
CARBON MONOXIDE	9a. PPM (VOL)	b. LB/HR	c.
NITROGEN OXIDES	10a. PPM (VOL)	b. LB/HR	c.
ORGANIC MATERIAL	11a. * PPM (VOL)	b. LB/HR	c. SUMMARY OF CARBON ADSORPTION
SULFUR DIOXIDE	12a. PPM (VOL)	b. LB/HR	c.
OTHER (SPECIFY)	13a. PPM (VOL)	b. LB/HR	c.

**"OTHER" CONTAMINANT SHOULD BE USED FOR AN AIR CONTAMINANT NOT SPECIFICALLY NAMED ABOVE. POSSIBLE OTHER CONTAMINANTS ARE ASBESTOS, BERYLLIUM, MERCURY, VINYL CHLORIDE, LEAD, ETC.

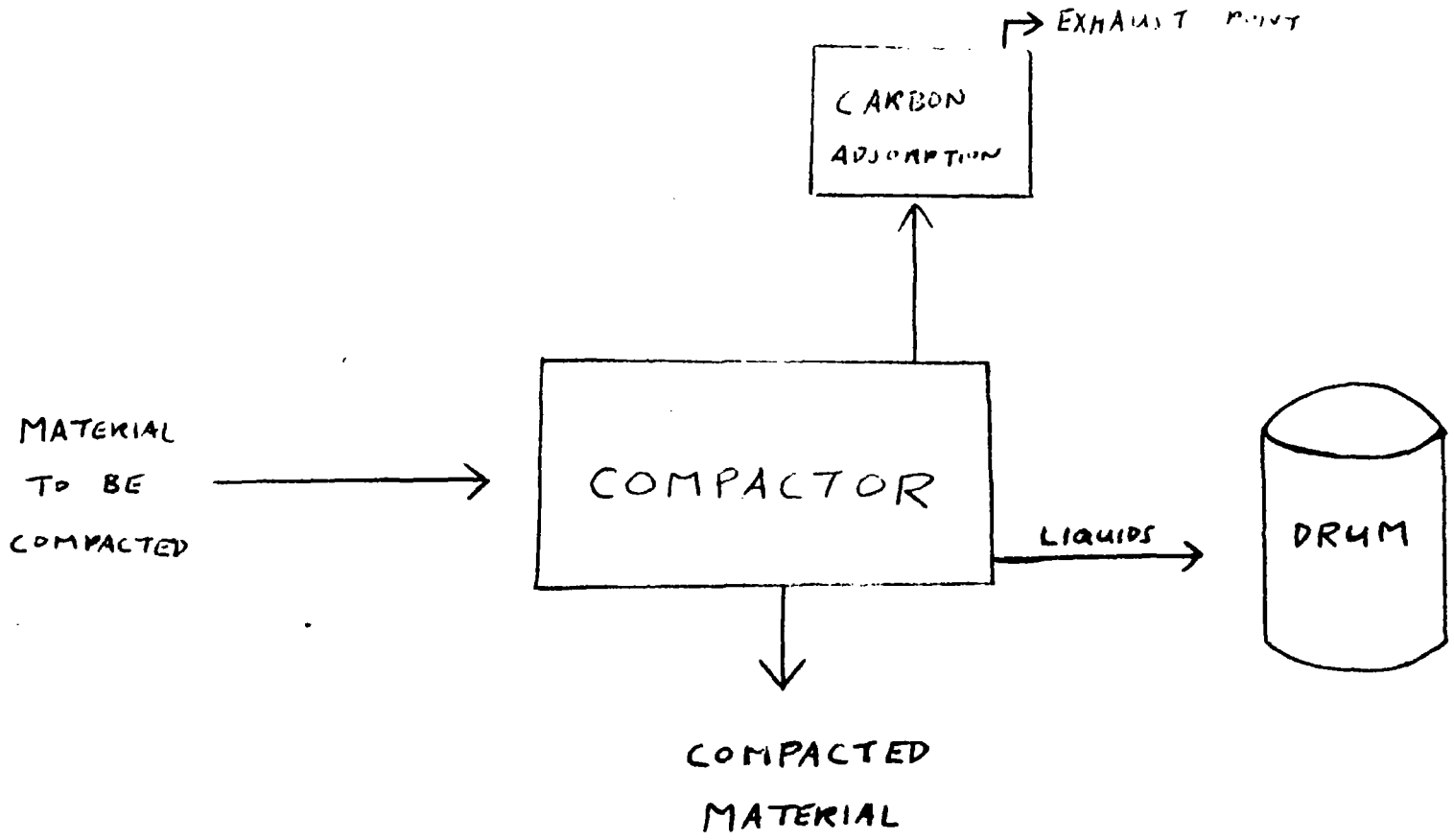
***DEPENDING ON ORGANIC MATERIAL (SEE SUMMARY OF CARBON ADSORPTION CAPACITIES)**
AVERAGE REMOVAL > 97%

EXHAUST POINT INFORMATION

1. FLOW DIAGRAM DESIGNATION(S) OF EXHAUST POINT: **EXAUST POINT**
2. DESCRIPTION OF EXHAUST POINT (LOCATION IN RELATION TO BUILDINGS, DIRECTION, HOODING, ETC.): **OUTSIDE CONTAINER STORAGE AREA**
3. EXIT HEIGHT ABOVE GRADE: **4Ft.**
4. EXIT DIAMETER: **2½ inches**
5. GREASTEST HEIGHT OF NEARBY BUILDINGS: **25** FT
6. EXIT DISTANCE FROM NEAREST PLANT BOUNDARY: **100** FT

AVERAGE OPERATION OF SOURCE	MAXIMUM OPERATION OF SOURCE
7. EXIT GAS TEMPERATURE: **AMBIENT** °F	9. EXIT GAS TEMPERATURE: **AMBIENT** °F
8. GAS FLOW RATE THROUGH EACH EXIT: **<75** ACFM	10. GAS FLOW RATE THROUGH EACH EXIT: **<75** ACFM

PROCESS FLOW DIAGRAM



COMPACTOR

Illinois Environmental Protection Agency · P. O. Box 19276, Springfield, IL 62794-9276

217/524-3300

October 22, 1981
Revised: December 24, 1992

Clean Harbors of Chicago, Inc.
Attn: James R. Laubsted
11800 South Stony Island Avenue
Chicago, Illinois 60617

Re: 0316000051 -- Cook County
Clean Harbors of Chicago, Inc.
ILD000608471
Permit Number: 1980-36-OP
Log Numbers: 1992-342 and 1992-317 (1992-316, 1992-179, 1992-279 1991-360,1991-296, 1991-248, 1991-243, 1991-177, 1990-476, 1990-277, 1990-250, 1990-156, 1990-155, 1990-007, 1989-237, 1984-759, 1985-219, 1986-083, 1986-101, 1986-145, 1987-022, 1988-294, 1989-007, 1989-173)
State Permit File

Gentlemen:

Permit is hereby granted to Clean Harbors, to operate a solid waste management site located on 26.5 acres in that part of the East 1/4 of fractional Section 23 and of the West 1/2 of Section 24, all in Township 37N, Range 14E of the 3rd P.M., south of the Indian Boundary Line and that part of Lake Calumet in said Township and Range, as more specifically described in the original application for a development permit.

Final plans, specifications, application(s) and supporting documents as submitted and approved shall constitute part of this permit and are identified on the records of the Illinois Environmental Protection Agency, Division of Land Pollution Control by the permit number(s) and log number(s) designated in the heading above. The permit is issued subject to the standard conditions attached hereto and incorporated herein by reference, and further subject to the following special conditions:

1. This permit allows Clean Harbors to operate the following units:

   A. Four (4) 7,000 gallon in-ground, lines concrete receiving tanks.

   B. A 200,000 gallon steel, primary settling tank.

   C. A 400,000 gallon steel, mix tank.

   D. A chemical treatment unit (IPSI Model #SAL2-100).

E. Four (4) gravitators/clarifiers (IPSI Model #ESS-075).

F. A 4,000 gallon steel, effluent collection tank.

G. A 175,000 gallon steel, effluent discharge tank.

H. A 200,000 gallon steel, sludge concentrator tank.

I. A 10,000 gallon steel, sludge condition tank.

J. A plate and frame filter press (Netzch Model 1200/88).

K. A chemical reduction/oxidation pretreatment system (for hexavalent chrome, cyanide, phenolic and ammonia contaminated waste streams) consisting of (3) reactor vessels, each equipped with an air scrubber emission control system.

L. An oily wastewater pretreatment system consisting of two (2) 6,000 gallon steel, oil/water separators, a heat exchanger, a 6,000 gallon steel (oil storage) tank and a 6,000 gallon steel (cuff storage) tank.

M. A carbon adsorption system (Baron-Blakeslee's Dual Bed Model No. CAV40-EX), including a water/solvent condensate separation unit designed to control organic emissions for the aerated storage/mix tanks and oil/water separators.

N. A sludge dewatering system consisting of a 10,000 gallon sludge feed tank and a trailer-mounted recessed plate and frame filter press (Netzch Model 1200/88).

O. Two (2) 300 gallon mixing chambers.

P. One (1) 850 gallon flocculation tank.

Q. One (1) 1,400 gallon surge tank.

R. One (1) cooling tank and cooling tower.

S. One (1) 13,000 gallon in-ground, concrete, sludge storage tank.

T. One (1) CTI PRO 8,560 compactor with carbon absorption system.

U. All piping, sumps, pumps, containment systems and other appurtenances as described in the aforementioned application(s).

Unit Designation	Size	No. of Drums
Container Storage Area		

a. (Within Processing Building #2)

i)	Staging area	20 x 26	72
ii)	Acidic drums area	29 x 26	192
iii)	Alkaline drums area	12 x 26	96
iv)	Organic drums area	24 x 26	192

b. Outside Storage Area #1 (for development only) two (2) 45 foot trailers

i)	Potentially Infectious Medical Waste (PIMW)	20 x 50	

c. Outside Storage Area #2

i)	Staging area	41 x 51	80
ii)	Oxidizers	20 x 30	96
iii)	Reactives	20 x 30	96
iv)	Poisons	20 x 30	96
v)	Flammable #1	50 x 42	160
vi)	Flammable #2	50 x 42	160
vii)	Truck unloading area	66 x 70	3 roll-off boxes

d. Outside Storage Area #3 (for development only)

i)	Non-hazardous drum storage area	30 x 62	336
ii)	Bulking area	23 x 43	1 roll-off box

e. Truck sampling pad

f. Bulk solids storage pad (for development only)

i) Only wastes which pass the paint filter test may be stored in this area. 6 roll-off boxes

g. Household hazardous waste storage (see Special Condition 39)

No waste may be received for the outside storage area #1 or the bulk solids storage pad or outside storage area #3 (for development only) until such time as an operating permit is issued by this Division for each area.

2. The treated effluent shall meet the requirements specified by the Metropolitan Water Reclamation District of Greater Chicago and this Agency's Division of Water Pollution Control, including Permit No. 1986-EP-1157.

3. The facility is permitted to accept for treatment wastes with these parameters within the following limitations:

pH	Range 0 to 14
Arsenic	10,000 ppm
Barium	10,000 ppm
Cadmium	10,000 ppm
Chromium	250,000 ppm
Copper	150,000 ppm
Iron	200,000 ppm
Lead	150,000 ppm
Nickel	150,000 ppm
Phenol	50,000 ppm
Selenium	10,000 ppm
Silver	10,000 ppm
Zinc	180,000 ppm
Cyanide	150,000 ppm
Mercury	1.0 ppm
Sulfide (reactive)	50,000 ppm

and TCLP (organic) wastes if a treatability study is provided.

The facility is also permitted to accept for treatment for the purposes of dewatering non-hazardous semi-solids and sludges.

The facility is also permitted to bulk solids which pass the paint filter test within process building #2 and the outside container storage truck unloading area.

The facility is also permitted to treat characteristic (D002 only) oil by blending with used oil to render the mixture non-hazardous by this characteristic (D002). This activity shall take place in process building #2 in a tanker truck located below the filter press on the mezzanine. Each tanker truck contents shall be tested to ensure the mixture has not retained its hazardous characteristic.

The facility is permitted to store potentially infectious medical waste (PIMW).

The facility is also permitted to remove liquids from containers by pumping in the drum staging areas, the acid storage area or the alkaline storage area.

The facility is also permitted to store any waste for which the permittee has an ultimate disposal site (i.e., incineration, landfill recycler).

4. The concentrations of Mercury in the wastes accepted for treatment (including wastes received under generic waste stream Permit #000053) shall not exceed 3 ppb unless Clean Harbors demonstrates that their treatment is effective for that particular waste stream in reducing the concentration of Mercury below this criteria. Documentation of the demonstration shall be maintained at the facility and shall be made available for inspection upon request.

5. Wastes received for treatment containing any amount of the following items shall not be permitted for acceptance at the facility: PCB, PBB, Insecticides and Pesticides.

6. Wastes containing solvents of a quantity sufficient to render the waste ignitable or explosive shall not be permitted for treatment at the facility. Aqueous wastes containing treatment levels of organics may not be accepted at this facility unless a treatment demonstration is made to the Agency in the form of an attachment to the special waste stream permit application(s) submitted to the Agency for review and approval.

7. Special wastes received at the site for storage and treatment shall be transported to the facility utilizing the Agency's supplemental waste stream permit and manifest systems.

8. Special wastes generated at the facility for disposal, storage, incineration, recovery or further treatment elsewhere shall be transported to the receiving facility utilizing the Agency's supplemental waste stream permit and manifest systems.

9. This facility shall be operated in accordance with this Agency's Division of Air Pollution Control Permit Number 83120017.

10. All loading/unloading of special wastes shall be accomplished over spill containment devices.

11. Any modification to the facility shall be subject of an application for supplemental permit for site modification submitted to this Agency.

12. Permittee shall notify the Agency of any changes from the information submitted to the Agency in its application for a developmental and operating permit for this site. Permittee shall notify the Agency of any changes in the names and addresses of both beneficial and legal titleholders, to the herein permitted site. Such notification shall be made in writing within fifteen (15) days of such change and shall include the name or names of any parties in interest and the address of their place of abode; or if a corporation, the names and addresses of its registered agent.

13. This permit is issued subject to review and modification by the Agency as deemed necessary to fulfill the intent and purpose of the Illinois Environmental Protection Act and all applicable environmental rules and regulations.

14. The new reactors shall be constructed in accordance with ASTM 3299 or its equivalency.

15. The Permittee shall inspect the tank systems yearly to assess their condition. This inspection shall consist of the visual inspections subject to the following modifications:

    a. Tanks shall be entered in accordance with 20 CFR 1910.41(d)(11).

    b. A detailed visual inspection of the tank's interior shall be conducted on an annual basis to ensure the tank's integrity. During this internal inspection, the interior surface shall be inspected for lack of surface resin, delamination, translucency/discoloration, air bubbles and thin areas. Corrective action as specified by the manufacturer of these tanks shall be taken if the internal inspection indicates that the interior surface of a tank system has been detrimentally affected by the hazardous wastes which have been stored, or treated in it.

    c. A leak test or other integrity assessment as approved by the Agency shall be conducted annually on the ancillary equipment.

    d. The annual inspection of each tank shall be certified by a qualified, independent, registered professional engineer.

    e. All waste and washwater generated during evacuation of the tanks shall be managed as a hazardous waste.

    f. Results of these inspections indicate a tank system is leaking, the permittee must cease using the tank until it is repaired or replaced.

    g. If the results of these inspections indicate a tank system is leaking, the permittee must cease using the tank until it is repaired or replaced.

16. A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.

17. A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

18. The container in the storage areas must be arranged so that a 2 foot aisle space exists for inspection. Furthermore, containers may only be stored in rows two abreast.

19. The container storage areas must be inspected daily for signs of cracks or gaps in the base. Containers must be removed from areas which are showing structural deficiency until such time that the area has been repaired.

20. The approval of the design of these container storage areas does not imply that these areas are designed in compliance with 35 IAC 724.

21. All wastes received at the facility shall be reviewed for compatibility, using the methods and procedures described in "A Method for Determining the Compatibility of Hazardous Waste" USEPA document EPA-600/2-80-076 dated April, 1980, in addition to the facilities approved waste analysis

22. All lab packs shall be opened within the confines of an operating fume hood. The Permittee shall not store containers holding waste that is incompatible with any waste or other materials stored nearby unless it is separated from the other material and protected from them by means of a dike, berm or other device.

23. A packing list identifying all hazardous waste classes inside of a lab pack must be attached to its outside container prior to it being placed into storage.

24. Only lab packs packaged in accordance with 49 CFR 173.12 may be received at this site for temporary storage, repackaging/consolidation of compatible materials for on-site treatment, or treatment/disposal off-site at permitted facilities.

25. Fume hoods shall be constructed in accordance with the practices recommended by ACGIH Committee on Industrial Ventilation.

26. Ventilation of the lab pack area must be in accordance with 20 CFR 1910.1000.

27. The new lime storage silo and ferric chloride storage tank shall not be constructed and operated until all necessary permits from the Division of Water Pollution Control and Air Pollution Control have also been obtained.

28. The collection of precipitation and run-on within the concrete containment area around the medical waste storage area shall be removed as soon as possible and processed through the treatment plant.

29. All waste in outside storage area #1 shall be stored in an area where the ambient temperature is less than 45° degrees Fahrenheit except when conducting waste transfer operations to avoid putrescible conditions. During waste transfer operations at no time shall the surface temperature of the waste containers be permitted to rise above 60° degrees Fahrenheit.

30. PIMW packages shall not be compacted or subjected to stress that compromises the integrity of the container.

31. Empty reusable PIMW containers or facility equipment (e.g., carts, squeegees or shovels) which are visually contaminant with PIMW shall be cleaned in a designated area.

32. Residues from cleaning any PIMW contaminated container, equipment or work surface shall be regulated as PIMW, except when discharged directly to a sewer or treatment system.

33. Copies of all records required to be kept under Section 56 of the Act shall be retained by and kept at the storage facility for three years and shall be made available at the storage facility during normal business hours for inspection and photocopying by the Agency. The retention period for all records required under this Section is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested in writing by the Agency.

    In addition to the requirements listed above, storage facilities shall also comply with the following requirements:

    a. Storage facilities shall weigh in pounds the amount of PIMW received. PIMW shall be weighed with a device for which certification has been obtained under the Weights and Measures Act (Ill. Rev. Stat. 1989, ch. 147, pars. 101 et. seq.).

    b. PIMW packages shall be stored in designated areas so as not to contaminate other waste or materials.

    c. All cardboard packages shall be elevated and stored in an enclosed area.

    d. PIMW shall be stored on a surface that allows drainage and collection of liquids and that minimizes exposure of PIMW to workers and the public.

    e. Signs identifying the storage facility as containing PIMW shall be prominently displayed at the storage facility on the exterior of entry doors or gates.

    f. Facility personnel training must be provided to all staff involved in the handling of PIMW. Personnel training must include, at a minimum, a thorough explanation of the operating procedures to be taken during normal and emergency situations. Training records on current personnel that verify training shall be kept at the facility until closure of the facilities. Training records on former employees must be kept for at least three years from the date the employee last worked at the facility.

g. Storage facilities must have a written contingency plan that is implemented in the event of a discharge or personal injury. The contingency plan must describe the actions that personnel must take in response to emergency situations such as, but not limited to, personal injury, discharges of PIMW, rupture of plastic bags, and equipment failure. This contingency plan must, at a minimum, include a list of all emergency equipment at the facility, an up-to-date list of names, addresses and phone numbers (office and home) of all persons qualified to act as emergency coordinator, procedures for cleanup, protection of personnel, disposal of spill residue, repackaging of PIMW, alternate arrangements for PIMW storage and transfer. A copy of the contingency plan must be maintained at the facility. Emergency phone numbers and a brief description of the emergency procedures shall be posted at the storage facility.

h. The owner or operator shall keep a written operating record at the storage facility. At a minimum the following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

i. Quantities and disposition of PIMW stored or transferred;

ii. Date and time the PIMW load was received at the storage facility;

iii. Date and time the PIMW load left the storage facility;

iv. Waste stream permit number (authorization number, if applicable) issued by the Agency;

v. Generator name(s), location(s), and if applicable, the identification number(s) issued by the Agency for each PIMW load received at the storage facility;

vi. Temperature(s) the PIMW load was maintained at the storage facility;

vii. Destinations of PIMW packages, which shall include at a minimum; the name of the receiving facility, the location of the receiving facility, the identification number of the receiving facility issued by the Agency (if applicable, and the disposition (i.e., storage, transfer, treatment, or disposal);

viii. Identify incidents (including discharges and personal injuries) and response taken.

34. Upon closure of a storage facility, the owner or operator shall decontaminate the PIMW area, equipment and structures.

35. The coating in the outside storage area #2 shall be inspected for signs of deterioration after each spill and shall be touched up (i.e., the coating reapplied in the area) if such signs are present.

36. A vector control specialist shall inspect the outside storage area #1 at least quarterly. If necessary, vector control measures shall be taken. The results of these inspections shall be maintained as part of the facility's operating record and be made available to the Agency upon written or verbal request.

37. The facility shall maintain a daily operating record. For all wastes except PIMW (see Condition 33 for the requirements applicable to PIMW); the operating record must be able to track waste streams as they pass through the facility. It must have the following entries for each shipment of waste received:

    . A unique identification number for each container received.
    . The generator's name and location.
    . The date and time of arrival.
    . The amount received (pounds).
    . The date treated or shipped off-site.

38. This facility shall be operated in accordance with the new Potentially Infectious Medical Waste (PIMW) legislation (Section 3.81 and Title XV of the Act). This legislation mandates the Illinois Pollution Control Board to adopt regulations specific to PIMW by January 1, 1993. This facility will be subject to the new PIMW regulations upon the effective date of those regulations. In addition, the facility shall submit to the Agency a supplemental permit application (LPC-PA1) within 60 days of the effective date of the new regulations for all modifications required as a result of these new regulations.

39. Conditions applicable to household hazardous wastes under Contract SWD-1007 between the IEPA and CHCI:

    a) This waste will be manifested to Clean Harbors under a manifest using Waste Stream Permit 000285 for authorization. The State of Illinois will retain generator status of these wastes when the wastes are sent for ultimate disposition.

    b) These wastes must be stored in self-contained trailer. The trailers may be stored anywhere on the asphalted portions of the facility.

    c) The wastes must not remain on-site for more than one year.

    d) If the IEPA requests repackaging of the waste, Clean Harbors may act in this capacity.

e) Special Conditions #12 and #13 of Supplemental Permit 1983-80-SP do not apply to this waste as the State of Illinois is still the generator of the waste.

f) Adequate aisle spacing must be maintained to allow inspection of the drums for leakage and the drums must be inspected daily. If leakage is detected, Clean Harbors must perform appropriate cleanup measures in accordance with their contingency plan.

Very truly yours,

Lawrence W. Lastep, P.E., Manager
Permit Section
Division of Land Pollution Control
Bureau of Land

LWE:MAS:lat/sp/0164Z,1-12

Illinois Environmental Protection Agency · P. O. Box 19276, Springfield, IL 62794-9276

217/782-2113

JOINT CONSTRUCTION AND OPERATING PERMIT

PERMITTEE

Clean Harbors of Chicago, Inc.
Attn: James R. Laubsted
11800 S. Stony Island Avenue
Chicago, IL 60617

Application No.: 91090060
Applicant's Designation: COMPACTOR
Subject: Compactor
Date Issued: December 30, 1991

I.D. No.: 031600BTE
Date Received: November 19, 1991
Operating Permit Expiration Date: November 19, 1992

Location: 11800 S. Stony Island Avenue, Chicago

Permit is hereby granted to the above-designated Permittee to CONSTRUCT and OPERATE emission source(s) and/or air pollution control equipment consisting of shredder and compactor with carbon cannister as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Operation of the emission source(s) included in this permit shall not begin until all associated air pollution control equipment has been constructed and is operational.

2. This permit is issued based on negligible emissions of nitrogen oxides (NO_x) and organic material (OM) from the shredder and compactor. For this purpose emissions of each contaminant shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/yr.

3a. The permittee shall install a carbon adsorption system with a saturation indicator, prior to operating the shredder and compactor unit, to control organic material emissions.

b. The permittee shall change the carbon filters when the saturation indicator indicates that the carbon is saturated.

c. The permittee shall keep records of the maintenance and operation of the carbon adsorption system including the replacement of the carbon filters. These records shall be retained for three years and shall be available fo inspection by the Agency.

4. At the time of renewal, the Permittee shall submit the records required in condition 3c.

5. Containers or materials that had contained RCRA type waste shall be triple rinsed prior to shredding or compacting.

6. The Permittee shall not shred or compact aerosol cans without obtaining written approval from the Agency.

7. In the event that the operation of this facility results in an odor nuisance or other nuisance due to the use of waste as a raw material or any other cause, the applicant shall take all appropriate and necessary actions, including but not limited to, changes in raw material or installation of controls, in order to eliminate the nuisance.

Please note that this permit has been reviewed according to applicable state law and regulations. However, the U.S. Environmental Protection Agency has promulgated an extensive set of regulations for the control of a variety of sources of volatile organic compounds (VOC) in the six-county Chicago metropolitan area (Cook, DuPage, Kane, Lake, McHenry and Will County), 55 Federal Register 26814-26909 (June 29, 1990). These federal regulations have a compliance date of July 1, 1991, and may be applicable to your plant.

Donald E. Sutton/jmm

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:JSN:jmm/sp/912M/16-17

cc: Region 1
Renee Stadel; legal counsel

Illinois Environmental Protection Agency · P. O. Box 19276, Springfield, IL 62794-9276

217/782-2113

OPERATING PERMIT

PERMITTEE

Clean Harbors of Chicago, Inc.
Attn: James R. Laubsted
11800 S. Stony Island Avenue
Chicago, Illinois 60617

Application No.: 91090060 I.D. No.: 031600BTE
Applicant's Designation: Compactor Date Received: August 17, 1992
Subject: Compactor
Date Issued: October 5, 1992 Expiration Date: September 30, 1995
Location: 11800 S. Stony Island Avenue, Chicago

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of a shredder and compactor with carbon canister as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. This permit is issued based on negligible emissions of nitrogen oxides (NO_X) and organic material (OM) from the shredder and compactor. For this purpose emissions of each contaminant shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/yr.

2a. The permittee shall install a carbon adsorption system with a saturation indicator, prior to operating the shredder and compactor unit, to control organic material emissions.

b. The permittee shall change the carbon filters when the saturation indicator indicates that the carbon is saturated.

c. The permittee shall keep records of the maintenance and operation of the carbon adsorption system including the replacement of the carbon filters. These records shall be retained for three years and shall be available for inspection by the Agency.

3. The Permittee shall submit the records required in Condition 2c upon renewal of permit.

4. Containers or materials that had contained RCRA type waste shall be triple rinsed prior to shredding or compacting.

5. The Permittee shall not shred or compact aerosol cans without obtaining written approval from the Agency.

6. In the event that the operation of this facility results in an odor nuisance or other nuisance due to the use of waste as a raw material or any other cause, the applicant shall take all appropriate and necessary actions, including but not limited to, changes in raw material or installation of controls, in order to eliminate the nuisance.

If you have any questions on this, please call Art. G. Rusiana at 217/782-2113.

Donald E Sutton

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:AGR/mls/468Z/87-88

cc: Region 1

COMPACTING
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HANDBOOK FOR

THE CTI

WASTE COMPACTION SYSTEM

PREPARED FOR

CLEAN HARBORS

Reducing Ha

THE BETTER TECHNOLOGY

GTI

CTI "PRO" C

The Better Way To R

A Better Way

Bulk disposal of hazardous waste is expensive and time-intensive. It's environmentally conscious world. Are CTI we have a better way.

The CTI PRO 8500 Compaction System is a better way for hazardous and bio-hazardous waste disposal. Hazardous material is compacted for disposal in steel drums. Fiber drums are used for materials to be incinerated. A microprocessor controlled system delivers the compaction force you need. The PRO's barrel containment chamber and patented compaction system is safe, smart, sensible way to dispose of waste material.

Safe

The PRO's patented compaction system sets the standard for compaction safety. With proper operation, user safety is assured. The CTI PRO unit will not operate if the door is open. Designed and built to meet or exceed Codes governing compactors.

All electrical components are U.L. listed and [illegible] for NEMA 4 or NEMA 7 [illegible].

Hazardous wastes are safely [illegible] barrel containment [illegible] and [illegible] containment chamber.

Smart

Microprocessor Controlled

The PRO's unique [illegible] controlled system [illegible] results in better [illegible] minimizing disposal costs.

Barrel Containment

Barrels are completely surrounded in a high grade steel barrel containment chamber. The fully encased barrel allows higher compaction ratios without barrel distortion.

Patented "Quick Chute"

"Quick Chutes" front access permits loading of the compactor without opening the door. Rear mounted "Quick Chutes" also available for installation out of traffic patterns.

Easy-To-Operate

The PRO features simple one-touch operation. No special training is necessary.

The "Quiet" Compactor

The PRO's fully enclosed design operates quietly in your workplace. (Approximately 55 dbs.)

Sensible

Just 8 feet tall, less than 3 feet wide, and weighing only 2,800 pounds, the PRO is a compact compactor. The innovative two-stage hydraulic system utilizes one-fifth the hydraulic oil of conventional units. The energy efficient 2 hp motor easily adapts to power sources readily available. When in place, the entire unit covers less than nine sq. feet of floor space.

Backed by Commitment to Quality & Service

CTI responds to your needs . . . before and after purchase. We work with you to guarantee that each and every system performs to specification and your satisfaction. Our technical and service staffs are dedicated to prompt action and response.

Reliable

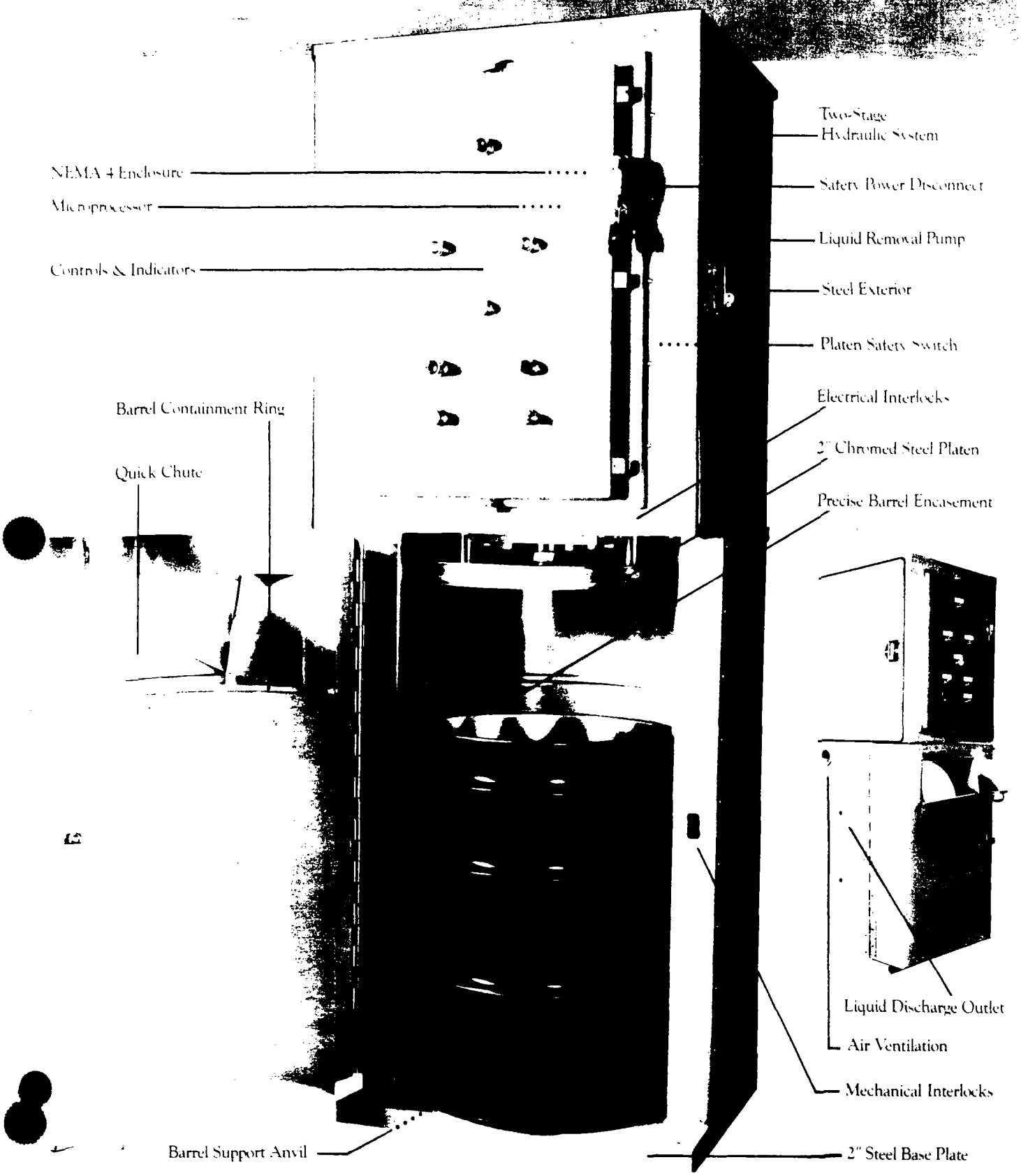
Each compactor is subjected to a rigid and extensive final factory test procedure. Testing includes full pressure, multi-cycle operation.

Available Options for Your Special Needs

- **Explosion-Proof Design**
  Class I, Division I electrical, hydraulic and motor components meet or exceed NEC and NFPA guidelines to conform to NEMA 7 standards.
- **Liquid Waste Removal**
  A powerful pump efficiently removes liquids during compaction cycle.
- **Increased Compaction Ratios**
  A larger cylinder allows increased compaction pressure to 85,000 lbs. for even higher compaction ratios.
- **HEPA Filter**
  Microprocessor controlled nuclear grade filtration system removes particles down to 0.3 microns with 99.97% efficiency.
- **HEPA Carbon Filtration System**
  Carbon absorber removes fumes and/or radioactive iodine down to 0.3 microns with 99.97% efficiency.
- **Fire Extinguisher Systems**
  Electronic temperature probe and fittings permit connection to existing dry chemical fire extinguishing systems.
- **Stainless Steel Components**
  Grade 304 stainless steel construction is desirable in corrosive or radioactive environments for ease of wipedown.
- **Barrel Crushing Configuration**
  Custom hydraulics and a special platen insert are used for crushing barrels.
- **Right-Hand Hinged Door**
  Main door hinge can be reversed to accommodate unit positioning.
- **Rear Mounted "Quick Chute"**
  Rear loading feature allows unit placement out of traffic patterns.
- **Hand Truck**
  Designed specifically for the CTI PRO system.

Note: CTI engineering department will review custom requirements on request.

OMPACTOR


Two-Stage Hydraulic System
NEMA 4 Enclosure
Safety Power Disconnect
Microprocessor
Liquid Removal Pump
Controls & Indicators
Steel Exterior
Platen Safety Switch
Electrical Interlocks
Barrel Containment Ring
2" Chromed Steel Platen
Quick Chute
Precise Barrel Encasement
Liquid Discharge Outlet
Air Ventilation
Mechanical Interlocks
Barrel Support Anvil
2" Steel Base Plate

CTI "PRO" C

The Better Way To

A Better Way

Safe disposal of hazardous waste is expensive and difficult in today's environmentally conscious world. At CTI, we have a better way.

The CTI PRO 8500 Compaction System is a better way for hazardous and bio-hazardous waste disposal. Hazardous material is compacted for disposal in steel drums. Fiber drums are used for materials to be incinerated. A microprocessor controlled system delivers the compaction force you need. The PRO's barrel containment chamber and patented compaction system is a safe, smart, sensible way to dispose of waste material.

Safe

The PRO's patented compaction system sets the standard for compaction safety. With proper operation, user safety is assured. The CTI PRO unit will not operate if the door is open. Designed and built to meet or exceed Codes governing compactors.

All electrical components are UL listed and are manufactured for NEMA 4 or NEMA 7 applications.

Hazardous wastes are safely [illegible] containment chamber.

Smart

Microprocessor Controlled

The PRO's simple [illegible] controlled system [illegible] cycles resulting in better [illegible] minimizing disposal costs.

Barrel Containment

Barrels are completely surrounded in a high grade steel barrel containment chamber. The fully encased barrel allows higher compaction ratios without barrel distortion.

Patented "Quick Chute"

"Quick Chutes" front access permits loading of the compactor without opening the door. Rear mounted "Quick Chutes" also available for installation out of traffic patterns.

Easy-To-Operate

The PRO features simple one-touch operation. No special training is necessary.

The "Quiet" Compactor

The PRO's fully enclosed design operates quietly in your workplace. (Approximately 55 dbs.)

Sensible

Just 8 feet tall, less than 3 feet wide, and weighing only 2,800 pounds, the PRO is a compact compactor. The innovative two-stage hydraulic system utilizes one-fifth the hydraulic oil of conventional units. The energy efficient 2 hp motor easily adapts to power sources readily available. When in place, the entire unit covers less than nine sq. feet of floor space.

Backed by Commitment to Quality & Service

CTI responds to your needs . . . before and after purchase. We work with you to guarantee that each and every system performs to specification and your satisfaction. Our technical and service staffs are dedicated to prompt action and response.

Reliable

Each compactor is subjected to a rigid and extensive final factory test procedure. Testing includes full pressure, multi-cycle operation.

Available Options for Your Special Needs

- **Explosion-Proof Design**
  Class I, Division I electrical, hydraulic and motor components meet or exceed NEC and NEPA guidelines to conform to NEMA 7 standards.
- **Liquid Waste Removal**
  A powerful pump efficiently removes liquids during compaction cycle.
- **Increased Compaction Ratios**
  A larger cylinder allows increased compaction pressure to 85,000 lbs. for even higher compaction ratios.
- **HEPA Filter**
  Microprocessor controlled nuclear grade filtration system removes particles down to 0.3 microns with 99.97% efficiency.
- **HEPA Carbon Filtration System**
  Carbon absorber removes fumes and or radioactive iodine down to 0.3 microns with 99.97% efficiency.
- **Fire Extinguisher Systems**
  Electronic temperature probe and fittings permit connection to existing dry chemical fire extinguishing systems.
- **Stainless Steel Components**
  Grade 304 stainless steel construction is desirable in corrosive or radioactive environments for ease of wipedown.
- **Barrel Crushing Configuration**
  Custom hydraulics and a special platen insert are used for crushing barrels.
- **Right-Hand Hinged Door**
  Main door hinge can be reversed to accommodate unit positioning.
- **Rear Mounted "Quick Chute"**
  Rear loading feature allows unit placement out of traffic patterns.
- **Hand Truck**
  Designed specifically for the CTI PRO system.

Note: CTI engineering department will review custom requirements on request.

SPECIFICATIONS

(Based on the CTI "PRO"—8500 Series)

Height: [illegible]
Width: 34"
Depth: 34"
Weight: 2,500 lbs. (approx.)
Capacity: 55 gallon barrel
Compaction Force: Up to 85,000 lbs.

Electric Motor: 2.0 hp (TEFC)
Electrical Service: Voltage available for most types of service.
Normal Operating Sound Level: 55 dbs.
Hydraulic Fluid: 10 gallons
Warranty: 1 year limited

APPLICATIONS

- Industrial Processing Plants
- Energy Production Facilities
- Hospitals and Clinics
- Government Applications
- High-Tech and Electronics
- Treatment Storage and Disposal Facilities (TSDF)
- Recycling and Maritime Operations
- Research and Development Facilities

COMPACTION RATIOS

Uncompacted Waste (barrels): CTI "PRO" 8500 compacted waste (barrel)

WASTE TYPE	COMPACTION RATIO RANGES
Absorbent Socks Pillows	3:1 - 6:1
Oil Filters, cartridge type	3:1 - 8:1
Paint Booth Air Filters	4:1 - 10:1
Glass Laboratory Vials	5:1 - 12:1
Shop Rags, cloth	6:1 - 14:1
Lab Garments, booties gloves plastics etc.	6:1 - 14:1
Metal Buckets, 5 gal.	5:1 - 14:1
Aluminum Containers	8:1 - 20:1
Wiping Towels, paper	20:1 - 25:1

[illegible] collected from CTI manufacturing facility and field results of current users. All ratios are approximate.

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Installation Instructions

The following is an installation checklist. The procedures below should be followed closely to ensure a successful start up.

1. Move the machine to the area where it will be used. It weighs approximately 3000 pounds and can be tipped up to forty-five degrees. Facing the machine, the best side to tip it toward is the right. If the machine is to be tipped more than twenty degrees, about one-half of the hydraulic fluid should be drained to prevent leakage and then replaced after the machine is moved to its area of use.

2. Electricity should be hooked up by an electrician familiar with local codes. The necessary voltage and circuit breaker ratings are specified in the electrical section of this manual.

For three phase machines, four wires (three for the current, one for the ground) should be run through the top junction box at the rear of the machine to the main circuit breaker in the electrical panel. The machine is equipped with a disconnect switch, a main circuit breaker, a circuit breaker for the motor, and control circuit fuses.

On three phase machines, when the machine is first started the rotation of the motor must be checked. One person should look down on the top of the motor while another starts the machine. The motor should rotate clockwise. If not, switch any two of the current wires on the main circuit breaker. Prolonged use of the motor (more than 30 seconds) in the wrong direction will destroy the pump.

For single phase machines, three wires (neutral, hot, and ground) are run through the top junction box to the main circuit breaker in the electrical panel. The machine is equipped with a disconnect switch, a main circuit breaker, a circuit breaker for the motor, and control circuit fuses.

There is no need to check the motor rotation on single phase machines.

3. It is highly recommended that new barrels that meet the specifications as outlined in the drawing located in this section be used. The CTI PRO's compaction chamber is designed to support the barrel on the sides and bottom during compaction to minimize distortion. Because of the tight tolerances, larger barrels will not fit in the compaction chamber. Nearly every barrel vendor

will supply barrels this size if specified when ordering.

4. The PRO is shipped with hydraulic oil in it and the platen in the down position. As a result, all of the oil is in the hydraulic cylinder and not in the hydraulic tank. The gauge will read empty until the platen is raised.

5. For machines with HEPA filters, a qualified electrician needs to run wire from the terminal block marked "M2" in the electrical panel through the lower junction box in the rear of the machine to the HEPA filter blower motor.

6. For machines with liquid removal, the customer must supply air to the pump. Between 90 psi and 150 psi should be attached to the bulkhead fitting at the rear of the machine. It is best to supply the air from a half-inch line. There is also a one half inch threaded pipe at the rear of the machine for the discharge from the pump. The user must provide for the appropriate disposal for the liquid removed.

7. For machines with nitrogen purge, the customer must supply the inert gas to the 1/2" fitting on the back of the machine. The controller will open and shut the valve as appropriate during compaction. The compactor cannot sense if there is an inert gas flow, so the buyer may wish to use an in-line air gauge.

OPERATION PROCEDURES - C.T.I. "PRO" COMPACTION SYSTEM

IMPORTANT - PLEASE READ:
Only personnel trained and familiarized with this unit should attempt operation. If you are not familiar and/or have not received training in the operating procedures, do not attempt to operate this system. see your Supervisor, or Safety officer for further information.

1. Before operating machine, check that you are wearing appropriate safety garments and equipment.

2. Familiarize yourself with the machine controls. See attached list of machine controls and indicator lights. Also, read and understand complete operating procedures.

3. Obtain key for "control power switch". Insert key and activate switch by rotating to "on" position. "Control power on" lamp should now be illuminated. If lamp is not lit after turning key switch, check to see that electrical disconnect switch (on upper right side of the electrical control cabinet) is in the "on" position. If lamp is still not lit, contact the in-house electrical department for service.

DO NOT ATTEMPT ANY ELECTRICAL MAINTENANCE UNLESS TRAINED AND AUTHORIZED.

4. Open compactor chamber door by unlatching and rotating door handle one quarter turn. Visually check for any out-of-place waste material.

5. Using C.T.I. safety handtruck (or similar loading device) place empty barrel/drum inside empty chamber firmly onto the bottom anvil and snugly against chamber walls.

6. Place waste into barrel/drum with material (not to exceed top of the barrel/drum) correctly inserted.

7. Close door and insure that the locking handle is in the downward locked position. The "door closed" indicator lamp should now be lit. If light is not showing, resecure door latch and/or quick chute door.

NOTE: Machine cannot be operated until the "door closed" lamp shows lit.

8. Initiate automatic compaction cycle by depressing the "auto start" button. Unit will automatically begin compaction cycle. Microprocessor will control downstroke of the platen into chamber and return platen to its original up position at the end of the cycle. "Ram position" indicator lamps will identify exact position of the platen (either up or down) during the cycle.

NOTE: Compaction cycle automatically stops if compactor door is fractionally opened at any time during compaction cycle. If this occurs:

a. Resecure door latch.

b. The "auto start" control must be depressed. The RAM will return the platen to it's starting position.

c. The system may now be operated.

9. The machine will then automatically shut-off and is ready for the loading of additional waste into the drum after the door/quick chute is opened.

10. Authorized waste may be loaded and compacted until the predetermined limit is reached and the "drum full" lamp is illuminated. Full drum-barrel must be removed from the compaction chamber by C.T.I. safety handtruck (or similar device). The system will not operate once the "drum full" lamp is lit.

11. The system must reset (as described above in a.,b.,c., and d.,) before a new drum/barrel is placed inside the compaction chamber.

12. Full drums/barrels must be stored, labeled and/or manifested according to company procedures.

NOTE: IF YOU DO NOT FULLY UNDERSTAND ANY OF THESE OPERATING PROCEDURES, PLEASE SEE YOUR SUPERVISOR OR SAFETY OFFICER.

NEVER ATTEMPT ANY SERVICE TO THE C.T.I. SYSTEM UNLESS YOU ARE AUTHORIZED AND TRAINED.

This listing will describe the control push buttons located on the main control enclosure or in a remote control enclosure. Additional controls required for custom systems will be noted following the general descriptions.

CONTROL POWER - This key-activated switch controls power to the entire system. The exception is the programmable controller which requires a continuous power supply and has a remote line switch.

CONTROL POWER ON - This lamp indicates that Control Power key is in the "on" position and the system is receiving power.

AUTO START - Push this switch to activate your C.T.I. "Pro" system for a complete compaction cycle.

AUTO STOP - Push this switch to stop the automatic compaction cycle. The platen will return to the home position when AUTO CYCLE START is pushed again. Once the platen has returned to the home position, push AUTO CYCLE START to activate the full cycle process.

RAM UP LIGHT - This light indicates that the automatic cycle has been completed and the RAM assembly is on its way back to a locked position. When this light has gone off, the main door or quick chute may be open.

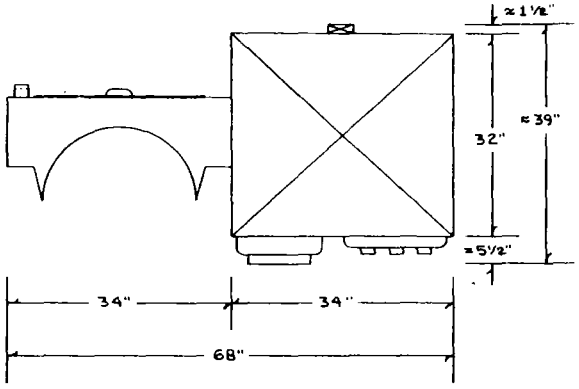
RAM DOWN LIGHT - This light indicates that the automatic cycle is in progress and that the platen is in the process of engaging/compacting the waste in the barrel. The main door and quick chute may not be opened at this time. If opening the doors is attempted, the machine will shut down until the doors have been secured.

QUICK DISCONNECT LIGHT - Pulling down on this switch will disconnect all power to the "Pro" system. Power can be restored by putting the switch back in the upright position.

BARREL FULL LIGHT - This light is activated when material in the barrel has reached a present level (which is adjustable). When this light is on, the AUTO CYCLE START is inoperative.
Note: When the BARREL FULL LIGHT is activated, the AUTO CYCLE START is deactivated until it is reset by turning the CONTROL POWER (key operated switch) to the off position. After removing the full barrel, turn the key to the on position and begin using the machine as you normally would.

DOOR CLOSED INDICATOR LIGHT - This is lit when the main and/or "Quick Chute" doors are closed and the power is on. If the light does not come on, and these conditions have not been met, please resecure the doors.

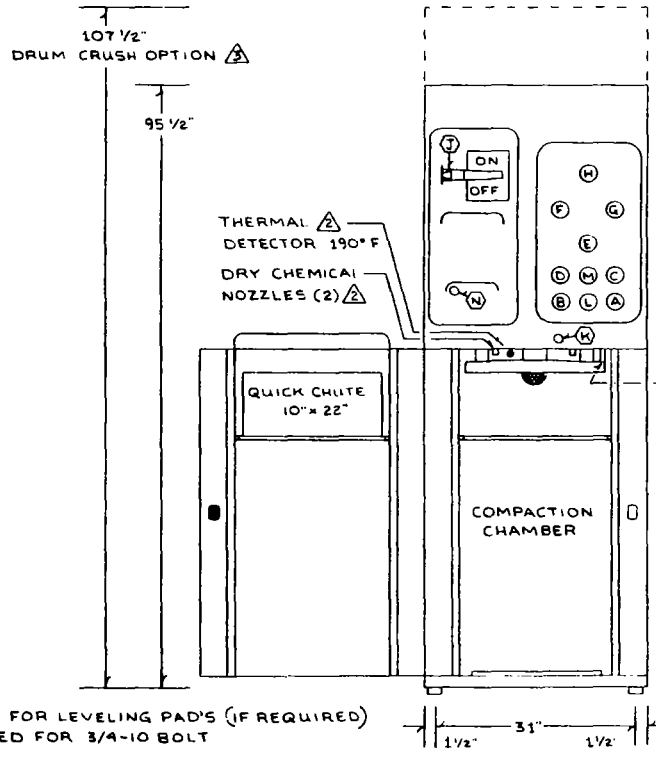
TOP VIEW - DOOR OPEN



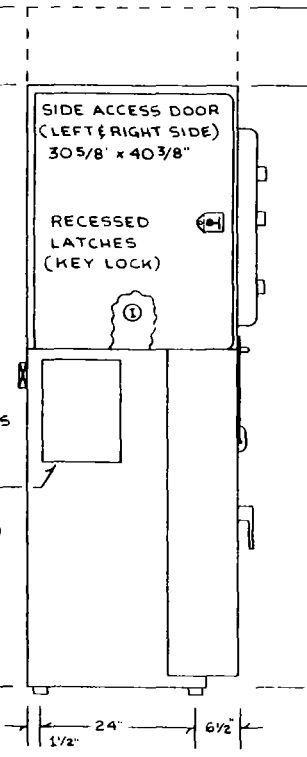
COMPACTOR ELECTRICAL CONTROLS, INDICATORS & SENSORS

REF. #	DESCRIPTION	TYPE
A	CONTROL PWR "OFF-ON"	2 POS. KEY OPERATED SELECTOR SWITCH
B	AUTO STOP	MUSHROOM HEAD PUSH BUTTON-RED
C	CONTROL PWR INDICATOR	RED LIGHT
D	AUTO START	ILLUMINATED PUSH BUTTON-GREEN
E	DOOR CLOSED INDICATOR	WHITE LIGHT
F	RAM UP INDICATOR	BLUE LIGHT
G	RAM DOWN INDICATOR	BLUE LIGHT
H	BARREL FULL INDICATOR	FLASHING AMBER LIGHT
I	RAM "UP-DOWN"	3 POS. SELECTOR SWITCH
J	MAIN CIRCUIT BREAKER	LEVER HANDLE "ON-OFF/RESET"
K	DOOR SENSOR (LS-5)	PROXIMITY SWITCH
L	CYCLE "WET-DRY"	2 POS. SELECTOR SWITCH 1
M	SUCTION PUMP TEST	PUSH BUTTON-BLUE 1
N	HYD. MOTOR STARTER RESET	PUSH BUTTON

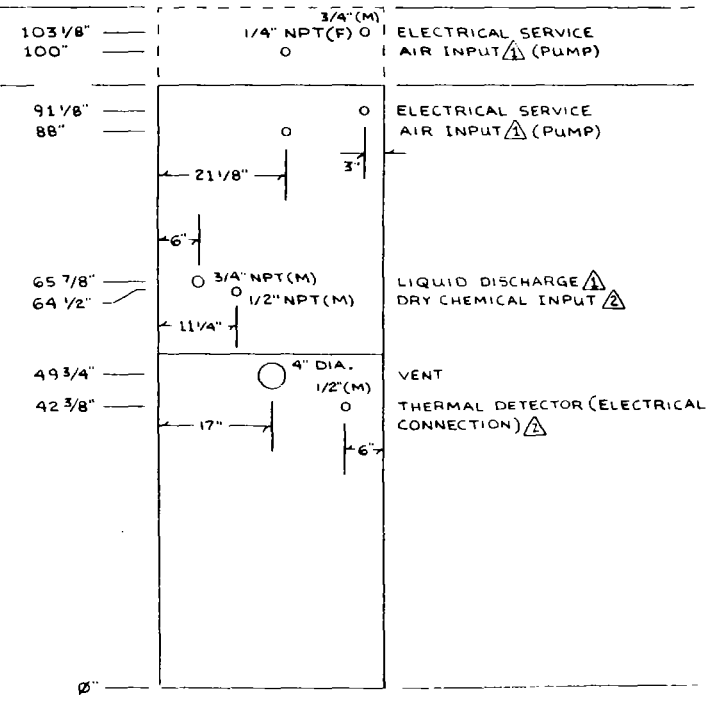
FRONT VIEW-DOOR OPEN



LEFT SIDE VIEW-DOOR CLOSED



BACK VIEW-DOOR CLOSED



DIM'S FOR LEVELING PAD'S (IF REQUIRED)
TAPPED FOR 3/4-10 BOLT

OPTIONS: 1 LIQUID REMOVAL SYSTEM
2 FIRE EXTINGUISHER SYSTEM CONNECTION
3 DRUM CRUSH
4 HEPA FILTER (NOT SHOWN)

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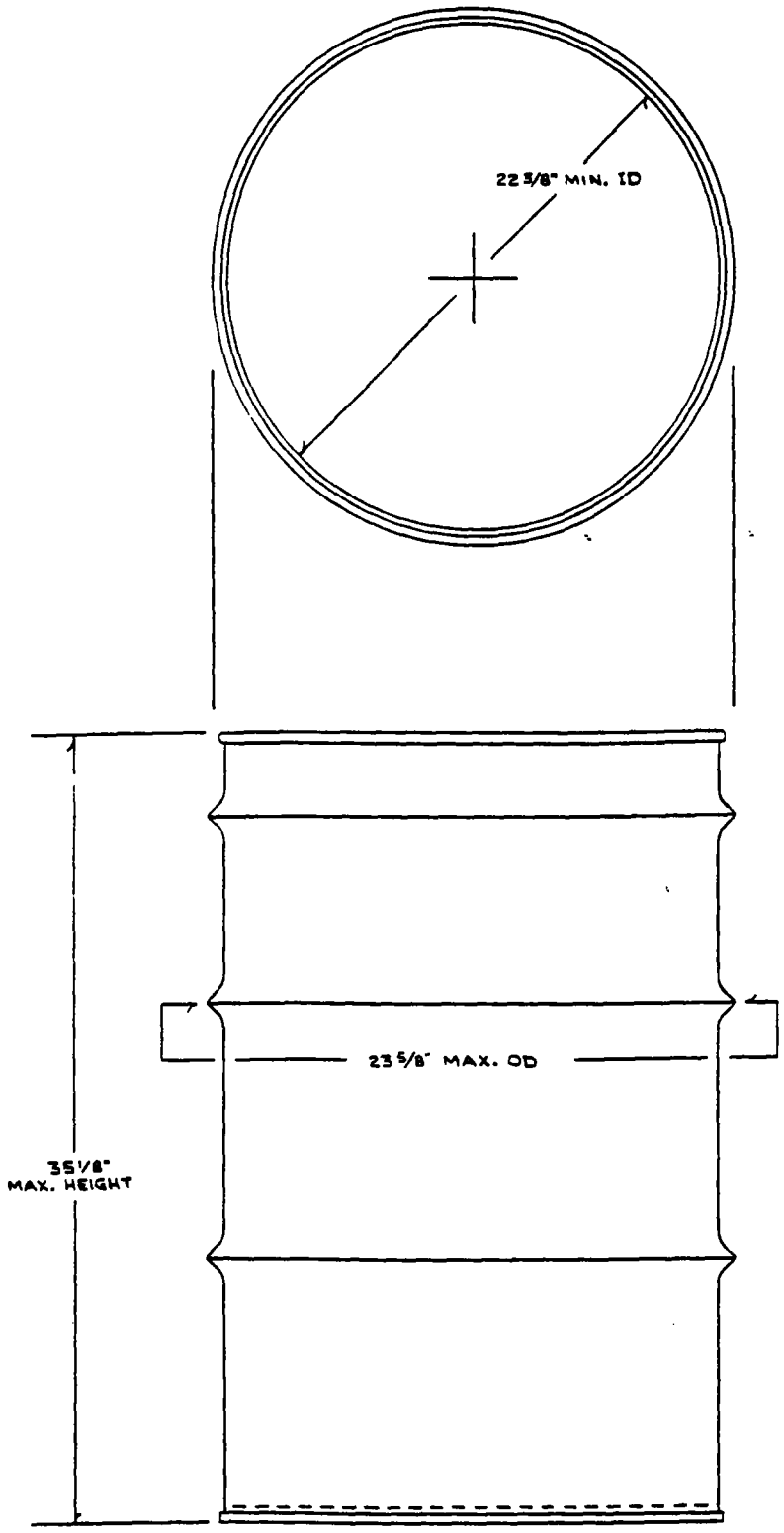
SCALE NONE	APPROVED BY	DRAWN BY H2
DATE 7-17-90		REVISED
CTI PRO COMPACTOR - ELECTRICAL CONTROL & COMPONENT ILLUSTRATION		
NEMA 7 PRO SERIES		DRAWING NUMBER CTI-1782



NOTE: OPEN HEAD STEEL DRUM SHALL MEET DOT SPECIFICATIONS FOR HAZARDOUS WASTE. DOT NO. 17C/17H

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PORTLAND, OR USA

SCALE: NONE
DATE: 7-11-90
APPROVED BY:
DRAWN BY: HZ
REVISED

OPEN HEAD STEEL DRUM SPECIFICATIONS
FOR CTI PRO-8500 SERIES COMPACTOR

DOT NO. 17C/17H

DRAWING NUMBER
CTI-1767

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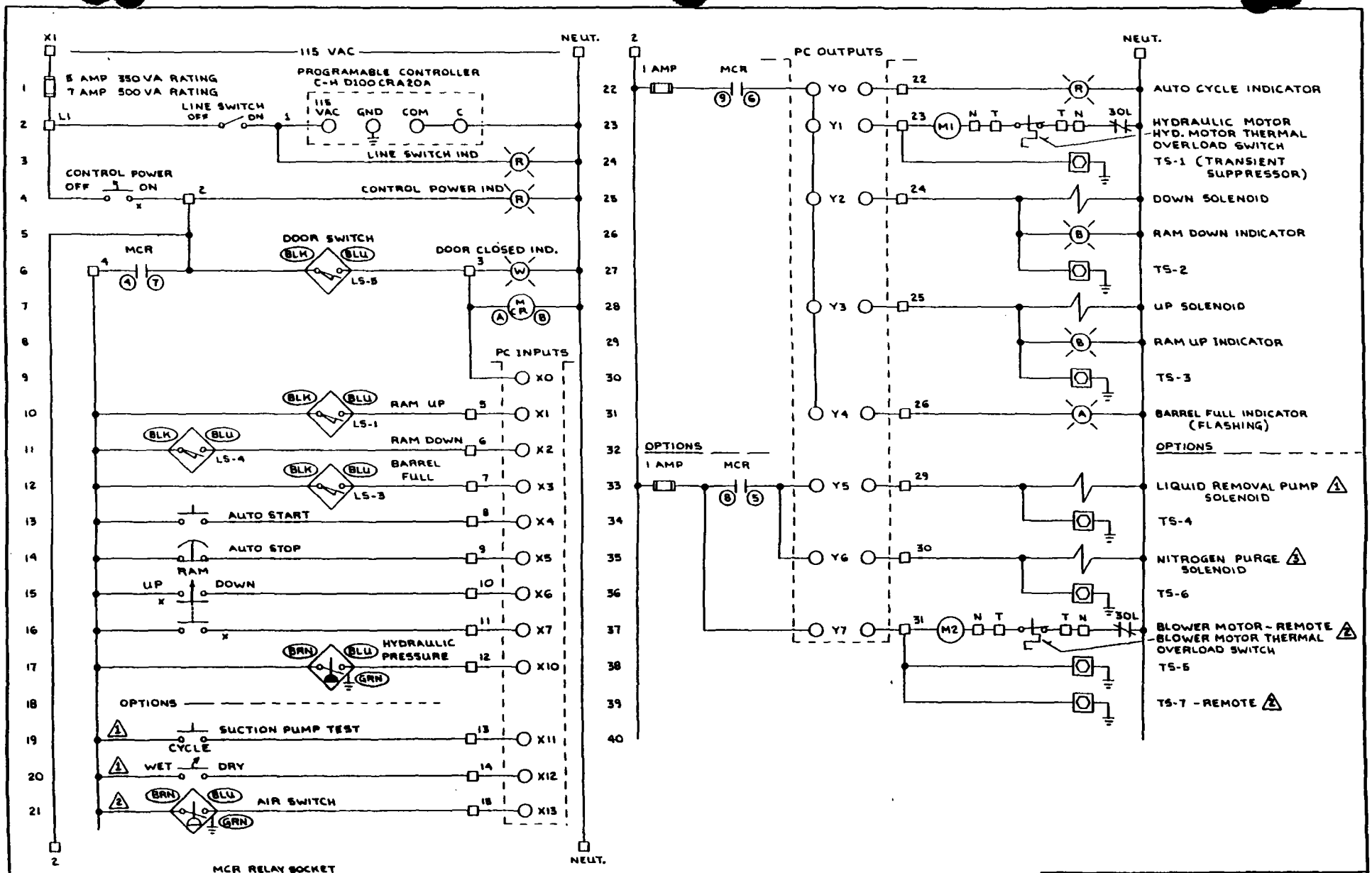
ELECTRICAL POWER REQUIREMENTS

Your CTI Compaction System requires electrical power as noted below:

HP	VOLTS	PHASE	AMPS	MAIN BRKR	O.L.	RPM
2	208	3	5.7	20 AMP	H1031-3	3450



OPTIONS: 1 LIQUID REMOVAL SYSTEM

2 HEPA FILTER SYSTEM, FLOOR MOUNT

3 NITROGEN PURGE SYSTEM

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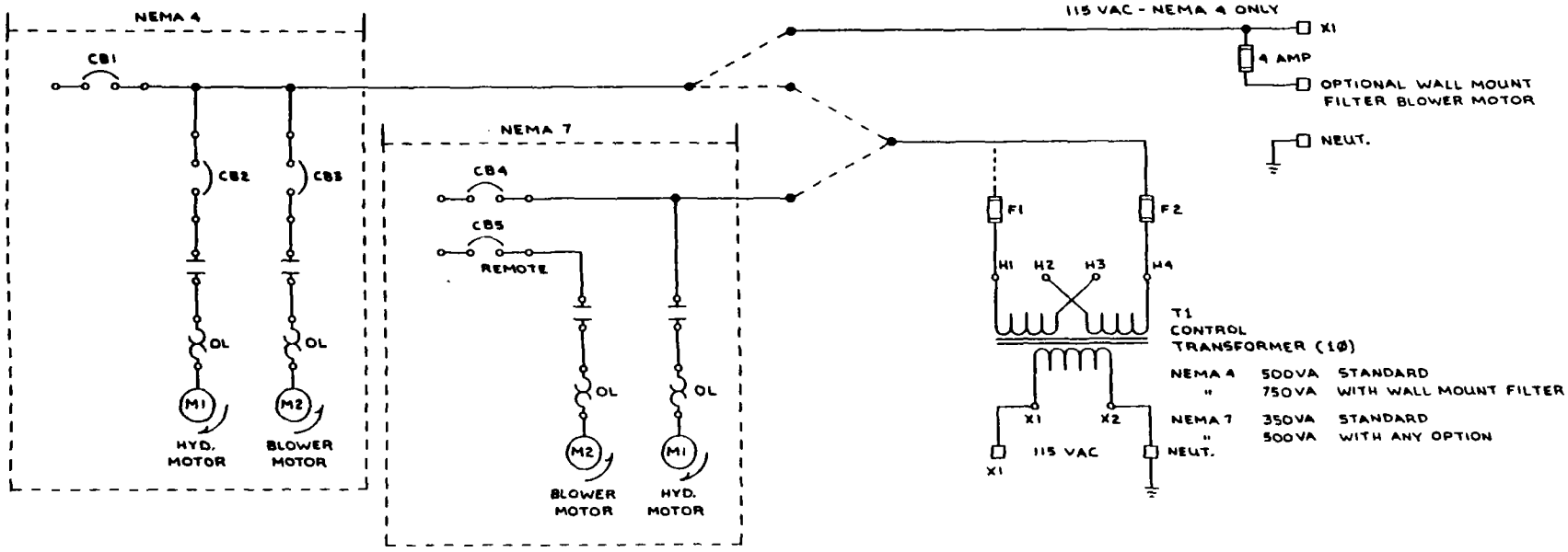
C.T.I. COMPACTOR ELECTRICAL SCHEMATIC	
NEMA 7 PRO-8500 SERIES	DRAWING NUMBER E-0737



	MOTOR HP	RPM	PHASE	VOLTS	AMPS	OL
M1	2	3450	1Ø	115	20.0	H1043
"	"	"	"	208/230	10.0	H1037
"	"	"	3Ø	208	5.7	H2009-3
"	"	"	"	220-240	5.4	"
"	"	"	"	440-480	2.7	H2007-3
"	"	"	"	575	2.24	H2006-3
M2	3	3450	3Ø	208	8.5	H2010-3
"	"	"	"	220-240	8.0	"
"	"	"	"	440-480	4.0	H2008-3

NOTE: A NO. 14 WIRE MINIMUM GROUND ROUTED DIRECTLY IS RECOMMENDED.

		CIRCUIT BREAKER RATING IN AMPS @ VOLTS/PHASE					
		115 1Ø	208/230 1Ø	208 3Ø	220-240 3Ø	440-480 3Ø	575 3Ø
NEMA 4	MAIN CIRCUIT BREAKER, CB1	60	40	30	30	20	20
NEMA 4	HYDRAULIC MOTOR (M1) CIRCUIT BREAKER, CB2	50	30	20	20	15	15
NEMA 4	FLOOR STAND BLOWER MOTOR (M2) CIRCUIT BREAKER, CB3	N.A.	N.A.	30	30	15	15
NEMA 4	MAIN CIRCUIT BREAKER, CB1 WITH FLOOR STAND BLOWER MOTOR (M2)	N/A	N/A	40	40	30	30
NEMA 7	MAIN CIRCUIT BREAKER, C4	N.A.	30	20	20	15	15
NEMA 7	FLOOR STAND BLOWER MOTOR (M2) CIRCUIT BREAKER, CB5	N.A.	N.A.	30	30	15	N.A.

N.A. NOT AVAILABLE
N/A NON APPLICABLE

	NEMA 4 & 7 - F1, F2 RATING IN AMPS @ T1 RATING/VOLTS ALL FUSES ATQ OR EQUIVALENT			
	VOLTS			
T1 RATING	208/230	220-240	440-480	575
350VA	5 / 4	4	2	1.5
500VA	4 / 3.5	3	3	2.5
750VA	6 / 5	5	4	3.5

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DATE 10-5-90		REVISED 12-12-90

C.T.I. COMPACTOR
ELECTRICAL SCHEMATIC, NEMA 4 & 7

PRO-8500 SERIES — DRAWING NUMBER E-0738

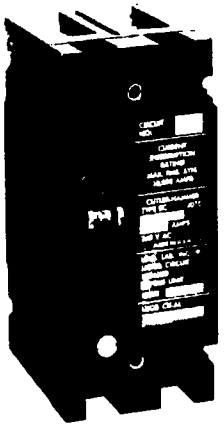
11/85

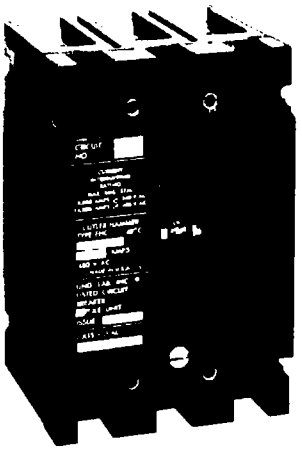
Supersedes EC/FC
dated 1/80

CUTLER-HAMMER CIRCUIT BREAKERS

Type FS & FH Molded Case Circuit Breakers 15-150 Amperes

TECHNICAL INFORMATION PUBLICATION
FS/FH





Application — Used as disconnects and for branch and feeder circuit protection in panelboards and switchboards, motor control centers, multi-metering equipment, busway plugs and individual enclosures.

Terminals — Box lug type wire connectors may be removed for use with panelboard connector straps. These breakers, with the same ratings, are also supplied with plug-on fittings for EE panelboards and switchboards.

Trip Amperes	Wire Size Range, AL/CU
15- 50	#14-4
60-100	#6-1/0
125-150	#2-4/0

Ratings — Calibrated at 40°C, the following are ratings for two and three pole breakers. Any two poles of a 3 pole breaker may be used in place of a 2 pole breaker.

Type	Trip Amps	Max. Ac Volts	Max. Dc Volts
FS-2	15-100	240	250
FS-4	15-150	480	250
FS-6, FH-6	15-150	600	250

Interrupting Capacity

Type	Ac RMS Symmetrical Amps			Dc Amps
	240 V	480 V	600 V	
FS-2	22,000	—	—	10,000
FS-4	22,000	14,000	—	10,000
FS-6	22,000	14,000	14,000	10,000
FH-6	100,000	30,000	18,000	10,000

DESIGN CHARACTERISTICS

- **Ratings** — 240 to 600 V ac or 250 V dc, 2 & 3 Poles, 15 to 150 Amps, Calibrated at 40°C.
- **Tripping Characteristics** — Thermal-Magnetic trip, calibrated and sealed after assembly. Directly heated bimetal element on 15-100A, indirectly heated on 125-150 amp sizes.
- **Handles** — Trip-free with "on-tripped-off" positions. Reset to "off" required to reclose contacts.
- **Terminals** — Suitable for AL or CU wire.
- **Standards** — Meets or exceeds Federal Specification W-C-375b; FS-2, Classes 2b and 2c; FS-4 and FS-6, Class 2d; FH-6, Class 22a. Breakers are listed under U.L. File #E11713.

OPTIONAL FEATURES

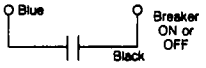
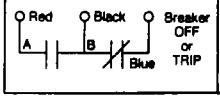
- **Handle Lock Attachment**
- **Shunt Trip**
- **Alarm Switch**
- **Auxiliary Switches**

Thermal Magnetic Trip — A bimetal element initiates tripping action on low overloads. The magnetic element reacts instantaneously to short circuit currents. A manual trip button allows periodic operation of the trip mechanism. Trip elements are not adjustable, nor interchangeable. The breaker case is sealed after calibration.

Operation — When the breaker trips, all contacts open and the handle moves to the mid position. The trip latch is reset by moving the breaker handle to the extreme OFF position and then contacts may be closed by moving the handle to the ON position.

Mounting — Breakers will function in any position. Also suitable for reverse feed. Standard mounting bolt is a 8/32″ x 3¼″ Sems screw, CH Part #11-3435.

Options — Handle padlock attachment is a field installed kit, part number CC9PL. Shunt trips, alarm switch and auxiliary switches are all factory installed in right hand pole on two or three pole breakers. Auxiliary contacts may be mounted in left hand pole if other devices are installed in the right hand pole. Leads are 16″ long and exit from the side of the breaker.

Shunt Trip	Provides tripping from remote location. Solenoid coil operates on 66 to 240V ac, 68 to 125V dc. Optional coil to 600V ac. Suitable for use with Class I ground fault sensors. Coil clearing contact opens when breaker contacts are open.
Alarm Switch 	Signals a tripped breaker condition. Rated 5 amp, 240V ac maximum. Contact closes only when breaker is in tripped condition.
Auxiliary Switches 	Indicates breaker contact position in remote control circuits. Available as single A-B or 2A-2B (2NO-2NC). 1A-1B contacts rated 11 amp continuous. 2A-2B contacts rated for 1/4 Hp. A closes, B opens when breaker is ON.

The installation and use of Cutler-Hammer products should be in accordance with the provisions of the U.S. National Electrical Code and/or other local codes or industry standards that are pertinent to the particular end use. Installations or use not in accordance with these codes and standards could be hazardous to personnel and/or equipment.

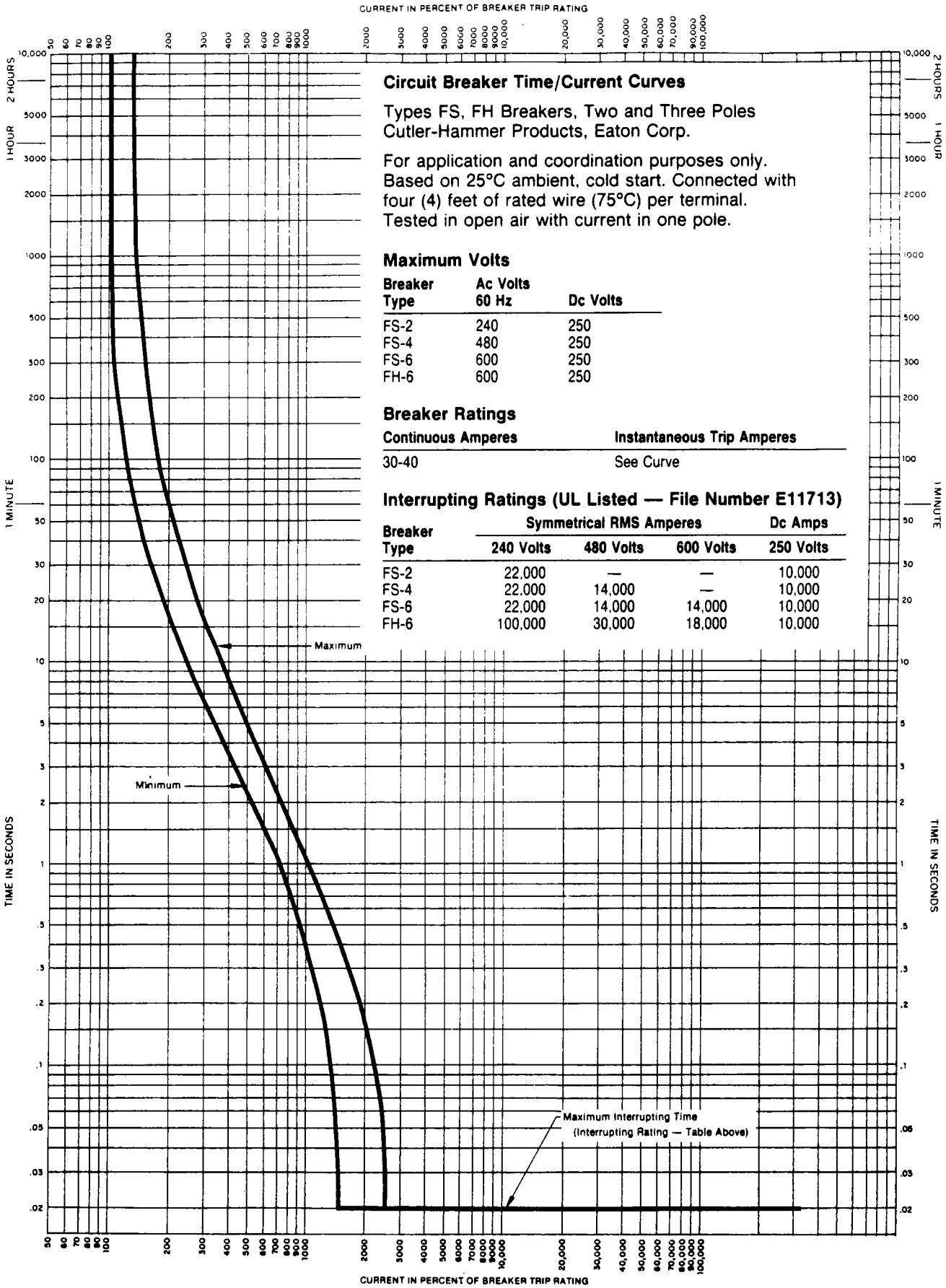
11/85

Supersedes EC/FC
dated 1/80

CUTLER-HAMMER CIRCUIT BREAKERS

TECHNICAL INFORMATION PUBLICATION FS/FH

Type FS & FH Molded Case 30-40 Amp Breaker Curve



Circuit Breaker Time/Current Curves

Types FS, FH Breakers, Two and Three Poles
Cutler-Hammer Products, Eaton Corp.

For application and coordination purposes only. Based on 25°C ambient, cold start. Connected with four (4) feet of rated wire (75°C) per terminal. Tested in open air with current in one pole.

Maximum Volts

Breaker Type	Ac Volts 60 Hz	Dc Volts
FS-2	240	250
FS-4	480	250
FS-6	600	250
FH-6	600	250

Breaker Ratings

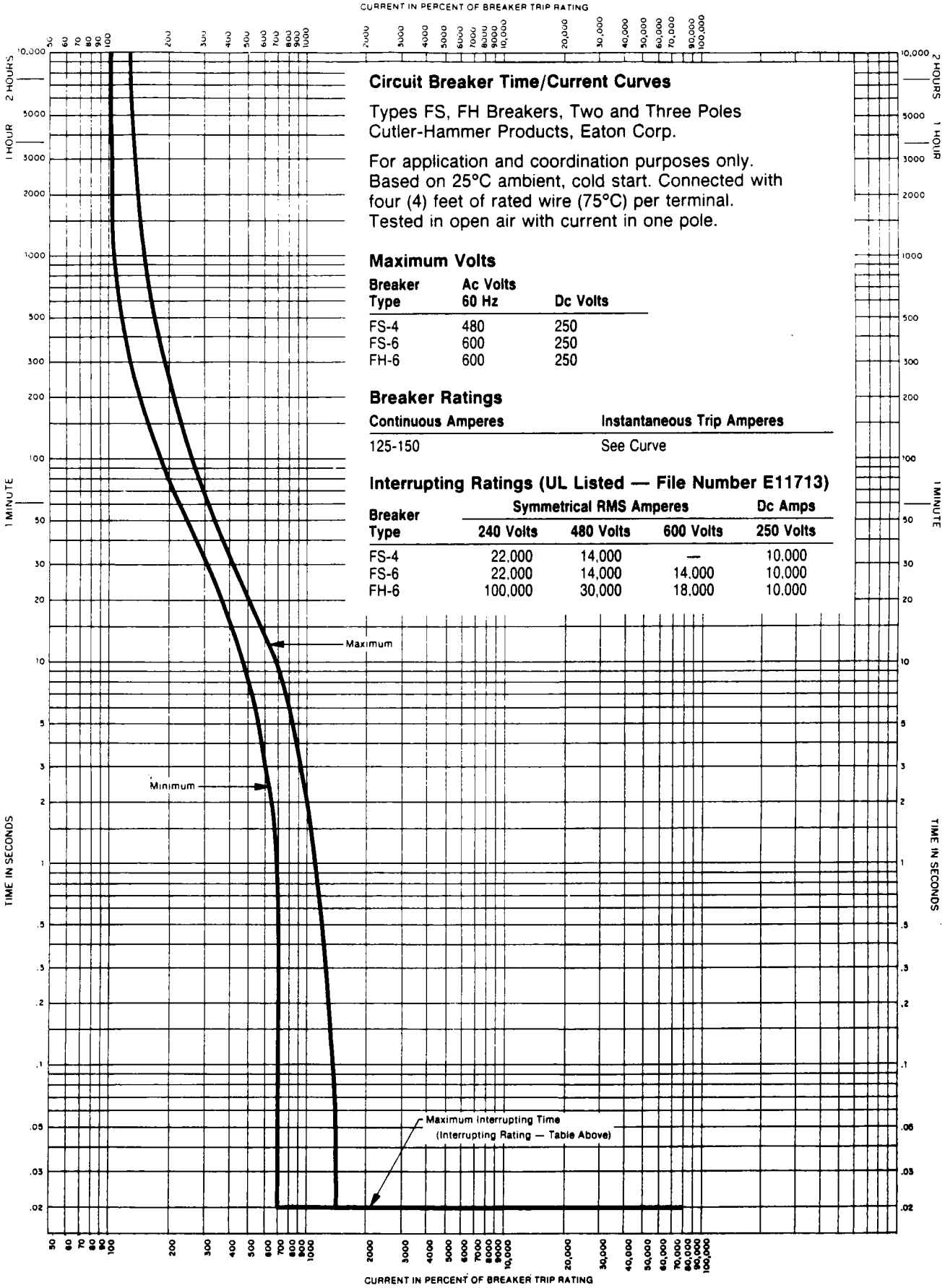
Continuous Amperes	Instantaneous Trip Amperes
30-40	See Curve

Interrupting Ratings (UL Listed — File Number E11713)

Breaker Type	Symmetrical RMS Amperes			Dc Amps
	240 Volts	480 Volts	600 Volts	250 Volts
FS-2	22,000	—	—	10,000
FS-4	22,000	14,000	—	10,000
FS-6	22,000	14,000	14,000	10,000
FH-6	100,000	30,000	18,000	10,000

Supersedes EC/FC dated 1/80

Type FS & FH Molded Case 125-150 Amp Breaker Curve



Circuit Breaker Time/Current Curves

Types FS, FH Breakers, Two and Three Poles
Cutler-Hammer Products, Eaton Corp.

For application and coordination purposes only. Based on 25°C ambient, cold start. Connected with four (4) feet of rated wire (75°C) per terminal. Tested in open air with current in one pole.

Maximum Volts

Breaker Type	Ac Volts 60 Hz	Dc Volts
FS-4	480	250
FS-6	600	250
FH-6	600	250

Breaker Ratings

Continuous Amperes	Instantaneous Trip Amperes
125-150	See Curve

Interrupting Ratings (UL Listed — File Number E11713)

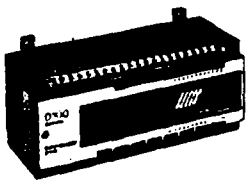
Breaker Type	Symmetrical RMS Amperes			Dc Amps
	240 Volts	480 Volts	600 Volts	250 Volts
FS-4	22,000	14,000	—	10,000
FS-6	22,000	14,000	14,000	10,000
FH-6	100,000	30,000	18,000	10,000

CUTLER-HAMMER PROGRAMMABLE CONTROLLERS

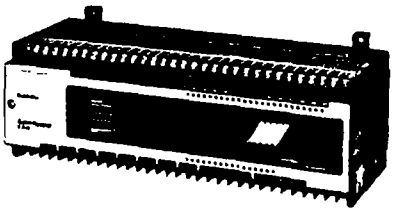
5/31/89
Supersedes
TIP F200 (D100)
dated 7/1/86

D100 Micro Programmable Logic Controllers

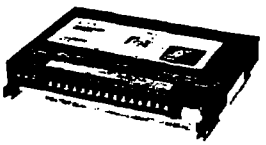
TECHNICAL INFORMATION PUBLICATION
F200
(D100)



20 I/O CONTROLLER

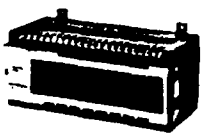


40 I/O CONTROLLER



14 I/O CONTROLLER

8 I/O EXPANDER



20 I/O EXPANDER

40 I/O EXPANDER

DESIGN CHARACTERISTICS

The D100 Micro Programmable Logic Controller is a family of products for use in a wide spectrum of applications. The D100 Micro PLC is small in size and economically priced.

Features:
- Expandable 14 to 120 I/O
- Utilizes true ladder logic programming
- Programmer displays eight rungs of logic at one time
- Large LCD screen displays "power flow" while D100 is running

CONTROLLER

The Controller is a stand alone programmable logic controller containing Central Processing Unit (CPU), power supply, memory, and Input/Output circuitry with terminals. Controllers are offered in several I/O configurations and capabilities — see Systems Configuration below. Controllers contain the RAM memory and back-up battery. See PROMS on the next page for PROM writing features of controllers.

EXPANDERS

All of the controllers are expandable. Any of the Expansion modules listed can be connected to any of the controllers to expand the system Input/Output capability up to the maximum capability of the controller. Expanders connect to the controller and subsequent expanders by short connecting cables. Expanders are offered in several configurations — see Systems Configuration below.

SYSTEM CONFIGURATIONS

Controller

Type	Controller I/O		System Max. I/O	
	Inputs	Outputs	Inputs	Outputs
14 I/O	8	6	20	14
20, 20A	12	8	24	16
40, 40A	24	16	48	32
40H	24	16	72	48

Controller — Optional ❶ Analog Module — Expander ❷ → Other Expanders

Expander

Type	Expander I/O	
	Inputs	Outputs
8 I/O	8	0
	4	4
	0	8
20 I/O	12	8
40 I/O	24	16

❶ If an Analog module is used in the system, it must be connected directly to the controller before any expanders are added. The Analog Module does not affect the I/O count. The Controller must be analog compatible.

❷ Up to two expanders may be used as long as the total number of inputs and outputs (controller and all expanders) is not greater than the maximum listed for the controller used.

The installation and use of Cutler-Hammer products should be in accordance with the provisions of the U.S. National Electrical Code and/or other local codes or industry standards that are pertinent to the particular end use. Installation or use not in accordance with these codes and standards could be hazardous to personnel and/or equipment.

Printed in U.S.A.
3G

CUTLER-HAMMER PROGRAMMABLE CONTROLLERS

D100 Micro Programmable Logic Controllers

5/31/89
Supersedes
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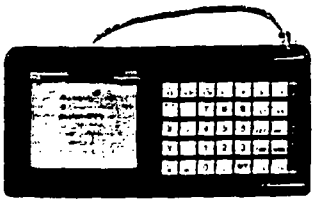
dated 7/1/86

PROGRAMMER

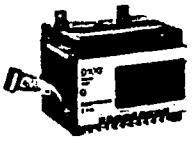


PROGRAMMER

The hand-held Programmer will program any D100 Controller up to its fully expanded capability. A large LCD screen displays up to eight ladder diagram rungs, each with up to ten elements, on each screen. An unlimited number of screens can be used in a program. The control scheme is programmed and displayed in familiar and easy-to-understand ladder logic using conventional symbols.

The programmer is also used to monitor the operation of the system. During operation, the display of the ladder logic shows power flow and device (coil and contact) operation. Timer and counter registers can also be observed in real time. Several monitoring display options are available for observation of multiple devices in several convenient formats.

ANALOG INPUT MODULE



ANALOG INPUT MODULE

An Analog Input Module is available for use with D100 14 I/O, D100 20A and D100 40A controllers. This module connects to the controller before the first expansion module and provides two analog inputs to the system. Three input ranges are provided for each analog channel: 0-10 volts, 0-5 volts and 0-20 milliamperes. The analog signal is converted to a register value and stored in an assigned register. Twelve other registers are assigned preset values. The signal register is continuously compared to the presets to control circuits in the system.

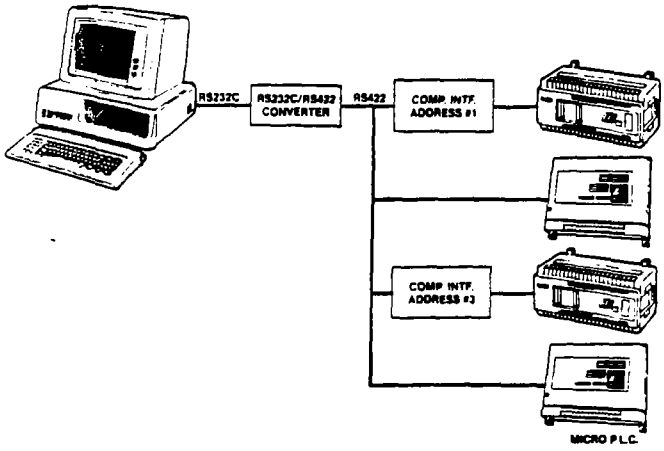
COMPUTER COMMUNICATIONS

The D100 can communicate with an IBM❶ (or compatible) personal computer (PC). The D100 can be programmed and monitored from a remote PC. The program and its operation can also be documented on a printer connected to the PC. Necessary software and hardware are offered for D100-to-PC communications.

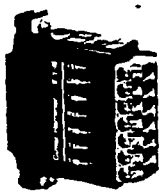
❶ Trademark of the International Business Machine Corporation.

SOFTWARE

Software — A computer communications program for programming the D100, complete with installation and operation manual, is available on either 5-1/4 inch or 3-1/2 inch disks. A showcase disk is offered which presents hardware/software feature/benefits on screen.



PROTOCOL MODULE

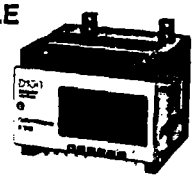


PROTOCOL MODULE

Protocol Module — The protocol module is an interface between a single D100 system and one PC. The protocol module plugs into a computer COM port (RS232) and connects by cable to the controller programmer receptacle. The protocol module can be located up to 1000 feet from the controller.

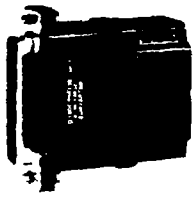
MULTIDROP MODULE

COMPUTER INTERFACE MULTIDROP MODULE



Multidrop Module — A multidrop module connects to the controller programmer receptacle and then, by cable, to a PC. From one to sixteen multidrop modules can be connected to one PC. Each multidrop module has a selector switch to set each system address individually. The multidrop module can be located up to 1000 feet from the computer.

RS422-232 CONVERTER



RS232 CONVERTER

RS422-232 Converter — The multidrop module uses an RS422 protocol. For computers that only have an RS232 COM port, a converter is required for communication with the multidrop module. This module converts RS422 communications to RS232.

See note on installation and use of product at bottom of page 1.

TECHNICAL INFORMATION PUBLICATION F200 (D100)

CUTLER-HAMMER PROGRAMMABLE CONTROLLERS

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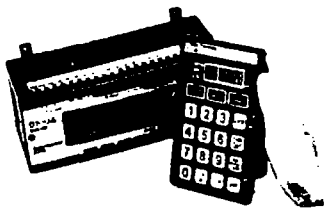
dated 7/1/86

D100 Micro Programmable Logic Controllers

TIMER/COUNTER ACCESS MODULE



The Timer/Counter Access Module is an accessory which makes it easier to:

- Monitor the current and preset values of timer and counter registers.
- Change the preset values of the registers while the program is running.

The module plugs into the programmer receptacle and gets its power from the controller. It can be used as a portable diagnostic tool for several systems or can be permanently connected to one system. It has password protection to prevent unauthorized access to registers and still provide a monitoring function. The module can be panel mounted and is NEMA 4, 12 rated.

PROMS

PROMS (Programmable Read Only Memories) are devices which record and store programs. PROMS can be used to:

- Store a program for quick retrieval in the event of accidental loss.
- Repeat a program for use in multiple applications such as several machine tools performing the same operations.
- Send a program to a remote location to change the operation of a system.

Proms fall into two major classifications:

- EEPROM (Electrically Erasable Programmable Read Only Memories) — erasable by the programmer or software.

  D100EE10 — Cartridge-mounted electronically erasable PROM. Can be plugged into and removed from the controller from the front without tools.

  D100EE28 — Cartridge-mounted electronically alterable PROM. Mounted in plug-in cartridge same as D100EE10.

  D100EE14 — Unmounted electronically alterable PROM chip for use in D100 14 I/O controllers. These PROMS plug into a socket inside the controller — require removal of the cover for access to the socket.

- UVPROM (UltraViolet erasable Programmable Read Only Memories) — erasable only by an ultraviolet light source (not furnished by Cutler-Hammer)

  D100UV10 — Directly interchangeable with the D100EE10.

Once programmed, EEPROMS can be used in any controller that they can be plugged into. However, they can be erased and programmed in controllers only as noted in the table below. It is good practice to use them only in controllers in which they can be programmed and erased.

CONTROLLERS

Power Supply	Inputs No.	Inputs Type	Outputs No.	Outputs Type	Catalog No.	Use Prom
20 I/O CONTROLLERS						
115 V ac	12	24 V dc	8	Triac	D100CA20	D100 EE10 ❶
115 V ac	12	24 V dc	8	Transist.	D100CD20	
115 V ac	12	115 V ac	8	Triac	D100CAA20	
24 V dc	12	24 V dc	8	Relay	D100DCR20	
40 I/O CONTROLLERS						
115 V ac	24	24 V dc	16	Triac	D100CA40	D100 EE10 ❶
115 V ac	24	24 V dc	16	Transist.	D100CD40	
115 V ac	24	115 V ac	16	Triac	D100CAA40	
24 V dc	24	24 V dc	16	Relay	D100DCR40	
40 I/O HIGH SPEED CONTROLLERS						
115 V ac	24	24 V dc	16	Relay	D100CR40	D100 EE10 ❶
115 V ac	24	24 V dc	16	Triac	D100CA40H	
115 V ac	24	24 V dc	16	Transist.	D100CD40H	
115 V ac	24	115 V ac	16	Relay	D100CRA40H	
115 V ac	24	115 V ac	16	Triac	D100CAA40H	
14 I/O CONTROLLERS — HIGH SPEED COUNT AND ANALOG CAPABLE						
115 V ac	8	24 V dc	6	Relay	D100CR14	D100 EE14
115 V ac	8	115 V ac	6	Relay	D100CRA14	
20 I/O CONTROLLERS — HIGH SPEED COUNT AND ANALOG CAPABLE						
115 V ac	12	24 V dc	8	Relay	D100CR20A	D100 EE28
115 V ac	12	115 V ac	8	Relay	D100CRA20A	
40 I/O CONTROLLERS — HIGH SPEED COUNT AND ANALOG CAPABLE						
115 V ac	24	24 V dc	16	Relay	D100CR40A	D100 EE28
115 V ac	24	115 V ac	16	Relay	D100CRA40A	

❶ UVPROM D100UV10 can also be used with these controllers.

EXPANDERS

Power Supply	Inputs No.	Inputs Type	Outputs No.	Outputs Type	Catalog No.
8 I/O EXPANDERS					
115 V ac	8	24 V dc	---	---	D100ENC8
115 V ac	8	115 V ac	---	---	D100ENA8
115 V ac	4	24 V dc	4	Relay	D100ERC8
115 V ac	4	115 V ac	4	Relay	D100ERA8
115 V ac	---	---	8	Relay	D100ERN8
115 V ac	---	---	8	Triac	D100EAN8
115 V ac	---	---	8	Transist.	D100EDN8
20 I/O EXPANDERS					
115 V ac	12	24 V dc	8	Relay	D100ER20
115 V ac	12	24 V dc	8	Triac	D100EA20
115 V ac	12	24 V dc	8	Transist.	D100ED20
115 V ac	12	115 V ac	8	Relay	D100ERA20
115 V ac	12	115 V ac	8	Triac	D100EAA20
24 V dc	12	24 V dc	8	Relay	D100DER20
40 I/O EXPANDERS					
115 V ac	24	24 V dc	16	Relay	D100ER40
115 V ac	24	24 V dc	16	Triac	D100EA40
115 V ac	24	24 V dc	16	Transist.	D100ED40
115 V ac	24	115 V ac	16	Relay	D100ERA40
115 V ac	24	115 V ac	16	Triac	D100EAA40

See note on installation and use of product at bottom of page 1.

CUTLER-HAMMER PROGRAMMABLE CONTROLLERS

D100 Micro Programmable Logic Controllers

5/31/89
Supersedes
TIP F200 (D100)
dated 7/1/86

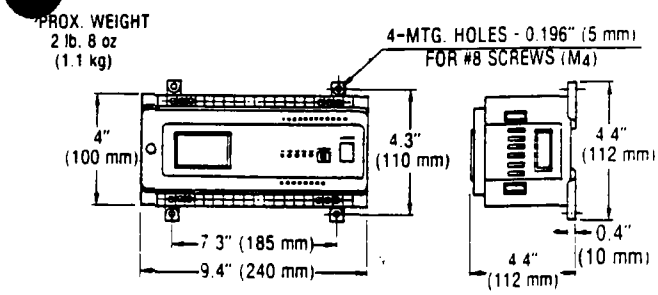
ACCESSORIES

Description	Catalog Number
ANALOG INPUT MODULE	
Two-point analog Input Module: 0-10 V dc, 0-5 V dc, 4-20 mA dc	D100AIM2
COMPUTER COMMUNICATIONS	
Computer Software — 5-1/4" disks	D100CCS60
Computer Software — 3-1/2" disks	D100CCS35
Showcase Disk - Onscreen Features/Benefits	D100CCS20S
Protocol Module — One controller to one computer (RS232)	D100CPM232
Multidrop module — for connecting up to 16 controllers to one computer, one required for each controller (RS422).	D100CPM422
RS422/232 converter with power supply for computers without 422 port.	D5010CPM422

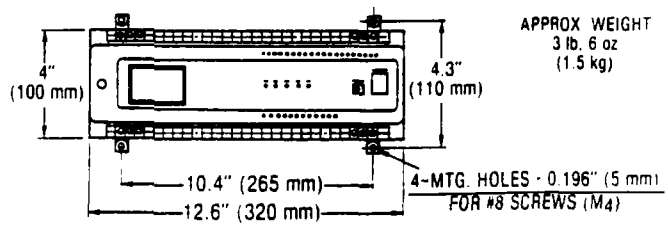
Description	Catalog Number
ACCESSORIES	
LCD Programmer with Cable	D100PG10A
Timer/Counter Access Module	D100TCM20
EEPROM Memory Cartridge for 20, 40 and 40H Controllers	D100EE10
EEPROM for 14 I/O Controllers	D100EE14
EEPROM Memory Cartridge for 20A and 40A Controllers	D100EE28
UV/PROM Memory Cartridge for 20, 40 and 40H Controllers	D100UV10
Optional 50 cm (19.7") Expansion Cable	D100AU50
SPARE PARTS	
Battery — Lithium 3 V, 1200 mA	D100AB10
Programmer Cable	D100AC10
Fuse — 250 V, 3.0 A	D100AF10
30 cm (11.8") Expansion Cable	D100AU30
User/Instruction Manual	D100DM10

APPROXIMATE DIMENSIONS — Dim: in (mm)

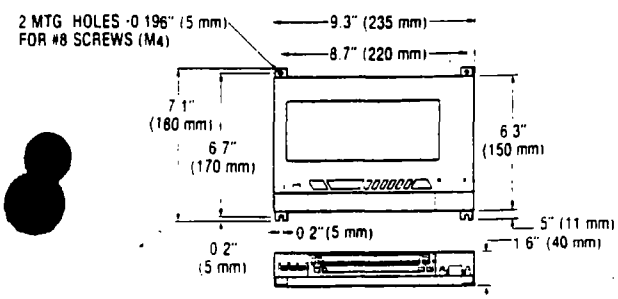
I/O CONTROLLERS AND EXPANDERS



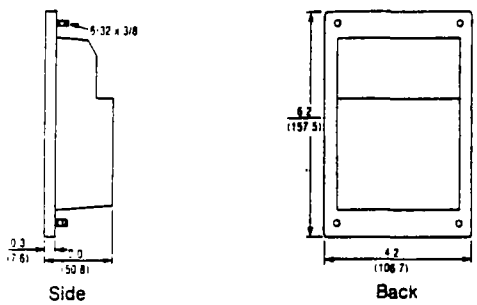
40 I/O CONTROLLERS AND EXPANDERS



14 I/O CONTROLLER

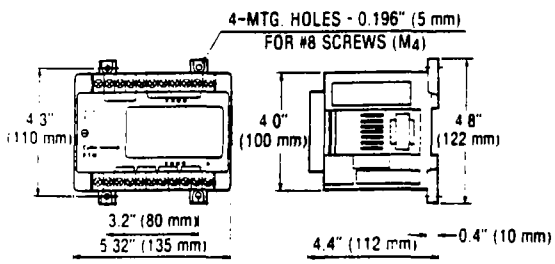


TIMER/COUNTER ACCESS MODULE



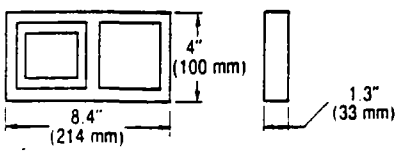
8 I/O EXPANDER, ANALOG INPUT MODULE AND COMPUTER MULTIDROP MODULE

APPROX WEIGHT 1 lb. 2 oz.
(0.5 kg)



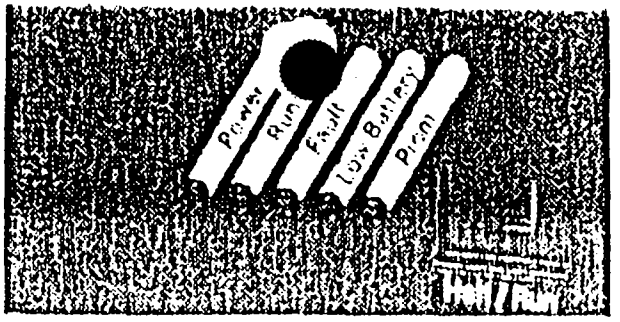
LCD PROGRAMMER

APPROX WEIGHT
14 oz (0.4 kg)



Dim: in. (mm)

See note on installation and use of product at bottom of page 1.



LED INDICATORS ON CONTROLLERS

LED	Indication
POWER	Internal power supply is functioning
RUN	The processor is scanning the program and controlling output. LED flashes when PC is STOPPED — outputs are retained. LED is off when PC is halted — outputs are disabled
FAULT	Processor failure has been detected
LOW BATTERY	Battery is below low limit.
PROM	PROM module is plugged in and operating.

Error messages are provided to inform the operator of errors committed during programming or malfunctioning of equipment or batteries. These messages are particularly important to the operator when programs are being entered or when PROM Modules are being loaded or saved.

HYDRAULIC PARTS LIST

1. Check your unit electrical specification for correct J.S. Barnes hydraulic motor/pump assembly:

   A) 3 phase 208/230/460 - GC9500-K*BT45*A1*3*CB-B 2 H.P.3450 R.P.M.

   B) Single phase 115/230 - GC9500-K*BT25A1*3*CB-B 2 H.P. 3450 R.P.M.

   C) 3 phase 208/230/460 Explosion proof- GC9500-K*BX45A4*3*CB-B 2 H.P. 3450 R.P.M.

2. A) Hydraulic Reservior, 10 Gallon Capacity

   B) Reservior Top Plate

   C) Hydraulic Sub Assembly Mounting Bracket

3. Hydraulic Fluid Level/Temperature Gauge

4. Filler/Breather/Filter Cap

5. Return Line Filter

6. Relief Valve

7. A) NEMA 4 Pressure Switch #PS-3000

   B) NEMA 7 C.C.S. Pressure Switch #6900GE22

8. Subase Plate

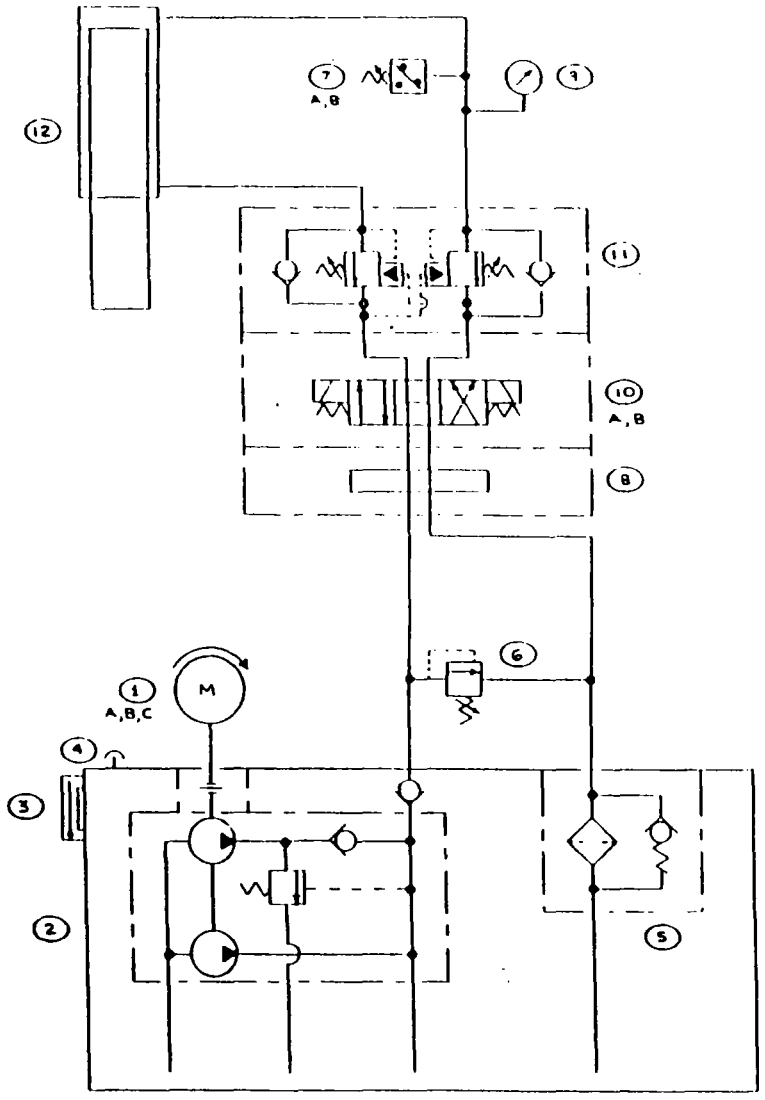
9. Pressure Gauge

10. A) For NEMA 4 Units: Directional Control Valve #D3W2CP09Y

    B) For NEMA 7 Units: Directional Control Valve #3W1CP07Y

11. Counterbalance Valve

12. A) Hydraulic Cylinder



COMPACTING TECHNOLOGIES INT'L, CO
PORTLAND, OR USA

SCALE N/A	APPROVED BY	DRAWN BY HB
DATE 9-16-89		REVISED 7-25-90

C.T.I. COMPACTOR
HYDRAULIC SCHEMATIC

NEMA 4 & 7 PRO-8500 SERIES	DRAWING NUMBER H-01101

TEXACO INC.
INDUSTRIAL HYGIENE, TOXICOLOGY, AND MATERIAL SAFETY DATA SHEET

NOTE. NO REPRESENTATION IS MADE AS TO THE ACCURACY OF THE INFORMATION HEREIN. SEE PAGE 7 FOR CONDITIONS UNDER WHICH DATA ARE FURNISHED.

Trade Name and Synonyms
01657 RANDO OIL HD 32

Manufacturer's Name
Texaco Inc.

Emergency Telephone No.
(914) 831-3400 ext. 204

Address
P.O. Box 509 Beacon, NY 12508

Chemical Name and/or Family or Description
Hydraulic Oils

THIS PRODUCT IS CLASSIFIED AS X NOT HAZARDOUS.

____ HAZARDOUS BY DEFINITION NO.(S) _____ ON ATTACHED EXPLANATION SHEETS

WARNING STATEMENT:
NONE CONSIDERED NECESSARY

OCCUPATIONAL CONTROL PROCEDURES

Protective Equipment (Type)

Eyes: Chemical type goggles or face shield optional.

Skin: Exposed employes should exercise reasonable personal cleanliness; this includes cleansing exposed skin areas several times daily with soap and water, and laundering or dry cleaning soiled work clothing at least weekly.

Inhalation: None required if exposures are within permissible concentrations; see below.

Ventilation: Adequate to meet component permissible concentrations.

Permissible Concentrations:

Air: None established for product; refer to page 4 for component permissible concentrations.

EMERGENCY AND FIRST AID PROCEDURES

First Aid

Eyes: As with most foreign materials, should eye contact occur, flush eyes with plenty of water.

Skin: Wash exposed areas with soap and water.

Ingestion: None considered necessary.

Inhalation: None considered necessary.

Other Instructions: None.

N.D. - Not Determined N.A. - Not Applicable

PHYSIOLOGICAL EFFECTS:

Code No. 01657

Effects of Exposure

Acute

Eyes: Causes minimal eye irritation. Transient minor irritation may be noted following initial contact.

Skin: Slightly irritating with possible redness, edema, or drying of the skin.

Respiratory System: Believed to be minimally irritating if not in excess of permissible concentration (see page 1.

Chronic: N.D.

Other: -

Sensitization Properties:

Skin: Yes ___ No ___ Unknown X Respiratory: Yes ___ No ___ Unknown X

Median Lethal Dose (LD_{50}, LC_{50}) (Species)

Oral: Similar product >[illegible] (rat); practically non-toxic

Inhalation: N.D.

Dermal: Similar product >[illegible] (rabbit); practically non-toxic

Other: N. D.

Irritation Index, Estimation of Irritation (Species)

Skin: 0.79/8.0 (rabbit); [illegible] irritating

Eyes: [illegible]8/110 (rabbit); no [illegible]ciable effect

Symptoms of Exposure: See above.

FIRE PROTECTION INFORMATION

Ignition Temp. °F: N.D. Flash Point °F (Method): 385 °F (COC)

Flammable Limits (%) Lower: N.D. Upper: N.D.

Products Evolved When Subjected to Heat or Combustion:

Carbon monoxide, carbon dioxide, aldehydes and ketones, combustion products of nitrogen, phosphorus, sulfur, calcium and zinc.

Recommended Fire Extinguishing Agents And Special Procedures:

According to the National Fire Protection Association Guide, use water spray, dry chemical, foam, or carbon dioxide.

Water or foam may cause frothing. Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for persons attempting to stop the leak.

Unusual or Explosive Hazards:

None.

N.D. - Not Determined N.A. - Not Applicable

< - Less Than > - Greater Than

ENVIRONMENTAL PROTECTION

Code No. 01657

Waste Disposal Method:
Under RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixture, processes, etc. may render the resulting material hazardous. (See Remarks for Waste Classification.)

Procedures in Case of Breakage or Leakage: (Transportation Spills Call CHEMTREC (800) 424-9300)
Contain spill if possible. Wipe up or absorb on suitable material and shovel up.

Remarks:
Waste Classification: Product has been evaluated for RCRA characteristics and does not meet criteria of a hazardous waste if discarded in its purchased form.

PRECAUTIONS

NONE CONSIDERED NECESSARY

Requirements for Transportation, Handling and Storage:
Minimum feasible handling temperatures should be maintained. Periods of exposure to high temperatures should be minimized. Water contamination should be avoided.

DOT Proper Shipping Name: N.A.
DOT Hazard Class (if applicable): N.A.

CHEMICAL AND PHYSICAL PROPERTIES

Boiling Point (°F) N.D. Vapor Pressure N.D. (mmHg)

Specific Gravity 0.8681 (H_2O=1) Vapor Density N.D. (Air=1)

Appearance and Odor pale liquid

pH of undiluted product N.D. Solubility N.D.

Percent Volatile by Volume N.D. Evaporation N.D. ( )=1

Viscosity 30.1 cSt @ 40 °C Other -

Hazardous Polymerizations _____ Occur X Do not occur

The Material Reacts Violently With: (If others is checked below, see additional comments on page 6 for futher details)

Air	Water	Heat	Strong Oxidizers	Others	None of These
			X		

N.D. - Not Determined N.A. - Not Applicable
< - Less Than > - Greater Than

COMPOSITION

Code No. 01657

Chemical/Common Name	CAS No.	Exposure Limit	Range in %
Solvent-dewaxed heavy paraffinic petroleum distillates	64742650	5mg/m3 ACGIH (MIST) 5mg/m3 OSHA (MIST) 10mg/m3 STEL (MIST)	95.00 - 99.9

To the best of our knowledge, none of the above listed components is hazardous according to OSHA (1910.1200) or one or more state Right-To-Know lists.

SARA TITLE III

I. Title III Section 302/304 Extremely Hazardous Substance

Component	CAS No.	%	RQ (Lbs)	TPQ (Lbs)
NONE				

II. CERCLA Section 102(a) Hazardous Substance

Component	CAS No.	%	RQ (Lbs)
NONE			

III. Title III Section 311 Hazard Categorization

Acute	Chronic	Fire	Pressure	Reactive	Not Applicable
					X

IV. Title III Section 313 Toxic Chemicals

Component	CAS No.	%
NONE		

PRODUCT SHIPPING LABEL	Code No. 01657

01657 RANDO OIL HD 32

NONE CONSIDERED NECESSARY

Chemical/Common Name	CAS No.	Range in %
Solvent-dewaxed heavy paraffinic petroleum distillates	64742650	95.00 - 99.99

To the best of our knowledge. none of the above listed components is hazardous according to OSHA (1910.1200) or one or more state Right-To-Know lists.
Not hazardous according to DOT criteria.

HMIS

Health	: 0	Reactivity	: 0
Flammability	: 1	Special	: 9

CAUTION: Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic. flammable. or reactive materials. Cutting or welding of empty containers might cause fire. explosion or toxic fumes from residues. Do not pressurize or expose to open flame or heat. Keep container closed and drum bungs in place.

HEALTH EMERGENCY TELEPHONE: (914) 831-3400 (EXT. 204)

Texaco Inc.
2000 Westchester Avenue
White Plains, New York 10650

For Additional Information Concerning:

Fuels/Lubricants/Antifreezes
call (914) 831-3400 (EXT.204)
Chemicals
call (512) 459-6543
Transportation Spills
call CHEMTREC (800) 424-9300

ADDITIONAL COMMENTS

Code No. 01657

STATE OF MICHIGAN CRITICAL MATERIALS ACT (REVISED 1988)
0.029% zinc

-

To determine applicability or effect of any law or regulation with respect to the product, users should consult his legal advisor or the appropriate government agency. Texaco does not undertake to furnish advice on such matters.

By R. T. Richards Title Mgr. Env. Conservation & Toxicology

Date 04-19-88 ☐ New ☒ Revised. Supersedes 03-23-88

ND Not Determined NA Not Applicable

THE INFORMATION CONTAINED HEREIN IS BELIEVED TO BE ACCURATE. IT IS PROVIDED INDEPENDENTLY OF ANY SALE OF THE PRODUCT AS PART OF TEXACO'S PRODUCT SAFETY PROGRAM. IT IS NOT INTENDED TO CONSTITUTE PERFORMANCE INFORMATION CONCERNING THE PRODUCT. NO EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE WITH RESPECT TO THE PRODUCT OR THE INFORMATION CONTAINED HEREIN. DATA SHEETS ARE AVAILABLE FOR ALL TEXACO PRODUCTS. YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL TEXACO PRODUCTS YOU BUY, PROCESS, USE OR DISTRIBUTE AND YOU ARE ENCOURAGED AND REQUESTED TO ADVISE THOSE WHO MAY COME IN CONTACT WITH SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN.

EXPLANATION OF THE INDUSTRIAL HYGIENE, TOXICOLOGY, AND MATERIAL SAFETY DATA SHEET

PRODUCT INFORMATION

Trade Name and Synonyms

Refer to the code number and name under which the product is marketed and the common commercial name of the product.

Manufacturer's Name and Address Self explanatory.

Chemical Name and/or Family or Description

Refer to chemical, generic, or descriptive name of single elements and compounds.

For purposes of this form, a product is defined as hazardous if it possesses one or more of the following characteristics: (1) has a flash-point below 200 degrees Fahrenheit, closed cup or subject to spontaneous heating; (2) has a threshold limit value as established by the American Conference of Governmental Industrial Hygenists and/or the Occupational Safety and Health Administration (with exception to petroleum oil mist). (3) a single dose oral LD50 below 500 mg/kg; (4) causes burns to the skin in the short-term exposure or is systemically toxic by skin contact; (5) has been demonstrated to be a skin or eye irritant or causes respiratory irritation; (6) may cause skin or respiratory sensitization; (7) has teratogenic, mutagenic or other toxic effects; (8) may cause asphyxia or pneumoconiosis; (9) in the course of normal operations may produce dusts, gases, fumes, vapor, mist,, or smoke which have one or more of the above characteristics; (10) contains a component which may be carcinogenic according to NTP (National Toxicology Program), IARC (International Agency for Research on Cancer), OSHA (Occupational Safety and Health Administration), EPA (Environmental Protection Agency) and/or NCI (National Cancer Institute.); (11) has a median LC50 (RATS) in air of 200 ppm or less by volume of gas or vapor or 2.0 mg/l or less of mist, fume or dust when administered by continuous inhalation for one hour; (12) is a hazard as identified in the Product Shipping Label on page 5.

OCCUPATIONAL CONTROL PROCEDURES

(Consult your Industrial Hygienist or Occupational Health Specialist.)

Protective Equipment

Type of protective equipment that is necessary for the safe handling and use of this product.

Ventilation

Normal means adequate to maintain permissible concentrations.
Ventilation: type, i.e. local exhaust, mechanical, etc.

Permissible Concentrations

Indicates worker exposure limits, such as the Threshol Limit Value (TLV) as establisned by the American Conference of Governmental Industrial Hygienists or standards, promulgated by the Occupational Safety and Health Administration (e.g., PEL).

TLV-Time Weighted Average (TWA) is the concentrati in air averaged over an 8 hour daily exposure.

TLV-Ceiling (C) is the ceiling limit on concentration that should not be exceeded during any part of the working day.

"Skin" Notation (ACGIH) indicates that dermal absorption can contribute to overall exposure following direct contact or exposure to airborne material.

Permissible Exposure Level (PEL) is the time weighted concentration in air averaged over an 8 hour daily exposure.

EMERGENCY AND FIRST AID PROCEDURES

Administer first aid and emergency procedures in case of eye and/or skin contact, ingestion and inhalation.

PHYSIOLOGICAL EFFECTS

Acute Exposures (Eye, Skin, Respiratory System)

Refers to the most common effects that would be expected to occur from direct contact with the product.

Chronic

Refers to the effects that are most likely to occur from repeated or prolonged exposure.

Sensitizer

Means a substance which will cause on or in normal living tissue, through an allergic or photodynamic process, a hypersensitivity which becomes evident on reapplication of, or exposure to, the same substance.

Median Lethal Dose or Concentration (LD50,LC50)

Refers to that dose or concentration of the material which will produce death in 50 per cent of the animals. For inhalation, exposure time is indicated.

Irritation Index

Refers to an empirical score (Draize Method) for eye and skin irritation when tested by the method described. If numbers are not available, an estimated score indicates whether or not the material is an irritant.

FIRE PROTECTION INFORMATION

Ignition Temperature

Refers to the temperature in degrees Fahrenheit, at which a liquid will give off enough flammable vapor to ignite and burn continuously for 5 seconds.

Flash Point (Method used)

Refers to the temperature in degrees Fahrenheit at which a liquid will give off enough flammable vapor to ignite.

Flammable Limits

Refers to the range of gas or vapor concentration (percent by volume in air) which will burn or explode if an ignition source is present. Lower means the lower flammable limit and upper means the upper flammable limit given in percent.

Products Evolved When Subjected to Heat or Combustion.

The products evolved when this material is subjected to heat or combustion. Includes temperature at which oxidation or other forms of degradation occurs.

Recommended Fire Extinguishing Agents and Special Procedures

Specifies the fire fighting agents that should be used to extinguish fires. If unusual fire hazards are involved or special procedures indicated, this is specified.

Unusual Fire or Explosive Hazards

Specifies hazards to personnel in case of fire, explosive danger.

ENVIRONMENTAL PROTECTION

Specifies how this product may be disposed.

Indicates precautions necessary in the event that leakage or breakage occurs. Included are a) clean-up procedures, (b) personal protective equipment if necessary, (c) hazards that may be created, i.e. fire, explosion, etc.

PRECAUTIONS

Label that is required or recommended.

Requirements for Transportation, Handling and Storage

Specifies handling and storage procedures. Gives ICC, DOT, or other regulations related to safety and health for transportation.

CHEMICAL AND PHYSICAL PROPERTIES

Boiling Point (or Range)

In degrees Fahrenheit or Celsius Boiling Point at 760 mmHg.

Vapor Pressure

Pressure exerted when a solid or liquid is in equilibrium with its own vapor.

Specific Gravity

The ratio of the density of the product to the density of water.

Vapor Density

The ratio of the density of the vapor at saturation concentration (20 degrees Celsius or 68 degrees Fahrenheit) to the density of air at 760 mmHg.

Appearance and Odor

Refers to the general characterization of the material, e.g. powder, colorless liquid, aromatic odor, etc.

pH

Refers to the degree of acidity or basicity of the material in a specific concentration.

pH1-5 - STRONGLY ACIDIC
pH5-7 - WEAKLY ACIDIC
pH7-9 - WEAKLY BASIC
pH9-14 - STRONGLY BASIC

Solubility

Refers to the solubility of a material by weight in water at room temperature. The term negligible, less than 0.1 %; slight, 0.1 to 1%; moderate, 1 to 10%; appreciable, 10% or greater. Gives solubility in organic solvents where appropriate.

Percent Volatile By Volume

Refers to the amount volatilized at 20 degrees Celsius or 68 degrees Fahrenheit when allowed to evaporate.

Evaporation

Gives the rate of evaporation compared to a standard

Viscosity

Measure of flow characteristics in Kinematic viscosity in Centistokes.

Hazardous Polymerization

Hazardous polymerization is that reaction which takes place at a rate which produces large amounts of energy. Indicates whether it may or may not occur and under what storage conditions.

Does the Material React Violently

Indicates whether the material will react violently, releasing large amounts of energy when exposed under conditions listed.

Composition

Components of the product as required by OSHA (1910.1200) and one or more state Right to Know laws.

COMPACTING TECHNOLOGIES INTERNATIONAL

2417 N.W. Thurman • P.O. Box 29046 • Portland, Oregon 97210 • (503) 228-0719 • FAX (503) 228-0873

PERFORMANCE AND TESTING CHECKS

Check all Fuses

The electrical controls of the compactor are divided into five sections:

a. Motor Control

b. Proximity Switch

c. Controller Input

d. Controller Output

e. Controller Unit

A. MOTOR CONTROL - Check correct voltage, frequency and polarity; as applicable.
- Check motor fuses or breakers.
- Check terminal overloads.
- If a defective motor is found, contact the factory.

B. PROXIMITY SWITCHES - Each of the proximity switches has two unique features. Those features are:

1) An indicating light that allows for quick testing of the switch, and the controller input to determine if they are adjusted properly.

2) An indicating light that will show an inoperative component.

C. CONTROLLER INPUTS - The controller has input LED's to indicate inputs from relays and push buttons. Operate the inputs to verify that the LED'S are operating on the controller.

D. CONTROLLER OUTPUTS - The controller has output LED'S. If a Motor Starter, Hydraulic Valve, Lamps, etc. are not operating, verify the output LED on the controller. If the output is verified, check the device to ensure that it is functioning properly.

E. CONTROLLER UNIT -

1) Verify all inputs and outputs.

2) Verify all LED indicators on the controller for any type of internal problem. (Note: For any other type of problem, call your factory engineer for assistance.)

"PRO" System Preventive Maintenance Schedule

T E M	Date last performed				
lydraulic oil - To be changed once a year under normal temperature range (every 6 - 8 months if room temperature regularly exceeds 95 degrees) and when the return line filter is changed					
Return line filter for hydraulic oil - Every filter has a guage or pop-up mechanism that indicates when the filter should be replaced. The monitoring mechanism should be checked weekly.					
lydraulic lines - To be checked weekly to ensure fittings are secure and their is no leakage					
lydraulic oil level - To be checked weekly					
Platen - To be cleaned often enough to prevent buildup, especially along the edges, the connections to the cylinder and guide rods, and in the openings, if any					
Pre-filter (if applicable) - To be checked every forty hours of use and replaced when dirty					
IEPA filter (if applicable) - To be checked after every forty hours of use and replaced when dirty or when					

Liquid removal pump (if applicable)- To be flushed with an appropriate solvent after every use					
Liquid removal in-line filter (if applicable)- To be removed and cleaned after every fifteen hours of use					
Liquid removal pump lubricator (if applicable)- Monitor sight gauge on the side of the lubricator daily to ensure there is an adequate level of ten-weight oil, and clean the filter on the lubricator periodically					

For more information see manufacturer's literature in this manual.

1089/MAINTLOG

COMPACTING TECHNOLOGIES INTERNATIONAL
2417 N.W. Thurman • P.O. Box 29046 • Portland, Oregon 97210 • (503) 228-0719 • FAX (503) 228-0873

RECOMMENDED SPARE PARTS

NEMA 7

Quantity	Description	PRICE
1	GO Proximity Sensor 73-13523-A1	$175.20 ea.
1	Potter-Brumfield Master Control Relay #KUP14A45	$ 26.54 ea.
1	DMIC/DRL3 Filter Element Hydraulic	$123.36 ea.
2	GE Flashing Lamps #267	$ 19.12 $ 8.56 ea.
2	GE LED Lamps #755	$ 3.80 $ 1.90 ea.
1	Furnas Push Button #51PA8A1 w/ 52 BAK	$ 65.70 ea.
1	Furnas Select Switch #51SA2AA w/ 52 BAK	$ 90.98 ea.
15	Gallons Hydraulic Oil Rando HD32 or Compatible (3-5 gallon containers)	$180.00 $ 12.00 gal.

- All prices FOB Portland, Oregon. Freight not included.
- Shipment 15 days after receipt of purchase order.

COMPACTING
TECHNOLOGIES
INTERNATIONAL

2417 N.W. Thurman • P.O. box 29046 • Portland, Oregon 97210 • (503) 228-0719 • FAX (503) 228-0873

LIMITED WARRANTY

1. EQUIPMENT WARRANTY:

Compacting Technologies, International (C.T.I.) warrants, subject to the terms of this Limited Warranty, that new products manufactured by it are free from defects in material or workmanship. No Employee or Representative of C.T.I. is authorized to change this warranty in any way or grant any other warranty.

(a) C.T.I. makes no other warranty, either expressed or implied and makes no warranty or merchantability or fitness for any particular purpose.

(b) C.T.I.'s obligation and liability under this warranty is expressly limited to repairing or replacing, at C.T.I.'s option, equipment found by C.T.I. (under inspection) to have been defective. See part 4 of this warranty. C.T.I. may, at its option, refund the purchase price of the equipment, less reasonable depreciation upon return of the equipment to C.T.I.

(c) C.T.I.'s obligation under this warranty or otherwise, shall not include any transportation charges, costs of installation, or any liability for direct, indirect, or consequential damage or delay.

(d) This warranty covers only products manufactured by C.T.I. Products and components manufactured by others are covered only by such warranties as are extended to C.T.I. by its suppliers.

2. DURATION OF WARRANTY:

The duration of this warranty shall be for a period of one year, following date of delivery to the first user. Equipment may be repaired any number of times under this warranty, but such repair shall not affect the duration of the warranty.

3. WARRANTY NULLIFICATION:

This warranty becomes null and void if any of the following conditions occur:

(a) Improper use, neglect, operation beyond rated capacity or disregard of C.T.I.'s maintenance or operating instructions or safety precautions.

(b) Any substitution of parts not approved by C.T.I. or any alteration or repair as in C.T.I.'s judgement materially and adversely effects the equipment.

(c) Failure to allow C.T.I. to make modifications as recommended and required by C.T.I. from time to time.

4. RETURN UNDER WARRANTY:

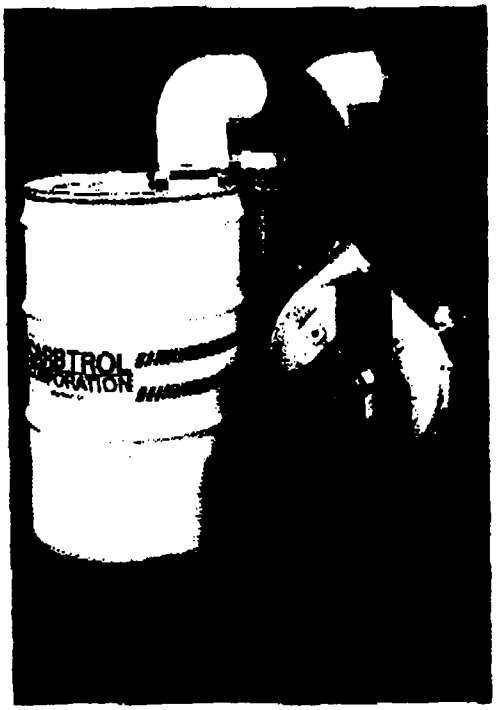
C.T.I. agrees to repair or replace the defective Equipment or part thereof under the terms of this warranty provided written notice of such defect is sent to C.T.I. prior to the expiration of the time period specified in Part 2 of this warranty, and provided said article or component is made available for inspection and verification by C.T.I. as provided in this part, and providing C.T.I. is given a reasonable time to repair, replace, or correct.

After obtaining C.T.I.'s written authorization, Buyer shall return to C.T.I., transportation prepaid, equipment or parts for which a warranty claim is made or, at the option of C.T.I., make it available on-site. Buyer must provide documentation explaining the circumstances for the return and the reason for the occurrence.

CARBTROL

Air Purification Systems

75 to 450 CFM



1000 CFM

FEATURES

- Activated carbon adsorber and blower combined in factory-assembled package.
- Supplied complete. Only requirement is power connection.
- Provided in the following capacities 75, 125, 300, 450, 1000 and 2000 CFM.
- Blower on discharge side of adsorber. Vacuum operation eliminates VOC leaks.
- Regeneration of spent carbon available. Canisters have D.O.T. rating for transport.
- Systems up to 450 CFM maintained in stock to meet emergency needs.

COMPONENTS

- 75 to 450 CFM units have blowers mounted on canister.
- 1000 & 2000 CFM units have blower on separate pallet.
- Interconnecting piping and 8 feet of flexible suction hose included.
- Pallets have fork lift fittings.
- Blowers are centrifugal type, direct drive of aluminum, spark-proof construction.
- TEFC motors standard. Explosion-proof available.
- Adsorber units can be supplied in mild steel epoxy lined, or HDPE. Piping is PVC.

APPLICATIONS

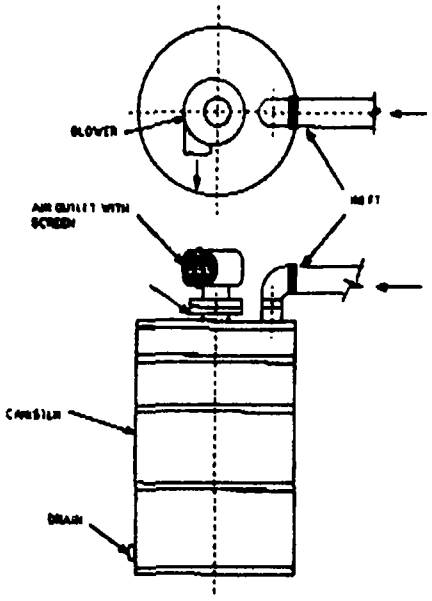
- Solvent Emissions
- Drum Filling Operations
- Spray Booths
- Laboratory Hoods
- Sumps and Sewerage Wet Wells

CARBTROL®
CORPORATION

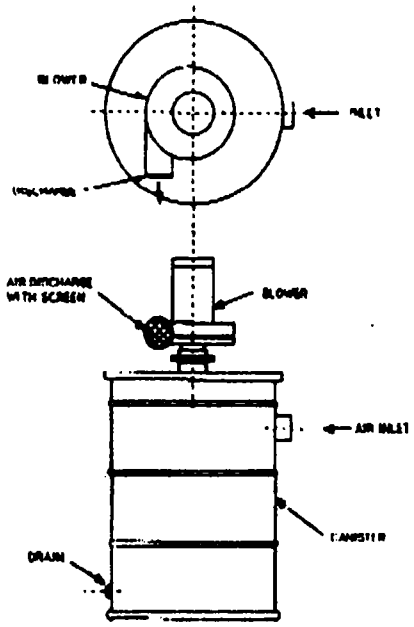
39 Riverside Avenue, Westport, CT 06880 • 1-800-242-1150 • (203) 226-5642

Air Purification Systems

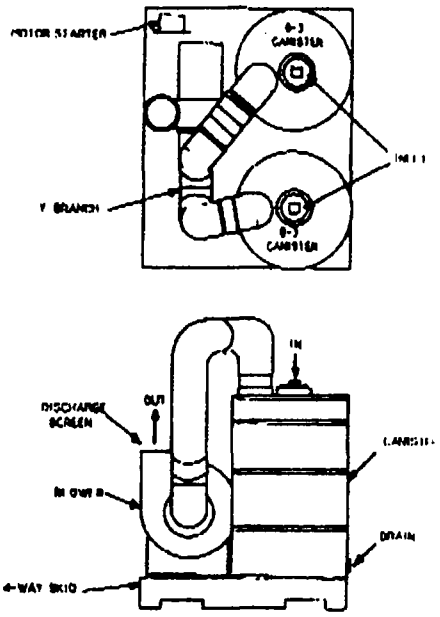
ARRANGEMENT



75 CFM SYSTEM



125, 300, 450 CFM SYSTEM



1000 CFM SYSTEM

SPECIFICATIONS

Model	G1B75	G2B125	G2B300	G3B450	G3B1000
Capacity (CFM)	75	125	300	450	1000
Carbon-Lbs./Canister	200	170	170	140	140
Number Canisters/System	1	1	1	1	2
Horsepower	1/12	1/3	1/2	3/4	3
Power Supply-Phase	1	1	1	1	3
Starter	None-SJ Cord & Plug	None-SJ Cord & Plug	Manual Motor Mtg.	Manual Motor Mtg.	Manual Motor Mtg.
Suction Hose	2½"	4⅝"	4⅝"	4⅝"	7"
Dimensions	24"D x 43"H	24"D x 56"H	24"D x 56"H	24"D x 58"H	4'Sq. x 51"H

CARBTROL®
CORPORATION

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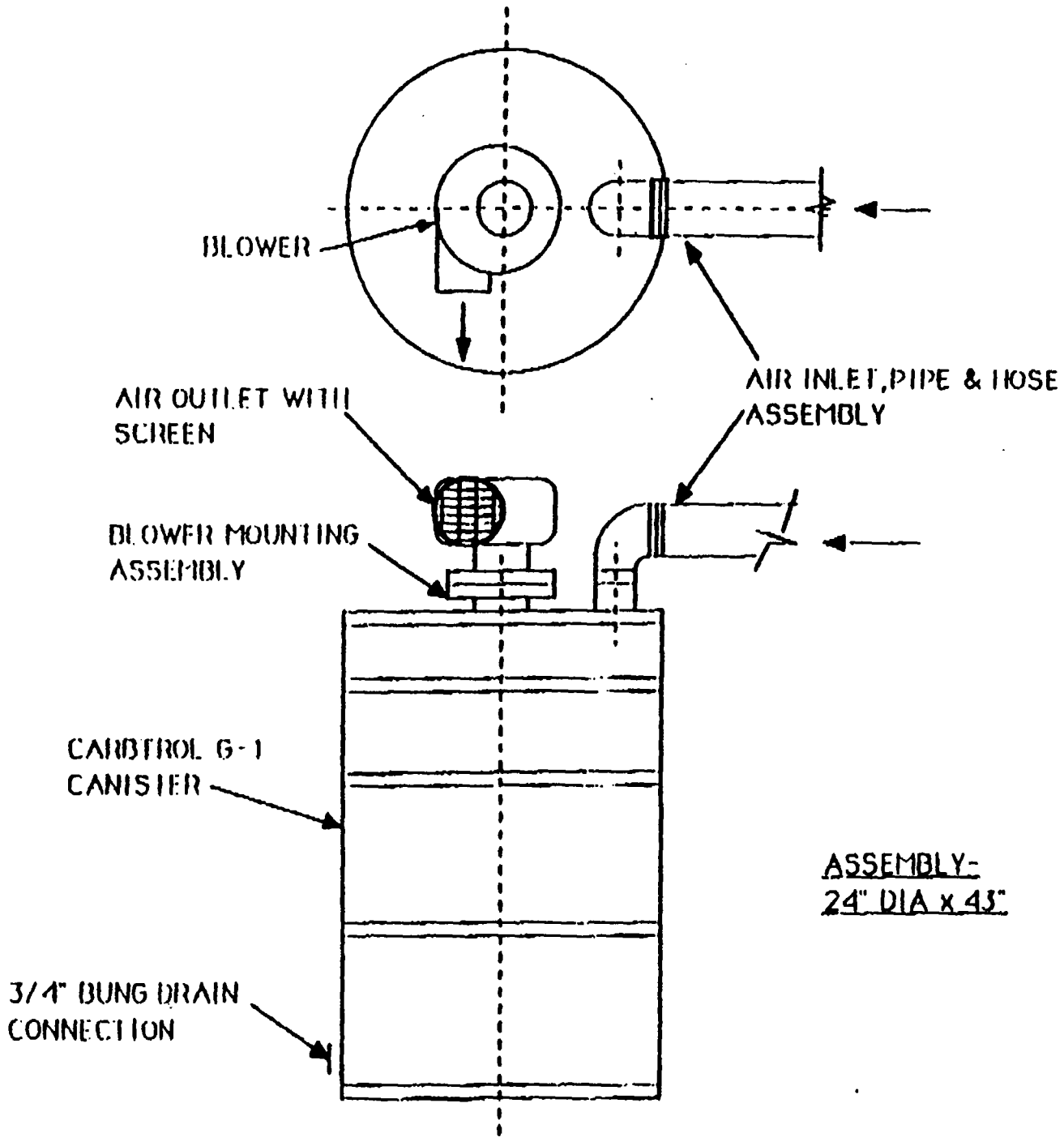

CARBTROL ® CORPORATION	39 RIVERSIDE AVENUE WESTPORT CONN. 06880 (203) 226-5642	
SCALE ----	PN-00200	BY WF
DATE 11-29-81		REV 3-22-91
G-1B-75 AIR PURIFICATION SYSTEM		
ARRANGEMENT	S	DWG 1123/1

TABLE 3. SUMMARY OF CARBON ADSORPTION CAPACITIES

Compound	Adsorption[a] Capacity, mg/g
bis(2-Ethylhexyl) phthalate	11,300
Butylbenzyl phthalate	1,520
Heptachlor	1,220
Heptachlor epoxide	1,038
Endosulfan sulfate	686
Endrin	666
Fluoranthene	664
Aldrin	651
PCB-1232	630
beta-Endosulfan	615
Dieldrin	606
Hexachlorobenzene	450
Anthracene	376
4-Nitrobiphenyl	370
Fluorene	330
DDT	322
2-Acetylaminofluorene	318
alpha-BHC	303
Anethole*	300
3,3-Dichlorobenzidine	300
2-Chloronaphthalene	280
Phenylmercuric Acetate	270
Hexachlorobutadiene	258
gamma-BHC (lindane)	256
p-Nonylphenol	250
4-Dimethylaminoazobenzene	249
Chlordane	245
PCB-1221	242
DDE	232
Acridine yellow*	230
Benzidine dihydrochloride	220
beta-BHC	220
N-Butylphthalate	220
N-Nitrosodiphenylamine	220
Phenanthrene	215
Dimethylphenylcarbinol*	210
4-Aminobiphenyl	200
beta-Naphthol*	200
alpha-Endosulfan	194
Acenaphthene	190
4,4' Methylene-bis-(2-chloroaniline)	190
Benzo(k)fluoranthene	181
Acridine orange*	180
alpha-Naphthol	180
4,6-Dinitro-o-cresol	169
alpha-Naphthylamine	160
2,4-Dichlorophenol	157
1,2,4-Trichlorobenzene	157
2,4,6-Trichlorophenol	155
beta-Naphthylamine	150
Pentachlorophenol	150
2,4-Dinitrotoluene	146
2,6-Dinitrotoluene	145
4-Bromophenyl phenyl ether	144
p-Nitroaniline*	140
1,1-Diphenylhydrazine	135
Naphthalene	132
1-Chloro-2-nitrobenzene	130
1,2-Dichlorobenzene	129
p-Chlorometacresol	124
1,4-Dichlorobenzene	121
Benzothiazole*	120
Diphenylamine	120
Guanine*	120
Styrene	120
1,3-Dichlorobenzene	118
Acenaphthylene	115
4-Chlorophenyl phenyl ether	111
Diethyl phthalate	110

TABLE 3. SUMMARY OF CARBON ADSORPTION CAPACITIES (cont.)

Compound	Adsorption[a] Capacity, mg/g
2-Nitrophenol	99
Dimethyl phthalate	97
Hexachloroethane	97
Chlorobenzene	91
p-Xylene	85
2,4-Dimethylphenol	78
4-Nitrophenol	76
Acetophenone	74
1,2,3,4-Tetrahydro-naphthalene	74
Adenine*	71
Dibenzo(a,h)anthracene	69
Nitrobenzene	68
3,4-Benzofluoranthene	57
1,2-Dibromo-3-chloro-propane	53
Ethylbenzene	53
2-Chlorophenol	51
Tetrachloroethene	51
o-Anisidine*	50
5 Bromouracil	44
Benzo(a)pyrene	34
2,4-Dinitrophenol	33
Isophorone	32
Trichloroethene	28
Thymine*	27
Toluene	26
5-Chlorouracil*	25
N-Nitrosodi-n-propylamine	24
bis(2-Chloroisopropyl) ether	24
Phenol	21

Compound	Adsorption[a] Capacity, mg/g
Bromoform	20
Carbon tetrachloride	11
bis(2-Chloroethoxy) methane	11
Uracil*	11
Benzo(ghi)perylene	11
1,1,2,2-Tetrachloroethane	11
1,2-Dichloropropene	8.2
Dichlorobromomethane	7.9
Cyclohexanone*	6.2
1,2-Dichloropropane	5.9
1,1,2-Trichloroethane	5.8
Trichlorofluoromethane	5.6
5-Fluorouracil*	5.5
1,1-Dichloroethylene	4.9
Dibromochloromethane	4.8
2-Chloroethyl vinyl ether	3.9
1,2-Dichloroethane	3.6
1,2-trans-Dichloroethene	3.1
Chloroform	2.6
1,1,1-Trichloroethane	2.5
1,1-Dichloroethane	1.8
Acrylonitrile	1.4
Methylene chloride	1.3
Acrolein	1.2
Cytosine*	1.1
Benzene	1.0
Ethylenediaminetetra-acetic acid	0.86
Benzoic acid	0.76
Chloroethane	0.59
N-Dimethylnitros-amine	6.8×10^{-5}

COPY

HOYER-SCHLESINGER-TURNER inc.
ENGINEERS - CONSTRUCTORS
300 west adams street chicago illinois 60606 telephone 263-0556 area code 312

March 29, 1993

Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
PO Box 19276
Springfield, Illinois 62794-9276

Re: Clean Harbors of Chicago, Inc.
Response to Deficiencies - RCRA Part B License Application

Gentlemen:

This letter shall serve as a clarification to certification submitted on March 15, 1993 as Response to Deficiencies - RCRA Part B License Application.

The Certification by Professional Engineer (see Appendix K-2) does include certification of Sand Filter - Item No. 149, Carbon Adsorption - Item No. 152 and Overflow Tank - Item No. 161-22.

Please feel free to contact me at 312/263-0556 if you have any questions.

Sincerely,

HOYER-SCHLESINGER-TURNER, INC.

Marie Vanagas

Marie Vanagas, PE

MARIE VANAGAS
62-40801
REGISTERED
PROFESSIONAL
ENGINEER
OF
ILLINOIS

CC: Paul A. Ahearn
James R. Laubsted

MV/ar

B-16

cc Maywood USEPA

DW MAS

CleanHarbors
ENVIRONMENTAL SERVICES COMPANIES

1200 CROWN COLONY DRIVE
P.O. BOX 9137
QUINCY, MA 02269
(617) 849-1800

RECEIVED
MAR 16 1993
IEPA - BOL
PERMIT SECTION

Via Courier

March 15, 1993

Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

Re: Clean Harbors of Chicago, Inc.
Response to Deficiencies - RCRA Part B License Application

Gentlemen:

In response to your letter dated January 29, 1993, Clean Harbors of Chicago, Inc. (CHCI) has prepared and is please to submit the enclosed 1-volume document entitled "Response to Deficiencies - Revised Part B Permit Application". Enclosed please find one (1) document containing all required original certifications, and three (3) copies.

This document contains a comment-by-comment response along with copies of all revised and/or new text, tables, and appendices. The package also includes a discussion of proposed amendments and clarifications to the original Application. You will note that each of IEPA's comments is addressed on a separate page, and that CHCI's response includes a cross-reference of pages that are affected. For the ease of review, all amended pages are marked with the revision date "03/15/93".

Please feel free to contact me at (617)849-1800, extension 4473, if you have any questions.

Sincerely,

Paul A. Ahearn

Paul A. Ahearn
Manager, Regulatory Compliance

cc: Stephen Pozner - CHI
Joseph McNally - CHCI

Serving 25 States From Over 33 Offices

B-16

USEPA

CARLSON ENVIRONMENTAL, Inc.

February 25, 1993

Illinois Environmental Protection Agency
Attention: Lawrence W. Eastep, P.E., Manager
Permit Section
Division of Land Pollution Control
Bureau of Land
2200 Churchill Road
Springfield, Illinois 62706

RECEIVED
MAR 01 1993
IEPA - DLPC
PERMIT SECTION

Re: Clean Harbors Part B Permit
Your correspondence dated 2/3/93

Dear Larry,

Concerning your two comments in the referenced correspondence:

i. The 1990 NIOSH pocket guide will be used.

ii. We will proceed to conduct the analysis in conformance with your requested changes, notwithstanding our previously stated concerns on the use of this modeling at distances less than 100 meters.

Our research indicates no known restrictions on public access to slips #4 and 6; we will advise you if we find information to the contrary.

The cover of the document we referenced for establishing the independent variable is attached, along with pages G-2 and G-3 from the appropriate appendix. The equation we are referencing is equation #7, where the rate of release , "QR", is related to several variables, including surface area, vapor pressure and molecular weight. Since we will be assuming a constant wind speed (1.5 m/sec) and temperature (20 °C), all other terms in the equation are constants.

We look forward to providing the results of this analysis to you very soon, and are faxing this letter to you in hopes that if there is anything lacking in this response to your 2/3/93 letter, you will immediately let us know.

Thank you and your staff for guidance with this protocol.

Very truly yours,

Frank W. Sherman, PE

cc: P. Ahearn J. Laubsted R. Carlson M. Schollenberger

Technical Guidance for Hazards Analysis

Emergency Planning for Extremely Hazardous Substances

U.S. Environmental Protection Agency
Federal Emergency Management Agency
U.S. Department of Transportation

December 1987

- Solids in solution are assumed to behave as a finely dispersed aerosol and are released in ten minutes;
- Solids in molten form are assumed to behave as liquids. The quantity molten is assumed to lose containment instantaneously, forming a 0.033 ft (1 cm) deep pool on a flat, level surface and volatilizing at its melting point temperature; and
- Solids in "brick" form (i.e., not powdered, in solution, vaporized, or molten) are not likely to be released.

G.2 ESTIMATION OF AIRBORNE QUANTITY RELEASED FOR LIQUIDS

The rate of release of a chemical is needed for calculation of the radius of the VZ. It is dependent on the quantity of chemical released, the nature of the release scenario (i.e., pool of liquid, release of pressure relief valve, etc.), and the properties of the chemical released. For spilled pools of chemicals, the rate of release is usually taken to be the evaporation rate (rate of volatilization). Using the assumptions presented above, the following equation is used to calculate the rate of release to air for liquids (in lbs/min):

$$(1)\ QR = \frac{(60\ \text{sec/min} \times MW \times K \times A \times VP \times (929\text{cm}^2/\text{ft}^2)}{R \times (T1+273) \times (760\ \text{mm Hg/atm}) \times 454\ \text{g/lb}}$$ (Clement 1981)

where: QR = Rate of release to air (lbs/min);
MW = Molecular weight (g/g mole);
K = Gas phase mass transfer coefficient (cm/sec);
A = Surface area of spilled material (ft^2);
VP = Vapor pressure of material at temperature T1 (mm Hg);
R = 82.05 atm cm^3/g mole K; and
T1 = Temperature at which the chemical is stored (°C).

The equation for the evaporation rate (rate of volatilization) can be rewritten as follows:

$$(2)\ QR = \frac{0.162 \times MW \times K \times A \times VP}{R\,(T1+273)}$$

K can be estimated based on a known value for a reference compound as follows:

$$(3)\ K = K_{ref} \times (MW_{ref}/MW)^{1/3}$$ (Clement 1981)

Using water as the reference compound:

$$(4)\ K_{ref} = K_{water} = 0.25 \times (u)^{0.78}$$ (Mackay and Matsugo 1973)

where: u = Windspeed (m/sec)

Combining Equations 3 and 4:

$$(5)\ K = 0.25\ (u)^{0.78} \times (18/MW)^{1/3}$$

Combining equations for QR and K yields the following equations:

$$(6)\ QR = \frac{0.162 \times 0.25 \times (u)^{0.78} \times (18)^{1/3} \times MW^{2/3} \times A \times VP}{R \times (T1 + 273)}$$

$$(7)\ QR = \frac{0.106 \times (u)^{0.78} \times MW^{2/3} \times A \times VP}{R \times (T1 + 273)}$$

Calculation of the surface area (A) of the spilled material is carried out as described in the following sections.

G.2.1 CALCULATION OF SURFACE AREAS OF POOLS OF SPILLED LIQUIDS

For diked areas, the surface area is assumed to be the area inside the dike (unless the surface area of the spill is smaller than the diked area). If the area is not diked, the following assumptions are used to calculate the surface area of the spill:

Density = 62.4 lb/ft^3 (i.e., all liquids are assumed to have the same density as water)

Depth of pool is 0.033 ft (1 cm)

The surface area of the spilled liquid (ft^2) is:

$$(8)\ A = \frac{QS\ (lbs)}{62.4\ lb/ft^3 \times 0.033ft} = 0.49 \times QS$$

where: QS = Quantity spilled (lbs); and

A = Surface area (ft^2).

Substituting for A in Equation 7, the quantity released to air per minute (QR) can be estimated as follows:

$$(9)\ QR = \frac{0.106 \times (u)^{0.78} \times MW^{2/3} \times 0.49 \times QS \times VP}{82.05 \times (T1 + 273)}$$

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
HRP-8J

FEB 08 1993

CERTIFIED MAIL P 993 304 596
RETURN RECEIPT REQUESTED

Mr. Paul A. Ahearn
Manager, Regulatory Compliance
Clean Harbors, Environmental Services Companies
1200 Crown Colony Drive
P.O. Box 9137
Quincy, Massachussets 02269

Re: Clean Harbors of Chicago, Inc.
Part B Permit Application
ILD000608471

Dear Mr. Ahearn:

The purpose of this letter is to notify you that certain existing and proposed hazardous waste management units at your facility, which are described in your Part B hazardous waste permit application (i.e., the mobile waste compactor and the proposed can crusher unit), appear to be regulated under the provisions of 40 Code of Federal Regulation (CFR) Part 264, Subpart X--Miscellaneous Units. If this is indeed the case, they will need to be addressed by the United States Environmental Protection Agency (U.S. EPA) in the Federal portion of the Resource Conservation and Recovery Act (RCRA) permit for your facility. Accordingly, much more information related to these units needs to be submitted in the Part B permit application.

On June 21, 1990, the United States Environmental Protection Agency (U.S. EPA) promulgated a rule in 55 Federal Register 25454, limiting organic air emissions as a class at hazardous waste treatment, storage, and disposal facilities requiring a permit under Subtitle C of RCRA. The effective date for this rule was December 21, 1990.

The U.S. EPA is formally requesting that you determine which units at the facility are, or will be, subject to the above referenced requirements, and for those units affected, submit the information required by 40 CFR Sections 270.14, 270.23, 270.24, and 270.25, which is required as part of your Part B permit application for a RCRA hazardous waste management permit. To assist you in preparing an acceptable application addressing these units, a general checklist for the review of Subpart X unit permit applications is enclosed, together with a sample checklist of Subparts AA and BB information requirements that you may use as a guideline in preparing your submittal. In addition, we have enclosed an example of permit conditions issued to another facility which utilizes a can crusher.

Printed on Recycled Paper

Please be advised that the rule for the control of organic air emissions, effective on December 21, 1990, required you to develop and implement a monitoring plan for equipment leaks, to identify any process vents included in the process vent rules, to develop emission calculations for those affected vents, and the identification of control technology, if required. Records of the equipment leak monitoring plan and its implementation, and process vent information must be kept in the operating file on the premises, available for inspection. These records may be submitted in partial/complete fulfillment of the 40 CFR Sections 270.24 and 270.25 requirements.

Your submission of required information related to organic air emissions and to the Subpart X units is due 45 days from your receipt of this letter. If additional time is needed, please contact the permit writer identified at the end of this letter. The response may consist of two separate "stand-alone" documents, although references to the current application could be used, or the location of the new information should be identified in a list cross-referencing these items. Each revised page or drawing must have the revision date identified on them for tracking purposes.

A certification identical to that outlined in 40 CFR 270.11(d) must accompany your submission. Three complete copies of each response should be prepared. Two copies should be sent to the RCRA permit writer for your facility at the Illinois Environmental Protection Agency, while the third copy should be sent to the following address:

RCRA Permitting Branch HRP-8J
Waste Management Division
U.S. Environmental Protection Agency
77 W. Jackson Boulevard
Chicago, Illinois 60604-3590

Attention: Illinois Section

The information which you submit can be disclosed to the public under the Freedom of Information Act and U.S. EPA Freedom of Information regulations. However, you may assert a claim of business confidentiality by printing the word "Confidential" on each page of the application which you believe contains confidential business information, and identifying in your cover letter which pages you are identifying as confidential. The U.S. EPA will review business confidentiality claims under regulations in 40 CFR Part 2, and may later request substantiation of any claims. Please review these rules carefully before making a claim.

If you have questions regarding these matters, please contact Ms. Juana Rojo of my staff, at (312) 886-0990.

Sincerely yours,

Gale R. Hrusha

for George J. Hamper, Chief
Illinois Section
RCRA Permitting Branch

Enclosures

cc: Lawrence A. Eastep, IEPA
James Laubsted, Clean Harbors-Chicago

USEPA

Illinois Environmental Protection Agency · P. O. Box 19276, Springfield, IL 62794-9276

217/524-3307

February 3, 1993

Frank W. Sherman
Carlson Environmental, Inc.
312 West Randolph Street
Chicago, Illinois 60606

Re: 0316000051 -- Cook County
Clean Harbors of Chicago
ILD000608471
RCRA Permit Log No. 16

Dear Mr. Sherman:

This letter is written in response to your letter dated January 15, 1993 regarding the proposed protocol for modeling ambient air concentrations resulting from potential spills. The Agency approves of the proposed protocol with the following changes:

i. The 1990 NIOSH pocket guide should be used in establishing the level of concern and;

ii. Ambient air concentration should be established at 25 meters (the approximate distance from a regulated unit to the closest property line) and 100 meters.

According to Robert Kaleel of our Bureau of Air (BOA), this type of model (gaussian point source) is capable of generating results for less than 100 meters and BOA feels comfortable with the estimated concentrations produced by this type of model at distances less than 100 meters.

However, the Agency will take under consideration your request that 100 meters should be the assumed downwind distance since the published air dispersion coefficients are only validated down to 100 meters and the facility indicates that its property line is over 100 meters from a regulated unit except in the direction towards the water (Lake Calumet). Therefore, please provide information regarding public access to the lake and the use of the water in slip No. 4 and No. 6.

The Agency sees no problem at this time in creating a concentration versus spill area plot but is unfamiliar with the document you reference. Therefore, please define the constraints on the equation identified in your submittal.

USEPA

CleanHarbors®
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested - #P082654968

February 1, 1993

Illinois Environmental Protection Agency
Division of land Pollution Control #24
Planning and Reporting Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

Dear Sir:

Enclosed is documentation submitted as a requirement of the Clean Harbors of Chicago, Inc. RCRA Part B Permit (RCRA Log No. 16, 0316000051). This is required by Attachment D, Part F, Number 3 on page D-6.

If you have any further questions, please contact me at (312)646-6202.

Sincerely,

James R. Laubsted
Compliance Manager

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested #P873791278

January 20, 1994

Mr. Thomas Grad
Mr. Frank Inc.
21900 S. Central Avenue
Matteson, IL 60443

Dear Mr. Grad:

Clean Harbors of Chicago, Inc. is submitting additional information concerning contingency planning to all local fire departments, police departments, hospitals and state and local emergency response teams that may be called upon to provide emergency services. This information is required by IEPA as a Special Condition of the facility's RCRA Part B Permit.

The information includes:

1) A list of all hazardous wastes to be managed at the facility (generic name) including USEPA hazardous waste number and the types of waste managed at each hazardous waste management unit at the facility;

2) A scaled drawing showing the location of all hazardous waste management units and all other areas where waste is managed at the facility (loading/unloading areas, etc.). The drawing also identifies the entrance to the facility, roads within the facility, and possible evacuation routes;

3) The results of computer air modeling conducted by the facility which calculate volumes necessary for 10% of IDLH conditions at 100 meters for NIOSH chemical hazards;

4) A description of the procedures used to handle waste at the facility;

5) An estimate of the quantity of the various types of waste which may be present at the facility and an estimate of the typical inventory of wastes at the facility.

This information is enclosed.

CleanHarbors®

If you have any questions on this information or you would like additional information, please contact me at (312)646-6202.

Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors®
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested #P873791279

January 20, 1994

Mr. Oran Robinson
Chief - Hazardous Materials Division
Illinois Emergency Management Agency
110 East Adams Street
Springfied, IL 62706

Dear Mr. Robinson:

Clean Harbors of Chicago, Inc. is submitting additional information concerning contingency planning to all local fire departments, police departments, hospitals and state and local emergency response teams that may be called upon to provide emergency services. This information is required by IEPA as a Special Condition of the facility's RCRA Part B Permit.

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4) A description of the procedures used to handle waste at the facility;

5) An estimate of the quantity of the various types of waste which may be present at the facility and an estimate of the typical inventory of wastes at the facility.

This information is enclosed.

CleanHarbors

If you have any questions on this information or you would like additional information, please contact me at (312)646-6202.

Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested #P873791280

January 20, 1994

Chief Kooistria
City of Chicago Fire Department
Battalion #14
10458 South Hoxie
Chicago, IL 60617

Dear Chief Kooistria:

Clean Harbors of Chicago, Inc. is submitting additional information concerning contingency planning to all local fire departments, police departments, hospitals and state and local emergency response teams that may be called upon to provide emergency services. This information is required by IEPA as a Special Condition of the facility's RCRA Part B Permit.

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4) A description of the procedures used to handle waste at the facility;

5) An estimate of the quantity of the various types of waste which may be present at the facility and an estimate of the typical inventory of wastes at the facility.

This information is enclosed.

CleanHarbors

If you have any questions on this information or you would like additional information, please contact me at (312)646-6202.

Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested #P873791281

January 20, 1994

Ms. Danette Cox
Metropolitan Water Reclamation District
of Greater Chicago
Main Office
100 East Erie Street
Chicago, IL 60611

Dear Ms. Cox:

Clean Harbors of Chicago, Inc. is submitting additional information concerning contingency planning to all local fire departments, police departments, hospitals and state and local emergency response teams that may be called upon to provide emergency services. This information is required by IEPA as a Special Condition of the facility's RCRA Part B Permit.

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4) A description of the procedures used to handle waste at the facility;

5) An estimate of the quantity of the various types of waste which may be present at the facility and an estimate of the typical inventory of wastes at the facility.

This information is enclosed.

FEB - 4

CleanHarbors®

If you have any questions on this information or you would like additional information, please contact me at (312)646-6202.

Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors®
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested #P873791282

January 20, 1994

Mr. Frank Kody
Metropolitan Water Reclamation District
of Greater Chicago
IWD Office
400 East 130th Street
Chicago, IL 60628

Dear Mr. Kody:

Clean Harbors of Chicago, Inc. is submitting additional information concerning contingency planning to all local fire departments, police departments, hospitals and state and local emergency response teams that may be called upon to provide emergency services. This information is required by IEPA as a Special Condition of the facility's RCRA Part B Permit.

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4) A description of the procedures used to handle waste at the facility;

5) An estimate of the quantity of the various types of waste which may be present at the facility and an estimate of the typical inventory of wastes at the facility.

This information is enclosed.

CleanHarbors

If you have any questions on this information or you would like additional information, please contact me at (312)646-6202.

Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors®
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested #P873791284

January 20, 1994

Mr. Mike Sykora
Si-Tech Industries, Inc.
7700 West 88th Street
Bridgeview, IL 60455

Dear Mr. Sykora:

Clean Harbors of Chicago, Inc. is submitting additional information concerning contingency planning to all local fire departments, police departments, hospitals and state and local emergency response teams that may be called upon to provide emergency services. This information is required by IEPA as a Special Condition of the facility's RCRA Part B Permit.

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5) An estimate of the quantity of the various types of waste which may be present at the facility and an estimate of the typical inventory of wastes at the facility.

This information is enclosed.

CleanHarbors

If you have any questions on this information or you would like additional information, please contact me at (312)646-6202.

Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors®
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested #P873791283

January 20, 1994

Mr. John Schwartz
EHS Trinity Hospital
2320 East 93rd Street
Chicago, IL 60617

Dear Mr. Schwartz:

Clean Harbors of Chicago, Inc. is submitting additional information concerning contingency planning to all local fire departments, police departments, hospitals and state and local emergency response teams that may be called upon to provide emergency services. This information is required by IEPA as a Special Condition of the facility's RCRA Part B Permit.

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5) An estimate of the quantity of the various types of waste which may be present at the facility and an estimate of the typical inventory of wastes at the facility.

This information is enclosed.

CleanHarbors®

If you have any questions on this information or you would like additional information, please contact me at (312)646-6202.

Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors®
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested # P082654963

January 20, 1994

District Commander Coffey
City of Chicago Police Department
District Station #4
2255 East 103rd Street
Chicago, IL 60617

Dear Commander Coffey:

Clean Harbors of Chicago, Inc. is submitting additional information concerning contingency planning to all local fire departments, police departments, hospitals and state and local emergency response teams that may be called upon to provide emergency services. This information is required by IEPA as a Special Condition of the facility's RCRA Part B Permit.

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4) A description of the procedures used to handle waste at the facility;

5) An estimate of the quantity of the various types of waste which may be present at the facility and an estimate of the typical inventory of wastes at the facility.

This information is enclosed.

CleanHarbors

Clean Harbors will also have to provide information regarding the properties of wastes managed at the facility unless documentation that the local fire department, police department, and HAZMAT unit do not want the information and that the information submitted to them is adequate. This information would include the following:

6) Name
USEPA Hazardous Waste Number
CAS Number
IDLH
TLVs (TLV-TWA, TLV-STEL, TLV-C)
Boiling Point
Vapor Pressure at two temperatures
NFPA Designation
Material Safety Data Sheets
Other appropriate characteristics (reactive class, etc.)
USDOT classification

An attachment indicating that you do not require this information is included for your convenience. Please return it in the enclosed postage paid envelope.

If you have any questions on this information or you would like additional information, please contact me at (312)646-6202.

Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors®
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Organization Name: City of Chicago Police Department
District Station #4

Address: 2255 East 103rd Street

City: Chicago, IL 60617

Contact Name: District Commander Coffey

Telephone Number: (312) 747-7581

This is to acknowledge that, as an authorized representative of the above referenced emergency assistance organization, I have received additional information including numbers 1, 2, 3, 4, and 5 of the attached letter. The information which has been provided is adequate and the information from number 6 of the attached letter is not wanted.

_____

Signature Date

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
MR. THOMAS GRAD
MR. FRANK INC.
21900 S. CENTRAL AVE.
MATTESON, IL 60443

4a. Article Number
P873791278

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
12294

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

Is your RETURN ADDRESS completed on the reverse side?

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

SENDER:
- Complete items 1 and/or 2 for additional services.
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
CHIEF FRANCIS W. MORIARTY
DEPUTY COORDINATOR
EMERGENCY PREPAREDNESS +
DISASTER SERVICES
CHICAGO. FIRE DEPT.
605 W. ARMITAGE AVE
CHICAGO, IL 60614

4a. Article Number
P082654948

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
12/17/93

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

LINCOLN PARK STA CHICAGO IL 60614 DEC 17 1993

Is your RETURN ADDRESS completed on the reverse side?

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
DISTRICT COMMANDER COFFEY
CITY OF CHICAGO POLICE DEPT.
DISTRICT STATION #4
2255 EAST 103RD ST.
CHICAGO, IL 60617

4a. Article Number
P082654963

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
1/21/94

5. Signature (Addressee)
2255 E 103rd St

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

Is your RETURN ADDRESS completed on the reverse side?

DOMESTIC RETURN RECEIPT

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- Complete items 3, and 4a & b.
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
CHIEF KOOISTRIA.
CITY OF CHICAGO FIRE DEPT
BATTALION # 14
10458 S. HOXIE
CHICAGO, IL 60617

4a. Article Number
P873791280

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
1-24-94

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)
[illegible]

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
MR. JOHN SCHWARTZ
EHS TRINITY HOSPITAL
2320 E. 93rd STREET
CHICAGO, IL 60617

4a. Article Number
P873791283

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
1/24/94

5. Signature (Addressee)
[illegible]

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
MR. MIKE SYKORA
SI-TECH INDUSTRIES, INC.
~~7900 W. 88th STREET~~
BRIDGEVIEW, IL 60455
P.O. Box 2388

4a. Article Number
P873791284

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
1-24-94

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)
[illegible]

PS Form 3811, December 1991

Is your RETURN ADDRESS completed on the reverse side?

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- Complete items 3, and 4a & b.
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- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
MR. ORAN ROBINSON
CHIEF-HAZARDOUS MATERIALS DIV.
IL. EMERGENCY MANAGEMENT AGENCY
110 E. ADAMS ST.
SPRINGFIELD, IL 62706

4a. Article Number
P873791279

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery 2 5 1994

5. Signature (Addressee)

6. Signature (Agent)
Robert D. Morris

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
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- Complete items 3, and 4a & b.
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
MS. DANETTE COX
MWRD
MAIN OFFICE
100 E. ERIE ST.
CHICAGO, IL 60611

4a. Article Number
P 873791281

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery 1/24/94

5. Signature (Addressee)

6. Signature (Agent)
M. Lilly

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
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- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
MR. FRANK KODY
MWRD
IWD OFFICE
400 E. 130th ST.
CHICAGO, IL 60628

4a. Article Number
P873791282

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery 1/24

5. Signature (Addressee)
Louise Thompson

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

USEPA

Illinois Environmental Protection Agency · P. O. Box 19276, Springfield, IL 62794-9276

217/524-3300

January 29, 1993

Paul A. Ahearn
Clean Harbors of Chicago
1200 Crown Colony Drive
Quincy, Massachusetts 02269

Re: 0316000051 -- Cook County
Clean Harbors of Chicago
ILD000608471
RCRA Permit Log No. 16

Dear Mr. Ahearn:

The Illinois Environmental Protection Agency has reviewed the Part B permit application for storage in containers (S01) or tanks (S02) and treatment in tanks (T01) as revised by the December 23, 1992 submittal for the above-referenced facility. A list of the deficiencies identified during this technical review is included in the attached Notice of Deficiency (NOD).

Each of the deficiencies must be addressed before this Agency can complete the technical review of your permit application. Your response must be submitted in quadruplicate and postmarked no later than March 1, 1993. The response should be in a format which allows incorporation of the new information into the appropriate sections of your application. To allow for a proper review of this new information, the location of the response to each deficiency should be identified in a list cross-referencing these items. Each revised page or drawing must have the revision date identified on them for tracking purposes.

A certification identical to that outlined in 35 Ill. Adm. Code 702.126 must accompany your submission. The original and three copies of the new information and certification should be submitted to the following address:

Illinois Environmental Protection Agency
Division of Land Pollution Control -- #33
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, Illinois 62794-9276

If you have any questions regarding this subject, feel free to contact Mark A. Schollenberger, P.E. of my staff at 217/524-3307.

Very truly yours,

Lawrence W. Eastep, P.E., Manager
Permit Section
Division of Land Pollution Control
Bureau of Land

LWE:MAS/mls/32Y/69

cc: USEPA, George Hamper

18

Clean Harbors of Chicago
USEPA ID No. ILD000608471
State ID No. 0316000051
Illinois Log No. 16
Technical Review
Notice of Deficiency Comments

C-2 Waste Analysis Plan

i. pg. C-13, Per the revisions submitted 12/23/93, CHCl does not intend to do the bucket test for lab pack wastes; however, the reference in C-2a(iii)c does not indicate this. Please modify the reference to reinstate the literature research in lieu of a bucket test for lab pack wastes.

ii. pg. C-16A, The references on this page relating to the information to be found in the tables do not conform to the titles on the tables. Please modify the application so that references and the table titles match.

D-2 Tank Systems

i. The newly submitted Appendix D-49 (certification of a tank system) from an Illinois P.E. does not include information covered in the previous out-of-state certification; such as, the tank has sufficient structural strength for its intended use, the material of construction of the tank is compatible with the wastes to be stored, the tank is designed to be nitrogen blanketed and electrically grounded or the tank will be constructed in accordance with NFPA68, . . . and UL142 . . . This information is necessary to satisfy the requirements of 35 724.292. Please amend this appendix as necessary.

ii. Proposed units which are part of the listed waste treatment scheme do not have a written assessment and certification by a registered professional engineer. The following units are not included in Table D-5 and therefore are not covered by the certification in the application; the plate and frame filter press, the sand filters, the carbon adsorption unit and the paddle wheel mixer. These units will not be approved unless a certification is provided. Details (drawings and design information) should also be provided.

iii. The proposed stabilization facility will not be permitted for the waste code F006 unless the treatability study includes all LDR constituents.

iv. The facility must indicate what reagents are to be used at the site. Pursuant to Section 703, Appendix A, a change in the treatment process would require a modification of the permit. Without the identification of the reagents, stabilization, neutralization and other processes using reagents will not be approved.

v. The facility is limited to the waste codes the manufacturer indicated are acceptable to carbon adsorption, based on the specific organics, unless an engineer certifies that the carbon adsorption unit is compatible (able to treat) the waste code in questions. Regardless, waste codes (which contain specific organics not amenable to carbon adsorption per the manufacturer) will not be permitted.

vi. Please identify how the facility will monitor breakthrough of the carbon adsorption units.

vii. Please identify how the suspended solids limitation to the carbon adsorption unit was established.

F-4a Unloading Operations

The Agency has the authority to request this information under Section 703.183(h). Under the omnibus provisions, the Agency can incorporate whatever provisions are necessary to protect the environment from spills in these areas. Therefore, the facility will provide us the following information:

i. the containment volume of the secondary containment systems for these areas

ii. whether these areas are impervious to spills (i.e., is the concrete coated to prevent infiltration of the spill waste)

iii. the volume associated with a 25-year 24-hour storm event for the area in question including any run-on and

iv. the calculations to support the numbers generated above.

G-4b Identification of Hazardous Materials

The copy of the log sheet referenced in the December 23, 1992 revisions was not found in the submitted information.

I-5 Financial Assurance Mechanism for Closure

The facility did not use worst case in calculating the cost to dispose of the hazardous waste fuel. Please revise accordingly.

MAS/mls/32Y/70-71

cc: Maywood USEPA

DWC

B-14

CleanHarbors®
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested - #P082654532

January 3, 1993

RECEIVED JAN 28 1994
WMD RCRA
RECORD CENTER

Illinois Environmental Protection Agency
Division of land Pollution Control #24
Planning and Reporting Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

Dear Sir:

Enclosed is documentation submitted as a requirement of the Clean Harbors of Chicago, Inc. RCRA Part B Permit (RCRA Log No. 16, 0316000051). This is required by Attachment D, Part F, Number 4 on page D-18.

If you have any further questions, please contact me at (312)646-6202.

Sincerely,

James R. Laubsted
Compliance Manager

RECEIVED
JAN - 5 1994
IEPA - BOL
PERMIT SECTION

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested # P 873 791 815

November 18, 1993

Mr. Mike Sykora
SI-TECH INDUSTRIES, INC.
7700 West 88th Street
Bridgeview, IL 60455

Dear Mr. Sykora:

Clean Harbors of Chicago, Inc. is having an Annual Open House for Emergency Response Agencies which may be called upon for emergency assistance at this facility. Your facility is listed in the Clean Harbors Contingency Plan as an Emergency Assistance Organization which could participate in an emergency response situation. The purpose of the Open House is to familiarize the Agencies with the facility layout, properties of hazardous wastes handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, possible evacuation routes, and injuries or illnesses which could result from fires, explosions, or releases at the facility.

Enclosed is the Contingency Plan from the approved Part B Permit for Clean Harbors of Chicago, Inc. Clean Harbors is providing this as required by the Permit.

Under 35 ILL. Adm. Code Part 724.153(b), Clean Harbors is required to document the refusal of an Emergency Assistance Organization to participate in our facility's emergency planning arrangements. In order for Clean Harbors to document (to the Illinois Environmental Protection Agency) our attempts to make emergency assistance arrangements with your organization, we are requesting that you sign the enclosed "Agreement to Cooperate in Contingency Planning Activities" and return it to me in the enclosed self-addressed stamped envelope.

The Contingency Plan designates the Chicago Fire Department as the primary Agency which will coordinate activities required by local Emergency Response Agencies during an emergency at the facility. The Chicago Fire

CleanHarbors

Department and the Chicago Police Department are the only fire or police departments designated in the Contingency Plan which might respond to an emergency at the facility.

The Open House is scheduled for Friday, December 3rd at 10:00 a.m. Please confirm your attendance.

On behalf of the management and staff of Clean Harbors, I would like to thank you and your organization for your continued cooperation and support in our emergency planning activities. If you have any questions regarding the revised plan or the acknowledgment form, please feel free to contact me at (312)646-6202.

Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors®
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

AGREEMENT TO COOPERATE IN CONTINGENCY PLANNING ACTIVITIES

Organization Name: Si-Tech Industries, Inc.

Address: 7700 West 88th Street

City: Bridgeview, IL 60455

Contact Name: Mr. Mike Sykora

Telephone Number: (708) 598-0502

This is to acknowledge that, as an authorized representative of the above referenced emergency assistance organization, I have received a copy of Clean Harbors of Chicago, Inc.'s (CHCI's) Contingency Plan and that my organization:

(CHECK ONE)

_X_ Agrees to participate in CHCI's emergency planning and response activities as described in Section G-6 of the Contingency Plan.

_____ Declines to participate in CHCI's emergency planning and response activities.

Signature 12-13-93 Date

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested # P 873 791 812

November 18, 1993

Mr. John Schwartz
EHS TRINITY HOSPITAL
2320 East 93rd Street
Chicago, IL 60617

Dear Mr. Schwartz:

Clean Harbors of Chicago, Inc. is having an Annual Open House for Emergency Response Agencies which may be called upon for emergency assistance at this facility. Your facility is listed in the Clean Harbors Contingency Plan as an Emergency Assistance Organization which could participate in an emergency response situation. The purpose of the Open House is to familiarize the Agencies with the facility layout, properties of hazardous wastes handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, possible evacuation routes, and injuries or illnesses which could result from fires, explosions, or releases at the facility.

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CleanHarbors®

Department and the Chicago Police Department are the only fire or police departments designated in the Contingency Plan which might respond to an emergency at the facility.

The Open House is scheduled for Friday, December 3rd at 10:00 a.m. Please confirm your attendance.

On behalf of the management and staff of Clean Harbors, I would like to thank you and your organization for your continued cooperation and support in our emergency planning activities. If you have any questions regarding the revised plan or the acknowledgment form, please feel free to contact me at (312)646-6202.

Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors®
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

AGREEMENT TO COOPERATE IN CONTINGENCY PLANNING ACTIVITIES

Organization Name: EHS Trinity Hospital

Address: 2320 East 93rd Street

City: Chicago, IL 60617

Contact Name: Mr. John Schwartz

Telephone Number: (312) 978-2000

This is to acknowledge that, as an authorized representative of the above referenced emergency assistance organization, I have received a copy of Clean Harbors of Chicago, Inc.'s (CHCI's) Contingency Plan and that my organization:

(CHECK ONE)

✓ Agrees to participate in CHCI's emergency planning and response activities as described in Section G-6 of the Contingency Plan.

_____ Declines to participate in CHCI's emergency planning and response activities.

John R. Schwartz 12-7-93

Signature Date

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested # P 873 791 814

November 18, 1993

Mr. Frank Kody
METROPOLITAN WATER RECLAMATION
DISTRICT OF GREATER CHICAGO
IWD Office
40 East 130th Street
Chicago, IL 60628

Dear Mr. Kody:

Clean Harbors of Chicago, Inc. is having an Annual Open House for Emergency Response Agencies which may be called upon for emergency assistance at this facility. Your facility is listed in the Clean Harbors Contingency Plan as an Emergency Assistance Organization which could participate in an emergency response situation. The purpose of the Open House is to familiarize the Agencies with the facility layout, properties of hazardous wastes handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, possible evacuation routes, and injuries or illnesses which could result from fires, explosions, or releases at the facility.

Enclosed is the Contingency Plan from the approved Part B Permit for Clean Harbors of Chicago, Inc. Clean Harbors is providing this as required by the Permit.

Under 35 ILL. Adm. Code Part 724.153(b), Clean Harbors is required to document the refusal of an Emergency Assistance Organization to participate in our facility's emergency planning arrangements. In order for Clean Harbors to document (to the Illinois Environmental Protection Agency) our attempts to make emergency assistance arrangements with your organization, we are requesting that you sign the enclosed "Agreement to Cooperate in Contingency Planning Activities" and return it to me in the enclosed self-addressed stamped envelope.

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CleanHarbors

Department and the Chicago Police Department are the only fire or police departments designated in the Contingency Plan which might respond to an emergency at the facility.

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On behalf of the management and staff of Clean Harbors, I would like to thank you and your organization for your continued cooperation and support in our emergency planning activities. If you have any questions regarding the revised plan or the acknowledgment form, please feel free to contact me at (312)646-6202.

Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors®
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

AGREEMENT TO COOPERATE IN CONTINGENCY PLANNING ACTIVITIES

Organization Name: Metropolitan Water Reclamation District of Greater Chicago - IWD Office

Address: 400 East 130th Street

City: Chicago, IL 60628

Contact Name: Mr. Frank Kody

Telephone Number: (312) 787-3575

This is to acknowledge that, as an authorized representative of the above referenced emergency assistance organization, I have received a copy of Clean Harbors of Chicago, Inc.'s (CHCI's) Contingency Plan and that my organization:

(CHECK ONE)

✓ Agrees to participate in CHCI's emergency planning and response activities as described in Section G-6 of the Contingency Plan.

_____ Declines to participate in CHCI's emergency planning and response activities.

Frank W. Kody PCO II 12/13/93

Signature Date

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested # P 873 791 817

November 18, 1993

Ms Danette Cox
METROPOLITAN WATER RECLAMATION
DISTRICT OF GREATER CHICAGO
Main Office
100 East Erie Street
Chicago, IL 60611

Dear Ms. Cox:

Clean Harbors of Chicago, Inc. is having an Annual Open House for Emergency Response Agencies which may be called upon for emergency assistance at this facility. Your facility is listed in the Clean Harbors Contingency Plan as an Emergency Assistance Organization which could participate in an emergency response situation. The purpose of the Open House is to familiarize the Agencies with the facility layout, properties of hazardous wastes handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, possible evacuation routes, and injuries or illnesses which could result from fires, explosions, or releases at the facility.

Enclosed is the Contingency Plan from the approved Part B Permit for Clean Harbors of Chicago, Inc. Clean Harbors is providing this as required by the Permit.

Under 35 ILL. Adm. Code Part 724.153(b), Clean Harbors is required to document the refusal of an Emergency Assistance Organization to participate in our facility's emergency planning arrangements. In order for Clean Harbors to document (to the Illinois Environmental Protection Agency) our attempts to make emergency assistance arrangements with your organization, we are requesting that you sign the enclosed "Agreement to Cooperate in Contingency Planning Activities" and return it to me in the enclosed self-addressed stamped envelope.

- The Contingency Plan designates the Chicago Fire Department as the primary Agency which will coordinate activities required by local Emergency Response Agencies during an emergency at the facility. The Chicago Fire

CleanHarbors

Department and the Chicago Police Department are the only fire or police departments designated in the Contingency Plan which might respond to an emergency at the facility.

The Open House is scheduled for Friday, December 3rd at 10:00 a.m. Please confirm your attendance.

On behalf of the management and staff of Clean Harbors, I would like to thank you and your organization for your continued cooperation and support in our emergency planning activities. If you have any questions regarding the revised plan or the acknowledgment form, please feel free to contact me at (312)646-6202.

Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

AGREEMENT TO COOPERATE IN

CONTINGENCY PLANNING ACTIVITIES

Organization Name: Metroploitan Water Reclamation District of Greater Chicago - Main Office
Address: 100 East Erie Street

City: Chicago, IL 60611

Contact Name: Ms. Danette Cox

Telephone Number: (312) 751-3044

This is to acknowledge that, as an authorized representative of the above referenced emergency assistance organization, I have received a copy of Clean Harbors of Chicago, Inc.'s (CHCI's) Contingency Plan and that my organization:

(CHECK ONE)

_____ Agrees to participate in CHCI's emergency planning and response activities as described in Section G-6 of the Contingency Plan.

_____ Declines to participate in CHCI's emergency planning and response activities.

_____

Signature Date

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested # P 873 791 816

November 18, 1993

Chief Kooistria
CITY OF CHICAGO FIRE DEPARTMENT
Battalion #14
10458 South Hoxie
Chicago, IL 60617

Dear Mr. Kooistria:

Clean Harbors of Chicago, Inc. is having an Annual Open House for Emergency Response Agencies which may be called upon for emergency assistance at this facility. Your facility is listed in the Clean Harbors Contingency Plan as an Emergency Assistance Organization which could participate in an emergency response situation. The purpose of the Open House is to familiarize the Agencies with the facility layout, properties of hazardous wastes handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, possible evacuation routes, and injuries or illnesses which could result from fires, explosions, or releases at the facility.

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Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

AGREEMENT TO COOPERATE IN CONTINGENCY PLANNING ACTIVITIES

Organization Name: City of Chicago Fire Department Battalion #14

Address: 10458 South Hoxie Avenue

City: Chicago, IL 60617

Contact Name: Chief Kooistria

Telephone Number: (312) 768-0965

This is to acknowledge that, as an authorized representative of the above referenced emergency assistance organization, I have received a copy of Clean Harbors of Chicago, Inc.'s (CHCI's) Contingency Plan and that my organization:

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_____ Declines to participate in CHCI's emergency planning and response activities.

_____

Signature Date

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested # P 873 791 813

November 18, 1993

Mr. Oran Robinson
Chief - Hazardous Materials Division
ILLINOIS EMERGENCY MANAGEMENT AGENCY
110 East Adams Street
Springfield, IL 62706

Dear Mr. Robinson:

Clean Harbors of Chicago, Inc. is having an Annual Open House for Emergency Response Agencies which may be called upon for emergency assistance at this facility. Your facility is listed in the Clean Harbors Contingency Plan as an Emergency Assistance Organization which could participate in an emergency response situation. The purpose of the Open House is to familiarize the Agencies with the facility layout, properties of hazardous wastes handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, possible evacuation routes, and injuries or illnesses which could result from fires, explosions, or releases at the facility.

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Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted

James R. Laubsted
Compliance Manager

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

AGREEMENT TO COOPERATE IN

CONTINGENCY PLANNING ACTIVITIES

Organization Name: Illinois Emergency Management Agency

Address: 110 East Adams Street

City: Springfield, IL 62706

Contact Name: Mr. Oran Robinson

Telephone Number: (217) 782-6760

This is to acknowledge that, as an authorized representative of the above referenced emergency assistance organization, I have received a copy of Clean Harbors of Chicago, Inc.'s (CHCI's) Contingency Plan and that my organization:

(CHECK ONE)

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_____ Declines to participate in CHCI's emergency planning and response activities.

_____

Signature Date

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested # P 873 791 811

November 18, 1993

District Commander Coffey
City of Chicago Police Department
District Station #4
2255 East 103rd Street
Chicago, IL 60617

Dear Mr. Coffey:

Clean Harbors of Chicago, Inc. is having an Annual Open House for Emergency Response Agencies which may be called upon for emergency assistance at this facility. Your facility is listed in the Clean Harbors Contingency Plan as an Emergency Assistance Organization which could participate in an emergency response situation. The purpose of the Open House is to familiarize the Agencies with the facility layout, properties of hazardous wastes handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, possible evacuation routes, and injuries or illnesses which could result from fires, explosions, or releases at the facility.

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Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

AGREEMENT TO COOPERATE IN

CONTINGENCY PLANNING ACTIVITIES

Organization Name: City of Chicago Police Department
District Station #4

Address: 2255 East 103rd Street

City: Chicago, IL 60617

Contact Name: District Commander Coffey

Telephone Number: (312) 747-8205

This is to acknowledge that, as an authorized representative of the above referenced emergency assistance organization, I have received a copy of Clean Harbors of Chicago, Inc.'s (CHCI's) Contingency Plan and that my organization:

(CHECK ONE)

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_____

Signature Date

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested # P082 654 527

November 18, 1993

Chief Francis W. Moriarity
Deputy Coordinator
Emergency Preparedness and Disaster Services
Chicago Fire Department
605 W. Armitage Avenue
Chicago, IL 60614

Dear Chief Moriarity:

Clean Harbors of Chicago, Inc. is having an Annual Open House for Emergency Response Agencies which may be called upon for emergency assistance at this facility. Your facility is listed in the Clean Harbors Contingency Plan as an Emergency Assistance Organization which could participate in an emergency response situation. The purpose of the Open House is to familiarize the Agencies with the facility layout, properties of hazardous wastes handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, possible evacuation routes, and injuries or illnesses which could result from fires, explosions, or releases at the facility.

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Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted

James R. Laubsted
Compliance Manager

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

AGREEMENT TO COOPERATE IN CONTINGENCY PLANNING ACTIVITIES

Organization Name: Emergency Preparedness and Disaster Svs.
Chicago Fire Department
Address: 605 W. Armitage Avenue

City: Chicago, IL 60614

Contact Name: Chief Francis W. Moriarty

Telephone Number: (312) 744-0225

This is to acknowledge that, as an authorized representative of the above referenced emergency assistance organization, I have received a copy of Clean Harbors of Chicago, Inc.'s (CHCI's) Contingency Plan and that my organization:

(CHECK ONE)

_____ Agrees to participate in CHCI's emergency planning and response activities as described in Section G-6 of the Contingency Plan.

_____ Declines to participate in CHCI's emergency planning and response activities.

_____

Signature Date

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

Certified Mail - Return Receipt Requested # P082654526

November 18, 1993

Mr. Thomas Grad
Mr. Frank Inc.
21900 S. Central Avenue
Matteson, IL 60443

Dear Mr. Grad:

Clean Harbors of Chicago, Inc. is having an Annual Open House for Emergency Response Agencies which may be called upon for emergency assistance at this facility. Your facility is listed in the Clean Harbors Contingency Plan as an Emergency Assistance Organization which could participate in an emergency response situation. The purpose of the Open House is to familiarize the Agencies with the facility layout, properties of hazardous wastes handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, possible evacuation routes, and injuries or illnesses which could result from fires, explosions, or releases at the facility.

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Sincerely,

CLEAN HARBORS OF CHICAGO, INC.

James R. Laubsted
Compliance Manager

CleanHarbors
OF CHICAGO, INC.
11800 SOUTH STONY ISLAND AVENUE • CHICAGO, IL 60617
(312) 646-6202 • FAX (312) 646-6381

AGREEMENT TO COOPERATE IN CONTINGENCY PLANNING ACTIVITIES

Organization Name: Mr. Frank, Inc.

Address: 21900 South Central Avenue

City: Matteson, IL 60443

Contact Name: Mr. Thomas Grad

Telephone Number: (708) 720-0700

This is to acknowledge that, as an authorized representative of the above referenced emergency assistance organization, I have received a copy of Clean Harbors of Chicago, Inc.'s (CHCI's) Contingency Plan and that my organization:

(CHECK ONE)

_X_ Agrees to participate in CHCI's emergency planning and response activities as described in Section G-6 of the Contingency Plan.

_____ Declines to participate in CHCI's emergency planning and response activities.

Mr. Thomas C. Grad 12-3-93

Signature Date

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
MR. FRANK KODY
METROPOLITAN WATER RECLAMATION
DISTRICT OF GREATER CHGO
IWD Office
400 East 130th Street
Chicago, IL 60628

4a. Article Number
P 873 791 814

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
12-7

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Mike Sykora
SI-TECH INDUSTRIES, INC.
~~7700 WEST 88TH STREET~~
BRIDGEVIEW, IL 60455
P.O. Box 2388

4a. Article Number
P 873 791 815

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
11-24-93

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. John Schwartz
EHS TRINITY HOSPITAL
2320 East 93rd Street
Chicago, IL 60617

4a. Article Number
P 873 791 812

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
11-22

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

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2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
District Commander Coffey
City of Chicago Police Department
District Station #4
2255 East 103rd Street
Chicago, IL 60617

4a. Article Number
P 873 791 811

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
11/30/93

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

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3. Article Addressed to:
Ms. Danette Cox
METROPOLITAN WATER RECLAMATION
DISTRICT OF GREATER CHICAGO
MAIN OFFICE
100 EAST ERIE STREET
CHICAGO, IL 60611

4a. Article Number
P 873 791 817

4b. Service Type
☐ Registered ☐ Insured
XX ☐ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
11/22/93

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)
Cotrell Tillman

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

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2. ☐ Restricted Delivery

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3. Article Addressed to:
Mr. Oran Robinson
Chief - Hazardous Materials Division
ILLINOIS EMERGENCY MANAGEMENT AGENCY
110 EAST ADAMS STREET
SPRINGFIELD, IL 62706

4a. Article Number
P 873 791 813

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
NOV 23 1993

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)
Robert D. Morris

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

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2. ☐ Restricted Delivery

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3. Article Addressed to:
Chief Kooistria
CITY OF CHICAGO FIRE DEPARTMENT
Battalion #14
10458 South Hoxie
Chicago, IL 60617

4a. Article Number
P 873 791 816

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
11-20-93

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)
FF Anthony [illegible]

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

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- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
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CHICAGO, IL 60614

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CLEAN HARBORS OF CHICAGO, INC.

RESPONSE TO DEFICIENCIES
REVISED PART B PERMIT APPLICATION

Submitted to:

Division of Land Pollution Control
Illinois Environmental Protection Agency

by

Clean Harbors of Chicago, Inc.
11800 South Stony Island Avenue
Chicago, IL 60617
EPA ID No. ILD000608471

December 23, 1992

Response to Deficiencies
Revised Part B Permit Application

I. BACKGROUND INFORMATION

Facility Name:	Clean Harbors of Chicago, Inc.
Owner/Operator Name:	Clean Harbors of Chicago, Inc.
Facility Address:	11800 South Stony Island Avenue Chicago, IL 60617
EPA ID No.:	ILD000608471

Clean Harbors of Chicago, Inc. (CHCI) is an existing hazardous waste storage and treatment facility located at 11800 South Stony Island Avenue in Chicago, Illinois. The facility currently operates under RCRA Interim Status and under Hazardous Waste Facility Operating Permits issued by the Illinois Environmental Protection Agency (IEPA) Division of Land Pollution Control.

On February 4, 1991, CHCI submitted a Revised Part B Permit Application ("the Application") to IEPA. The Application was subsequently revised on June 10, 1991 and February 14, 1992. This document has been prepared in response to comments made by IEPA in a letter to CHCI dated October 1, 1992.

II. COMMENT-BY-COMMENT RESPONSE

For the sake of completeness and ease of review, each of IEPA's comments are repeated with CHCI's response and a reference to all revised pages. All technical modifications/changes made as part of this response are marked with the reference "[Revised 12/23/92]" in the lower right-hand margin of each affected page.

All of the changes included in this Response have been reviewed and certified by an independent Illinois-registered Professional Engineer (PE). An updated PE certification letter, along with a PE-stamped Table of Contents is included in Appendix K-2.

COMMENT NO. 1

A. Part A Application

The previously submitted Part A applications did not include the signature of the owner. The Port Authority must sign the Part A application as owner of the site with Clean Harbors as operator of the site. The complete form must be submitted to this Agency.

RESPONSE:
CHCI acknowledges the Comment and has secured the signature of the Illinois International Port District (IIPD). The signatory page (Page 7) of the RCRA Part A Application Form bearing the original signatures of IIPD and CHCI is included for insertion into the Application.

REVISIONS:
Text: RCRA Part A Form, Page 7
Tables: None
Appendices: None

COMMENT NO. 2

B-1. General Description

For the proposed treatment operations for listed hazardous wastes, please provide answers to the following questions:

i) What equipment is used for stabilization?
ii) Where is the analytical data demonstrating that the stabilization/fixation process meets the established LDR standards (for metals) for the hazardous codes proposed for this treatment operation?
iii) Where is the demonstration of the feasibility of this type of treatment (stabilization/fixation) for organics parameters and the reactivity characteristic? Please provide justification for this proposal.
iv) Define the level of trace organic for which oxidation is appropriate.
v) Explain how you plan to do carbon absorption.
vi) Define the level of trace organics for which carbon absorption is appropriate.
vii) What is the limitation on suspended solids to prevent fouling in the carbon absorption unit?
viii) How is chemical precipitation going to remove the organic constituents, phenol and naphthalene from the hazardous waste K087?
ix) Where is the documentation showing the effectiveness of rendering solids without free liquids through the use of portable pumps; that is, the results of paint filter tests.

RESPONSE:

i) Equipment for Stabilization

The equipment used for stabilization will include a paddle mixer for batch treatment of hazardous wastes. Wastes will be fed to the mixer along with predetermined (by bench scale study) treatment chemicals to affect stabilization. Chemical additives will include ferrous sulfate, lime, cement, aluminum sulfate, kiln dust, fly ash, and other pozellanic cementitious materials.

ii) Analytical data for stabilization/fixation process

By letter dated May 28, 1992, CHCI submitted treatability study data for certain hazardous waste codes that are proposed for stabilization/fixation. CHCI notes that it has, to date, completed treatability studies on EPA waste codes D002, D006, D007, D008, F006, F019, and K062. Treatability data for remaining stabilization/fixation codes listed in Table C-8 of the Part B Application will be submitted upon completion. For the sake of completeness, the treatability data is included in new Appendix C-5.

COMMENT NO. 2 (CONTINUED)

iii) Feasibility of stabilization/fixation for organics/reactives

CHCI notes that it has, to date, been unsuccessful in its efforts to achieve stabilization/fixation of organic constituents and characteristically reactive wastes at levels which comply with Land Disposal Restriction (LDR) standards.

Stabilization is, however, an effective part of a treatment train for certain listed waste codes containing both organic and inorganic compounds. In such a scenario, the organic component of the waste stream is treated by air stripping, carbon adsorption, oxidation, or other technology to achieve to the required LDR standard. Following organic removal/treatment, the inorganic component of the waste is then stabilized to meet LDR requirements. Those wastes would still contain the hazardous waste codes originally associated with those materials even when stabilization is necessary.

iv) Oxidation of trace organics

The compounds and the boundary limits for treatment of trace organics by oxidation are:

D018	Benzene	35 ppm
D028	1,2-Dichloroethane	10 ppm
D029	1,1-Dichloroethylene	100 ppm
D030	2,4-Dinitrotoluene	5 ppm
D032	Hexachlorobenzene	10 ppm
D033	Hexachlorobutadiene	10 ppm
D034	Hexachloroethane	5 ppm
D035	Methyl ethyl ketone	400 ppm
D039	Tetrachloroethylene	5 ppm
D040	Trichloroethylene	10 ppm

These boundary limits were determined using performance data submitted as part of CHCI's Generic Permit Application dated May 10, 1991. For the sake of convenience, the demonstration data is included in Appendix C-3.

CHCI intends to transfer the above limits to appropriate listed codes containing such constituents. Treatability study data for other characteristic constituents will be submitted for IEPA review and approval prior to acceptance of such codes for treatment by oxidation.

CHCI notes that it has not performed any other performance demonstrations for oxidation of listed wastes containing organic constituents due to the fact that the facility is not currently receiving listed wastes for onsite treatment. Performance data will be submitted to IEPA for review and approval prior to acceptance and onsite treatment of such streams.

COMMENT NO. 2 (CONTINUED)

v) Overview of carbon adsorption system
CHCI notes that it intends to utilize carbon adsorption technology, not carbon absorption.

The carbon adsorption system will be be a polishing-type system that will remove dilute concentrations of select organic compounds and inorganic metals from aqueous-based hazardous and non-hazardous wastewater streams. The system will be equipped with appropriately-sized, in-line sand filters to remove suspended solids which could foul/clog the carbon system.

CHCI will use granular activated carbon (GAC) as the adsorption media for liquid phase removal of organic constituents. The treatment system will utilize commercially-available skid-mounted carbon canisters, or equivalent, typically sized at approximately 2,000 pounds of GAC per unit. The units will be operated in series.

All waste streams that are candidates for carbon adsorption will be subject to bench scale treatment study prior to introduction into the system. Wastewater streams containing heavy metals, suspended solids, or other contaminants not amenable to carbon adsorption will be pretreated in the facility's existing treatment systems using techniques such as neutralization, chemical addition, flocculation, and filtration.

vi) Levels of organics to be treated using carbon adsorption
The CHCI shall rely on established scientific/manufacturer's data to determine the organic constituents and concentration levels which are amenable for treatment using GAC technology. A copy of technical bulletin outlining the contaminants and concentrations which can be successfully treated using the Westlake Inc.'s Aqua Scrub System is included in Appendix C-4.

vii) Suspended Solids Limits
In order to prevent fouling of the GAC units, the limit for suspended solids will be 30 ppm.

COMMENT NO. 2 (CONTINUED)

viii) Phenol and naphthalene removal from K087

a. Phenol -- CHCI acknowledges that chemical precipitation will not remove phenol and has removed the reference in Table C-7. Chemical oxidation will be used as the method for pretreating phenol from K087 waste streams.

b. Naphthalene -- CHCI acknowledges that chemical precipitation will not remove naphthalene from K087 waste streams, and has removed the reference in Table C-7. CHCI has added air stripping as an applicable technology for the removal of naphthalene.

ix) Removal of free liquids from containers

As currently described in Section C-1(viii), the "treatment" of D002 liquid/solid mixtures will involve the removal of a distinct and readily separable liquid layer using portable pumps. In response the the Agency's comment, CHCI will test a representative sample of the "treated" waste (i.e., the remaining solid portion) using the paint filter test so as to confirm the absence of free liquids. Once the free liquid is removed, the waste, by definition, cannot be identified as EPA-Corrosive and the D002 waste code will be eliminated from the remaining solid portion of the waste.

REVISIONS:

Text: C-3, C-3A, C-4, C-5A

Section C Tables: Table C-7, Page 12

Appendices: C-3 (new), C-4 (new), C-5 (new)

COMMENT NO. 3

C-2. Waste Analysis Plan

In the case a permit is issued, the permit will be condition as follows:

"Before any wastes are placed into a storage unit, facility management will assess the compatibility of the waste with the storage unit materials of construction and with wastes already stored therein. Compatibility will be assessed by performing a Liquid Waste Compatibility Test.

The referenced procedure, Liquid Waste Compatibility Test (D5058A), is described in the publication "Annual Book of ASTM Standards", American Society for Testing Materials, 1916 Race Street, Philadelphia, PA 19013, most recent edition.

The procedure has been revised as follows: the test will be conducted at 1:1 ratio of the new waste stream and the composite of the existing wastes stored in the area served by the same secondary containment system. The Permittee will prepare a 100 ml composite of existing waste streams from which a 5 ml sample is taken to test a 5 ml sample of the waste stream received for storage. If no reaction is observed, a 5 ml aliquot of the tested sample shall be added to the remaining 95 ml composite in preparation for testing the next sample.

This test shall not be applied to lab pack wastes."

RESPONSE:
CHCI acknowledges the Agency's comment but requests that the permit condition be clarified with respect to waste streams containing no free liquids. CHCI proposes that the final sentence be modified to read: "This test shall not be applied to lab pack wastes or wastes which contain no free liquids."

The modified procedures for compatibility testing prior to storage has been incorporated into the text of Section C-2a(iii).

REVISIONS:
Text: C-12, C-12A (new)
Tables: None
Appendices: None

COMMENT NO. 4

C-2e. Additional Requirements for Wastes Generated Off-Site

Your 02/14/92 response to our 11/04/91 NOD indicated for incoming fuel blending wastes, the wastes would be considered "non-conforming" if one or more constituents in the waste stream is in excess of the boundary condition(s) listed in Tables C-1 through C-8, as appropriate. The Agency does not understand this response. Please clarify.

RESPONSE:
The 02/14/92 statement is in error and has been revised. The parameters and boundary conditions described in Tables C-1 through C-8 are not necessary factors in determining whether an incoming load of hazardous waste fuel is "conforming" or "non-conforming". The text of Section C-2e(v)B has been revised accordingly.

Note that as previously explained in Paragraph 2 of Section C-2e(v)B, "non-conforming" loads of hazardous waste fuels that are not accepted for the fuel blending program will be considered for acceptance under one of the facility's other waste management programs such as onsite treatment or storage/transfer. In such cases, the parameters and boundary conditions listed in Tables C-1 through C-8 become necessary factors for evaluation depending upon the alternate handling method under consideration.

REVISIONS:
Text: C-16A
Tables: None
Appendices: None

COMMENT NO. 5

D-1(3)(a). Requirement for the Base or Liner to Contain Liquids

The certification provided in Appendix D-59 is inadequate. The certification must state the design of the container storage area is suitable for its intended use under 35 IAC 724.292 in that it possess suitable structural integrity to maintain the weight of the contents without failure, is compatible with the intended wastes to be stored and is impervious.

RESPONSE:
CHCI acknowledges the comment. A revised Professional Engineer's certification is provided in Appendix D-59.

REVISIONS:
Text: None
Tables: None
Appendices: D-59

COMMENT NO. 6

D-2b(1). Assessment of New Tank System's Integrity

Regarding the proposed Pegasus system, please verify that tanks No. 100, 101, 102 and 103 on the drawing in Appendix D-57 corresponds to item No. 159 in Table D-5.

The assessment for the Pegasus system in Appendix D-49A is inadequate. In accordance with the Illinois Revised Statue 1989, Chapter 111, paragraph 5101, the assessment must be certified by a professional engineer registered in Illinois. In regards to the format of the certification, it is unclear that the assessment includes the foundation upon which the system rests. That is, that the foundation has sufficient structural strength to support the unit without collapse, rupture or failure of the unit and the secondary containment system.

RESPONSE:

a. Table D-5 -- CHCI notes that Tank Nos. 100 through 103 noted on CHCI Drawing No. 4241 correspond to Item No. 158 (one hundred fifty eight) in Table D-5. Tanks Nos. 100 through 103 are 8,000-gallon capacity tanks equipped with agitators.

b. Certification of Pegasus Fuel Blending System -- CHCI acknowledges the comment. The following drawings associated with the Pegasus Fuel Blending System have been reviewed by an Illinois-registered professional engineer (PE), as noted in the certification letter included in Appendix D-49A:

App.	No.	Title
D-45	4207	Process Flow, Piping and Instrumentation Diagram - Proposed Fuels Blending Operations, Sheet 3 of 3
D-13	4213	Sheet 2 of 3, Issue C - Equipment Layout - Proposed Fuels Blending Operation
D-51	4235	Control Panel Face Layout Drum Processing
D-52	4236	Control Panel Face Layout Waste Processing
D-53	4237	Drum Processing System Schematic
D-54	4238	Enclosure Vacuum, Fire Prevention and Suppression
D-55	4239	Drum Movement Isometric
D-56	4240	Simplified Process Flow and Material Balance
D-57	4241	Waste Liquid Piping Schematic

In addition, the PE has reviewed the Pegasus System operations manual in Appendix D-50 and made certain technical corrections such as incorrect references.

COMMENT NO. 6 (CONTINUED)

Finally, in response to the Comment, the PE's certification letter for the Pegasus System has been revised to address the structural integrity of the foundation beneath the unit. The revised letter is provided in Appendix D-59.

REVISIONS:
Text: None
Tables: None
Appendices: D-13; D-45; D-49A; D-50; D-51; D-52; D-53; D-54; D-55; D-56; D-57; D-59; and D-50, Pages 2-5, 3-6, 4-2, 4-3, 4-4, 4-5, 4-6, 5-4, A-5, A-8, B-1, and the List of Figures/Drawings.

COMMENT NO. 7

F-3A(4). Water for Fire Control

Please indicate whether Clean Harbors intends to comply with each recommendation proposed by Gage-Babcock & Associates, Inc. in Appendix F-6.

RESPONSE:
CHCI intends to comply with each recommendation proposed by Gage-Babcock & Associates, Inc. in their review dated February 13, 1992.

REVISIONS:
Text: None
Tables: None
Appendices: None

COMMENT NO. 8

F-4a. Unloading Operations

Please provide a comprehensive list of each unloading area with a reference of the drawing which shows the details of the secondary containment system. Include calculations of the secondary containment volume and the volume necessary to contain a 24-hour 25-year storm event if the unloading area is subject to direct precipitation.

RESPONSE:
CHCI has prepared a (see Table 1 on the next page) of the areas at the facility which are used for loading/unloading of bulk and container shipments. The list includes a reference to applicable design drawings.

CHCI notes that with the exception of the rolloff storage areas (for solids only), none of the loading/unloading areas are used for the "storage" of hazardous wastes. As such, none of the loading/unloading areas are subject to minimum secondary containment requirements or floodwater run-on requirements.

REVISIONS:
Text: None
Tables: None
Appendices: None

Table 1: List of Loading/Unloading Areas

Name of Unit (CHCI Dwg. No. 4204)	Location	Type of Activity (Bulk/Container)
1. Concrete Pad	Adjacent to Receiving Sump Nos. 1 - 4	Bulk (to sumps) Drums (to sumps)
2. Process Bldg. No. 2	Inside building	Bulk (to reactor) Drums (to reactor or bays)
3. Existing Truck Unloading Area	Eastern end of Outdoor Drum Storage Area	Drums (to staging/bays) Rolloffs (staged along southern wall)
4. Rail Car Loading/Unloading (12′ by 150′)	South of Outdoor Drum Storage Area	Bulk (to/from tanks) Drums (to/from bays)
5. Rail Car Loading/Unloading (12′ by 75′)	South of Proposed Flammable Bulk Storage Tank Farm	Bulk (to/from tanks) Drums (to/from bays)
6. Tankers Unloading Area	Adjacent to Proposed Flammable Bulk Storage Tank Farm	Bulk (to/from tanks)
7. Proposed Truck Loading Dock	Western end of Outdoor Drum Storage Area	Drums (from staging/bays)
8. Truck Loading/ Unloading Pad	East of Listed Waste Storage Tanks	Bulk (to/from tanks)
9. Medical Waste Storage Pad	West of Existing Tank Farm	Containers in Box Trailers
10. Proposed Bulk Storage Pad	West of Existing Tank Farm	Rolloffs
11. Crushed Drum Rolloff	North of Proposed Fuels Blending Building	Rolloff
12. Proposed Drum Crushing & Compaction Area	Inside Fuels Blending Building	Rolloff
13. Non-Hazardous Drum Bulking Area	North of Flammable-1 Drum Storage Bay	Rolloff

COMMENT NO. 9

G. Contingency Plan

In this section as corrected by the revisions dated 02/14/92 there is no page 12. Is all the information that is meant to be in the application present.

RESPONSE:
No changes to Page G-12 were made under the 02/14/92 response. Page G-12 was previously submitted in CHCI response package dated 06/10/91.

REVISIONS:
Text: None
Tables: None
Appendices: None

COMMENT NO. 10

G-4b. Identification of Hazardous Materials

Clean Harbors has not demonstrated that it is capable of identifying the spilled material by the location of the drum. Until the computer inventory system is in place, Clean Harbors must have an alternate system in place.

RESPONSE:
CHCI is continuing to develop its computer-based drum tracking system. The drum tracking system, described in existing Appendix D-58, is designed to provide an inventory of the waste in each each storage bay.

Until the computerized drum tracking is fully operational, CHCI will continue to use a back-up paper-based tracking system. Drum inventories in each bay will be recorded on preprinted log sheets at the beginning of each business day. The completed logs will be maintained on file and available for review by internal and external emergency response personnel in the event of a fire, release, or other emergency.

Copies of the log sheets used in the paper-based system are included for review and insertion into Appendix D-58.

REVISIONS:
Text: None
Tables: None
Appendices: D-58

COMMENT NO. 11

G-4c. Assessment

Clean Harbors must identify a spill volume that would not have an impact (i.e. the air concentrations for the parameter in question are not above one-tenth the IDLH for that constituent) outside the facility's boundary.

RESPONSE:
CHCI has retained the services of Carlson Environmental, Inc. (CEI) to prepare and conduct follow-up air modeling. CEI previously prepared a study of potential health and safety risks at the facility in the document entitled "An Evaluation of Potential Hazardous Material Emergencies through Atmospheric Transport from the Current and Proposed Clean Harbors Facility". The CEI study was submitted to the IEPA as part of the 02/14/92 response package. The follow-up air modeling required by this Comment is not complete as of this date, and will be submitted to the IEPA in the near future.

REVISIONS:
Text: None
Tables: None
Appendices: None

COMMENT NO. 12

I-4. Closure Cost Estimate

Clean Harbors has based part of its closure cost on the shipment of a portion of the wastes stored to Systech for use as hazardous waste fuels (HWF). This assumes the material in question has a minimum BTU/lb value of 5,000. The price used is $0.25/gal. Recent material from Systech indicates a base price of $0.30/gal. There are additional surcharges for low BTU value, such as 5,000 BTU/lb, high water content or chlorine content. These can increase the price significantly. Clean Harbors must include minimum specifications for these parameters that the stored waste designated as HWF would meet at gate control. Based on these specifications, revise your cost estimate accordingly.

RESPONSE:
CHCI has modified the closure cost estimate relative to hazardous waste fuels. The modified costs represent December 1992 values. In response to the Agency's concerns, CHCI will use a cost structure which is assumed to be an average of best- and worst-case costs for liquids and solids as shown below. To integrate the 1992 values in the 1990-based cost estimate, CHCI has "deflated" the 1992 costs to 1990 values, using the 1990 and 1991 annual implicit price deflator which is equal to 1.04 for each year.

<u>a. Liquids</u> (Systech - Alpena, MI)

Best (Base) Cost, $/lb	0.04
- Heat value >10,000 BTU	
- Halogens < 2%	
- Water Content < 30%	
Total Best Cost	0.145 $/lb = 0.33 $/gallon

Worst (Additional) Cost, $/lb	
- Base	0.04
- Heat Value 6,000-9,999 BTU/lb	0.025
- Halogens 2-10%	0.06
- Water Content > 30%	0.02
Total Worst Cost	0.145 $/lb = 1.21 $/gallon

1992 Average Cost = (Best + Worst)/2 = (0.33 + 1.21)/2 = 0.77 $/gal

"Deflating" to 1990 values:
1991 Average cost = (1992 Average Cost)/1.04 = 0.74 $/gal
1990 Average cost = (1991 Average Cost)/1.04 = 0.71 $/gal

COMMENT NO. 12 (CONTINUED)

b. Solids (Petrochem - Detroit, MI)
Solids prices vary according the the amount of solids present in the drum an the extent to which the solids are "processable", i.e., capable of being blended into bulk liquid form or reduced in size and repackaged into 6-gallon pails.

Best: Semisolids	$225 per drum
Middle: Solids	$295 per drum
Worst: Monoliths	$425 per drum

1992 Average Cost = (Best + Middle + Worst)/3 = $315 per drum

"Deflating" to 1990 values:
1991 Ave. Cost = (1992 Ave. Cost)/1.04 = 302.88 $/drum = 5.51 $/gal
1990 Ave. Cost = (1991 Ave. Cost)/1.04 = 291.23 $/drum = 5.29 $/gal

REVISIONS:
Text: None
Tables: None
Appendices: I-1, Pages 1, 2, 8, 9, 17

COMMENT NO. 13

I-5. Financial Assurance Mechanism for Closure

The Agency is unable to find Appendix I-3 in your submittal. Please resubmit.

RESPONSE:
In existing Section I-5, CHCI states that the existing interim status facility utilizes a Letter of Credit as its financial assurance mechanism for closure. In fact, the existing facility utilizes a closure trust fund. The text of Section I-5 has been corrected accordingly.

A copy of the most-recent update to the existing trust fund is included for insertion into Appendix I-3. As already noted in the text, CHCI shall submit adequate documentation for closure financial assurance of the Part B facility concurrent with final License issuance.

REVISIONS:
Text: I-8
Tables: None
Appendices: I-3

III. REVISIONS/CLARIFICATION

CHCI proposes the following revisions and clarifications to the, equipment, operations, and management plans currently described its Part B Permit Application dated February 15, 1991 and revised on June 10, 1991 and February 14, 1992.

REVISION/CLARIFICATION NO. 1 - Contingency Plan Changes

DESCRIPTION:
In response to a request from the Illinois Attorney General's (AG's) office following the AG's review of a July 26, 1991 release at the facility, CHCI has modified the facility's Contingency Plan to update or include additional notification information, including:

Page G-1: Inclusion of a non-business hours telephone number for the facility

Page G-4: Name change of Illinois Emergency Services and Disaster Agency to Illinois Emergency Management Agency

Page G-4A: Notification to nearest neighbors/abutters of the facility when a release could impact human health or safety at such off-site locations

Section G Tables, Page 1: New address for James Laubsted

Section G Tables, Page 2: New district number and contact name for the Chicago Police Department.

Changes to these pages are noted by the revision date 07/16/92 in the bottom margin of the page.

REVISIONS:
Text: G-1, G-4, G-4A (new)
Section G Tables: Pages 1 and 2
Appendices: None

REVISION/CLARIFICATION NO. 2 - Coating System

DESCRIPTION:
CHCI inadvertently omitted to include manufacturer's technical specifications for the Protecto-Coat/Protecto-Crete coating systems that are intended for use in the existing and proposed container storage areas. The previous 02/14/92 submittal included only the chemical resistance charts for the coatings. CHCI regrets the oversight and has included the technical specifications for inclusion with Appendix D-18, Data Sheet #3.

REVISIONS:
Text: None
Tables: None
Appendices: D-18, Data Sheet #3

IV. NEW/PROPOSED ACTIVITIES/UNITS

CHCI proposes to add the following activities and/or hazardous waste management units to its Part B Permit Application dated February 15, 1991 as revised on June 10, 1991 and February 14, 1992.

ACTIVITY/UNIT NO. 1 - Non-Hazardous Waste Drum Storage/Consolidation

DESCRIPTION:
By letter dated October 14, 1992. CHCI requested Agency approval to construct and operate a container storage and consolidation/bulking area for non-hazardous wastes.

The non-hazardous container storage area will be a 63-foot long by 30-foot wide concrete pad adjacent to the western edge of the existing Oxidizer Bay in the Outdoor (Hazardous Waste) Container Storage Area. The non-hazardous storage area is equipped with a 12-inch wide by 6-inch high concrete curb along the perimeter for secondary containment purposes. The floor surface is sloped to three liquid collection sumps. Containers, typically 55-gallon units, will be staged 2-high on pallets with a minimum of 4'6" between each row of pallets.

The non-hazardous bulking area will be an approximately 43-foot long by 29-foot wide concrete pad adjacent to the western edge of the non-hazardous container storage area. The non-hazardous bulking area is equipped with 6-inch high concrete curb along the perimeter for secondary containment purposes. The floor surface inside the units is sloped away from the sides and towards a liquid collection sump located in the middle of the pad. A 30-cubic yard capacity rolloff container will be staged in the bulking area. The rolloff will be used to accumulate non-hazardous solid wastes.

CHCI notes that the non-hazardous storage/bulking pads are located in an area that is designated as the location for future Phase II hazardous waste Outdoor Drum Storage Area and Loading Dock. CHCI intends to relocate the non-hazardous waste unit to another portion of the facility prior to commencing Phase II construction.

Design and location drawings for the non-hazardous waste storage and consolidation areas is included in new Appendices D-62 and D-63. Per the Agency's request, CHCI has included the non-hazardous drum storage and consolidation area in the facility's Closure Cost Estimate.

REVISIONS:
Text: D-5A, D-5B (new), D-6
Section I Tables: Page 2
Appendices: D-62 (new); D-63 (new); I-1, Page 16A (new) and 17

ACTIVITY/UNIT NO. 2 - Aerosol Can Compactor

DESCRIPTION:
By letter dated November 12, 1992, CHCI requested Agency approval to install and operate a aerosol can compaction system. The proposed system will automatically feed, puncture, and crush all sizes of aerosol cans at a rate of up to 300 cans per hour. The machine is air operated and collects both product and propellant from the can. The system can be mounted on a skid and used in container storage/staging areas throughout the facility

The proposed system will be a commercially-available, off-the-shelf system designed and manufactured by Aervoe-Pacific Co., Inc. Manufacturer's literature describing the system and general method of operation is included in Appendix D-64.

REVISIONS:
Text: D-5B (new)
Tables: None
Appendices: D-64 (new)

ACTIVITY/UNIT NO. 3 - Household Hazardous Waste Trailer

DESCRIPTION:
By letter dated November 6, 1992, CHCI requested Agency approval to accumulate household hazardous waste (HHW), including dioxin-containing pesticides, that are collected as part of HHW collection programs sponsored by IEPA.

The containerized HHW will be received at the facility and stored on a single box trailer (60 55-gallon drum capacity) that is equipped with secondary containment features. The trailer will be staged in any asphalt/concrete vehicle parking area inside the facility's security fence. Special inspections and inventory logs will be maintained for the HHW trailer. Storage of HHW on the trailer will be allowed for up to one (1) year of date of receipt at the facility, and is not considered to count as part of the facility's drum storage inventory. The HHW trailer is exempt from all RCRA Part B licensing requirements, including the closure plan and cost estimate.

REVISIONS:
Text: None
Tables: None
Appendices: None

V. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direct supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Joseph McNally
Vice-President and General Manager
Clean Harbors of Chicago, Inc.

Part B-16

CLEAN HARBORS OF CHICAGO, INC.

RESPONSE TO DEFICIENCIES
REVISED PART B PERMIT APPLICATION

Submitted to:

Division of Land Pollution Control
Illinois Environmental Protection Agency

by

Clean Harbors of Chicago, Inc.
11800 South Stony Island Avenue
Chicago, IL 60617
EPA ID No. ILD000608471

June 10, 1991

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IEPA-DLPC

Response to Deficiencies
Revised Part B Permit Application

I. Summary Information

Facility Name:	Clean Harbors of Chicago, Inc.
Owner/Operator Name:	Clean Harbors of Chicago, Inc.
Facility Address:	11800 South Stony Island Avenue Chicago, IL 60617
EPA ID No.:	ILD000608471

Clean Harbors of Chicago, Inc. (CHCI) is an existing hazardous waste storage and treatment facility located at 11800 South Stony Island Avenue in Chicago, Illinois. The facility currently operates under RCRA Interim Status.

On February 4, 1991, CHCI submitted a Revised Part B Permit Application ("the Application") to the Illinois Environmental Protection Agency (IEPA). This document has been prepared in response to comments made by the IEPA in a letter to CHCI dated April 19, 1991.

II. Comment-By-Comment Response

For the sake of completeness and ease of review, each of IEPA's comments are repeated with CHCI's response and a reference to all revised pages. All modifications/changes made as part of this response package are marked with the revision date "06/10/91".

COMMENT NO. 1:

B-4 Traffic Information

The application did not provide the weight of the loaded vehicles transporting wastes to the facility or the load bearing capacity of expected traffic that Stony Island Avenue is designed to handle.

RESPONSE:

a. Weight of Loaded Vehicles - CHCI has included a detailed description of the type and weight (empty and loaded) of typical transport vehicles used to haul waste to and from the facility.

b. Load Bearing Capacity - Based on information provided by the City of Chicago Department of Public Works, the improved South Stony Island Avenue, scheduled for completion by the end of 1991, is designed to handle up to 2,000 total vehicles per day. The improved roadway is designed to withstand a minimum loading capacity of 18,000 pound per axle.

REVISION PAGES:

Section B-4 of the Application has been reformatted and revised to distinguish between onsite traffic information (Section B-4a) and offsite traffic information (Section B-4b).

Text: Pages B-4, B-5, and B-5A (new).
Section B Tables: None
Appendices: Appendix B-13 (new)

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COMMENT NO. 2:

C-1 Chemical and Physical Analyses

The application did not define the wastes received into the various waste groups shown on drawings of the storage area and either a range of hazardous constituents in each hazardous waste code or an acceptable range of parameters in each waste or waste group (particularly, wastes for fuel blending).

RESPONSE:

a. Define Waste Groups - CHCI notes that a description of the seven general "waste groups" handled at the facility, as well as a detailed (partial) listing of typical EPA waste codes handled under each "waste group" is already provided in Footnote (a) of existing Table D-1. However, in an effort to facilitate IEPA's understanding and review of the Waste Analysis Plan, CHCI has incorporated the waste group/code information into Section C-1. CHCI notes that a correction has been made to Footnote (a) of Table D-1 to add "pesticides (D012 - D017)" to the description for the Poison/PCB waste group.

b. Fuel Blending Parameters - As explained in Footnote (a) of Table C-10, hazardous waste fuel blending is a proposed activity, and actual analytical data for hazardous waste fuels shipped to and from CHCI does not exist at the present time. However, CHCI's sister company, Clean Harbors of Braintree, Inc. (CH/Braintree) in Braintree, Massachusetts, has been involved in the storage and transfer of hazardous waste fuels for over six (6) years. It has been CH/Braintree's experience that, as explained in Footnote (b) of Table C-10, boundary limits for incoming hazardous waste fuels are restricted only by the permit limitations and fuel specifications of the end burner facility (e.g., cement kiln). As such, CHCI will consider any waste suitable for acceptance into the hazardous waste fuel blending program provided that the waste: (1) is liquid, semisolid, or solid in nature; (2) is chemically compatible with other waste fuel streams that it may be blended with; and (3) meets the following specifications:

~ Minimum BTU Value	- 5000 BTU/pound
~ Solids Content	- No limit
~ Chlorine Content	- No limit
~ Water Content	- No limit
~ PCB's	- Less than 50 ppm

In existing Table C-10, CHCI presented a list of EPA waste codes to be accepted in the fuel blending program. This list represents a compilation of codes which are currently accepted at selected cement kiln facilities in the United States and Canada. CHCI notes, however, that the noted parameter and wastes codes are subject to change in light of the new "Burning of Hazardous Waste in Boiler and Industrial Furnaces (BIF)" rule (56 FR 7134) promulgated on February 21, 1991.

COMMENT NO. 2 (CONTINUED)

Sample analyses generated as part of CH/Braintree's hazardous waste fuel blending program are included in new Appendix C-1, Data Sheet #66.

REVISION PAGES:

Text: Pages C-1 and C-1A (new)
Section C Tables: Table C-10, Page 48
Section D Tables: Table D-1, Page 2
Appendices: Appendix C-1, Data Sheet #66 (new)

COMMENT NO. 3:

C-1a <u>Containerized Waste</u>

The application did not identify the type of wastes (by hazardous waste code and a general description) to be stored in the roll-off containers or provide the results of a test to show that the wastes do not contain free liquids.

RESPONSE:

a. <u>Identification of Wastes Stored In Rolloffs</u> - The type of waste to be stored in rolloff containers is described in paragraph 2 of revised Section C-1(v), "Storage and Transfer of Hazardous Wastes Using Tanks and Containers". In general, CHCI will accept all EPA hazardous wastes for storage and handling in rolloff containers with the exception of water reactive solids. Reactive wastes which are excluded from entry into the facility in rolloff form are designated by an asterisk on existing Table C-9.

b. <u>Free Liquids Test</u> - As explained in Sections C-1a and D-1(b)(1), all waste to be stored at the facility in rolloff containers will be first tested for the presence of free liquids using EPA Method 9095. Rolloff containers with free liquids will not be allowed for storage in the rolloff storage area. A sample analysis for free liquids content is included in new Appendix C-1, Data Sheet #65.

REVISION PAGES:

Text: Page C-5
Section C Tables: Table C-9, Pages 15 and 27
Appendices: Appendix C-1, Data Sheet #65 (new)

COMMENT NO. 4:

C-2f <u>Additional Requirements for Ignitable, Reactive or Incompatible Wastes</u>

The application did not describe the methods used to meet additional waste analysis requirements necessary for storing incompatible wastes, (i.e. all wastes should be classified for compatibility pursuant to 40 CFR 264 Appendix V and pages B9A-9F of USEPA OSWER Doc. #9938.4).

RESPONSE:

CHCI acknowledges the comment and has revised the language of Section C-2f to reflect that all wastes will be classified for compatibility pursuant to: (i) 40 CFR 264 Appendix V; and (ii) EPA guidance document 600/2-80-076 entitled "Method for Determining the Compatibility of Hazardous Waste".

CHCI notes that "OSWER Doc. #9938.4 is an incorrect reference. As discussed a May 8, 1991 teleconference between Mark Schollenberger of IEPA and Paul Ahearn of Clean Harbors, IEPA acknowledged the incorrect reference and instructed CHCI to substitute "EPA 600/2-80-076" in its place.

REVISION PAGES:

Text: Page C-16
Tables: None
Appendices: None

COMMENT NO. 5:

D-1a(1)/D-1a(b) Description of Containers

Please provide a table with the following heading and the appropriate information on the containers:

1. general description
2. approximate number in storage (by area)
3. container construction material
4. approximate dimensions
5. typical usable volume
6. DOT specification
7. Liner specification
8. stacking height

RESPONSE:

CHCI acknowledges the comment and has prepared a new Table D-7 to describe the general types of containers which may be used for handling and storing wastes in containers. The number and stacking height of containers in each area are identified on revised Table D-1. Rolloff containers (described in existing Table D-2) are stacked one container high only.

REVISION PAGES:

Text: Pages D-6 and D-6A (new)

Section D Tables: Table D-1 on Pages 1 and 2, and
new Table D-7 on Pages 12 and 13

Appendices: None

COMMENT NO. 6:

D-1a(3) Secondary Containment System Design and Operation

Please indicate on the drawing the areas in which incompatible wastes will be stored.

Please address the lab pack repack area, the fuel blending staging area and the roll-off box storage area under this section at this time.

RESPONSE:

a. Storage of Incompatible Wastes - Existing and proposed container management areas are shown on the following drawings:

- Existing Container Storage Area
  CHCI Dwg. No. 4209 in Appendix D-3

- Proposed Container Storage Areas
  i. Outdoor Storage -- CHCI Dwg. No. 4210 in Appendix D-4
  ii. Lab Pack Repack and Consolidation Area -- CHCI Dwg. No. 4211 in Appendix D-11
  iii. Fuel Blending Container Staging Area -- CHCI Dwg. No. 4213 in Appendix D-13.

With the exception of the fuel blending area, each of these container management area is divided into a number of separate storage bays that have been designed to provide proper segregation of incompatible materials that are stored at the facility. Each of these bays is already identified by general waste type (e.g., "acidic") on the drawings. The fuel blending area is not segregated into separate storage bays; all wastes which are deemed acceptable for the fuel blending program will be analyzed for compatibility prior to being staged in the processing floor.

b. Description of Specific Container Management Areas

CHCI has reformatted Section D-1a(3) of the text to provide a more detailed description of each of the container management areas referenced above.

CHCI notes that the design of the bulk solids storage pad has been revidsed to include six (6) segregated storage bays, each with its own liquids containment sump. Refer to revised CHCI Dwg. No. 4218 (Issue C) is Appendix D-16. For the sake of consistency, the revised description of the bulk storage pad is included in Section D-1b(4).

COMMENT NO. 6 (CONTINUED)

REVISION PAGES:

Text: Pages D-8, D-8A (new), D-8B (new), D-9, D-9A (new), D-10, and D-12.

Section D Tables: None

Appendices: Revised Appendix D-16

COMMENT NO. 7:

D-1a(3)(a) Requirement for the Base to Contain Liquids

Please explain how the P.E. determined the existing sealant was compatible since a chemical compatibility chart is not provided in the manufacturers literature.

The application did not provide a soil report showing adequate bearing capacity. The application did not provide the design calculations for the footings.

RESPONSE:

a. Chemical Compatibility Charts - The existing container storage areas are coated with epoxy-based and vinylester-based resin sealants manufactured by Transcoat, Inc. Because Transcoat, Inc. is no longer in business, the P.E. relied upon a corrosion resistance chart provided by Dudick Corrosion-Proof, Inc. which manufactures resin systems which are similar to the Transcoat, Inc. materials. A copy of the Dudick chemical resistance bulletin is included for insertion to Appendix D-18, Data Sheet #1. The Dudick bulletin is also pertinent to the the Dudick "Protecto" coating system currently in use on the waste receiving tanks (see Appendix D-18, Data Sheet #3). For the sake of completeness, CHCI is also submitting chemical resistance bulletins for the Ceilcote, Inc. "Ceilcrete" system and the Futura Coating, Inc. "Geothane" system included in Appendix D-18, Data Sheets #5 and #6, respectively. Corrosion resistance information for the systems described in Data Sheet #2, #4, and #7 is already provided in the existing literature.

b. Soil Report - There are three soil boring reports which assess the soil bearing capacity at different areas at the facility. The reports and the area of study include:

i. Walter & Assoc., -- Initial Facility Construction, Sept. 1980
ii. PSI, Inc. -- Phase I Drum Storage, August 1990
iii. O'Brien & Associates -- Proposed Construction, June 1991

c. Footing Design Calculations - CHCI acknowledges the comment; calculations showing the structural integrity of existing drum storage Building No. 2 structure have been added to the structural calculations found in Appendix D-47.

REVISION PAGES:

Text: Page D-8
Section D Tables: None
Appendices: Additional information for Data Sheets #1, #5 and #6 in Appendix D-18
Structural calculations added to Appendix D-47
New Appendix D-48

COMMENT NO. 8:

D-2a(1) <u>Assessment of Existing Tank System's Integrity</u>

In the application submitted, the Agency was unable to find the actual field inspection reports for:

1. **the primary storage tank (TK #2)**
2. **the mix tank (TK #4)**
3. **the concrete sludge sump**
4. **the sludge concentrator and;**
5. **the waste storage tank.**

RESPONSE:

CHCI acknowledges the comment and is providing field inspection report for the above-referenced tanks as described below:

<u>1. Primary Storage Tank (TK #2)</u> - The entire internal surface of Tank No. 2 is currently in the process of being recoated. The tank will be reinspected and certified as structurally sound and suitable for its intended use once the recoating process is completed and the coating material has cured. The activities to date are described in the Hoyer-Schlesinger-Turner (HST) letter dated June 10, 1991 which is included with this Response package for insertion into existing Appendix D-36.

<u>2. Mix Tank (TK #4)</u> - A complete external inspection of the tanks was conducted on December 20, 1990 and certified under Hoyer-Schlesinger-Turner (HST) letter dated January 15, 1991. The 01/15/91 HST letter was inadvertently omitted from the previous submittal, but is included with this Response package for insertion into existing Appendix D-36. An internal inspection and certification of the tank will, barring unforseen circumstances, be conducted within the next two months as noted in the 06/10/91 HST letter.

<u>3. Concrete Sludge Sump</u> - A partial inspection of the concrete sludge sump was conducted on 12/20/90 and certified under HST letter dated January 30, 1991 (see existing Appendix D-36). The final inspection and certification of the sludge sump will, barring unforeseen circumstances, be conducted within the next two months.

<u>4. Sludge Concentrator (TK #3)</u> - A complete external inspection of the tank was conducted on 12/20/90 and certified under the 01/15/91 HST letter. An internal inspection and certification of the tank will, barring unforeseen circumstances, be conducted within the next two months as noted in the 06/10/91 HST letter.

<u>5. Waste Storage Tank</u> - A complete inspection of the tank was conducted on May 29, 1991 and certified under HST letter dated May 30, 1991. The 05/30/91 HST letter is provided with this Response for inclusion in existing Appendix D-36.

COMMENT NO. 8 (CONTINUED)

REVISION PAGES:

Text: None
Tables: None
Appendices: Appendix D-36 is revised to include the HST letters dated 05/30/91 and 06/10/91.

COMMENT NO. 9:

D-2b(1) <u>Assessment of New Tank System's Integrity</u>

It is not acceptable to provide an assessment upon construction of the proposed tanks. The assessment must be provided at this time in accordance with the following:

Provide a written assessment that is reviewed and certified by an independent, qualified, registered professional engineer, on the structural integrity and suitability of each tank system for handling hazardous waste. The assessment must show that the foundation, structural support, seams, connections and pressure controls (if applicable) are adequately designed and that the tank systems has sufficient structural strength and compatibility with the waste(s) to be stored or treated to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment must include the following: (1) design standard(s) according to which the tank(s) and/or the ancillary equipment are constructed; (2) hazardous characteristics of the waste(s) to be handled; (3) a corrosion assessment by a qualified expert for new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with the water; (4) a determination of design or operational measures that will protect underground tank systems against potential damage due to vehicular traffic; (5) design considerations to ensure that tank foundations will maintain the load of a full tank and that tank systems will be anchored to prevent flotation or dislodgment where the tank system is placed in a saturated zone or is located within a seismic fault zone; and (6) design considerations to ensure that tank systems will withstand the effects of frost heave.

RESPONSE:

CHCI acknowledges the IEPA's comment and has retained an independent, qualified, registered professional engineer (PE) to prepare and certify such an assessment. A copy of the HST PE certified assessment is included in new Appendix No. D-49.

REVISION PAGES:

Text: Pages D-23 and D-24
Tables: None
Appendices: Appendix D-49 (new)

COMMENT NO. 10:

D-2b(3) <u>Description of Tank System Installation and Testing Plans and Procedures</u>

The application did not indicate how the ancillary equipment (piping) is supported (i.e. installed in accordance with ANSI B31.3 or ANSI B31.4 or some other equivalent guidelines).

RESPONSE:

CHCI acknowledges the comment and has added a statement in Section D-2b(3) which states that all piping shall be installed in accordance with ANSI B31.3 standards, as applicable.

REVISION PAGES:

Text: Page D-24
Tables: None
Appendices: None

COMMENT NO. 11:

D-2f(1)(b) Requirements for Secondary Containment and Leak Detection

The application did not describe how the design of the secondary containment system took into consideration the effects for the freeze thaw cycle.

The drawing in Appendix D-38 did not show the slope of the secondary containment system for the reactor vessel.

The application did not provide a schedule of compliance for providing secondary containment for the existing tanks and ancillary equipment.

RESPONSE:

a. Freeze-Thaw Cycle - As described in Note 10 on revised CHCI Dwg. Nos. 4215 (Proposed Flammable Storage Tank Farm Details) and 4216 (Proposed Listed Wastes Storage/Transfer Tank Farm Details), the concrete mat foundation for all proposed tank farms and truck loading/unloading areas is "designed to withstand uneven reaction forces due to soil motions caused by differential settlement, freezing-thawing cycle and frost heave."

b. Reactor Vessel Containment - CHCI acknowledges the comment and has revised CHCI Dwg. No 4231 to show: (i) the direction of floor slope within the unit; and (ii) key elevations to indicate the rate of slope.

c. Secondary Containment Schedule - In existing Sections D-2f(1) and D-2f(1)(d), CHCI stated that the secondary containment existing tanks and ancillary equipment will be upgraded to meet §724.293 requirements by 1995. Per a May 8, 1991 teleconference between Mark Schollenberger of IEPA and Paul Ahearn of Clean Harbors, IEPA accepted the referenced statements as sufficient and withdrew the comment.

REVISION PAGES:

Text: Pages D-20, D-21, D-27, and D-29
Tables: None
Appendices: Revised/reissued drawings include:

Appendix D-37. CHCI Dwg. No. 4219, Issue C.

Appendix D-38. CHCI Dwg. No. 4231, Issue B.

Appendix D-44. CHCI Dwg. No. 4216, Issue C.

Appendix D-46. CHCI Dwg. No. 4215, Issue C.

COMMENT NO. 12:

D-2f(1)(c) <u>Requirements for a Vault System</u>

The plans do not show chemical-resistant water stops at the construction joints as required by the regulations.

RESPONSE:

CHCI acknowledges the comment and has revised Section D-2f(1)(d) to include a statement which addresses the need for chemical-resistant water stops at the construction joints. CHCI shall utilize Sonneborn "Sonolastic NP-1" joint compound, or equivalent material. Technical specifications for the "Sonolastic" System are included in new Appendix D-18, Data Sheet #8.

CHCI notes that during a May 8, 1991 teleconference between Mark Schollenberger of IEPA and Paul Ahearn of Clean Harbors, IEPA agreed that inclusion of such a statement would be accepted by IEPA in lieu of actually modifying each affected construction/design drawing.

REVISION PAGES:

Text: Page D-29
Tables: None
Appendices: Appendix D-18, Data Sheet #8 (new)

COMMENT NO. 13:

D-2f(2) <u>Requirement for Tank Systems Until Secondary Containment is Implemented</u>

Please have the engineer state the tank assessment included the ancillary equipment (piping, etc.) associated with each tank or provide the results of a leak test or other integrity assessment measure.

RESPONSE:

CHCI acknowledges the comment has included a statement certified by a registered PE regarding the integrity of the existing ancillary equipment (i.e. piping) in use at the facility. Refer to the 06/10/91 HST letter.

REVISION PAGES:

Text: Page D-31
Tables: None
Appendices: Appendix D-36 (HST letter dated 06/10/91)

COMMENT NO. 14:

F-2b(2)e **Tank Level of Waste**

The application did not state the minimum freeboard provided in the open top tanks or document that this amount is sufficient considering wind action and a 24 hr. 25 yr. precipitation event.

RESPONSE:

a. Indoor process tanks - Overtopping caused by precipitation or wind action is not a concern for any of CHCI's open top processing tanks since all such tanks are/will be located inside the enclosed process buildings at the facility.

b. Outdoor receiving tanks - A discussion of the effects of precipitation and wind effects has been added to Section F-2b(2)(e).

According to the US Weather Bureau, a 25-year 24-hour precipitation event in the Chicago, IL area would result in a rainfall of approximately four (4) inches. A minimum freeboard of six (6) inches is maintained in each receiving tank at all times. This freeboard level provides sufficient excess capacity in the receiving tanks to contain the four inches of rain produced by a 25-year 24-hour event.

Overtopping caused by wind action is considered negligible considering the minimal surface area (220 square feet) of each receiving tank that is actually exposed to the wind.

REVISION PAGES:

Text: Pages F-7 and F-7A (new)
Tables: None
Appendices: Appendix F-5 (new)

COMMENT NO. 15:

F-4e <u>Personnel Protection Equipment</u>

The application did not provide an explanation of what protection equipment is worn when handling wastes.

RESPONSE:

CHCI has developed a comprehensive guidance document for the selection and use of personnel protection equipment (PPE) during hazardous waste operations at the facility. A copy of the document is included in existing Appendix F-2. CHCI has also developed a matrix which specifies minimum PPE levels that are required for specific waste handling activities at the facility. The PPE matrix, which includes a list of the personnel protective equipment that is standard issue to all employees involved in waste handling activities, is presented in new Table F-4.

REVISION PAGES:

Text: Page F-10
Section F Tables: New Table F-4 on Pages 5 and 6
Appendices: None

COMMENT NO. 16:

F-5e <u>Management of Ignitable or Reactive Wastes in Tank Systems</u>

The application did not provide documentation that the placement of the tanks complies with NFPA buffer zone requirements.

RESPONSE:

All of the tank systems used to manage ignitable or reactive materials are located more than 1,000 feet from the nearest public roadway, and over 400 feet from the nearest adjoining property which can be built upon. These distances exceeds the National Fire Protection Association (NFPA) standard for minimum protective distances for liquids defined as "unstable" (vigorously polymerizes or decomposes, undergoes condensation reaction, or becomes self-reactive under conditions of shock, pressure or temperature) in NFPA 30.

REVISION PAGES:

Text: Page F-12
Tables: None
Appendices: None

COMMENT NO. 17:

G-1 General Information

The contingency plan must be a stand alone document. Information, such as the description of activities and the site plan, cannot be referenced to other sections as the contingency plan will be handed out to public officials for their use.

RESPONSE:

CHCI acknowledges the comment and has revised Section G to be a stand-alone document. Specifically, a site map of the facility has been included in new Appendix G-4.

REVISION PAGES:

Text: Page G-1
Tables: None
Appendices: New Appendix G-4

COMMENT NO. 18:

G-3 Implementation

The application needs to be modified to state: 1) the contingency plan is implemented whenever there is a fire, explosion, evacuation or an area or any spill greater than 1 pound.

2) Any implementation of the contingency plan requires notification of the IEPA within 24 hours. Any spills less than 1 pound must still be recorded in the operating record.

RESPONSE:

a. Implementation - CHCI acknowledges the comment and has revised the language of Section G-3 accordingly. However, CHCI feels that it is essential that the term "spill" be defined in order to: (i) determine what amount of waste constitues "less than 1 pound" and (2) distinguish between controlled and uncontrolled. Thus, for the purpose of this Contingency Plan, the term "spill" shall mean any unplanned, uncontrolled release of hazardous waste to the environment (air, water, soil, or stationary secondary containment device such as a dike or concrete floor). Examples of such spills include a leaking drum or pipeline, an overfilled tank, or a ruptured hose. The term "spill" shall not include: (i) "de minimus" amounts (e.g., drips from hoses or sampling devices) encountered during rountine waste handling activites; or (ii) controlled accumulation of hazardous waste in a containment device (e.g., bucket, drip pan, scupper, etc.) used to collect and control the release of waste during routine processing or maintenance activities such as draining hoses or disassembing and repairing a pump.

b. Notification - CHCI acknowledges the comment and has revised Section G-3 accordingly. CHCI will notify IEPA of any event which requires implementation of the Contingency Plan within 24 hours of discovery.

c. Recording of Events - CHCI acknowledges the comment and has revised Section G-8 accordingly. CHCI will document in the facility's operating record the time, date, and details of any incident that requires requires implementation of the Contingency Plan. CHCI will also document any spill or leak of less than 1 pound which does not require implementation of the Plan.

REVISION PAGES:

Text: Pages G-2, G-3, G-4, G-4A (new), G-13, and G-14.
Tables: None
Appendices: None

COMMENT NO. 19:

G-4b **Identification of Hazardous Materials**

The application must state the applicant will maintain a operating log through which he will be able to identify the spilled material by the location of the drum

RESPONSE:

CHCI acknowledges the comment and has revised Section G-4b accordingly. As part of the records maintained by the facility, CHCI shall keep a daily written inventory for each hazardous waste container storage area. The log will include, by storage bay, the number of containers and the general waste category stored in the bay.

REVISION PAGES:

Text: Page G-6 and G-6A (new)
Tables: None
Appendices: None

COMMENT NO. 20:

G-4 Emergency Response Procedures

In an effort to demonstrate compliance with regulatory changes which have taken effect since your RCRA Part B Permit application has been submitted the Agency requests that you revise the contingency plan in your application to conform with the following format.

1. The contingency plan must include the necessary information and descriptions to satisfy the requirements of 35 Ill. Adm. Code Part 724.156. The contingency plan and supporting documentation must be revised to demonstrate that the following information and requirements were considered and addressed, at a minimum:

   a. type, amount and variety of waste in the building

   b. location of waste

   c. waste handling practices

   d. possible hazards that may result from a release, fire, or explosion (e.g., the effects of any toxic, irritating or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions). This will require an estimation of the quantities and types of gases that could be generated

   e. the effects of weather conditions in the event of a release, fire, or explosion

   f. identify the possible hazards to human health or the environment (on-site and off-site) that may result from a release, fire, or explosion

   g. describe how the emergency coordinator (EC) will determine if a release, fire or explosion could threaten human health or the environment outside the facility. Identify the type of information and criteria the EC would use in arriving at such a determination. In addition, estimate the time it would take to make such a determination and compare that to the time it would take material resulting from a release, fire or explosion to travel off-site

h. how will the EC determine if evacuation of local areas may be advisable: As in g. above, identify the type of information and criteria the EC will use and make a time comparison of the time necessary to make such a determination to the time an off-site impact is estimated to occur.

i. who will the EC notify if evacuation of the local areas is determined to be advisable.

Revise the contingency plan and supporting documentation as necessary to incorporate the information determined above. If any of the results are generated by computer (i.e. emission/dispersion models, etc.) the model(s) must be identified. In addition, the Agency may require the owner/operator to provide an original copy of the model(s) so that the Agency can verify computer generated data. An evaluation of this information may necessitate a change in the design or operation of the facility pursuant to 35 Ill. Adm. code 724.131.

RESPONSE:

As discussed during a June 4, 1991 teleconference between Mark Schollenberger of IEPA and Paul Ahearn of Clean Harbors, CHCI is currently in the process of retaining a qualifed consulting firm to assist in the evaluation of hazards posed by a tank or container release at the facility. Because the scope of, and procedures for, conducting the evaluation are still in the developmental stage, CHCI is unable to provide the IEPA with a detailed overview of evaluation or a timetable for its completion. CHCI will submit a complete response to Comment No. 20 upon completion of the evaluation.

REVISION PAGES:

Text: None
Tables: None
Appendices: None

COMMENT NO. 21:

G-6 <u>Coordination Agreement Requirements</u>

Please either describe and document the coordination agreements with local police and fire departments, hospitals, contractors, and state and local emergency response teams to familiarize them with the facility and actions needed in case of emergency or document refusals to enter into a coordination agreement. This must be done at this time.

RESPONSE:

A listing of the emergency response organizations and the service(s) which they provide is included in revised Table G-2. As described in Section G-6, copies of the Contingency Plan are issued to each of the emergency reponse organizations noted in Table G-2. In addition, CHCI conducts informational meetings ("open houses")at the facility to provide the organizations with the opportunity to tour the facility and discuss emergency response procedures.

As part of the most recent open house held on May 3, 1991, CHCI requested that each organization sign an "Agreement to Participate in Contingency Planning Activities". To date, CHCI has been successful in obtaining written agreements from four of the eight listed organizations. CHCI will continue its efforts to obtain agreements with the remaining four organizations. Copies of CHCI's request letters and the signed agreements are included in new Appendix G-5.

REVISION PAGES:

Text: Page G-13
Section G Tables: Table G-2 on Pages 2 and 3
Appendices: Appendix G-5 (new)

COMMENT NO. 22:

G-4d <u>Control Procedures</u>

The application did not define the area represented by a small fire which may be combated using hand held extinguishers.

REVISION PAGES:

CHCI notes that the decision on whether or not to attempt to extinguish a fire does not rely on the "size" of the fire, but rather on the "stage" of the fire, and on the experience and training of the worker who may attempt a response.

No CHCI employee is required to make an attempt to fight a fire. However, CHCI does conduct basic fire extinguisher training which teaches workers how to identify the "stage" of a fire and properly utilize portable fire extinguishers. In training workers about fire fighting, CHCI relies on the OSHA definition of "incipient stage fire" found at 29 CFR 1910.155(c)(26)"

> "Incipient stage fire" means a fire which is in the initial or beginning stage and which can be controlled or extinguished by portable fire extinguishers, Class II standpipe or small hose systems without the need for protective clothing or breathing apparatus.

CHCI's training program and the contingnecy plan both emphasize that worker may only attempt to fight an incipient stage fire provided that the attempt does not present an undue risk of personal injury.

CHCI has revised Section G-4d to remove the terms "small fire" and "early stage" and replaced them with the term "incipient stage fire.

Text: Pages G-7 and G-7A (new)
Tables: None
Appendices: None

COMMENT NO. 23:

G-4g <u>Incompatible Waste</u>

The application did not describe the procedures to decontaminate the area.

RESPONSE:

CHCI acknowledges the comment and has revised Section G-4g accordingly. Decontamination procedures following a release will include the removal of liquids using potable pumps and/or absorbents and the removal of solids using brooms, scrapers, shovels, or other suitable equipment. If necessary, the area will be rinsed with water (with or without detergent) or other appropriate solvent which, prior to use, is determined to be compatible with the spilled waste(s).

REVISION PAGES:

Text: Pages G-9
Tables: None
Appendices: None

COMMENT NO. 24:

G-4 <u>Container Spills and Leakage</u>

The application did not define what time frame spilled material would be removed.

RESPONSE:

CHCI acknowledges the comment and has revised Section G-4g accordingly. CHCI will, under normal circumstances, all spilled materials will be removed within two (2) hours of discovery. Additional time may be required depending upon the extent of the release and the physical and/or chemical properties of the material(s) involved in the release.

REVISION PAGES:

Text: Page G-9 and G-9A (new)
Tables: None
Appendices: None

COMMENT NO. 25:

G-8 <u>Required Reports</u>

The application did not contain a provision to notify the Agency that clean-up operations are complete and that the emergency equipment is fit for its intended use. Please add.

RESPONSE:

CHCI acknowledges the comment and has revised Sections G-4h and G-8 accordingly. CHCI shall verbally notify the IEPA that all emergency equipment listed in the Contingency Plan shall be cleaned and fit for its intended use before operations in the affected area(s) of the facility are resumed.

REVISION PAGES:

Text: Pages G-9, G-13, and G-14
Tables: None
Appendices: None

COMMENT NO. 26:

H-1b <u>Training Content, Frequency and Techniques</u>

The training program needs to be modified so that all personnel know the evacuation procedure.

RESPONSE:

All CHCI personnel currently receive Contingency Plan training which includes a thorough review of evacuation procedures and routes. Due to an editing error, Employee Group 3.2 was omitted from the original Table H-2. The error has been corrected.

REVISION PAGES:

Text: None
Section H Tables: Table H-2 on Page 5
Appendices: None

COMMENT NO. 27:

I-1a <u>Closure Performance Standard</u>

The application did not define what an acceptable level is in the rinsate.

RESPONSE:

Decontamination of a particular waste management unit (e.g., storage tank, secondary containment structure) will be deemed complete when the rinsate from the decontamination process no longer exhibits any of the following characteristics of a hazardous waste as defined under 40 CFR 261:

- D001	Ignitable
- D002	Corrosive
- D003	Reactive
- D004 through D011	Toxic Metals
- D018 through D043	Toxic Organics

REVISION PAGES:

Text: Page I-1, I-1A (new), I-2, and I-3.
Tables: None
Appendices: None

COMMENT NO. 28:

K-2 <u>Engineering Certification</u>

Technical data, such as design drawings, specifications and engineering studies, must be certified (sealed) by a Professional Engineer who is licensed to practice in the State of Illinois in accordance with Ill. Rev. Stat., par 5101, Sec. 1 and par. 5119, Sec. 13.1. Either the individual documents must be sealed or a table of contents of the technical data must be provided to which he is placing his seal to.

RESPONSE:

CHCI has included a table of contents which itemizes all of the technical data (e.g., design drawings, design specifications, engineering studies, etc.) included in the revised RCRA Part B Application. Each of these documents/drawings have been reviewed by a professional engineer licensed to practice in the State of Illinois. Each page of the revised table of contents (dated 06/10/91) has been certified (sealed) by the professional engineer. This certified table of contents and and accompanying HST cover letter date June 10, 1991 replaces the existing professional engineer certification statement included in Appendix K-2.

REVISION PAGES:

Text: Page K-1
Tables: None
Appendices: Appendix K-2

COMMENT NO. 29:

K-3 Prior Conduct Certification

All persons at the facility who have signature authority must submit a signed "prior conduct certification", not just the President of the company.

RESPONSE:

CHCI acknowledges the comment and notes that since the February 1991 revision was submitted, Mr. John C. Forster has replaced Mr. Michael R. Hatch as the President of CHCI. "Prior Conduct Certification Forms" for Mr. Forster and for Mr. Anthony Pongonis, CHCI's Vice President and General Manager are included with this package. CHCI notes that, at this time, only Mr. Forster and Mr. Pongonis have authorized signatory powers for the purposes of this and other IEPA permitting matters.

CHCI also notes that the "Prior Conduct Certification Form" in the February 1991 revision was included in Section O, not Section K-3 as cited in the IEPA's comment. For the sake of consistency, the replacement forms should be added to Section O in new Appendix O-3.

Finally, the information on the February 1991 form, along with existing Appendices O-1 and O-2, was intended to describe the compliance history of the facility during Clean Harbors ownership, and not Mr. Hatch's personal record in the hazardous waste field. The new "Prior Conduct Certification Statements" reflect the personal records of Mr. Forster and Mr. Pongonis. The facility's compliance history is still included in the Section O appendices.

REVISION PAGES:

Text: Page O-1
Tables: None
Appendices: Appendix O-3 (new)

COMMENT NO. 30:

L-1 Solid Waste Management Units

Identify each solid waste management unit at the facility. A solid waste management unit includes any unit which is not a "regulated unit" (under RCRA) and may include any of the following:

- Landfill
- Surface impoundment
- Waste pile
- Land treatment unit
- Injection well
- Incinerator
- Tank (including wastewater treatment units, elementary neutralization units, and tanks used in reuse/recovery operations)
- Container
- Storage area, transfer stations or waste recycling operation.

RESPONSE:

CHCI has no information on any past Solid Waste Management Units (SWMU's) which may or may not have been in existence at the site prior to CHCI's initial activities in 1980. As stated in existing Section L-1, all SWMU's in existence at the site from 1980 to the present time are currently "regulated units" that are operated under existing IEPA Land Pollution Control Operating Permit.

REVISION PAGES

Text: None
Tables: None
Appendices: None

COMMENT NO. 31:

L-1a <u>Characterize the Solid Waste Management Unit</u>

- Type of each unit
- Location of each existing or closed unit on the topographic map. (See Comment B-2)
- Engineering drawings for each unit, if available
- General dimensions of each unit
- Dates when the unit was in operation
- Description of the materials or wastes placed in each unit
- Quantity or volume of waste, if known

RESPONSE

See response to Comment No. 30 above.

REVISION PAGES

Text: None
Tables: None
Appendices: None

III. Proposed Amendments/Clarifications

CHCI proposes the following amendments and clarifications to its "Revised Part B Permit Application" date February 15, 1991:

AMENDMENT/CLARIFICATION NO. 1 -- Utilization of Receiving Tanks

In Section D-2a(A), CHCI described the construction and use of the the four (4) 7,000-gallon inground receiving tanks. The description implied that the receiving tanks are used solely for waste acceptance, that is, for the offloading of incoming bulk transport vehicles. In point of fact, the receiving pits have historically been used for a number of waste handling and pretreatment operations. CHCI intends to continue utilizing the recieving tanks in such fashion, and the description of the receiving tanks in Section D-2(a)(A) has been modified to include the following activities:

1. Unloading and holding of incoming bulk liquid loads;
2. Consolidation of drummed liquids;
3. Pretreatment of complex metals (e.g. copper, nickel) with a total ammonia content of less than 2000 ppm;
4. Pretreatment of phenol less than 100 ppm;
5. Pretreatment (oxidation) of organic D-codes;
6. Elementary neutralization;
7. Accumulation and holding of filtrate from the plate and frame filter press used for sludge dewatering;
8. Accumulation and holding of overflow from sludge concentrator tanks;
9. Accumulation and holding of decant water from the waste oil system;
10. Backflow from tank to draw prime on pumps;
11. Accumulation and holding of liquids from containment sumps;
12. Accumulation and holding of rinsates from truck washout activities; and
13. Accumulation and storage of rinsates from washout of empty drums.

REVISION PAGES:

Text: Pages D-14A
Tables: None
Appendices: None

cc: Maywood
USEPA

DWC
MAS

CleanHarbors
OF CHICAGO, INC.
11800 S. STONY ISLAND AVENUE
CHICAGO, IL 60617
(312) 646-6202

Certified Mail - Return Receipt Requested - # P903 863 082

December 9, 1992

RECEIVED
DEC 14 1992
IEPA-DLPC

Mr. Mark Schollenberger, P.E.
Environmental Protection Engineer
Illinois Environmental Protection Agency
Division of Land Pollution Control
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

Dear Mr. Schollenberger:

This letter is regarding our conversation of December 2nd regarding the permit application for Non-Hazardous Drum Storage and Bulking Operation. This additional information on operating procedures will be part of the permit application.

Clean Harbors will follow the daily inspection plan outlined in the Part B application for the non-hazardous storage area. This includes labeling, structural integrity, containment structure free of cracks and gaps, floor area free of spills, containers covered except when in use, and adequate aisle space.

Clean Harbors will immediately respond to spills or releases when discovered from the non-hazardous storage area. Area personnel will attempt to contain any release, collect any liquids using pumps or vacuum tankers, collect any solid material and absorbent, and treat or dispose of collected material at approved facilities. Upon discovery of a leaking container, the contents will be immediately transferred to another compatible container or the leaking container placed into an overpack drum. Spilled and leaking wastes shall be absorbed or collected using pumps, shovels, etc. All collected materials and spill residues will be containerized.

Clean Harbors will follow the Waste Analysis Plan of the Part B application as indicated for non-hazardous wastes. These wastes could be treated at the facility or accepted for

State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

USEPA

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

217/524-3300

Rec'd 10/27/92

October 1, 1992

Clean Harbors of Chicago
11800 South Stony Island Avenue
Chicago, Illinois 60617

Re: 0316000051 -- Cook County
Clean Harbors of Chicago
ILD000608471
RCRA Permit Log No. 16

Gentlemen:

The Illinois Environmental Protection Agency has reviewed the Part B permit application for storage in containers (S01) or tanks (S02) and treatment in tanks (T01) as revised by the February 14, 1992 submittal for the above-referenced facility. A list of the deficiencies identified during this technical review is included in the attached Notice of Deficiency (NOD).

Each of the deficiencies must be addressed before this Agency can complete the technical review of your permit application. Your response must be submitted in quadruplicate and postmarked no later than December 1, 1992. The response should be in a format which allows incorporation of the new information into the appropriate sections of your application. To allow for a proper review of this new information, the location of the response to each deficiency should be identified in a list cross-referencing these items. Each revised page or drawing must have the revision date identified on them for tracking purposes.

A certification identical to that outlined in 35 Ill. Adm. Code 702.126 must accompany your submission. The original and three copies of the new information and certification should be submitted to the following address:

Illinois Environmental Protection Agency
Division of Land Pollution Control -- #33
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, Illinois 62794-9276

-13-

Printed on Recycled Paper

If you have any questions regarding this subject, feel free to contact Mark A. Schollenberger, P.E. of my staff at 217/524-3307.

Very truly yours,

Lawrence W. Eastep, P.E., Manager
Permit Section
Division of Land Pollution Control
Bureau of Land

LWE:MAS:443Z/24-25

Enclosure

cc: USEPA - George Hamper

Clean Harbors of Chicago
USEPA ID No. ILD000608471
State ID No. 0316000051
Illinois Log No. 16
Technical Review
Notice of Deficiency Comments

A Part A Application

The previously submitted Part A applications did not include the signature of the owner. The Port Authority must sign the Part A application as owner of the site with Clean Harbors as operator of the site. The completed form must be submitted to this Agency.

B-1 General Description

For the proposed treatment operations for listed hazardous wastes, please provide answers to the following questions:

i) What equipment is used for stabilization?

ii) Where is the analytical data demonstrating that the stabilization/fixation process meets the established LDR standards (for metals) for the hazardous codes proposed for this treatment operation?

iii) Where is the demonstration of the feasibility of this type of treatment (stabilization/fixation) for organics parameters and the reactivity characteristic? Please provide justification for this proposal.

iv) Define the level of trace organics for which oxidation is appropriate.

v) Explain how you plan to do carbon absorption.

vi) Define the level of trace organics for which carbon absorption is appropriate.

vii) What is the limitation on suspended solids to prevent fouling in the carbon absorption unit?

viii) How is chemical precipitation going to remove the organic constituents, phenol and naphthalene from the hazardous waste K087?

ix) Where is the documentation showing the effectiveness of rendering solids without free liquids through the use of portable pumps; that is, the results of paint filter tests.

C-2 Waste Analysis Plan

In the case a permit is issued, the permit will be condition as follows:

"Before any wastes are placed into a storage unit, facility management will assess the compatibility of the waste with the storage unit materials

of construction and with wastes already stored therein. Compatibility will be assessed by performing a Liquid Waste Compatibility Test.

The referenced procedure, Liquid Waste Compatibility Test (D5058A), is described in the publication "Annual Book of ASTM STandards", American Society for Testing Materials, 1916 Race Street, Philadelphia, PA 19013, most recent edition.

The procedure has been revised as follows: the test will be conducted at a 1:1 ratio of the new waste stream and the composite of the existing wastes stored in the area served by the same secondary containment system. The Permittee will prepare a 100 ml composite of existing waste streams from which a 5 ml sample is taken to test a 5 ml sample of the waste stream received for storage. If no reaction is observed, a 5 ml aliquat of the tested sample shall be added to the remaining 95 ml composite in preparation for testing the next sample.

This test shall not applied to lab pack wastes."

C-2e Additional Requirements for Wastes Generated Off-Site

Your 02/14/92 response to our 11/04/91 NOD indicated for incoming fuel blending wastes, the wastes would be considered "noncomforming" if one or more constituents in the waste stream is in excess of the boundary condition(s) listed in Tables C-1 through C-8, as appropriate. The Agency does not understand this response. Please clarify.

D-1(3)(a) Requirement for the Base or Liner to Contain Liquids

The certification provided in Appendix D-59 is inadequate. The certification must state the design of the container storage area is suitable for its intended use under 35 IAC 724.292 in that it possess suitable structural integrity to maintain the weight of the contents without failure, is compatible with the intended wastes to be stored and is impervious.

D-2b(1) Assessment of New Tank System's Integrity

Regarding the proposed Pegasus system, please verity that tanks No. 100, 101, 102 and 103 on the drawing in Appendix D-57 corresponds to item No. 159 in Table D-5.

The assessment for the Pegasus system in Appendix D-49A is inadequate. In accordance with the Illinois Revised Statue 1989, Chapter 111, paragraph 5101, the assessment must be certified by a professional engineer registered in Illinois. In regards to the format of the certification, it is unclear that the assessment includes the foundation upon which the system rests. That is, that the foundation has sufficient structural strength to support the unit without collapse, rupture or failure of the unit and the secondary containment system.

F-3A(4) Water for Fire Control

Please indicate whether Clean Harbors intends to comply with each recommendation proposed by Gage-Babcock & Associates, Inc. in Appendix F-6.

F-4a Unloading Operations

Please provide a comprehensive list of each unloading area with a reference of the drawing which shows the details of the secondary containment system. Include calculations of the secondary containment volume and the volume necessary to contain a 24-hour 25-year storm event if the unloading area is subject to direct precipitation.

G Contingency Plan

In this section as corrected by the revisions dated 02/14/92 there is no page 12. Is all the information that is meant to be in the application present.

G-4b Identification of Hazardous Materials

Clean Harbors has not demonstrated that it is capable of identifying the spilled material by the location of the drum. Until the computer inventory system is in place, Clean Harbors must have an alternate system in place.

G-4c Assessment

Clean Harbors must identify a spill volume that would not have a impact (i.e. the air concentrations for the parameter in question are not above one-tenth the IDLH for that constituent) outside the facility's boundary.

I-4 Closure Cost Estimate

Clean Harbor has based part of its closure cost on the shipment of a portion of the wastes stored to Systech for use as hazardous waste fuels (HWF). This assumes the material in question has a minimum BTU/lb value of 5,000. The price used is $0.25/gal. Recent material from Systech indicates a base price of $0.30/gal. There are additional surcharges for low BTU value, such as 5,000 BTU/lb, high water content or chlorine content. These can increase the price significantly. Clean Harbors must include minimum specifications for these parameters that the stored waste designated as HWF would meet at gate control. Based on these specifications, revise your cost estimate accordingly.

I-5 Financial Assurance Mechanism for Closure

The Agency is unable to find Appendix I-3 in your submittal. Please resubmit.

MAS:443Z/26-28

3-16

cc: Maywood
USEPA

DWC
MAS

CleanHarbors
ENVIRONMENTAL SERVICES COMPANIES
1200 CROWN COLONY DRIVE
P.O. BOX 9137
QUINCY, MA 02269
(617) 849-1800

Certified Mail - Return Receipt Requested P 405 836 496

May 28, 1992

Mr. Mark Schollenberger, P.E.
Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

Re: Clean Harbors of Chicago, Inc.
Response to Deficiencies - RCRA Part B License Application

Dear Mr. Schollenberger:

In response to Comment B-1 of IEPA's notice dated November 4, 1991, Clean Harbors of Chicago, Inc. (CHCI) has prepared and is please to submit the enclosed treatability study data for certain hazardous waste codes that have been proposed for stabilization/fixation at CHCI. Following stabilization/fixation, these treated wastes will be shipped for disposal at an offsite hazardous waste landfill.

Please note that to date, CHCI has completed treatability studies on EPA waste codes D002, D006-8, F006, F019, and K062. Treatability data for the remaining stabilization/fixation codes listed in Table C-8 of the Part B Application will be submitted upon completion.

Please feel free to contact me at (617) 849-1800, extension 4473, if you have any questions.

Sincerely,

Paul A. Ahearn

Paul A. Ahearn
Compliance Project Manager

RECEIVED
JUN 01 1992
IEPA-DLPC

cc: Stephen Pozner - CHI
Joseph McNally - CHCI

Attachment

-11-

CHI # _____

LOG IN _____

PERMIT # _____

HAZ CODES D002

CleanHarbors

ENVIRONMENTAL SERVICES COMPANIES
11800 S. Stony Island Avenue
Chicago, Illinois 60617
(312) 646-6202

LAB ANALYSIS _____

OK ___ ACCEPT ___ REJECT ___

PRICE _____

QUOTE _____

WASTE SOURCE	INLAND
WASTE GENERATOR	
WASTE DESCRIPTION	H_2SO_4 SLUDGE
RECEIPT DATE	VOLUME

WASTE CHARACTERISTICS

COLOR/APPEARANCE	YELLOW SLURRY	WATER MISCIBILITY	+
% FLOATER	—	% OIL ON ACIDIFICATION	—
% FREE OIL	—		

TEST	As Rec.	LEACH.	TEST	As Rec.	TCLP
PH	0.7		Ag, ppm	<0.1	
% TOTAL SOLIDS	87.4		As, ppm	<0.1	
% DISSOLVED SOLIDS			Ba, ppm	<0.1	
% SUSPENDED SOLIDS	15.2		Cd, ppm	0.2	
% SETTLEABLE SOLIDS			Cr, ppm	1.5	
FLASH POINT °C	>200		Cr (Hex), ppm	—	
OIL AND GREASE, ppm	<10		Cu, ppm	28	
PHENOLS, ppm	—		Hg, ppb	<0.1	
CHLORIDE, ppm			Ni, ppm	7.4	
BROMIDE, ppm			Pb, ppm	0.9	
PHOSPHATE, ppm (TOTAL)			Se, ppm	<0.1	
COD, ppm	—		Zn, ppm	454	
BOD, ppm			Fe, ppm	2400	
ACIDITY mg/1 as $CaCo_3$			PCB, ppm	—	
ALKALINITY, mg/1 as $CaCo_3$			Tl, ppm	<0.1	
CYANIDE, ppm (TOTAL)	<10		NH_3	—	
CYANIDE, ppm (RELEASE)					
SULFIDE, ppm (TOTAL)	<10		TOX, ppm		
SULFIDE, ppm			TOC, ppm		

TREATMENT CHARACTERISTICS

NEUTRALIZATION EQUIVALENT (pH 10)

~~TREATMENT WITH MIX TANK~~ STABILIZATION (100 ml WASTE + ~~— ml MIX TANK~~ 50 gm LIME

TEST	MIX TANK	MIX + Sample		MIX TANK	MIX + Sample
% SOLIDS Produced by Volume			IRON, ppm		
% SOLIDS Produced by Weight			NICKEL, ppm		
COD, ppm			ZINC, ppm		
CYANIDE (TOTAL), ppm			O&G, ppm		
CYANIDE (RELEASABLE), ppm			COPPER, ppm		
BORON, ppm			LEAD, ppm		
CADMIUM, ppm			MERCURY, ppb		
CHROMIUM (TOTAL), ppm			Tl, ppm		
CHROMIUM (HEX), ppm					

ACCEPTED: REJECTED:

COMMENTS FINAL pH (10%) 10.2

California List:
Yes _____ No _____
Please Check

Sent for G.C.

CHI # _____

LOG IN _____

PERMIT # _____

HAZ. CODES D006, D007, D008

CleanHarbors

ENVIRONMENTAL SERVICES COMPANIES
11800 S. Stony Island Avenue
Chicago, Illinois 60617
(312) 646-6202

LAB ANALYSIS _____

OK ___ ACCEPT ___ REJECT ___

PRICE _____

QUOTE _____

WASTE SOURCE	MORTON
WASTE GENERATOR	
WASTE DESCRIPTION	PAINT PIGMENT
RECEIPT DATE	VOLUME

WASTE CHARACTERISTICS

COLOR/APPEARANCE	BROWN, PAINT SOLIDS	WATER MISCIBILITY	+
% FLOATER	—	% OIL ON ACIDIFICATION	—
% FREE OIL	—		

TEST	As Rec.	LEACH.	TEST	As Rec.	TCLP
PH	—		Ag, ppm	4.6	
% TOTAL SOLIDS	24.8		As, ppm	<0.1	
% DISSOLVED SOLIDS			Ba, ppm	28	
% SUSPENDED SOLIDS	100		Cd, ppm	1.0	1.0
% SETTLEABLE SOLIDS			Cr, ppm	164	161
FLASH POINT °C	>200		Cr (Hex), ppm	—	
OIL AND GREASE, ppm	648		Cu, ppm	100,800	
PHENOLS, ppm	<2		Hg, ppb	<0.1	
CHLORIDE, ppm			Ni, ppm	460	
BROMIDE, ppm			Pb, ppm	716	702
PHOSPHATE, ppm (TOTAL)			Se, ppm	<0.1	
COD, ppm	—		Zn, ppm	6.0	
BOD, ppm			Fe, ppm	76	
ACIDITY mg/1 as $CaCo_3$			PCB, ppm	—	
ALKALINITY, mg/1 as $CaCo_3$			Tl, ppm	<0.1	
CYANIDE, ppm (TOTAL)	<10		NH_3	—	
CYANIDE, ppm (RELEASE)					
SULFIDE, ppm (TOTAL)	<10		TOX, ppm		
SULFIDE, ppm			TOC, ppm		

TREATMENT CHARACTERISTICS

NEUTRALIZATION EQUIVALENT (pH 10)

~~TREATMENT WITH MIX TANK~~ STABILIZATION (100 ~~ml~~ gm WASTE + ~~ml MIX TANK~~) 50 gm LIME + 2 gm FeS

TEST	MIX TANK	MIX + Sample		MIX TANK	MIX + Sample
% SOLIDS Produced by Volume			IRON, ppm		
% SOLIDS Produced by Weight			NICKEL, ppm		
COD, ppm			ZINC, ppm		
CYANIDE (TOTAL), ppm			O&G, ppm		
CYANIDE (RELEASABLE), ppm			COPPER, ppm		
BORON, ppm			LEAD, ppm		3.4
CADMIUM, ppm		<0.1	MERCURY, ppb		
CHROMIUM (TOTAL), ppm		3.79	Tl, ppm		
CHROMIUM (HEX), ppm			PAINT FILTER		PASS

ACCEPTED: REJECTED:

COMMENTS FINAL pH (10%) 11.4

California List
Yes _____ No _____
Please Check

CHI # _____

LOG IN _____

PERMIT # _____

HAZ CODES F006

CleanHarbors

ENVIRONMENTAL SERVICES COMPANIES
11800 S. Stony Island Avenue
Chicago, Illinois 60617
(312) 646-6202

LAB ANALYSIS _____

OK ___ ACCEPT ___ REJECT ___

PRICE _____

QUOTE _____

WASTE SOURCE	VALENTEC
WASTE GENERATOR	
WASTE DESCRIPTION	ELECTROPLATING FILTER CAKE
RECEIPT DATE	VOLUME

WASTE CHARACTERISTICS

COLOR/APPEARANCE	GRAY/BROWN	WATER MISCIBILITY	+
% FLOATER	—	% OIL ON ACIDIFICATION	—
% FREE OIL	—		

TEST	As Rec.	LEACH.	TEST	As Rec.	TCLP
PH	—		Ag, ppm	2.3	
% TOTAL SOLIDS	36.2		As, ppm	<0.1	
% DISSOLVED SOLIDS			Ba, ppm	<0.1	
% SUSPENDED SOLIDS	100		Cd, ppm	1.7	0.2
% SETTLEABLE SOLIDS			Cr, ppm	522	46
FLASH POINT °C	>200		Cr (Hex), ppm	—	
OIL AND GREASE, ppm	122		Cu, ppm	196	
PHENOLS, ppm	<2		Hg, ppb	<0.1	
CHLORIDE, ppm			Ni, ppm	200	
BROMIDE, ppm			Pb, ppm	8.4	1.5
PHOSPHATE, ppm (TOTAL)			Se, ppm	<0.1	
COD, ppm	—		Zn, ppm	7200	
BOD, ppm			Fe, ppm	12,800	
ACIDITY mg/1 as $CaCo_3$			PCB, ppm	—	
ALKALINITY, mg/1 as $CaCo_3$			Tl, ppm	3.7	
CYANIDE, ppm (TOTAL)	<10		NH_3	—	
CYANIDE, ppm (RELEASE)					
SULFIDE ppm (TOTAL)	<10	<	TOX, ppm		
SULFIDE, ppm			TOC, ppm		

TREATMENT CHARACTERISTICS

NEUTRALIZATION EQUIVALENT (pH 10)

~~TREATMENT WITH MIX TANK~~ STABILIZATION 1100 gm ~~ml~~ WASTE + ~~ml MIX TANK~~ 50 gm LIME + 2 gm FeS

TEST	MIX TANK	MIX + Sample		MIX TANK	MIX + Sample
% SOLIDS Produced by Volume			IRON, ppm		
% SOLIDS Produced by Weight			NICKEL, ppm		
COD, ppm			ZINC, ppm		
CYANIDE (TOTAL), ppm			O&G, ppm		
CYANIDE (RELEASABLE), ppm			COPPER, ppm		
BORON, ppm			LEAD, ppm		0.34
CADMIUM, ppm		<0.02	MERCURY, ppb		
CHROMIUM (TOTAL), ppm		0.12	Tl, ppm		
CHROMIUM (HEX), ppm			PAINT FILTER		PASS

ACCEPTED _____ REJECTED _____

COMMENTS FINAL pH (10%) 12.0

California List
Yes _____ No _____
Please Check

CHI # _____

LOG IN _____

PERMIT # _____

HAZ. CODES F019

CleanHarbors

ENVIRONMENTAL SERVICES COMPANIES
11800 S. Stony Island Avenue
Chicago, Illinois 60617
(312) 646-6202

LAB ANALYSIS _____

OK ___ ACCEPT ___ REJECT ___

PRICE _____

QUOTE _____

WASTE SOURCE	ALUMINUM CORP.
WASTE GENERATOR	
WASTE DESCRIPTION	CHEMICAL CONVERSION COATING OF ALUMINUM TREATMENT SLUDGE
RECEIPT DATE	VOLUME

WASTE CHARACTERISTICS

COLOR/APPEARANCE	GRAY SOLID	WATER MISCIBILITY	+
% FLOATER	—	% OIL ON ACIDIFICATION	—
% FREE OIL	—		

TEST	As Rec.	LEACH.	TEST	As Rec.	TCLP
PH	—		Ag, ppm	0.8	
% TOTAL SOLIDS	28.6		As, ppm	0.2	
% DISSOLVED SOLIDS			Ba, ppm	12	
% SUSPENDED SOLIDS	100		Cd, ppm	0.2	
% SETTLEABLE SOLIDS			Cr, ppm	864	62.8
FLASH POINT °C	>200		Cr (Hex), ppm	—	
OIL AND GREASE, ppm	84		Cu, ppm	74	
PHENOLS, ppm	<2		Hg, ppb	<0.1	
CHLORIDE, ppm			Ni, ppm	318	
BROMIDE, ppm			Pb, ppm	16	0.8
PHOSPHATE, ppm (TOTAL)			Se, ppm	<0.1	
COD, ppm	—		Zn, ppm	1210	
BOD, ppm			Fe, ppm	3860	
ACIDITY mg/1 as $CaCo_3$			PCB, ppm	—	
ALKALINITY, mg/1 as $CaCo_3$			Tl, ppm	<0.1	
CYANIDE, ppm (TOTAL)	<10		NH_3	—	
CYANIDE, ppm (RELEASE)					
SULFIDE, ppm (TOTAL)	<10		TOX, ppm		
SULFIDE, ppm			TOC, ppm		

TREATMENT CHARACTERISTICS

NEUTRALIZATION EQUIVALENT (pH 10)

~~TREATMENT WITH MIX TANK~~ STABILIZATION (100 gm ~~ml~~ WASTE + ~~ml MIX TANK~~ 50gm LIME + 2gm Fe)

TEST	MIX TANK	MIX + Sample		MIX TANK	MIX + Sample
% SOLIDS Produced by Volume			IRON, ppm		
% SOLIDS Produced by Weight			NICKEL, ppm		
COD, ppm			ZINC, ppm		
CYANIDE (TOTAL), ppm			O&G, ppm		
CYANIDE (RELEASABLE), ppm			COPPER, ppm		
BORON, ppm			LEAD, ppm		
CADMIUM, ppm			MERCURY, ppb		
CHROMIUM (TOTAL), ppm		0.84	Tl, ppm		
CHROMIUM (HEX), ppm					

ACCEPTED: REJECTED:

COMMENTS FINAL pH(10%) 11.8

California List

Yes _____ No _____

Please Check

Sent for G.C.

CHI # _____

LOG IN _____

PERMIT # _____

HAZ. CODES K062

CleanHarbors

ENVIRONMENTAL SERVICES COMPANIES
11800 S. Stony Island Avenue
Chicago, Illinois 60617
(312) 646-6202

LAB ANALYSIS _____

OK ___ ACCEPT ___ REJECT ___

PRICE _____

QUOTE _____

WASTE SOURCE AUTOKAD

WASTE GENERATOR

WASTE DESCRIPTION PICKLING SLUDGE

RECEIPT DATE VOLUME

WASTE CHARACTERISTICS

COLOR/APPEARANCE	YELLOW SOLID	WATER MISCIBILITY	+
% FLOATER	—	% OIL ON ACIDIFICATION	—
% FREE OIL	—		

TEST	As Rec.	LEACH.	TEST	As Rec.	TCLP
PH	—		Ag, ppm	<0.1	
% TOTAL SOLIDS	21.1		As, ppm	<0.1	
% DISSOLVED SOLIDS			Ba, ppm	3.2	
% SUSPENDED SOLIDS	100		Cd, ppm	0.0	
% SETTLEABLE SOLIDS			Cr, ppm	1240	4.8
FLASH POINT ° C	>200		Cr (Hex), ppm	—	
OIL AND GREASE, ppm	<10		Cu, ppm	274	
PHENOLS, ppm	<10		Hg, ppb	<0.1	
CHLORIDE, ppm			Ni, ppm	835	
BROMIDE, ppm			Pb, ppm	480	2.3
PHOSPHATE, ppm (TOTAL)			Se, ppm	0.2	
COD, ppm	—		Zn, ppm	8230	
BOD, ppm			Fe, ppm	14,600	
ACIDITY mg/1 as $CaCo_3$			PCB, ppm	—	
ALKALINITY, mg/1 as $CaCo_3$			Tl, ppm	<0.1	
CYANIDE, ppm (TOTAL)	<10		NH_3	—	
CYANIDE, ppm (RELEASE)					
SULFIDE, ppm (TOTAL)	<10		TOX, ppm		
SULFIDE, ppm			TOC, ppm		

TREATMENT CHARACTERISTICS

NEUTRALIZATION EQUIVALENT (pH 10)

~~TREATMENT WITH MIX TANK~~ STABILIZATION (100 ~~ml~~ gm WASTE + ~~ml MIX TANK~~ 50 gm LIME + 2 gm FeS

TEST	MIX TANK	MIX + Sample		MIX TANK	MIX + Sample
% SOLIDS Produced by Volume			IRON, ppm		
% SOLIDS Produced by Weight			NICKEL, ppm		
COD, ppm			ZINC, ppm		
CYANIDE (TOTAL), ppm			O&G, ppm		
CYANIDE (RELEASABLE), ppm			COPPER, ppm		
BORON, ppm			LEAD, ppm		0.13
CADMIUM, ppm			MERCURY, ppb		
CHROMIUM (TOTAL), ppm		0.056	Tl, ppm		
CHROMIUM (HEX), ppm			PAINT FILTER		PASSED

ACCEPTED: REJECTED:

COMMENTS FINAL pH (10%) 11.8

California List
Yes _____ No _____
Please Check

CleanHarbors
ENVIRONMENTAL SERVICES COMPANIES
1200 CROWN COLONY DRIVE
P.O. BOX 9137
QUINCY, MA 02269
(617) 849-1800

Via Courier

February 17, 1992

RECEIVED
FEB 18 1992
IEPA-DLPC

Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

Re: Clean Harbors of Chicago, Inc.
Response to Deficiencies - RCRA Part B License Application

Gentlemen:

In response to your letter dated November 4, 1991, Clean Harbors of Chicago, Inc. (CHCI) has prepared and is please to submit the enclosed 2-volume document entitled "Response to Deficiencies - Revised Part B Permit Application". Enclosed please find one (1) document containing all required original certifications, and three (3) copies.

This document contains a comment-by-comment response along with copies of all revised and/or new text, tables, and appendices. The package also includes a discussion of proposed amendments and clarifications to the original Application. You will note that each of IEPA's comments is addressed on a separate page, and that CHCI's response includes a cross-reference of pages that are affected. For the ease of review, all amended pages are marked with the revision date "02/14/92".

Please feel free to contact me at (617)849-1800, extension 4473, if you have any questions.

Sincerely,

Paul A. Ahearn

Paul A. Ahearn
Compliance Project Manager

cc: Stephen Pozner - CHI
Joseph McNally - CHCI

Part B 16

Cook Co. 0316000051

CleanHarbors
ENVIRONMENTAL SERVICES COMPANIES
1200 CROWN COLONY DRIVE
P.O. BOX 9137
QUINCY, MA 02269
(617) 849-1800

Certified Mail - Return Receipt Requested

December 2, 1991

Mr. Mark A. Schollenberger, P.E.
Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
P.O. Box 19276
Springfield, IL 62794-9276

RECEIVED
DEC 06 1991
IEPA-DLPC

Re: Clean Harbors of Chicago, Inc.
Request for Extension

Dear Mr. Schollenberger:

As discussed during our telephone conversation on this date, Clean Harbors of Chicago, Inc. (CHCI) has requested and received from the Illinois Environmental Protection Agency (IEPA) an extension of the filing date for CHCI's response to the RCRA Part B permit application comments contained in ape's letter dated November 4, 1991. Per our conversation, CHCI has been granted an extension of the response filing date from December 24, 1991 to January 31, 1992.

CHCI appreciates the Agency's cooperation in this matter. If you have any questions, please do not hesitate to contact me at Clean Harbors' corporate office at (617) 849-1800, extension 4473.

Sincerely,

Paul A. Ahearn

Paul A. Ahearn
Compliance Project Manager

cc: Stephen Pozner

USEPA

Illinois Environmental Protection Agency · P. O. Box 19276, Springfield, IL 62794-9276

217/782-6762

Refer to: 0316000051 -- Cook County
Clean Harbors of Chicago
ILD000608471
RCRA Permit Log No. 16

November 4, 1991

Clean Harbors of Chicago
11800 S. Stony Island Avenue
Chicago, Illinois 60617

Gentlemen:

The Illinois Environmental Protection Agency has reviewed Part B of the RCRA permit application for storage in containers (S01) or tanks (S02) and treatment in tanks (T01) dated June 11, 1991 and received June 12, 1991 for the above-referenced facility. A list of the deficiencies identified during this initial technical review is included in the attached Notice of Deficiency (NOD).

Each of the deficiencies must be addressed before this Agency can complete the technical review of your permit application. Your response must be submitted in quadruplicate and postmarked no later than December 24, 1991. The response should be in a format which allows incorporation of the new information into the appropriate sections of your application. To allow for a proper review of this new information, the location of the response to each deficiency should be identified in a list cross-referencing these items. Each revised page or drawing must have the revision date identified on them for tracking purposes.

A certification identical to that outlined in 35 Ill. Adm. Code 702.126 must accompany your submission. The original and three copies of the new information and certification should be submitted to the following address:

Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, Illinois 62794-9276

If you have any questions regarding this subject, feel free to contact Mark A. Schollenberger, P.E. of my staff at 217/782-6762.

Very truly yours,

Lawrence W. Eastep, P.E., Manager
Permit Section
Division of Land Pollution Control

LWE:MAS:rd3256q/42-43

Enclosure

cc: Division File, w/enclosure
Maywood Region, w/enclosure
George Hamper, USEPA Region V, w/enclosure
Marilyn Sabadaszka, USEPA Region V
Planning & Reporting Section
Paul A. Ahearn, Clean Harbors
Hoyer-Schlesinger-Turner, Inc.
Charlie Zeal

Clean Harbors of Chicago
USEPA I.D. No. ILD000608471
State I.D. No. 0316000051
Illinois Log No. 16
Technical Review
Notice of Deficiency Comments

A. Part A Application

Previously submitted Part A applications included numerous waste codes for treatment which the Part A submitted as part of the Part B permit application does not include (for instance, F030, K101, P004 and U002). Additionally, these past Part A application include U and P listed wastes (P061, U013, U139 and U198) for storage which are also not covered by the February 20, 1991 Part A submittal. Please confirm that the February 20, 1991 Part A is accurate in these details. Also, verify that wastes carrying codes being deleted by this latest revision of the Part A were not received by this facility.

B-1 General Description

Under the proposed treatment operations for listed hazardous wastes, explain what treatment might be expected to be provided for each waste code. Particularly, when looking at Table C-7, explain how nonpumpable sludges will be treated, how waste water treatment sludges whose basis for listing are toxic metals will be treated, what treatment will be provided for a mixture of various organic compounds, etc.

Under the proposed stabilization operations for characteristic wastes, pesticides and organics are not hazardous constituents which are normally considered to be amendable to stabilization. Please submit documentation demonstrating the viability of this treatment.

C-2 Waste Analysis Plan

In the case a permit is issued, the permit will be condition as follows:

i) All wastes must be tested by ASTM D5058A during gate control receipt.

ii) All wastes, as generated, received for fuel blending, must have a minimum BTU/lb value of 5,000 until the time Clean Harbors can demonstrate that the facilities which receive the fuel area in compliance (i.e., have submitted a certification of compliance, (40 CFR 266.103(c)) with the "Burning of Hazardous Waste in Boilers and Industrial Furnaces" regulations.

iii) This facility shall conduct preacceptance analysis in accordance with the approved waste analysis plan and the following requirements:

a. A preacceptance analysis shall be conducted in accordance with the most current instructions for special waste stream applications. All parameters required by these instructions must be included in the analysis.

b. The waste must be reanalyzed in accordance with the above requirements at least every five years.

c. In the event there is a conflict between the approved waste analysis plan and the Instructions for Special Waste Stream applications, the most stringent requirements shall apply.

C-2e Additional Requirements for Wastes Generated Off-Site

The application did not define the waste acceptance criteria for determining conformance/nonconformance of the gate control parameters to the preacceptance results (i.e. when is a waste rejected).

D-1 Containers

The roll-off containers associated with building no. 3 have not been properly addressed in this application.

D-1a(1) Description of Containers

The application did not provide either a photograph or sample copy of the markings and labels demonstrating compliance with the requirements of 35 IAC Part 722 Subpart C.

D-1a(2) Container Management Practices

The pallet arrangements (for D001) do not comply with NFPA requirements. The facility has indicated Class 1A materials will be accepted by including such waste codes as (U001, U092, U115, ...). Please provide appropriate pile arrangements when handling these materials. Additionally, explain how the design of the facility is in compliance with the storage requirements in Section 4.8 for storage adjacent to a building.

D-1a(3)(a) Requirement for the Base or Liner to Contain Liquids

Demonstrate the capability of the base to contain liquids, including:

- A statement that the base is free of cracks or gaps;
- Demonstration of imperviousness of base to wastes and precipitation;
- Base design and materials of construction;
- An engineering evaluation of the base's structural integrity; and
- Discussion of compatibility of the base with wastes.

The application did not provide the basis of design/P.E. certification of the design for the proposed container area's in i) outdoor storage, ii) the lab pack building, iii) the fuel blending area and iv) building no. 3.

Are flammables stored in the organic drum area of building no 2? Flammables (acetone, butanol, butyl acetate, ethyl ether, ethylene oxide, MEK) do not appear to be recommended for epoxy resins (see Dudick corrosion resistance chart).

Are organic chlorides stored in the organic drum area of building no. 2. Organic chlorides (benzoyl chloride, chlorobenzene, chloroform, chlorophenol, chlorotoluene, methylene chloride, methyl chloride) do not appear to be recommended for epoxy resins (see Dudick corrosion resistance chart).

The Cladkote E-HT corrosion chart for epoxy based resins which is to be used in the proposed areas is highly suspicious looking. No compounds are actually given a not recommended designation and the compounds which are troublesome to the Dudick resin (i.e. acetone, butanol, butyl acetate, MEK, methylene chloride) are almost all given a satisfactory if flushed immediately rating. What is meant by flushed immediately, within 24 hours of the spill, within minutes of the spill?

D-1a(3)e Removal of Liquids from Containment Systems

Please define what is meant by removed in a timely manner (i.e. within 24 hours of the discovery).

D-2b(1) Assessment of New Tank System's Integrity

Please have the engineer certify the new tank system is in compliance with 35 IAC 724.292(a) (i.e. attesting that the tank system has sufficient structural integrity and is acceptable for the treating and storing of hazardous waste).

Our reference document "Technical Resource Document for the Storage and Treatment of Hazardous Waste in Tank Systems" (PB87-134391) indicate mild carbon steel (which are used as storage tanks for flammables) are incompatible with methyl ethyl ketone and acetone. Historical information indicate MEK and acetone make up 6.3% and 3.1% of hazardous waste fuel respectively. Please comment on this.

D-2f(1)(b) Requirements for Secondary Containment

The facility plans to use Geothane 520 (an urethane coating) in the diked area for the fuel blending tank farm. The corrosion chart for this resin does not recommend this resin for acetone, butanol, ethanol, xylol and mineral spirits. Please explain how this resin is suitable.

F-1a(3) Warning Signs

Please provide a map designating the location of warning signs.

F-3a(4) Water for Fire Control

The adequacy of the fire control equipment and procedures should be evaluated by an independent fire control professional or the responsible fire department and the results submitted for review by the Agency. If such an evaluation has been performed, provide the results to the Agency for review.

F-4a Unloading Operations

Please have the engineer certify as to the adequacy of the design of the railroad unloading area.

F-4b Run-off

Provide a cross-section of the unloading area for building #2 demonstrating the capability to contain run-off/spills during unloading.

G-4 Emergency Response Procedures

The response was inadequate. Computer generated information was not provided for an evaluation of the hazards from emissions for spill-related incidents.

G-4b Identification of Hazardous Materials

The previous response is adequate if general waste category means the facility can identify the USEPA hazardous waste codes and major hazardous components for the drums in the affected area.

G-4c Assessment

The company must prepare a medical hazard table by waste code.

G-8 Required Reports

The application submitted was missing pages dealing with this item. Please resubmit this portion.

H-2 Implementation of Training Program

Provide documentation of implementation of the training program for existing personnel.

I-4 Closure Cost Estimate

This closure cost estimate is not acceptable. All costs must be for off-site treatment (i.e. one cannot assume the contractor will be able to conduct onsite treatment of acid/bases). Additionally, one cannot assume off-site disposal as hazardous fuel, one must assume off-site incineration when materials with little fuel value are to be blended into the hazardous waste fuel. The facility may delete the costs for closure of the aqueous wastewater treatment units as these units are exempt from RCRA permitting.

I-5 Financial Assurance Mechanism for Closure

Please submit documentation of financial assurance mechanism for the existing portion of the facility.

I-8a(1) Liability Requirements

The Agency feels the facility is only subject to coverage for sudden accidental occurrences. However, if coverage is provided in a combined form, liability coverage must be maintained for $4 million per occurrence and $8 million aggregate. Therefore, your current liability coverage is inadequate.

MAS:rd3256q/44-49

Part R-16.

USEPA

CleanHarbors
ENVIRONMENTAL SERVICES COMPANIES
1200 CROWN COLONY DRIVE
P.O. BOX 9137
QUINCY, MA 02269
(617) 849-1800

Certified Mail - Return Receipt Requested

May 30, 1991

Mr. Mark Schollenberger
Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

Re: Submittal Date Extension for Response to Comments
Clean Harbors of Chicago, Inc.

Dear Mr. Schollenberger:

As discussed during our telephone conversation on this date, Clean Harbors of Chicago, Inc. (CHCI) has requested and received from the Illinois Environmental Protection Agency (IEPA) an extension of the filing date for CHCI's response to the RCRA Part B permit application comments contained in IEPA's letter dated April 19, 1991. Per our conversation, CHCI has been granted a one (1) week extension of the response filing date, from June 4, 1991 to June 11, 1991.

CHCI appreciates the Agency's cooperation in this matter. If you have any questions, please do not hesitate to contact me at Clean Harbors' corporate office at (617) 849-1800, extension 4473.

Sincerely,

Paul A. Ahearn

Paul A. Ahearn
Compliance Project Manager

cc: Stephen Pozner

RECEIVED
JUN 03 1991
IEPA-DLPC

Illinois Environmental Protection Agency · P. O. Box 19276, Springfield, IL 62794-9276

217/782-6762

Refer to: 0316000051 -- Cook County
Clean Harbors of Chicago
ILD000608471
RCRA Permit Log No. 16
RCRA Permit File

April 19, 1991

Clean Harbors of Chicago, Inc.
11800 South Stony Island Avenue
Chicago, Illinois 60617

Gentlemen:

The Illinois Environmental Protection Agency has reviewed the Part B RCRA permit application for storage in containers or tanks and treatment in tanks, dated February 19, 1991 and received February 20, 1991 for the above referenced facility. The Agency has determined that your RCRA Part B permit application is complete.

However, the following technical deficiencies were noted during our completeness review (see the following attachment). Each of the deficiencies must be addressed before this Agency can begin the technical review of your permit application. Your response must be submitted in quadruplicate and postmarked no later than June 4, 1991. The response should be in a format which allows incorporation of the new information into the appropriate sections of your application. To allow for a proper review of this new information, the location of the response to each deficiency should be identified in a list cross-referencing these items. Each revised page or drawing must have the revision date identified on them for tracking purposes.

A certification identical to that outlined in 35 Ill. Adm. Code 702.126 must accompany your submission. The original and three copies of the new information and certification should be submitted to the following address:

Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, Illinois 62794-9276

If you have questions regarding this subject, feel free to contact Mark Schollenberger of my staff at 217/782-6762.

Very truly yours,

Lawrence W. Eastep, P.E., Manager
Permit Section
Division of Land Pollution Control

LWE:dts/0736q/87-88

cc: Division File, w/enclosure
Northern Region, w/enclosure
George Hamper, USEPA Region V, w/enclosure
Planning & Reporting Section
Marilyn Sabadaszka, USEPA Region V
Hoyer-Schlesinger-Turner, Inc., w/enclosure
C. Zeal

B-4 Traffic Information

The application did not provide the weight of the loaded vehicles transporting wastes to the facility or the load bearing capacity of expected traffic that Stony Island Avenue is designed to handle.

C-1 Chemical and Physical Analyses

The application did not define the wastes received into the various waste groups shown on drawings of the storage area and either a range of hazardous constituents in each hazardous waste code or an acceptable range of parameters in each waste or waste group (particularly, wastes for fuel blending).

C-1a Containerized Waste

The application did not identify the type of wastes (by haz. code and a general description) to be stored in the roll-off containers or provide the results of a test to show that the wastes do not contain free liquids.

C-2f Additional Requirements for Ignitable, Reactive or Incompatible Wastes

The application did not describe the methods used to meet additional waste analysis requirements necessary for storing incompatible wastes. (i.e. All wastes should be classified for compatibility pursuant to 40 CFR 264 Appendix V and pages B9A-9F of USEPA OSWER Doc. #9938.4)

D-1a(1)/D-1a(b) Description of Containers

Please provide a table with the following headings and the appropriate information on the containers:

1. general description
2. approximate number in storage (by area)
3. container construction material
4. approximate dimensions
5. typical usable volume
6. DOT specification

7. Liner specification

8. stacking height

D-1a(3) Secondary Containment System Design and Operation

Please indicate on the drawing the areas in which incompatible wastes will be stored.

Please address the lab pack repack area, the fuel blending staging area and the roll-off box storage area under this section at this time.

D-1a(3)a Requirement for the Base to Contain Liquids

Please explain how the P.E. determined the existing sealant was compatible since a chemical compatibility chart is not provided in the manufacturers literature.

The application did not provide a soil report showing adequate bearing capacity. The application did not provide the design calculations for the footings.

D-2a(1) Assessment of Existing Tank System's Integrity

In the application submitted, the Agency was unable to find the actual field inspection reports for:

1. the primary storage tank (TK #2)

2. the mix tank (TK #4)

3. the concrete sludge sump

4. the sludge concentrator and;

5. the waste storage tank.

D-2b(1) Assessment of New Tank System's Integrity

It is not acceptable to provide an assessment upon construction of the proposed tanks. The assessment must be provided at this time in accordance with the following:

Provide a written assessment that is reviewed and certified by an independent, qualified, registered professional engineer, on the structural integrity and suitability of each tank system for handling

hazardous waste. The assessment must show that the foundation, structural support, seams, connections and pressure controls (if applicable) are adequately designed and that the tank systems has sufficient structural strength and compatibility with the waste(s) to be stored or treated to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment must include the following: (1) design standard(s) according to which the tank(s) and/or the ancillary equipment are constructed; (2) hazardous characteristics of the waste(s) to be handled; (3) a corrosion assessment by a qualified expert for new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water; (4) a determination of design or operational measures that will protect underground tank systems against potential damage due to vehicular traffic; (5) design considerations to ensure that tank foundations will maintain the load of a full tank and that tank systems will be anchored to prevent flotation or dislodgment where the tank system is placed in a saturated zone or is located within a seismic fault zone; and (6) design considerations to ensure that tank systems will withstand the effects of frost heave.

D-2b(3) Description of Tank System Installation and Testing Plans and Procedures:

The application did not indicate how the ancillary equipment (piping) is supported (i.e. installed in accordance with ANSI B31.3 or ANSI B31.4 or some other equivalent guidelines).

D-2f(1)(b) Requirements for Secondary Containment and Leak Detection

The application did not describe how the design of the secondary containment system took into consideration the effects for the freeze thaw cycle.

The drawing in Appendix D-38 did not show the slope of the secondary containment system for the reactor vessel.

The application did not provide a schedule of compliance for providing secondary containment for the existing tanks and ancillary equipment.

D-2f(1)(c) Requirements for a Vault System

The plans do not show chemical-resistant water stops at the construction joints as required by the regulations.

D-2f(2) Requirement for Tank Systems Until Secondary Containment is Implemented

Please have the engineer state the tank assessment included the ancillary equipment (piping,...) associated with each tank or provide the results of a leak test or other integrity assessment measure.

F-2b(2)e Tank Level of Waste

The application did not state the minimum freeboard provided in the open top tanks or document that this amount is sufficient considering wind action and a 24 hr. 25 yr. precipitation event.

F-4e Personnel Protection Equipment

The application did not provide an explanation of what protection equipment is worn when handling wastes.

F-5e Management of Ignitable or Reactive Wastes in Tank Systems

The application did not provide documentation that the placement of the tanks complies with NFPA buffer zone requirements.

G-1 General Information

The contingency plan must be a stand alone document. Information, such as the description of activities and the site plan, cannot be referenced to other sections as the contingency plan will be handed out to public officials for their use.

G-3 Implementation

The application needs to be modified to state: 1) the contingency plan is implemented whenever there is a fire, explosion, evacuation of an area or any spill greater than 1 pound.

2) Any implementation of the contingency plan requires notification of the IEPA within 24 hours. Any spills less than 1 pound must still be recorded in the operating record.

G-4b Identification of Hazardous Materials

The application must state the applicant will maintain a operating log through which he will be able to identify the spilled material by the location of the drum.

G-4 Emergency Response Procedures

In an effort to demonstrate compliance with regulatory changes which have taken effect since your RCRA Part B permit application has been submitted the Agency requests that you revise the contingency plan in your application to conform with the following format.

1. The contingency plan must include the necessary information and descriptions to satisfy the requirements of 35 Ill. Adm. Code Part 724.156. The contingency plan and supporting documentation must be revised to demonstrate that the following information and requirements were considered and addressed, at a minimum:

   a. type, amount and variety of waste in the building

   b. location of waste.

   c. waste handling practices.

   d. possible hazards that may result from a release, fire, or explosion (e.g., the effects of any toxic, irritating or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions). This will require an estimation of the quantities and types of gases that could be generated.

   e. the effects of weather conditions in the event of a release, fire, or explosion.

   f. identify the possible hazards to human health or the environment (on-site and off-site) that may result from a release, fire, or explosion.

   g. describe how the emergency coordinator (EC) will determine if a release, fire or explosion could threaten human health or the environment outside the facility. Identify the type of information and criteria the EC would use in arriving at such a determination. In addition, estimate the time it would take to make such a determination and compare that to the time it would take material resulting from a release, fire or explosion to travel off-site.

   h. how will the EC determine if evacuation of local areas may be advisable? As in g. above, identify the type of information and criteria the EC will use and make a time

comparison of the time necessary to make such a determination to the time an off-site impact is estimated to occur.

i. who will the EC notify if evacuation of the local areas is determined to be advisable.

Revise the contingency plan and supporting documentation as necessary to incorporate the information determined above. If any of the results are generated by computer (i.e. emission/dispersion models, etc.) the model(s) mut be identified. In addition, the Agency may require the owner/operator to provide an original copy of the model(s) so that the Agency can verify computer generated data. An evaluation of this information may necessitate a change in the design or operation of the facility pursuant to 35 Ill. Adm. Code 724.131.

G-6 Coordination Agreement Requirements

Please either describe and document the coordination agreements with local police and fire departments, hospitals, contractors, and state and local emergency response teams to familiarize them with the facility and actions needed in case of emergency or document refusals to enter into a coordination agreement. This must be done at this time.

G-4d Control Procedures

The application did not define the area represented by a small fire which may be combatted using hand held extinguishers.

G-4g Incompatible Waste

The application did not describe the procedures to decontaminate the area.

G-4 Container Spills and Leakage

The application did not define what time frame spilled material would be removed.

G-8 Required Reports

The application did not contain a provision to notify the Agency that clean-up operations are complete and that the emergency equipment is fit for its intended use. Please add.

H-1b Training Content, Frequency and Techniques

The training program needs to be modified so that all personnel know the evacuation procedure.

I-1a Closure Performance Standard

The application did not define what an acceptable level is in the rinsate.

K-2 Engineering Certification

Technical data, such as design drawings, specifications and engineering studies, must be certified (sealed) by a Professional Engineer who is licensed to practice in the State of Illinois in accordance with Ill. Rev. Stat., par 5101, Sec. 1 and par. 5119, Sec. 13.1. Either the individual documents must be sealed or a table of contents of the technical data must be provided to which he is placing his seal to.

K-3 Prior Conduct Certification

All persons at the facility who have signature authority must submit a signed "prior conduct certification", not just the President of the company.

L-1 Solid Waste Management Units

Identify each solid waste management unit at the facility. A solid waste management unit includes any unit which is not a "regulated unit" (under RCRA) and may include any of the following:

- Landfill
- Surface impoundment
- Waste pile
- Land treatment unit
- Injection well
- Incinerator
- Tank (including wastewater treatment units, elementary neutralization units, and tanks used in reuse/recovery operations)

- Container
- Storage area, transfer station or waste recycling operation.

L-1a <u>Characterize the Solid Waste Management Unit</u>

- Type of each unit
- Location of each existing or closed unit on the topographic map. (See comment B-2.)
- Engineering drawings for each unit, if available
- General dimensions of each unit
- Dates when the unit was in operation
- Description of the materials or wastes placed in each unit
- Quantity or volume of waste, if known

MS:dls/0736q/89-96

CleanHarbors
ENVIRONMENTAL SERVICES COMPANIES
1200 CROWN COLONY DRIVE
P.O. BOX 9137
QUINCY, MA 02269
(617) 849-1800

Via United Parcel Service

February 19, 1991

RECEIVED
FEB 20 1991
IEPA-DLPC

Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, IL 62794-9276

Re: Clean Harbors of Chicago, Inc.
RCRA Part B License Application
Revision Date 02/15/91

Gentlemen:

Clean Harbors of Chicago, Inc. (CHCI) is pleased to submit for your review and approval a revised RCRA Part B Facility License Application, CHCI Revision Date 02/15/91. Enclosed please find one (1) document containing all required original certifications, and three (3) copies.

Please note that CHCI has re-written the Application in its entirety in accordance with the Agency's general comment on the Notice of Deficiency (NOD) dated November 9, 1990. The revised Application has been structured in accordance with "RCRA Part B Permit Application Decision Guide" (Revision 5, June 1989) to facilitate a timely review. CHCI has incorporated its responses to the Agency's specific comments into the corresponding section(s) of the revised application. The Table of Contents located at the front of the document has been developed such that the deficiencies noted by the Agency can easily be cross-referenced and located in the Revised document.

CleanHarbors

Please feel free to contact me at (617)849-1800, extension 4473, if you have any questions.

Sincerely,

Paul A. Ahearn

Paul A. Ahearn
Compliance Project Manager

cc: Stephen Pozner - CHI
John Forster - CHCI

USEPA

Illinois Environmental Protection Agency · P. O. Box 19276, Springfield, IL 62794-9276

217/782-6762

Refer to: 0316000051 -- Cook County
Clean Harbors of Chicago
ILD000608471
RCRA Permit Log No. 16
RCRA Permit File

November 9, 1990

Clean Harbors of Chicago, Inc.
11800 South Stony Island Avenue
Chicago, Illinois 60617

Gentlemen:

The Illinois Environmental Protection Agency has reviewed Part B of the RCRA permit application for container storage and tank storage areas dated September 27, 1990 and received September 28, 1990 for the above-referenced facility. A list of the deficiencies identified during this initial completeness review is included in the attached Notice of Deficiency (NOD).

Each of the deficiencies must be addressed before this Agency can complete the completeness review of your permit application. Your response must be submitted in quadruplicate and postmarked no later than December 20, 1990. The response should be in a format which allows incorporation of the new information into the appropriate sections of your application. To allow for a proper review of this new information, the location of the response to each deficiency should be identified in a list cross-referencing these items. Each revised page or drawing must have the revision date identified on them for tracking purposes.

Additionally, please fill out and submit with the response to deficiencies the attached form, (LPC-372).

A certification identical to that outlined in 35 Ill. Adm. Code 702.126 must accompany your submission. The original and three copies of the new information and certification should be submitted to the following address:

Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Post Office Box 19276
Springfield, Illinois 62794-9276

If you have any questions regarding this subject, feel free to contact Mark A. Schollenberger of my staff at 217/782-6762.

Very truly yours,

Lawrence W. Eastep, P.E., Manager
Permit Section
Division of Land Pollution Control

LWE:MAS:lab/3855n, 1-2

Enclosure

cc: Division File, w/enclosure
Northern Region, w/enclosure
George Hamper, USEPA Region V, w/enclosure
USEPA Region V
Planning & Reporting Section

General

The application was not submitted in the format requested by the Agency in accordance with the "RCRA Part B Permit Application Decision Guide". The Agency has the authority to request information in a prescribed fashion under 35 IAC 702.106 and 702.123. The Agency feels it is essential to receive the Part B application in this format to facilitate timely review and to allow future modifications to be reviewed and incorporated into the Part B Permit.

Enclosed is a "RCRA Part B Permit Application Decision Guide".

B. FACILITY DESCRIPTION

B-1 General Description: 703.183(a)

Please describe in detail the fuel blending operation and uses of the tanks.

B-2 Topographic Map: 703.183(s), 703.185(c), 703.185(d), 724.195, 724.197

B-2a General Map Requirements: 703.183(s)

The map must show the facility and a distance of 1,000 feet around it, at a scale of 1 inch equal to not more than 200 feet. The map must include: contours sufficient to show surface water flow around facility unit operations, map date, 100-year floodplain area, surface waters, surrounding land uses, a wind rose, map orientation, and legal boundaries of facility site. The map should also indicate the location of access control, injection and withdrawal wells, buildings, structures, sewers, loading and unloading areas, fire control facilities, flood control or drainage barriers, run-off control systems, and (proposed) new and existing hazardous waste operation units and solid waste management units. Multiple maps may be submitted to meet the above requirements, if necessary, but should be at a scale of 1 inch equal to not more than 200 feet.

i. The surrounding land uses are not clearly defined within 1,000 feet of the facility. Please submit a zoning map and a map showing existing uses of the surrounding lands.

ii. The drainage controls, such as the swale around the outside drum storage area, are not clearly defined.

iii. The runoff controls, as shown in the drawings (CH1-1001, 1&2) submitted with the State operating permit, are not clearly defined in this application.

iv. A written description and plat map of the legal boundaries needs to be submitted.

v. Either off-site wells need to be indicated on the site map or a statement made that withdrawal/injection wells are not present within 1,000 feet of the facility boundaries.

B-3a Seismic Standard: 724.118

Demonstrate that new facilities where treatment, storage or disposal of hazardous waste are not within 200 feet (61 meters) of a fault which has had displacement during Holocene time or demonstrate that the sum of all the new construction does not redefine the site as a new facility.

B-4 Traffic Information: 703.183(j)

Provide the following traffic-related information:

. Adequacy of access roadway surfaces (on and to the site) and load bearing capacity for expected traffic at the site by providing the weight of loaded vehicles, documenting the basis for the load bearing capacity of the roadway surfaces and indicating the access roads to the site.

C. WASTE CHARACTERISTICS

C-1 Chemical and Physical Analyses: 703.183(b), 724.113(a)

For each hazardous waste stored, treated or disposed at the facility, describe the waste, the hazard characteristics, the basis for hazard designation, and provide a laboratory report detailing the chemical and physical analyses of representative samples.

Please define the materials received into the various waste groups stored (i.e., acids, alkalines, ...) then provide hazardous codes of the wastes in the grouping, a sample analysis of the grouping, and either a range of hazardous constituents in each hazardous code or a acceptable range of parameters in each waste or waste group (particularly, wastes for fuel blending).

C-1a Containerized Waste: 703.201(b)(1)

For owners and operators that store containers of wastes without a secondary containment system, provide the test procedures and results, or other documentation or information, which show that the wastes do not contain free liquids (see D-1b(1)). A suggested test for free liquids is the Paint Filter Liquids Test, Method 9095, in "Test Methods for Evaluating Solid Wastes, Physical Chemical Methods", EPA Publication No. SW-846 (latest edition). Also, please identify the type of waste (by hazardous waste code and a general description) to be stored in the roll-off containers.

C-1b Waste in Tank Systems: 724.291(b)(2), 724.292(a)(2)

Provide the hazardous characteristics of the wastes to be handled in the tank systems.

C-2 Waste Analysis Plan: 703.183(c), 724.113(b) and (c)

Provide a copy of the waste analysis plan that describes the methodologies for conducting the analyses required to properly treat, store, or dispose of hazardous wastes.

C-2a Parameters and Rationale: 724.113(b)(1)

List parameters chosen for analysis and explain the rationale for their selection.

Please clearly define parameters chosen for preacceptance and fingerprint analysis and key parameters chosen based on the treatment to be provided.

C-2c Sampling Methods: 724.113(b)(3), 40 CFR 261 - Appendix I

List the sampling methods used to obtain a representative sample of each waste to be analyzed and document that the chosen method is appropriate for the type and nature of the waste.

Please define sampling methods for non-liquid phases or tank sampling.

C-2e Additional Requirements for Wastes Generated Off-Site: 724.113(c)

Describe the procedures used to inspect and/or analyze a representative portion of wastes generated off-site. Describe the statistical method used to determine a representative sample of the incoming wastes (e.g. the number of drums to be sampled).

Please define the minimum number of samples which will be taken from a drum lot.

C-2f Additional Requirements for Ignitable, Reactive or Incompatible Wastes: 724.113(b)(6), 724.117

Describe the methods used to meet additional waste analysis requirements necessary for storing incompatible wastes.

D. PROCESS INFORMATION

D-1 Containers

D-1a Containers with Free Liquids

D-1a(1) Description of Containers: 724.271, 724.272

Provide the following information about the containers used to treat or store hazardous waste: approximate number of each type of container, construction materials, dimensions and usable volumes, DOT specifications or other manufacturer specifications, liner specifications (if applicable), container condition (new, used, reconditioned), and markings and labels.

D-1a(3) Secondary Containment System Design and Operation: 703.201(a)(1), 724.275(a) and (d)

Provide design and profile drawings of the existing or planned container storage area(s), showing the secondary containment system and the arrangement of containers. Indicate on the drawings the areas in which incompatible wastes will be stored. Note that the secondary containment system requirements also apply to storage areas holding wastes F020, F021, F022, F023, F026 and F027, whether or not these wastes contain free liquids.

D-1a(3)(a) Requirement for the Base or Liner to Contain Liquids: 724.275(b)(1)

Demonstrate the capability of the base to contain liquids, including:

- A statement that the base is free of cracks or gaps;
- Demonstration of imperviousness of base to wastes and precipitation;
- Base design and materials of construction;
- An engineering evaluation of the base's structural integrity; and
- Discussion of compatibility of the base with wastes.

D-1a(3)(b) Containment System Drainage: 703.201(a)(2), 724.275(b)(2)

The base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids. Define what the slope of the floor is in the indoor container storage area.

D-1a(3)(c) Containment System Capacity: 703.201(a)(3), 724.275(b)(3)

Provide calculations which demonstrate that the containment system will have sufficient capacity to contain at least 10 percent of the volume of the containers or the volume of the largest container, whichever is greater. This demonstration must discuss the volume of the largest container, total volume of containers, containment structure capacity, and volume displaced by containers and other structures in the containment system. Provide calculations (similar to the outside storage area) for the indoor container storage area.

D-1a(3)(d) Control of Run-on: 703.201(a)(4), 724.275(b)(4)

Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in the above paragraph to contain any run-on that might enter the system. Describe the dikes, berms, drainage system, etc., used to prevent run-on, <u>or</u> provide calculations demonstrating that the containment system has sufficient excess capacity to contain run-on. A 24-hour, 25-year storm event can be used as the basis for the calculations.

D-1a(3)(e) Removal of Liquids from Containment System: 703.201(a)(5), 724.275(b)(5)

Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in a timely manner to prevent overflow of the containment system. Describe the procedures and equipment used during liquid removal. Provide sump, pump and piping drawings, if applicable. Specify the methods for determining whether the removed material is a hazardous waste and for handling as such.

D-1b Containers Without Free Liquids

D-1b(1) Test for Free Liquids: 703.201(b)(1), 729.320

Submit the test results or other documentation or information to show that the wastes to be stored do not contain free liquids (e.g. EPA Method No. 9095).

D-1b(2) Description of Containers: 724.271, 724.272

Provide the following information about the containers used to treat or store hazardous waste: approximate number of each type of container, DOT specifications or other manufacturer specifications, liner specifications (if applicable), container condition (new, used, reconditioned), and markings and labels.

D-2 Tank Systems

The following items must be provided for all tank systems. Note that a tank system includes the tank <u>and</u> its associated ancillary equipment and containment system.

D-2a Existing Tank Systems

D-2a(1) Assessment of Existing Tank System's Integrity: 703.202(a), 724.291

Provide a written assessment that is reviewed and certified by an independent, qualified, registered professional engineer, on the structural integrity and suitability of each tank system for handling hazardous waste. At a minimum, this assessment must consider the following: (1) design standard(s), if available according to which the tank and ancillary equipment were constructed; (2) hazardous characteristics of the wastes that have been and will be handled; (3) documented age of the tank system, if available (otherwise, an estimate of the age); and (4) results of a leak test, internal inspection, or other tank integrity examination. Explain the use of the receiving pits and why no assessment was provided for these units.

D-2a(2) External Corrosion Protection: 703.202(e), 724.291(b)(3)

Describe corrosion protection measures used to ensure continued structural integrity and suitability of each tank system for handling hazardous waste.

D-2b New Tank Systems

D-2b(1) Assessment of New Tank System's Integrity: 703.202(a), 724.292

Provide a written assessment that is reviewed and certified by an independent, qualified, registered professional engineer, on the structural integrity and suitability of each tank system for handling hazardous waste. The assessment must show that the foundation, structural support, seams, connections and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength and compatibility with the waste(s) to be stored or treated to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment must include the following: (1) design standards(s) according to which the tank(s) and/or the ancillary equipment are constructed; (2) hazardous characteristics of the waste(s) to be handled; (3) a corrosion assessment by a qualified expert for new tank systems or components in which the external shell of a metal tank or any external metal component of

the tank system will be in contact with the soil or with water; (4) a determination of design or operational measures that will protect underground tank systems against potential damage due to vehicular traffic; (5) design considerations to ensure that tank foundations will maintain the load of a full tank and that tank systems will be anchored to prevent flotation or dislodgment where the tank system is placed in a saturated zone or is located within a seismic fault zone; and (6) design considerations to ensure that tank systems will withstand the effects of frost heave.

D-2b(2) External Corrosion Protection: 703.202(e), 724.292(f)

Describe the design, construction, and operation of corrosion protection systems necessary to ensure the integrity of the tank system. Show that the construction of any field-fabricated corrosion protection system will be supervised by an independent corrosion expert.

D-2b(3) Description of Tank System Installation and Testing Plans and Procedures: 703.202(f), 724.292(b)-(e)

Demonstrate that an independent, qualified installation inspector or an independent, qualified, registered professional engineer will inspect each new tank system prior to covering, enclosing, or placing a new tank system or component in use. This inspection is to determine the presence of weld breaks, punctures, scrapes of protective coatings, cracks, corrosion and other structural damage or inadequate construction/installation.

Demonstrate that new tank systems or components that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

Demonstrate that all new tanks and ancillary equipment will be tested for tightness prior to being covered, enclosed or placed in use. Specify how repairs will be made if the tank system is found not to be tight.

Demonstrate how ancillary equipment will be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion or contraction.

D-2d Description of Feed Systems, Safety Cutoff, Bypass Systems and Pressure Controls: 703.202(c)

Provide a description of the feed systems, safety cutoff, bypass systems and pressure controls (e.g., vents).

D-2e Diagram of Piping, Instrumentation and Process Flow for Each Tank System: 703.202(d)

Provide a diagram of piping, instrumentation and process flow for each tank system.

D-2f Containment and Detection of Releases: 724.293

Secondary containment meeting the requirements of 35 IAC 724.293(b) - (f) (see Items D-2f(1)(b) through D-2f(1)(d) below) must be provided for:

1. All new tank systems or components, prior to their being put into service;

2. All existing tank systems used to store or treat Hazardous Waste Numbers F020, F021, F022, F023, F026 or F027, as defined in 35 IAC 721.131, by January 12, 1989;

3. Those existing tank systems of known and documented age, prior to January 12, 1989, or when the tank system has reached fifteen (15) years of age, whichever comes later;

4. Those existing tank systems for which the age cannot be documented, prior to January 12, 1995; but if the age of the facility is greater than seven (7) years, secondary containment must be provided by the time the facility reaches fifteen (15) years of age, or prior to January 12, 1989, whichever comes later; and

5. Tank systems that store or treat materials that become hazardous wastes subsequent to January 12, 1987, within the following time frames (from the date that the material becomes a hazardous waste):

   a. Prior to new tanks being placed into service;

   b. Within two (2) years if Case 2 (above) applies;

   c. Within two (2) years or when the tank system has reached fifteen (15) years of age, whichever comes later, if Case 3 (above) applies; or

   d. Within eight (8) years or, if the age of the facility is greater than seven (7) years, by the time the facility reaches fifteen (15) years of age, whichever is later, if Case 4 (above) applies.

Exemptions to this requirement are provided in 35 IAC 724.293(f) (see Item D-2f(1)(d) below) and 35 IAC 724.293(g) (see Item D-2f(3) below). If an existing tank system does not have a secondary containment system meeting the requirements of 35 IAC 724.293(b) - (f) and has not been granted alternative design or operation under 35 IAC 724.293(g), the closure plan for that tank system must include a contingency for:

1. Closure of the unit as a landfill; and

2. Post-closure care and monitoring for the unit as a landfill (see Item I-1d(2)).

The closure cost estimates prepared for this unit in accordance with 35 IAC 724.242 must reflect the costs of this contingent closure/post-closure plan if the cost of these activities is greater than the cost of decontaminating the tank system and the surrounding area. These estimates must then be used to establish the amount of financial assurance which is to be provided to meet the requirements of 35 IAC 724.243.

D-2f(1)(b) Requirements for Secondary Containment and Leak Detection:
724.293(b)-(c), 703.202(g)

Demonstrate that the secondary containment system has been (will be) designed, installed and operated to prevent any migration of waste or accumulated liquid from the tank system to the soil, groundwater, or surface water at any time during its use. Also, demonstrate that the secondary containment system can detect and collect releases and accumulated liquids. This demonstration must include at least the following:

- Specify the materials of construction used to construct or line the system. Show that these materials are compatible with the wastes in the tank system.

- Demonstrate that the system has sufficient strength and thickness to prevent failure caused by any of the following:

  -- pressure gradients (including static head and external hydrological forces);

  -- physical contact with the wastes;

  -- climatic conditions; and

  -- stresses from daily operation (including stresses from nearby vehicular traffic).

- Present calculations to prove that the secondary containment system is placed on a foundation or base that is capable of providing support, resisting pressure gradients above and below the system, and preventing failure due to settlement, compression, or uplift.

- Provide a description of the leak detection system, including its operating principle, design features and operating procedures. Demonstrate that the leak detection system will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within twenty four (24) hours. If the prevailing site conditions or detection technologies will not allow detection of a release within 24 hours, then specify the earliest practical time that detection can take place. Indicate why this longer period does not pose a threat to human health and the environment.

- Show how the secondary containment system is sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation.

- Document how it will be ensured that spilled or leaked wastes and precipitation will be removed from the secondary containment system within twenty four (24) hours. If wastes and precipitation cannot be removed within 24 hours, then specify the earliest practical time that removal can take place. Indicate why this longer period does not pose a threat to human health and the environment.

D-2f(1)(c) Requirements for External Liner, Vault, Double-Walled Tank or Equivalent Device: 703.202(g), 724.293(d) and (e)

Show that secondary containment for each tank includes at least one of the following: a liner external to the tank, a vault, a double-walled tank, or an equivalent device approved by the Agency.

For each vault system, provide the following information:

- Present calculations to show that the vault system is designed or operated to contain 100 percent of the capacity of the largest tank within its boundary.

- Show that the vault system is designed or operated to prevent run-on or infiltration of precipitation. Alternatively, show that the collection system has sufficient excess capacity to contain run-on and precipitation from a 25-year, 24-hour rainfall.

- Demonstrate that the vault system is constructed using chemical-resistant water stops in place at any joints. Specify the material used.

- Demonstrate that the vault is provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the vault material. Specify the coating or lining used, and provide the manufacturer's data sheet.

- Specify the method used to protect against the formation and ignition of vapors if the wastes being placed in the tank(s) are ignitable or reactive.

- Specify the exterior moisture barrier used and provide the manufacturer's data sheet. Alternatively, describe how the vault is designed or operated to prevent the migration of moisture into the vault if the vault is subject to hydraulic pressure.

D-2f(1)(d) Secondary Containment and Leak Detection Requirements for Ancillary Equipment: 703.202(g), 724.293(f)

Ancillary equipment is defined as any device including, but not limited to, such devices as piping, fittings, flanges, valves and pumps, that are used to distribute, meter or control the flow of waste:

a. from its point of generation to storage or treatment tanks;

b. between waste storage and treatment tanks to a point of disposal on-site; or

c. between waste storage and treatment tanks to a point of shipment for disposal off-site

The ancillary equipment associated with each tank system must be provided with a secondary containment system as described in the following paragraphs, except for:

1. Aboveground piping (exclusive of flanges, joints, valves and other connections) that are visually inspected for leaks on a daily basis;

2. Welded flanges, welded joints and welded connections, that are visually inspected for leaks on a daily basis;

3. Sealless or magnetic coupling pumps, that are visually inspected for leaks on a daily basis; and

4. Pressurized aboveground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices) that are visually inspected for leaks on a daily basis.

Demonstrate that each tank system's ancillary equipment is provided with secondary containment such as jacketing, double-walled piping, or a trench. Describe the containment system, and demonstrate that it has been (will be) designed, installed and operated to prevent any migration of waste or accumulated liquid to the soil, groundwater or surface water at any time during its use. Also, demonstrate that the containment system can detect and collect releases and accumulated liquids. This demonstration must include at least the following:

- Specify the materials of construction used to construct or line the system. Show that these materials are compatible with the wastes in the tank system.

- Demonstrate that the system has sufficient strength and thickness to prevent failure caused by any of the following:

  -- pressure gradients (including static head and external hydrological forces)

  -- physical contact with the wastes

  -- climatic conditions

  -- stress of daily operation (including stresses from nearby vehicular traffic).

- Present calculations to prove that the secondary containment is placed on a foundation or base that is capable of providing support, resisting pressure gradients above and below the system, and preventing failure due to settlement, compression, or uplift.

- Provide a description of the leak detection system, including its operating principle, design features and operating procedures. Demonstrate that the leak detection system will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within twenty four (24) hours. If the prevailing site conditions or detection technologies will not allow detection of a release within 24 hours, then specify the earliest practical time that detection can take place. Indicate why this longer period does not pose a threat to human health and the environment.

- Show how the secondary containment system is sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation.

- Document how it will be ensured that spilled or leaked wastes and precipitation will be removed from the secondary containment system within twenty four (24) hours. If wastes and precipitation cannot be removed within 24 hours, then specify the earliest practical time that removal can take place. Indicate why this longer period does not pose a threat to human health and the environment.

D-2g Controls and Practices to Prevent Spills and Overflows: 703.202(i), 724.294(b)

Provide a detailed description of controls and practices used to prevent spills and overflows. At a minimum, this must include: (1) spill prevention controls (e.g., check valves, dry disconnect couplings); (2) overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and (3) maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

F PROCEDURES TO PREVENT HAZARDS

F-2 Inspection Schedule: 703.183(e), 724.115

F-2b(2)(c) Tank Overfilling Control Equipment: 724.295(a)

Document that overfilling control equipment (e.g., waste-feed cut-off systems and bypass systems) are inspected at intervals sufficient to ensure good working order. How often are the high level float switches inspected for proper operability?

F-2b(2)(d) Tank Monitoring Data: 724.295(b)(2)

Document that data gathered from monitoring equipment (e.g., pressure and temperature gauges, monitoring wells), where present, is inspected at least once each operating day to ensure that the tank is operated according to design specifications.

F-3 Waiver or Documentation of Preparedness and Prevention Requirements

F-3a(1) Internal Communications: 724.132(a)

An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel. Please indicate the location of the intercoms on the emergency and safety equipment location plan.

F-4e Personnel Protection Equipment: 703.183(h)(5)

Prevention of undue exposure of personnel to hazardous waste (e.g., protective clothing and equipment). Please explain when protection equipment is worn when handling other wastes similar to the explanation provided when handling medical wastes.

F-5 Prevention of Reaction of Ignitable, Reactive and Incompatible Wastes

F-5c Management of Ignitable or Reactive Wastes in Containers: 703.201(c), 724.276

Provide sketches, drawings, or data demonstrating that containers of ignitable or reactive waste are located at least 15 meters (50 feet) from the facility's property line.

F-5e Management of Ignitable or Reactive Wastes in Tank Systems: 703.202(j), 724.298

Describe the operational procedures used for storing such wastes in tanks that includes specific information on: (1) how the waste is treated, rendered, or mixed before or immediately after the placement in the tank so that it is no longer considered ignitable or reactive and complies with 724.117(b); or the waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to react or ignite; or the tank is used solely for emergencies; (2) how facilities that treat or store ignitable or reactive waste in tanks comply with the National Fire Protection Association's buffer zone requirements for tanks.

G. CONTINGENCY PLAN: 703.183(g), 724.150 through 724.156, 724.152(b)

Provide a copy of the Contingency Plan or Spill Prevention Control and Countermeasures (SPCC) Plan in accordance with 40 CFR Part 112 or 1510, amended for hazardous waste management to describe the actions facility personnel will take in response to fires, explosions, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.

G-1 General Information

Provide the facility name and location, operator, site plan, and description of facility operations.

G-2 Emergency Coordinators: 724.152(d), 724.155

Provide a statement of authorization of the coordinator to commit necessary resources to plan.

G-3 Implementation: 724.152(a), 724.156(d)

Describe how and when the contingency plan will be implemented.

G-4 Emergency Response Procedures: 724.156

G-4b Identification of Hazardous Materials: 724.156(b)

Describe procedures to identify the character, exact source, amount and area/extent of any released material involved in the emergency.

G-4c Assessment: 724.156(c) and (d)

Describe the policy for assessment of possible hazards to the environment and human health and need for evacuation and notification of authorities. The assessment must consider both direct and indirect effects of the release, fire or explosion. The authorities to be notified should include the Illinois Environmental Protection Agency, Emergency Response Unit, the Illinois Emergency Services and Disaster Agency and the National Response Center.

G-4d Control Procedures: 724.152(a)

Specify control procedures to be taken in the event of a fire, explosion or release.

G-4e Prevention of Recurrence or Spread of Fires, Explosions, or Releases: 724.156(e)

Describe the necessary steps to be taken, during an emergency, to ensure that fires, explosions, or releases do not occur, reoccur or spread to other hazardous waste at the facility.

G-4f Storage and Treatment of Released Material: 724.156(g)

Immediately after an emergency, the emergency coordinator must provide for treatment, storage, or disposal of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

G-4g Incompatible Waste: 724.156(h)(1)

Describe provisions for prevention of incompatible waste from being treated, stored or located in the affected areas until cleanup procedures are completed.

G-4h Post-Emergency Equipment Maintenance: 724.156(h)(2)

Describe procedures for ensuring that all emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

G-4i Container Spills and Leakage: 724.152, 724.271

Specify procedures to be used when responding to container spills or leakage, including procedures and timing for expeditious removal of spilled waste and repair or replacement of the container(s).

G-4j(1) Tank System Spills and Leakage: 724.296

Document the procedures to be used by the facility owner or operator to respond to tank system spills or leakage and Disposition of Leaking or unfit-for-use tank system, including:

- ceasing the addition of waste into the tank system;
- inspection of the tank system to determine the cause of the release;
- Removal of waste from the tank system or secondary containment system;
- Containment of releases;
- Notification of the Agency within twenty-four (24) hours and submittal of a written report to the Agency within thirty (30) days (unless exempt under 35 IAC Section 724.296(d)(2));
- Provision of secondary containment, repair or closure, as appropriate; and
- certification of major repairs.

H. PERSONNEL TRAINING: 703.183(1), 724.116

H-1 Outline of the Training Program: 724.116(a)(1)

Provide an outline of both the introductory and continuing training programs by owners or operators to prepare personnel to operate or maintain the facility in a safe manner. Include a brief description on how training will be designed to meet actual job tasks. Note: On-the-job training may be used to comply with these requirements. Submit an example of the specific training tailored to meet the specific job duties of an individual employee.

H-1c Training Director: 724.116(a)(2)

Demonstrate that the program is directed by a person trained in hazardous waste management.

H-2 Implementation of Training Program: 724.116(b), (d)(4) and (e)

Indicate that training has been successfully completed by facility personnel within six months of their employment or assignment to the facility or transfer to a new position within the facility, whichever is later. Employees hired after the effective date of these regulations must not work in unsupervised positions until they have completed the training requirements. Records documenting that the required training has been given to and completed by facility personnel must be maintained. Submit documentation that existing personnel have completed the training program.

I. CLOSURE AND POST-CLOSURE REQUIREMENTS: 703.183(m), 724.210 through 724.220

I-1 Closure Plans: 703.183(m), 724.212

Include a copy of the written closure plan consistent with I-1a through I-1g, including an estimate of the maximum inventory of wastes in storage and treatment at any time. The closure plan must address all units at the facility, including unclosed interim status units for which a Part B permit is not being pursued.

I-1a Closure Performance Standard: 724.211

Describe how the closure plan provided minimizes the need for post-closure maintenance and minimizes releases of wastes and hazardous constituents. Define unacceptable level.

I-1b Partial and Final Closure Activities: 724.212(b)(1) and (2)

If partial closure is anticipated, describe how and when the facility will be partially closed, including an identification of the maximum extent of operation after partial closure. Describe how and when the facility will finally be closed.

I-5 Financial Assurance Mechanism for Closure: 703.183(o), 724.243

Provide a copy of the established financial assurance mechanism for facility closure. The mechanism must be one of the following:

I-5a Closure Trust Fund: 724.243(a), 40 CFR 264.151(a)(1)

I-5b Surety Bond: 724.243(b) and (c), 724.251(b) and (c)

I-5b(1) Surety Bond Guaranteeing Payment Into a Closure Fund: 724.253(b), 40 CFR 264.151(b)

I-5b(2) Surety Bond Guaranteeing Performance of Closure: 724.243(c), 40 CFR 264.151(c)

I-5c Closure Letter of Credit: 724.243(d), 40 CFR 264.151(d)

I-5d Closure Insurance: 724.243(e), 40 CFR 264.151(e)

I-5e Financial Test and Corporate Guarantee for Closure: 724.243(f), 40 CFR 264.151(h)

I-8 Liability Requirements: 703.183(q), 724.247

Provide copies of the required items documenting compliance with applicable liability requirements for sudden and nonsudden accidental occurrences.

I-8a Coverage for Sudden Accidental Occurrences: 724.247(a)

Liability coverage must be maintained for sudden accidental occurrences in the amount of at least $1 million per occurrence with an annual aggregate of at least $2 million. Liability coverage may be demonstrated in one of three ways:

I-8a(1) Endorsement or Certification: 724.247(a)(1)

Submit a signed duplicate original of the Hazardous Waste Facility Liability Endorsement, with the wording specified by 40 CFR 264.251(i), or of a Certificate of Liability Insurance, with the wording specified by 40 CFR 264.151(j).

I-8a(2) Financial Test for Liability Coverage: 724.247(a)(2), 724.247(f)

Submit a letter signed by the owner's or operator's chief financial officer and worded as specified by 40 CFR 264.151(g), a copy of the independent certified public accountant's report on examination of the applicant's financial statements for the latest fiscal year, and a special report from the certified public accountant. If the applicant is using the financial test to demonstrate both assurance for closure or post-closure care and liability coverage, the letter specified in 40 CFR 264.151(g) must be submitted to cover both forms of financial responsibility. Under these circumstances, a separate letter as specified by 40 CFR 264.151(f) is not required.

I-8a(3) Use of Multiple Insurance Mechanisms: 724.247(a)(3)

Submit items demonstrating required liability coverage through a combination of endorsement or certification and financial test as these mechanisms are specified in this section (see I-8a(1) and I-8a(2)). The amounts of coverage demonstrated must total at least the minimum amounts required by 264.147(a).

J. OTHER FEDERAL LAWS: 703.183(t)

Demonstrate compliance with the requirements of applicable Federal laws such as the Clean Air Act, Clean Water Act, the Wild and Scenic Rivers Act, National Historic Preservation Act of 1966, Endangered Species Act, Coastal Zone Management Act, and Fish and Wildlife Coordination Act. Provide all relevant documentation.

K. PART B CERTIFICATION: 703.182

K-2 Engineering Certification: 703.182, Illinois Professional Engineering Act

Technical data, such as design drawings, specifications and engineering studies, must be certified (sealed) by a Professional Engineer who is licensed to practice in the State of Illinois in accordance with Ill. Rev. Stat., par. 5101, Sec. 1 and par. 5119, Sec. 13.1.

L. CONTINUING RELEASES AT PERMITTED FACILITIES [§3004(U)]

L-1. Solid Waste Management Units

Identify each solid waste management unit at the facility. A solid waste management unit is any unit which is not a "regulated unit" and may include any of the following:

- Landfill
- Surface impoundment
- Waste pile
- Land treatment unit
- Injection well
- Incinerator
- Tank (including wastewater treatment units, elementary neutralization units, and tanks used in reuse/recovery operations)
- Container
- Storage area, transfer station or waste recycling operation.

L-1a Characterize the Solid Waste Management Unit

For each solid waste management unit, submit the following information:

- Type of each unit
- Location of each existing or closed unit on the topographic map. [See comment B-2.]
- Engineering drawings for each unit, if available
- General dimensions of each unit
- Dates when the unit was in operation

- Description of the wastes placed in each unit
- Quantity or volume of waste, if known

L-1b No Solid Waste Management Units

Provide evidence supporting the conclusion that no solid waste management units exist at the facility.

L-2 Releases

Provide all information available on whether or not any releases have occurred from any of the solid waste management units at the facility. Reasonable efforts to identify releases must be made, even if releases have not been verified. (A release may include: spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment. It does not include releases otherwise permitted or authorized under law or discharges into the injection zone of a UIC permitted class I injection well.)

L-2a Characterize Releases

Information on releases must include the following types of available information concerning prior or current releases:

- Date of the release
- Type of waste or constituent released
- Quantity or volume released
- Nature of the release
  - -- Spill
  - -- Overflow
  - -- Ruptured pipe or tank
  - -- Other
- Groundwater monitoring and other analytical data available to describe nature and extent of release. If other than groundwater monitoring data, please describe.
- Physical evidence of distressed vegetation or soil contamination
- Historical evidence of releases such as tanker truck accidents
- Any state, local or federal enforcement actions which may address releases
- Any public citizen complaints about the facility which could indicate a release
- Any information showing the migration of the release.

L-2b No Releases

Provide evidence supporting the conclusion that no releases from solid waste management units exist at the facility.

CleanHarbors
ENVIRONMENTAL SERVICES COMPANIES
1200 CROWN COLONY DRIVE
P.O. BOX 9137
QUINCY, MA 02269
(617) 849-1800

September 27, 1990

Permit Section, RCRA Unit
Division of Land Pollution Control
Illinois Environmental Protection Agency
220 Churchill Road
Post Office Box 19276
Springfield, Illinois 62794 - 9276

RE: Clean Harbors of Chicago, Inc. - Revised Part B Permit Application
11800 S. Stony Island Ave.
Chicago, Illinois

Dear Sir or Madam:

Pursuant to your request, enclosed please find Clean Harbors revised RCRA Part A and B permit application for Clean Harbors of Chicago, Inc's facility located at 11800 South Stony Island Avenue, Chicago, Illinois.

If you have any questions, please do not hesitate to contact me at (617)-849-1800, extension 4309.

Sincerely,

Stephen Pozner

Stephen Pozner,
Director of Compliance
Clean Harbors, Inc.

RECEIVED
SEP 28 1990
IEPA-DLPC

-5-

Please file

~~ROSD~~
USEPA

Illinois Environmental Protection Agency · P. O. Box 19276, Springfield, IL 62794-9276

217/782-6762

Refer to: 0316000051 -- Cook County
Chem-Clear
ILD000608471
RCRA Log B-16
Certified Mail # P 331 994 615

July 26, 1990

Chem-Clear, Inc.
Attn: James Laubsted
11800 S. Stoney Island Avenue
Chicago, Illinois 60617

Gentlemen:

The purpose of this letter is to remind you that your revised RCRA Part B permit application is due October 1, 1990. Unless we receive your revised application by October 1, 1990, the Agency will begin the process of terminating interim status for your facility pursuant to 35 IAC 703.157(b). This would require closure of your RCRA hazardous easte management unit(s).

If you have any quetstions, contact Charlie Zeal at 216/782-6762

Very truly yours,

Lawrence W Eastep by CAZ

Lawrence W. Eastep, P.E., Manager
Permit Section
Division of Land Pollution Control

LWE:CAZ:rmi/2653n/76

cc: Division File
Maywood Region
Enforcement
USEPA Region V, George Hamper
Charlie Zeal
Doug Clay
RPMS

Georges

Illinois Environmental Protection Agency · P.O. Box 19276, Springfield, IL 62794-9276

217/782-6762

Refer to: 0316000051 -- Cook County
Chem-Clear
ILD000608471
Part B Log 16

October 19, 1989

Chem-Clear, Inc.
Attention: Environmental Affairs
11800 South Stony Island Avenue
Chicago, IL 60617

Ladies/Gentlemen:

We are in the process of scheduling the review of the RCRA Part B permit application for your facility. In order to initiate the review, we must ensure that we have a current and complete application. Pursuant to 35 IAC 703.150(b), we are requesting that you submit three (3) copies of the current and complete application to my attention by no later than October 1, 1990. Signature requirements are identified in 35 IAC 702.126.

The application must include and incorporate any revisions made to date in response to completeness and for technical review comments. Please be advised that 35 IAC Subtitle G has been modified several times since you last submitted your application. This being the case, carefully review Subtitle G and incorporate any necessary revisions to your application to be submitted by October 1, 1990. In addition, pursuant to 35 IAC 702.123, the Agency has developed a format for the RCRA Part B permit application.

Enclosed you will find copies of documents titled "RCRA Part B Permit Application Decision Guide" and "IEPA/RCRA Part B Application Completeness/Technical Evaluation Checklist" which, along with the requirements in 35 IAC 703.182, must be followed in developing your Part B permit application. If a given checklist item does not appear applicable to the application, a response of "Not Applicable" should be made and justification for this response must be provided. ALL APPLICATIONS WHICH ARE NOT SUBMITTED USING THIS FORMAT WILL BE REJECTED AS INCOMPLETE.

The original and two (2) copies of the RCRA Part B permit application must be submitted to the following address:

Permit Section, RCRA Unit
Division of Land Pollution Control
Illinois Environmental Protection Agency
2200 Churchill Road
Post Office Box 19276
Springfield, Illinois 62794-9276

If you have any questions concerning this request, contact Charlie Zeal at 217/782-6762.

Very truly yours,

Lawrence W Eastep

Lawrence W. Eastep, P.E., Manager
Permit Section
Division of Land Pollution Control

LWE:CZ:ct/3390k,54-55

Enclosures

cc: Division File
Regional Office
Compliance Section
USEPA Region V, George Hamper
Enforcement

CHEM-CLEAR®

SUITE 915 • 992 OLD EAGLE SCHOOL ROAD • WAYNE, PENNSYLVANIA 19087 • (215) 687-8990

July 9, 1984

RECEIVED
JUL 12 1984
WASTE MANAGEMENT BRANCH

RECEIVED
JUL 13 1984
WMD-RAIU
EPA, REGION V

Mr. Robert Stone
Mail Code 5HW-13
Waste Management Branch
U.S. E.P.A., Region V
230 S. Dearborn Avenue
Chicago, IL 60604

Dear Mr. Stone,

As discussed in our telephone conversation of July 6, this letter is intended to serve as a notice of amendment to Section D of Chem Clear's Part B Permit application. Based upon present business, we anticipate the possible need for treatment and storage capacity expansion at our S. Stony Island Avenue, Chicago facility at some point in the future. We would like to reserve the privilege to construct additional mixing, sedimentation and storage tanks, should the need arise without major revision to our Part B Permit.

We are tentatively proposing to construct six (6) additional fixed-roof tanks which would be essentially identical to existing tanks. The enclosed drawing #4031-D, Tank Farm Layout, has been revised to include the proposed tank farm addition and should be substituted for the original drawing included in Appendix D of our Permit application.

We anticipate the need for one (1) 424,000 gallon tank, one (1) 212,000 gallon tank and four (4) 110,000 gallon capacity tanks. The two largest of these would be identical with our existing influent mixing and storage tank #4 and the exisitng primary clarifier tank #2. Allowing for a minimum of five (5) percent freeboard, the effective capacity of these tanks would be approximately 400,000 and 200,000 gallons, respectively.

All new tanks will be designed in conformance with AWWAD-100 code as detailed in pages D-6 to D-24 of Section D of our Permit application. These tanks will be internally coated, anchored and diked as described in Section D and on drawing #4031-D. As illustrated, it is planned to provide 440,000 gallons of containment for these tanks by means of a four (4) foot berm completely encircling the tank farm addition. The area immediately south of our present tank farm is tentatively designated as the site of the addition; proposed area is indicated with a dashed line.

COPY 1

I understand that we will need to apply for a modification to our Part B Permit prior to the time of actual construction. At such time, we will supply more detailed drawings and specifications. If you should require additional information in the interim, please do not hesitate to contact me. Thank you for your assistance in this matter.

Sincerely,

Ruth C. Niesen

Ruth C. Niesen
Environmental Coordinator

Enclosure

cc: Arun Lakhani, Vice President of Engineering, Chem-Clear Inc.
Greg Valocchi, Chicago Plant Manager, Chem-Clear Inc.
Lawrence W. Eastep P.E., Manager Permit Section, IL E.P.A.
Karen Natchtwey, Permit Section, DLPC, IL E.P.A.